Geometry

GEOMETRY

Congruence

Experiment with transformations in the plane.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 1 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment based on the undefined notions of point, line, distance along a line, and distance around a circular arc. [G-CO1]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch). [G-CO2]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 3 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 1 0	Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself. [G-CO3]
Mathematics (2015)	Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments. [G-CO4]

Grade(s): 9 - 12 **All Resources:** 1 0 **Learning Activities:** 0 **Lesson Plans:** 1 0 **Multimedia:** 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 9 **Learning Activities:** 2 **Lesson Plans:** 1 7 **Multimedia:** 0 **Unit Plans:** 0	Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another. [G-CO5]

Understand congruence in terms of rigid motions. (*Build on rigid motions as a familiar starting point for development of concept of geometric proof.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent. [G-CO6]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson** 2	Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent. [G-CO7]

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain how the criteria for triangle congruence, angle-side-angle (ASA), side-angle-side (SAS), and side-side-side (SSS), follow from the definition of congruence in terms of rigid motions. [G-CO8]

Prove geometric theorems. (*Focus on validity of underlying reasoning while using variety of ways of writing proofs.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Prove theorems about lines and angles. *Theorems include vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; and points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.* [G-CO9]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 8 **Learning Activities:** 0 **Lesson Plans:** 8 **Multimedia:** 0 **Unit Plans:** 0	Prove theorems about triangles. *Theorems include measures of interior angles of a triangle sum to 180°, base angles of isosceles triangles are congruent, the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length, and the medians of a triangle meet at a point.* [G-CO10]
Mathematics (2015) Grade(s): 9 - 12	Prove theorems about parallelograms. *Theorems include opposite sides are congruent, opposite angles are congruent; the diagonals of a parallelogram bisect each other; and conversely, rectangles are parallelograms with congruent diagonals.* [G-CO11]

All Resources:	9
Learning Activities:	0
Lesson Plans:	9
Multimedia:	0
Unit Plans:	0

Make geometric constructions. (*Formalize and explain processes.*)

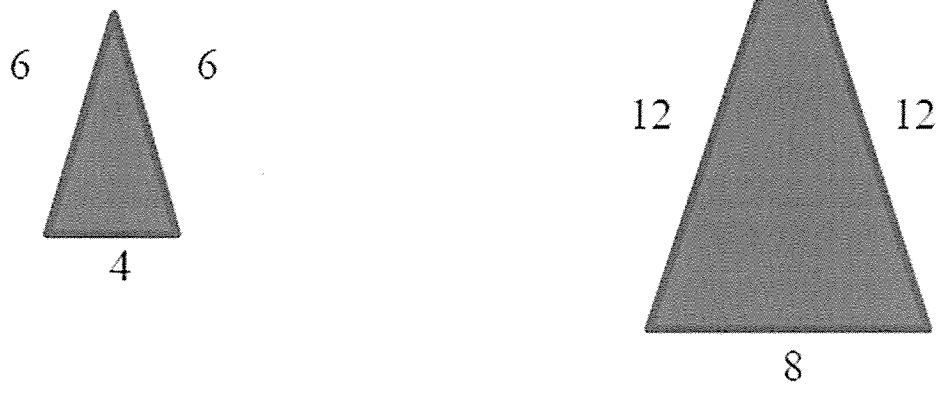
Mathematics (2015) Grade(s): 9 - 12	Make formal geometric constructions with a variety of tools and methods such as compass and straightedge, string, reflective devices, paper folding, and dynamic geometric software. *Constructions include copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.* [G-CO12]
All Resources:	26
Learning Activities:	2
Lesson Plans:	24
Multimedia:	0
Unit Plans:	0

Mathematics (2015) Grade(s): 9 - 12	Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle. [G-CO13]
All Resources:	2
Learning Activities:	0
Lesson Plans:	2
Multimedia:	0
Unit Plans:	0

Similarity, Right Triangles, and Trigonometry

Understand similarity in terms of similarity transformations.

Mathematics (2015) Grade(s): 9 - 12	Verify experimentally the properties of dilations given by a center and a scale factor. [G-SRT1] a. A dilation takes a line not passing through the center of the dilation to a parallel line and leaves a line passing through the center unchanged. [G-SRT1a] b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor. [G-SRT1b]
All Resources:	22
Learning Activities:	0
Lesson Plans:	22

Multimedia: 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides. [G-SRT2] Example 1:  Given the two triangles above, show that they are similar. $^{4}/_{8} = {}^{6}/_{12}$ They are similar by SSS. The scale factor is equivalent. Example 2:  Show that the two triangles are similar. Two corresponding sides are proportional and the included angle is congruent. (SAS similarity)
Mathematics (2015) Grade(s): 9 -	Use the properties of similarity transformations to establish the angle-angle (AA) criterion for two triangles to be similar. [G-SRT3]

12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	

Prove theorems involving similarity.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	Prove theorems about triangles. *Theorems include a line parallel to one side of a triangle divides the other two proportionally, and conversely; and the Pythagorean Theorem proved using triangle similarity.* [G-SRT4]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures. [G-SRT5]

Define trigonometric ratios and solve problems involving right triangles.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia** 0	Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle leading to definitions of trigonometric ratios for acute angles. [G-SRT6]

: **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia :** 0 **Unit Plans:** 0	Explain and use the relationship between the sine and cosine of complementary angles. [G-SRT7]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia :** 0 **Unit Plans:** 0	Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.* [G-SRT8]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia :** 0 **Unit Plans:** 0	(+) Prove the Law of Sines and the Law of Cosines and use them to solve problems. [G-SRT10]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson** 3	(+) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces). [G-SRT11]

Plans: **Multimedia:** 0 **Unit Plans:** 0	

Circles

Understand and apply theorems about circles.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Prove that all circles are similar. [G-C1]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Identify and describe *relationships* among inscribed angles, radii, and chords. *Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.* [G-C2]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle. [G-C3]
Mathematics (2015) Grade(s): 9 - 12	(+) Construct a tangent line from a point outside a given circle to the circle. [G-C4]

All Resources:	1
Learning Activities:	0
Lesson Plans:	1
Multimedia:	0
Unit Plans:	0

Find arc lengths and areas of sectors of circles. (*Radian introduced only as unit of measure.*)

Mathematics (2015) Grade(s): 9 - 12	Derive, using similarity, the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector. [G-C5]
All Resources:	3
Learning Activities:	0
Lesson Plans:	3
Multimedia:	0
Unit Plans:	0

Expressing Geometric Properties With Equations

Translate between the geometric description and the equation for a conic section.

Mathematics (2015) Grade(s): 9 - 12	Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation. [G-GPE1]
All Resources:	1
Learning Activities:	0
Lesson Plans:	1
Multimedia:	0
Unit Plans:	0

Use coordinates to prove simple geometric theorems algebraically. (*Include distance formula; relate to Pythagorean Theorem.*)

Mathematics (2015) Grade(s): 9 - 12	Use coordinates to prove simple geometric theorems algebraically. [G-GPE4] Example: Prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point $(0, 2)$.
All Resources:	0

Learning Activities: 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 1 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Prove the slope criteria for parallel and perpendicular lines, and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point). [G-GPE5]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Find the point on a directed line segment between two given points that partitions the segment in a given ratio. [G-GPE6]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.* [G-GPE7]

Use coordinates to prove simple geometric theorems algebraically. (Alabama)

Mathematics (2015)	Determine areas and perimeters of regular polygons, including inscribed or circumscribed polygons, given the coordinates of vertices or other characteristics. (Alabama)

Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 1 **Unit Plans:** 0	

Geometric Measurement and Dimension

Explain volume formulas and use them to solve problems.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Give an informal argument for the formulas for the circumference of a circle; area of a circle; and volume of a cylinder, pyramid, and cone. *Use dissection arguments, Cavalieri's principle, and informal limit arguments.* [G-GMD1]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 12 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.* [G-GMD3]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 0 **Lesson** 7	Determine the relationship between surface areas of similar figures and volumes of similar figures. (Alabama)

Plans:	
Multimedia: 0	
Unit Plans: 0	

Visualize relationships between two-dimensional and three-dimensional objects.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 0 **Lesson Plans:** 7 **Multimedia:** 0 **Unit Plans:** 0	Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects. [G-GMD4]

Modeling With Geometry

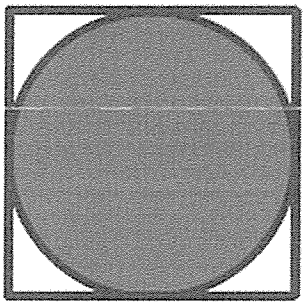
Apply geometric concepts in modeling situations.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 17 **Learning Activities:** 0 **Lesson Plans:** 17 **Multimedia:** 0 **Unit Plans:** 0	Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).* [G-MG1]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, British Thermal Units (BTUs) per cubic foot).* [G-MG2]
Mathematics	Apply geometric methods to solve design problems (e.g., designing an object or structure

(2015) Grade(s): 9 - 12 **All Resources:** 1 7 **Learning Activities:** 0 **Lesson Plans:** 1 7 **Multimedia:** 0 **Unit Plans:** 0	to satisfy physical constraints or minimize cost, working with typographic grid systems based on ratios).* [G-MG3]

Using Probability to Make Decisions

Use probability to evaluate outcomes of decisions. (*Introductory; apply counting rules.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	(+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator). [S-MD6]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game). [S-MD7] (Alabama) Example: 6 units  What is the probability of tossing a penny and having it land in the non-shaded region' Geometric Probability is the Non-Shaded Area divided by the Total Area.

	$\frac{(6^2)-\pi(3^2)}{6^2} = \frac{36-9\pi}{36} = \frac{4-\pi}{4}$ or $1-\frac{\pi}{4}$

Algebraic Connections

ALGEBRA

Modeling

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 11 **Learning Activities:** 0 **Lesson Plans:** 11 **Multimedia:** 0 **Unit Plans:** 0	Create algebraic models for application-based problems by developing and solving equations and inequalities, including those involving direct, inverse, and joint variation. (Alabama) Example: The amount of sales tax on a new car is directly proportional to the purchase price of the car. If the sales tax on a $20,500 car is $1,600, what is the purchase price of a new car that has a sales tax of $3,200' Answer: The purchase price of the new car is $41,000.
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Solve application-based problems by developing and solving systems of linear equations and inequalities. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 13 **Learning Activities:** 0 **Lesson Plans:** 13 **Multimedia:** 0 **Unit Plans:** 0	Use formulas or equations of functions to calculate outcomes of exponential growth or decay. (Alabama) Example: Solve problems involving compound interest, bacterial growth, carbon-14 dating, and depreciation.

Graphing

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1	Determine maximum and minimum values of a function using linear programming procedures. (Alabama) Example: Observe the boundaries $x \geq 0$, $y \geq 0$, $2x - 3y + 15 \geq 0$, and $x \leq 9$ to find the maximum and minimum values of $f(x,y) = 3x + 5y$

Multimedia: 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 1 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Determine approximate rates of change of nonlinear relationships from graphical and numerical data. (Alabama) a. Create graphical representations from tables, equations, or classroom-generated data to model consumer costs and to predict future outcomes. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Use the extreme value of a given quadratic function to solve applied problems. (Alabama) Example: Determine the selling price needed to maximize profit.

Finance

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 18 **Learning Activities:** 1 **Lesson Plans:** 17 **Multimedia:** 0 **Unit Plans:** 0	Use analytical, numerical, and graphical methods to make financial and economic decisions, including those involving banking and investments, insurance, personal budgets, credit purchases, recreation, and deceptive and fraudulent pricing and advertising. (Alabama) Examples: Determine the best choice of certificates of deposit, savings accounts, checking accounts, or loans. Compare the costs of fixed- or variable-rate mortgage loans. Compare costs associated with various credit cards. Determine the best cellular telephone plan for a budget. a. Create, manually or with technological tools, graphs and tables related to personal finance and economics. (Alabama) Example: Use spreadsheets to create an amortization table for a mortgage loan or a circle graph for a personal budget.

GEOMETRY

Modeling

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 5	Determine missing information in an application-based situation using properties of right triangles, including trigonometric ratios and the Pythagorean Theorem. (Alabama) Example: Use a construction or landscape problem to apply trigonometric ratios and the Pythagorean Theorem.

Learning Activities:	0
Lesson Plans:	5
Multimedia:	0
Unit Plans:	0

Symmetry

Mathematics (2015)	Analyze aesthetics of physical models for line symmetry, rotational symmetry, or the golden ratio. (Alabama)
Grade(s): 9 - 12	
All Resources: 7	Example: Identify the symmetry found in nature, art, or architecture.
Learning Activities: 0	
Lesson Plans: 7	
Multimedia: 0	
Unit Plans: 0	

Measurement

Mathematics (2015)	Critique measurements in terms of precision, accuracy, and approximate error. (Alabama)
Grade(s): 9 - 12	
All Resources: 4	Example: Determine whether one candidate has a significant lead over another candidate when given their current standings in a poll and the margin of error.
Learning Activities: 0	
Lesson Plans: 4	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015)	Use ratios of perimeters, areas, and volumes of similar figures to solve applied problems. (Alabama)
Grade(s): 9 - 12	
All Resources: 11	Example: Use a blueprint or scale drawing of a house to determine the amount of carpet to be purchased.
Learning Activities: 0	
Lesson Plans: 11	
Multimedia: 0	
Unit Plans: 0	

STATISTICS AND PROBABILITY

Graphing

Mathematics (2015)	Create a model of a set of data by estimating the equation of a curve of best fit from tables of values or scatter plots. (Alabama)
Grade(s): 9 - 12	
All 24	Examples: Create models of election results as a function of population change, inflation

Resources:		or employment rate as a function of time, cholesterol density as a function of age or weight of a person.
Learning Activities:	0	
Lesson Plans:	24	a. Predict probabilities given a frequency distribution. (Alabama)
Multimedia:	0	
Unit Plans:	0	

Algebra II

NUMBER AND QUANTITY

The Complex Number System

Perform arithmetic operations with complex numbers.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real. [N-CN1]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers. [N-CN2]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	(+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers. [N-CN3]

Use complex numbers in polynomial identities and equations. (*Polynomials with real coefficients.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning** 0	Solve quadratic equations with real coefficients that have complex solutions. [N-CN7]

Activities:	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015)	+) Extend polynomial identities to the complex numbers.
Grade(s): 9 - 12	Example: Rewrite $x^2 + 4$ as $(x + 2i)(x - 2i)$. [N-CN8]
All Resources: 0	
Learning Activities: 0	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015)	+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials. [N-CN9]
Grade(s): 9 - 12	
All Resources: 1	
Learning Activities: 0	
Lesson Plans: 1	
Multimedia: 0	
Unit Plans: 0	

Vector and Matrix Quantities

Perform operations on matrices and use matrices in applications.

Mathematics (2015)	+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network. *(Use technology to approximate roots.)* [N-VM6] (Alabama)
Grade(s): 9 - 12	
All Resources: 0	
Learning Activities: 0	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015)	+) Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled. [N-VM7]
Grade(s): 9 - 12	
All Resources: 0	
Learning Activities: 0	
Lesson 0	

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	+) Add, subtract, and multiply matrices of appropriate dimensions. [N-VM8]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties. [N-VM9]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse. [N-VM10]

ALGEBRA

Seeing Structure in Expressions

Interpret the structure of expressions. (*Polynomial and rational.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3	Interpret expressions that represent a quantity in terms of its context.* [A-SSE1] a. Interpret parts of an expression such as terms, factors, and coefficients. [A-SSE1a] b. Interpret complicated expressions by viewing one or more of their parts as a single entity. [A-SSE1b] Example: Interpret $P(1+r)^n$ as the product of P and a factor not depending on P.

Multimedia: 0 **Unit Plans:** 0	

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Use the structure of an expression to identify ways to rewrite it. [A-SSE2] Example: See $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.

Write expressions in equivalent forms to solve problems.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems.* [A-SSE4] Example: Calculate mortgage payments.

Arithmetic With Polynomials and Rational Expressions

Perform arithmetic operations on polynomials. (*Beyond quadratic.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Understand that polynomials form a system analogous to the integers; namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials. [A-APR1]

Understand the relationship between zeros and factors of polynomials.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson** 0	Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$. [A-APR2]

Plans:	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015)	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. [A-APR3]
Grade(s): 9 - 12	
All Resources: 3	
Learning Activities: 0	
Lesson Plans: 3	
Multimedia: 0	
Unit Plans: 0	

Use polynomial identities to solve problems.

Mathematics (2015)	Prove polynomial identities and use them to describe numerical relationships. [A-APR4]
Grade(s): 9 - 12	Example: The polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.
All Resources: 0	
Learning Activities: 0	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Rewrite rational expressions. (*Linear and quadratic denominators.*)

Mathematics (2015)	Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or for the more complicated examples, a computer algebra system. [A-APR6]
Grade(s): 9 - 12	
All Resources: 0	
Learning Activities: 0	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Creating Equations*

Create equations that describe numbers or relationships. (*Equations using all available types of expressions, including simple root functions.*)

Mathematics (2015)	Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.* [A-CED1]
Grade(s): 9 - 12	
All Resources: 2	

Learning Activities: 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 15 **Learning Activities:** 0 **Lesson Plans:** 15 **Multimedia:** 0 **Unit Plans:** 0	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. [A-CED2]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. [A-CED3] Example: Represent inequalities describing nutritional and cost constraints on combinations of different foods.
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. [A-CED4] Example: Rearrange Ohm's law $V = IR$ to highlight resistance R.

Reasoning With Equations and Inequalities

Understand solving equations as a process of reasoning and explain the reasoning. (*Simple rational and radical.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning** 0	Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise. [A-REI2]

Activities:	
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Solve equations and inequalities in one variable.

Mathematics (2015)	Recognize when the quadratic formula gives complex solutions, and write them as $a \pm bi$ for real numbers a and b. [A-REI4b] (Alabama)
Grade(s): 9 - 12	
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Solve systems of equations.

Mathematics (2015)	(+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of demensions 3 x 3 or greater). [A-REI9]
Grade(s): 9 - 12	
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Represent and solve equations and inequalities graphically. (*Combine polynomial, rational, radical, absolute value, and exponential functions.*)

Mathematics (2015)	Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions * [A-REI11]
Grade(s): 9 - 12	
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

FUNCTIONS

Conic Sections

Understand the graphs and equations of conic sections.*(Emphasize*

understanding graphs and equations of circles and parabolas.) (Alabama)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Create graphs of conic sections, including parabolas, hyperbolas, ellipses, circles, and degenerate conics, from second-degree equations. (Alabama) Example: Graph $x^2 - 6x + y^2 - 12y + 41 = 0$ or $y^2 - 4x + 2y + 5 = 0$. a. Formulate equations of conic sections from their determining characteristics. (Alabama) Example: Write the equation of an ellipse with center (5, -3), a horizontal major axis of length 10, and a minor axis of length 4. Answer: $\frac{(x-5)^2}{25} + \frac{(y+3)^2}{4} = 1.$

Interpreting Functions

Interpret functions that arise in applications in terms of the context. (*Emphasize selection of appropriate models.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 15 **Learning Activities:** 0 **Lesson Plans:** 15 **Multimedia:** 0 **Unit Plans:** 0	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.* [F-IF5] Example: If the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.

Analyze functions using different representations. (*Focus on using key features to guide selection of appropriate type of model function.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 9 **Learning Activities:** 1 **Lesson Plans:** 8 **Multimedia:** 0 **Unit Plans:** 0	Graph functions expressed symbolically, and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* [F-IF7] a. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. [F-IF7b] Example $f(x) = 2x^3$ or $f(x) = (x+1)/(x-1)$ for $x \neq 1$. b. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. [F-IF7c] c. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. [F-IF7e]
Mathematics	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. [F-IF8]

(2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	

STATISTICS AND PROBABILITY

Interpreting Categorical and Quantitative Data

Summarize, represent, and interpret data on a single count or measurement variable.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). [F-IF9] Example: Given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.

Building Functions

Build a function that models a relationship between two quantities. (*Include all types of functions studied.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 8 **Learning Activities:** 0 **Lesson Plans:** 8 **Multimedia:** 0 **Unit Plans:** 0	Write a function that describes a relationship between two quantities.* [F-BF1] a. Combine standard function types using arithmetic operations. [F-BF1b] Example: Build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.

Build new functions from existing functions. (*Include simple radical, rational, and exponential functions; emphasize common effect of each transformation across function types.*)

Mathematics (2015) Grade(s): 9 - 12 **All** 5	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k\,f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic

Resources:	expressions for them. [F-BF3]
Learning Activities: 0	
Lesson Plans: 5	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015)	Find inverse functions. [F-BF4]
Grade(s): 9 - 12	a. Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse, and write an expression for the inverse. [F-BF4a]
All Resources: 0	
Learning Activities: 0	Example: $f(x) = 2x^3$ or $f(x) = (x+1)/(x-1)$ for $x \neq 1$.
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Linear, Quadratic, and Exponential Models*

Construct and compare linear, quadratic, and exponential models and solve problems. (*Logarithms as solutions for exponentials.*)

Mathematics (2015)	For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where a, c, and d are numbers, and the base b is 2, 10, or e; evaluate the logarithm using technology. [F-LE4]
Grade(s): 9 - 12	
All Resources: 0	
Learning Activities: 0	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

STATISTICS AND PROBABILITY

Using Probability to Make Decisions

Use probability to evaluate outcomes of decisions. (*Include more complex situations.*)

Mathematics (2015)	(+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator). [S-MD6]
Grade(s): 9 - 12	
All Resources: 8	
Learning Activities: 0	
Lesson Plans: 8	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	(+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game). [S-MD7]

Conditional Probability and the Rules of Probability

Understand independence and conditional probability and use them to interpret data. (*Link to data from simulations or experiments.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe events as subsets of a sample space (the set of outcomes), using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not"). [S-CP1]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Understand the conditional probability of *A* given *B* as *P*(*A* and *B*)/*P*(*B*), and interpret independence of *A* and *B* as saying that the conditional probability of *A* given *B* is the same as the probability of *A*, and the conditional probability of *B* given *A* is the same as the probability of *B*. [S-CP3]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. [S-CP4] Example: Collect data from a random sample of students in your school on their favorite subject among mathematics, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.
Mathematics	Recognize and explain the concepts of conditional probability and independence in

(2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	everyday language and everyday situations. [S-CP5] Example: Compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.

Use the rules of probability to compute probabilities of compound events in a uniform probability model.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A, and interpret the answer in terms of the model. [S-CP6]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model. [S-CP7]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	(+) Apply the general Multiplication Rule in a uniform probability model, $P(A \text{ and } B) = P(A)P(B\|A) = P(B)P(A\|B)$, and interpret the answer in terms of the model. [S-CP8]
Mathematics (2015) Grade(s): 9 - 12	(+) Use permutations and combinations to compute probabilities of compound events and solve problems. [S-CP9]

All Resources:	10
Learning Activities:	0
Lesson Plans:	10
Multimedia:	0
Unit Plans:	0

Algebra II with Trigonometry

NUMBER AND QUANTITY

The Complex Number System

Perform arithmetic operations with complex numbers.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real. [N-CN1]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers. [N-CN2]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers. [N-CN3]

Use complex numbers in polynomial identities and equations. (*Polynomials with real coefficients.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning** 0	Solve quadratic equations with real coefficients that have complex solutions. [N-CN7]

Activities:	
Lesson Plans: 1	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015)	+) Extend polynomial identities to the complex numbers. [N-CN8]
Grade(s): 9 - 12	Example: Rewrite $x^2 + 4$ as $(x + 2i)(x - 2i)$.
All Resources: 0	
Learning Activities: 0	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015)	+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials. [N-CN9]
Grade(s): 9 - 12	
All Resources: 1	
Learning Activities: 0	
Lesson Plans: 1	
Multimedia: 0	
Unit Plans: 0	

Vector and Matrix Quantities

Perform operations on matrices and use matrices in applications.

Mathematics (2015)	+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network. *(Use technology to approximate roots.)* [N-VM6] (Alabama)
Grade(s): 9 - 12	
All Resources: 0	
Learning Activities: 0	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015)	+) Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled. [N-VM7]
Grade(s): 9 - 12	
All Resources: 1	
Learning Activities: 0	
Lesson 1	

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	+) Add, subtract, and multiply matrices of appropriate dimensions. [N-VM8]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties. [N-VM9]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse. [N-VM10]

ALGEBRA

Seeing Structure in Expressions

Interpret the structure of expressions. (*Polynomial and rational.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4	Interpret expressions that represent a quantity in terms of its context.* [A-SSE1] a. Interpret parts of an expression such as terms, factors, and coefficients. [A-SSE1a] b. Interpret complicated expressions by viewing one or more of their parts as a single entity. [A-SSE1b] Example: Interpret $P(1+r)^n$ as the product of P and a factor not depending on P.

Multimedia: 0 **Unit Plans:** 0	

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Use the structure of an expression to identify ways to rewrite it. [A-SSE2] Example: See $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.

Write expressions in equivalent forms to solve problems.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems.* [A-SSE4] Example: Calculate mortgage payments.

Arithmetic With Polynomials and Rational Expressions

Perform arithmetic operations on polynomials. (*Beyond quadratic.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Understand that polynomials form a system analogous to the integers; namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials. [A-APR1]

Understand the relationship between zeros and factors of polynomials.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson** 0	Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$. [A-APR2]

Plans:	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015)	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. [A-APR3]
Grade(s): 9 - 12	
All Resources: 0	
Learning Activities: 0	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Use polynomial identities to solve problems.

Mathematics (2015)	Prove polynomial identities and use them to describe numerical relationships. [A-APR4]
Grade(s): 9 - 12	Example: The polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.
All Resources: 0	
Learning Activities: 0	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Rewrite rational expressions. (*Linear and quadratic denominators.*)

Mathematics (2015)	Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or for the more complicated examples, a computer algebra system. [A-APR6]
Grade(s): 9 - 12	
All Resources: 0	
Learning Activities: 0	
Lesson Plans: 0	
Multimedia: 0	
Unit Plans: 0	

Creating Equations*

Create equations that describe numbers or relationships. (*Equations using all available types of expressions, including simple root functions.*)

Mathematics (2015)	Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.* [A-CED1]
Grade(s): 9 - 12	
All Resources: 2	

Learning Activities: 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 14 **Learning Activities:** 0 **Lesson Plans:** 14 **Multimedia:** 0 **Unit Plans:** 0	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. [A-CED2]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. [A-CED3] Example: Represent inequalities describing nutritional and cost constraints on combinations of different foods.
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. [A-CED4] Example: Rearrange Ohm's law $V = IR$ to highlight resistance R.

Reasoning With Equations and Inequalities

Understand solving equations as a process of reasoning and explain the reasoning. (*Simple rational and radical.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning** 0	Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise. [A-REI2]

Activities:	
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Solve equations and inequalities in one variable.

Mathematics (2015)	Recognize when the quadratic formula gives complex solutions, and write them as $a \pm bi$ for real numbers a and b. [A-REI4b] (Alabama)
Grade(s): 9 - 12	
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Solve systems of equations.

Mathematics (2015)	(+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3 x 3 or greater). [A-REI9] (Alabama)
Grade(s): 9 - 12	
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Represent and solve equations and inequalities graphically. (*Combine polynomial, rational, radical, absolute value, and exponential functions.*)

Mathematics (2015)	Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.* [A-REI11]
Grade(s): 9 - 12	
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

FUNCTIONS

Conic Sections

Understand the graphs and equations of conic sections. (*Emphasize*

***understanding graphs and equations of circles and parabolas.*) (Alabama)**

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Create graphs of conic sections, including parabolas, hyperbolas, ellipses, circles, and degenerate conics, from second-degree equations. (Alabama) Example: Graph $x^2 - 6x + y^2 - 12y + 41 = 0$ or $y^2 - 4x + 2y + 5 = 0$. a. Formulate equations of conic sections from their determining characteristics. (Alabama) Example: Write the equation of an ellipse with center (5, -3), a horizontal major axis of length 10, and a minor axis of length 4. Answer: $\frac{(x-5)^2}{25} + \frac{(y+3)^2}{4} = 1.$

Interpreting Functions

Interpret functions that arise in applications in terms of the context. (*Emphasize selection of appropriate models.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 13 **Learning Activities:** 0 **Lesson Plans:** 13 **Multimedia:** 0 **Unit Plans:** 0	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.* [F-IF5] Example: If the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.

Analyze functions using different representations. (*Focus on using key features to guide selection of appropriate type of model function.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 0 **Lesson Plans:** 7 **Multimedia:** 0 **Unit Plans:** 0	Graph functions expressed symbolically, and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* [F-IF7] a. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. [F-IF7b] b. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. [F-IF7c] c. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. [F-IF7e]
Mathematics (2015) Grade(s): 9 - 12	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. [F-IF8]

All Resources:	1
Learning Activities:	0
Lesson Plans:	1
Multimedia:	0
Unit Plans:	0

Mathematics (2015)	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). [F-IF9]
Grade(s): 9 - 12	
All Resources: 2	Example: Given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.
Learning Activities: 0	
Lesson Plans: 2	
Multimedia: 0	
Unit Plans: 0	

Building Functions

Build a function that models a relationship between two quantities. (*Include all types of functions studied.*)

Mathematics (2015)	Write a function that describes a relationship between two quantities.* [F-BF1]
Grade(s): 9 - 12	a. Combine standard function types using arithmetic operations. [F-BF1b]
All Resources: 16	Example: Build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.
Learning Activities: 0	
Lesson Plans: 16	
Multimedia: 0	
Unit Plans: 0	

Build new functions from existing functions. (*Include simple radical, rational, and exponential functions; emphasize common effect of each transformation across function types.*)

Mathematics (2015)	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k\,f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them. [F-BF3]
Grade(s): 9 - 12	
All Resources: 5	
Learning Activities: 0	
Lesson Plans: 5	
Multimedia: 0	
Unit Plans: 0	

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Find inverse functions. [F-BF4] Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse, and write an expression for the inverse. [F-BF4a] Example $f(x) = 2x^3$ or $f(x) = (x+1)/(x-1)$ for $x \neq 1$.

Linear, Quadratic, and Exponential Models*

Construct and compare linear, quadratic, and exponential models and solve problems. (*Logarithms as solutions for exponentials.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where a, c, and d are numbers, and the base b is 2, 10, or e; evaluate the logarithm using technology. [F-LE4]

Trigonometric Functions

Extend the domain of trigonometric functions using the unit circle.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle. [F-TF1]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1	Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle. [F-TF2]

Multimedia: 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Define the six trigonometric functions using ratios of the sides of a right triangle, coordinates on the unit circle, and the reciprocal of other functions. (Alabama)

Model periodic phenomena with trigonometric functions.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.* [F-TF5]

STATISTICS AND PROBABILITY

Using Probability to Make Decisions

Use probability to evaluate outcomes of decisions. (*Include more complex situations.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 8 **Learning Activities:** 0 **Lesson Plans:** 8 **Multimedia:** 0 **Unit Plans:** 0	(+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator). [S-MD6]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0	(+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game). [S-MD7]

Lesson Plans:	2
Multimedia:	0
Unit Plans:	0

Conditional Probability and the Rules of Probability

Understand independence and conditional probability and use them to interpret data. (*Link to data from simulations or experiments.*)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe events as subsets of a sample space (the set of outcomes), using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not"). [S-CP1]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Understand the conditional probability of *A* given *B* as *P*(*A* and *B*)/*P*(*B*), and interpret independence of *A* and *B* as saying that the conditional probability of *A* given *B* is the same as the probability of *A*, and the conditional probability of *B* given *A* is the same as the probability of *B*. [S-CP3]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. [S-CP4] Example: Collect data from a random sample of students in your school on their favorite subject among mathematics, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson** 0	Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. [S-CP5] Example: Compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.

Plans:	
Multimedia: 0	
Unit Plans: 0	

Use the rules of probability to compute probabilities of compound events in a uniform probability model.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Find the conditional probability of *A* given *B* as the fraction of *B*'s outcomes that also belong to *A*, and interpret the answer in terms of the model. [S-CP6]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model. [S-CP7]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Apply the general Multiplication Rule in a uniform probability model, $P(A \text{ and } B) = P(A)P(B\|A) = P(B)P(A\|B)$, and interpret the answer in terms of the model. [S-CP8]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0	(+) Use permutations and combinations to compute probabilities of compound events and solve problems. [S-CP9]

Unit Plans:	0

Discrete Mathematics

NUMBER AND QUANTITY

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Analyze topics from elementary number theory, including perfect numbers and prime numbers, to determine properties of integers. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Determine characteristics of sequences, including the Fibonacci sequence, the triangular numbers, and pentagonal numbers. (Alabama) Example: Write a sequence of the first 10 triangular numbers and hypothesize a formula to find the n^{th} triangular number.
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Use the recursive process and difference equations to create fractals, population growth models, sequences, series, and compound interest models. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Convert between base ten and other bases. (Alabama)

ALGEBRA

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine results of operations upon 3 x 3 and larger matrices, including matrix addition and multiplication of a matrix by a matrix, vector, or scalar. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze determinants and inverses of 2 x 2, 3 x 3, and larger matrices to determine the nature of the solution set of the corresponding system of equations, including solving systems of equations in three variables by echelon row reduction and matrix inverse. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Solve problems through investigation and application of existence and nonexistence of Euler paths, Euler circuits, Hamilton paths, and Hamilton circuits. (Alabama) Example: Show why a 5 x 5 grid has no Hamilton circuit. a. Develop optimal solutions of application-based problems using existing and student-created algorithms. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply algorithms, including Kruskal's and Prim's, relating to minimum weight spanning trees, networks, flows, and Steiner trees. (Alabama) a. Use shortest path techniques to find optimal shipping routes. (Alabama)
Mathematics (2015) Grade(s): 9 - 12	Determine a minimum project time using algorithms to schedule tasks in order, including critical path analysis, the list-processing algorithm, and student-created algorithms. (Alabama)

All Resources:	1
Learning Activities:	0
Lesson Plans:	1
Multimedia:	0
Unit Plans:	0

GEOMETRY

Mathematics (2015) Grade(s): 9 - 12	Use vertex-coloring techniques and matching techniques to solve application-based problems. (Alabama) Example: Use graph-coloring techniques to color a map of the western states of the United States so no adjacent states are the same color, including determining the minimum number of colors needed and why no fewer colors may be used.
All Resources:	1
Learning Activities:	0
Lesson Plans:	1
Multimedia:	0
Unit Plans:	0

Mathematics (2015) Grade(s): 9 - 12	Solve application-based logic problems using Venn diagrams, truth tables, and matrices. (Alabama)
All Resources:	2
Learning Activities:	0
Lesson Plans:	2
Multimedia:	0
Unit Plans:	0

STATISTICS AND PROBABILITY

Mathematics (2015) Grade(s): 9 - 12	Use combinatorial reasoning and counting techniques to solve application-based problems. (Alabama) Example: Determine the probability of a safe opening on the first attempt given the combination uses the digits 2, 4, 6, and 8 with the order unknown. Answer: The probability of the safe opening on the first attempt is $^1/_{24}$.
All Resources:	7
Learning Activities:	0
Lesson Plans:	7
Multimedia:	0
Unit Plans:	0

Mathematics (2015) Grade(s): 9 - 12	Analyze election data to compare election methods and voting apportionment, including determining strength within specific groups. (Alabama)
All	1

Resources:	
Learning Activities:	0
Lesson Plans:	1
Multimedia:	0
Unit Plans:	0

Mathematical Investigations

NUMBER AND QUANTITY

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 1 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Critique ancient numeration systems and applications, including astronomy and the development and use of money and calendars. (Alabama) a. Determine relationships among mathematical achievements of ancient peoples, including the Sumerians, Babylonians, Egyptians, Mesopotamians, Chinese, Aztecs, and Incas. (Alabama) b. Explain origins of the Hindu-Arabic numeration system. (Alabama) Example: Perform addition and subtraction in both the Hindu-Arabic and the Roman numeration systems to compare place value and place holders.
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 9 **Learning Activities:** 0 **Lesson Plans:** 9 **Multimedia:** 0 **Unit Plans:** 0	Analyze mathematical relationships in music to interpret frequencies of musical notes and to compare mathematical structures of various musical instruments. (Alabama) Examples: Compare frequencies of notes exactly one octave apart on the musical scale; using frequencies and wave patterns of middle C, E above middle C, and G above middle C to explain why the C major chord is harmonious. a. Determine lengths of strings necessary to produce harmonic tones as in Pythagorean tuning. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Use special numbers, including *e*, *i*, π and the golden ratio, to solve application-based problems. a. Identify transcendental numbers. (Alabama) Example: Calculate *e* to ten decimal places using a summation with $^1/_{n!}$.
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Explain the development and uses of sets of numbers, including complex, real, rational, irrational, integer, whole, and natural numbers. (Alabama) a. Analyze contributions to the number system by well-known mathematicians, including Archimedes, John Napier, René Descartes, Sir Isaac Newton, Johann Carl Friedrich Gauss, and Julius Wilhelm Richard Dedekind. (Alabama) Example: Plot solutions to the polynomial equation, $x^2 - 6x + 11 = 0$, on the Gaussian plane.

ALGEBRA

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	dentify beginnings of algebraic symbolism and structure through the works of European mathematicians. (Alabama) a. Create a Fibonacci sequence when given two initial integers. (Alabama) b. Investigate Tartaglia's formula for solving cubic equations. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain the development and applications of logarithms, including contributions of John Napier, Henry Briggs, and the Bernoulli family. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Justify the historical significance of the development of multiple perspectives in mathematics. (Alabama) Example: Relate the historical development of multiple perspectives to the works of Sir Isaac Newton and Gottfried Wilhelm von Leibniz in the foundations of calculus. a. Summarize the significance of René Descartes' Cartesian coordinate system. (Alabama) b. Interpret the foundation of analytic geometry with regard to geometric curves and algebraic relationships. (Alabama)

GEOMETRY

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Solve problems from non-Euclidean geometry, including graph theory, networks, topology, and fractals. (Alabama) Examples: Observe the figure to the right to determine if it is traversable, and if it is, describe a path that will traverse it. Verify that two objects are topologically equivalent. Sketch four iterations of Sierpinski's triangle. 
Mathematics	Analyze works of visual art and architecture for mathematical relationships. (Alabama)

(2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	Examples: Use Leonardo da Vinci's *Vitruvian Man* to explore the golden ratio. Identify mathematical patterns in Maurits Cornelis Escher's drawings, including the use of tessellations in art, quilting, paintings, pottery, and architecture. a. Summarize the historical development of perspective in art and architecture. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Determine the mathematical impact of the ancient Greeks, including Archimedes, Eratosthenes, Euclid, Hypatia, Pythagoras, and the Pythagorean Society. (Alabama) Example: Use Euclid's proposition to inscribe a regular hexagon within a circle. a. Construct multiple proofs of the Pythagorean Theorem. (Alabama) b. Solve problems involving figurate numbers, including triangular and pentagonal numbers. (Alabama) Example: Write a sequence of the first 10 triangular numbers and hypothesize a formula for finding the n^{th} triangular number.
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Describe the development of mathematical tools and their applications. (Alabama) Examples: Use knotted ropes for counting; Napier's bones for multiplication; a slide rule for multiplying and calculating values of trigonometric, exponential, and logarithmic functions; and a graphing calculator for analyzing functions graphically and numerically.

STATISTICS AND PROBABILITY

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Summarize the history of probability, including the works of Blaise Pascal; Pierre de Fermat; Abraham de Moivre; and Pierre-Simon, marquis de Laplace. (Alabama) Example: Discuss the impact of probability on gaming, economics, and insurance.

Precalculus

NUMBER AND QUANTITY

The Complex Number System

Represent complex numbers and their operations on the complex plane.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number. [N-CN4]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	+) Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on the complex plane; use properties of this representation for computation. [N-CN5] Example: $(-1 + \sqrt{3}\,i)^3 = 8$ because $(-1 + \sqrt{3}\,i)$ has modulus 2 and argument 120°.
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	+) Calculate the distance between numbers in the complex plane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints. [N-CN6]

Limits

Understand limits of functions.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning** 0	Determine numerically, algebraically, and graphically the limits of functions at specific values and at infinity. (Alabama) a. Apply limits in problems involving convergence and divergence. (Alabama)

Activities:	
Lesson Plans:	4
Multimedia:	0
Unit Plans:	0

Vector and Matrix Quantities

Represent and model with vector quantities.

Mathematics (2015)	+) Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., **v**, |**v**|, ||**v**||, v). [N-VM1]
Grade(s): 9 - 12	
All Resources:	3
Learning Activities:	0
Lesson Plans:	3
Multimedia:	0
Unit Plans:	0

Mathematics (2015)	+) Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point. [N-VM2]
Grade(s): 9 - 12	
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Mathematics (2015)	+) Solve problems involving velocity and other quantities that can be represented by vectors. [N-VM3]
Grade(s): 9 - 12	
All Resources:	4
Learning Activities:	0
Lesson Plans:	4
Multimedia:	0
Unit Plans:	0

Perform operations on vectors.

Mathematics (2015)	+) Add and subtract vectors. [N-VM4]
Grade(s): 9 - 12	a. (+) Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that the magnitude of a sum of two vectors is typically not the sum of the magnitudes. [N-VM4a]
All Resources:	3
Learning	0
	b. (+) Given two vectors in magnitude and direction form, determine the magnitude and

Activities: **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	direction of their sum. [N-VM4b] c. (+) Understand vector subtraction **v** - **w** as **v** + (-**w**), where -**w** is the additive inverse of **w**, with the same magnitude as **w** and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and perform vector subtraction component-wise. [N-VM4c]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	+) Multiply a vector by a scalar. [N-VM5] a. (+) Represent scalar multiplication graphically by scaling vectors and possibly reversing their direction; perform scalar multiplication component-wise, e.g., as $c(v_x, v_y) = (cv_x, cv_y)$. [N-VM5a] b. (+) Compute the magnitude of a scalar multiple c**v** using $\|\|c\mathbf{v}\|\| = \|c\|v$. Compute the direction of c**v** knowing that when $\|c\|v \neq 0$, the direction of c**v** is either along **v** (for $c > 0$) or against **v** (for $c < 0$). [N-VM5b]

Perform operations on matrices and use matrices in applications.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as transformations of vectors. [N-VM11]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Work with 2 x 2 matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area. [N-VM12]

ALGEBRA

Seeing Structure in Expressions

Write expressions in equivalent forms to solve problems.

Mathematics (2015) Grade(s): 9 - 12	Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems.* *(Extend to infinite geometric series.)* [A-SSE4] (Alabama)

All Resources:	0	Example: Calculate mortgage payments.
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	

Arithmetic With Polynomials and Rational Expressions

Use polynomial identities to solve problems.

Mathematics (2015)		(+) Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of x and y for a positive integer n, where x and y are any numbers, with coefficients determined, for example, by Pascal's Triangle. (The Binomial Theorem can be proved by mathematical induction or by a combinatorial argument.) [A-APR5]
Grade(s): 9 - 12		
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	

Reasoning With Equations and Inequalities

Solve systems of equations.

Mathematics (2015)		(+) Represent a system of linear equations as a single matrix equation in a vector variable. [A-REI8]
Grade(s): 9 - 12		
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	

FUNCTIONS

Conic Sections

Understand the graphs and equations of conic sections. (Alabama)

Mathematics (2015)		Create graphs of conic sections, including parabolas, hyperbolas, ellipses, circles, and degenerate conics, from second-degree equations. (Alabama)
Grade(s): 9 - 12		
All Resources:	5	Example: Graph $x^2 - 6x + y^2 - 12y + 41 = 0$ or $y^2 - 4x + 2y + 5 = 0$.
Learning Activities:	0	a. Formulate equations of conic sections from their determining characteristics. (Alabama)
Lesson Plans:	5	Example: Write the equation of an ellipse with center (5, -3), a horizontal major axis of

Multimedia: 0 **Unit Plans:** 0	length 10, and a minor axis of length 4. Answer: $\frac{(x-5)^2}{25}+\frac{(y+3)^2}{4}=1.$

Interpreting Functions

Interpret functions that arise in applications in terms of the context. (*Emphasize selection of appropriate models. Understand limits of functions.*) (Alabama)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 20 **Learning Activities:** 1 **Lesson Plans:** 19 **Multimedia:** 0 **Unit Plans:** 0	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. (*Key features include intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity. Determine odd, even, neither.*)* [F-IF4] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 15 **Learning Activities:** 0 **Lesson Plans:** 15 **Multimedia:** 0 **Unit Plans:** 0	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.* [F-IF6]

Analyze functions using different representations. (*Focus on using key features to guide selection of appropriate type of model function with emphasis on piecewise, step, and absolute value. Also emphasize inverse and transformations of polynomials, rational, radical, absolute value, and trigonometric functions.*) (Alabama)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Graph functions expressed symbolically, and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* [F-IF7] a. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. [F-IF7b] b. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. [F-IF7c] c. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior. [F-IF7d]

	d. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. [F-IF7e]

Building Functions

Build a function that models a relationship between two quantities.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Compose functions. [F-BF1c] Example: If $T(y)$ is the temperature in the atmosphere as a function of height, and $h(t)$ is the height of a weather balloon as a function of time, then $T(h(t))$ is the temperature at the location of the weather balloon as a function of time.

Build new functions from existing functions.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine the inverse of a function and a relation. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Verify by composition that one function is the inverse of another. [F-BF4b]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0	(+) Read values of an inverse function from a graph or a table, given that the function has an inverse. [F-BF4c]

Multimedia: 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Produce an invertible function from a non-invertible function by restricting the domain. [F-BF4d]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Understand the inverse relationship between exponents and logarithms, and use this relationship to solve problems involving logarithms and exponents. [F-BF5]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Compare effects of parameter changes on graphs of transcendental functions. (Alabama) Example: Explain the relationship of the graph $y = e^{x-2}$ to the graph $y = e^{x}$.

Trigonometric Functions

Recognize attributes of trigonometric functions and solve problems involving trigonometry. (Alabama)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0	Determine the amplitude, period, phase shift, domain, and range of trigonometric functions and their inverses. (Alabama)

Unit Plans: 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use the sum, difference, and half-angle identities to find the exact value of a trigonometric function. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Utilize parametric equations by graphing and by converting to rectangular form. (Alabama) a. Solve application-based problems involving parametric equations. (Alabama) b. Solve applied problems that include sequences with recurrence relations. (Alabama)

Extend the domain of trigonometric functions using the unit circle.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Use special triangles to determine geometrically the values of sine, cosine, and tangent for $\pi/3$, $\pi/4$, and $\pi/6$, and use the unit circle to express the values of sine, cosine, and tangent for $\pi - x$, $\pi + x$, and $2\pi - x$ in terms of their values for x, where x is any real number. [F-TF3]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions. [F-TF4]

Model periodic phenomena with trigonometric functions.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed. [F-TF6]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.* [F-TF7]

Prove and apply trigonometric identities.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$, and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant of the angle. [F-TF8] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Prove the addition and subtraction formulas for sine, cosine, and tangent, and use them to solve problems. [F-TF9]

Apply trigonometry to general triangles.

GEOMETRY

Similarity, Right Triangles, and Trigonometry

Apply trigonometry to general triangles.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Derive the formula $A = (^1/_2)ab\sin(C)$ for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side. (*Apply formulas previously derived in Geometry.*) [G-SRT9] (Alabama)

Expressing Geometric Properties With Equations

Translate between the geometric description and the equation for a conic section.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Derive the equations of a parabola given a focus and directrix. [G-GPE2]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Derive the equations of ellipses and hyperbolas given the foci, using the fact that the sum or difference of distances from the foci is constant. [G-GPE3]

Explain volume formulas and use them to solve problems.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0	(+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures. [G-GMD2]

Multimedia: 0 **Unit Plans:** 0	

STATISITCS AND PROBABILITY

Interpreting Categorical and Quantitative Data

Summarize, represent, and interpret data on a single count or measurement variable.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets. (*Focus on increasing rigor using standard deviation*). [S-ID2] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers). (*Identify unifrom, skewed, and normal distridutions in a set of data. Determine the quartiles and interquartile range for a set of data.*) [S-ID3] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve. [S-ID4]

Interpret linear models.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 11 **Learning Activities:** 0	Compute (using technology) and interpret the correlation coefficient of a linear fit. [S-ID8]

Lesson Plans: 11 **Multimedia:** 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Distinguish between coorelation and causation. [S-ID9]

Making Inferences and Justifying Conclusions

Understand and evaluate random processes underlying statistical experiments.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 13 **Learning Activities:** 0 **Lesson Plans:** 13 **Multimedia:** 0 **Unit Plans:** 0	Understand statistics as a process for making inferences about population parameters based on a random sample from that population. [S-IC1]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 9 **Learning Activities:** 0 **Lesson Plans:** 9 **Multimedia:** 0 **Unit Plans:** 0	Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. [S-IC2] Example: A model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model'

Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 11 **Learning** 0	Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each. [S-IC3]

Activities: **Lesson Plans:** 11 **Multimedia:** 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling. [S-IC4]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant. [S-IC5]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Evaluate reports based on data. [S-IC6]

Use probability to evaluate outcomes of decisions.

Calculate expected values and use them to sove problems.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson** 6	(+) Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions. [S-MD1]

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	(+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution. [S-MD2]
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. [S-MD3] Example: Find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. [S-MD4] Example: Find a current data distribution on the number of television sets per household in the United States, and calculate the expected number of sets per household. How many television sets would you expect to find in 100 randomly selected households'

Use probability to evaluate outcomes of decisions.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values. [S-MD5] a. Find the expected payoff for a game of chance. [S-MD5a] Examples: Find the expected winnings from a state lottery ticket or a game at a fast-food restaurant. b. Evaluate and compare strategies on the basis of expected values. [S-MD5b] Example: Compare a high-deductible versus a low-deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.

Analytical Mathematics

NUMBER AND QUANTITY

Vector and Matrix Quantities

Represent and model with vector quantities.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	+) Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., **v**, | **v** |, | |**v**| |), including the use of eigen-values and eigen-vectors. [N-VM1] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	+) Solve problems involving velocity and other quantities that can be represented by vectors, including navigation (e.g., airplane, aerospace, oceanic). [N-VM3] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	+) Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that the magnitude of a sum of two vectors is typically not the sum of the magnitudes. Find the dot product and the cross product of vectors. [N-VM4a] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2	+) Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum, including vectors in complex vector spaces. [N-VM4b] (Alabama)

Multimedia: 0 **Unit Plans:** 0	
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	+) Understand vector subtraction **v** - **w** as **v** + (-**w**), where (-**w**) is the additive inverse of **w**, with the same magnitude as **w** and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and perform vector subtraction component-wise, including vectors in complex vector spaces. [N-VM4c] (Alabama)

Perform operations on matrices and use matrices in applications.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network, including linear programming. [N-VM6] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	+) Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled, including rotation matrices. [N-VM7] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse. Solve matrix equations using augmented matrices. [N-VM10] (Alabama)
Mathematics	+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable

(2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dimensions to produce another vector. Work with matrices as transformations of vectors, including matrices larger than 2 x 2. [N-VM11] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	(+) Work with 2 x 2 matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area. Solve matrix application problems using reduced row echelon form. [N-VM12] (Alabama)

Complex Numbers

Use complex numbers in polynomial identities and equations.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	(+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials. Understand the importance of using complex numbers in graphing functions on the Cartesian or complex plane. [N-CN9] (Alabama)

Limits

Understand limits of functions. (Alabama)

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Calculate the limit of a sequence, of a function, and of an infinite series. (Alabama)

ALGEBRA

Seeing Structure in Expressions

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use the laws of Boolean Algebra to describe true/false circuits. Simplify Boolean expressions using the relationships between conjunction, disjunction, and negation operations. (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use logic symbols to write truth tables. (Alabama)

Arithmetic With Polynomials and Rational Functions

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Reduce the degree of either the numerator or denominator of a rational function by using partial fraction decomposition or partial fraction expansion. (Alabama)

FUNCTIONS

Trigonometric Functions

Extend the domain of trigonometric functions using the unit circle.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0	(+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions. [F-TF4].

Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Apply trigonometry to general triangles.

Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	(+) Prove the Law of Sines and the Law of Cosines and use them to solve problems. Understand Law of Sines = 2*r*, where *r* is the radius of the circumscribed circle of the triangle. Apply the Law of Tangents. [G-SRT10] (Alabama)
Mathematics (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply Euler's and deMoivre's formulas as links between complex numbers and trigonometry. (Alabama)

Science Grade 7

From Molecules to Organisms: Structures and Processes

Science (2015) Grade(s): 7 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Engage in argument from evidence to support claims of the cell theory.
Science (2015) Grade(s): 7 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 1 **Unit Plans:** 0	Gather and synthesize information to explain how prokaryotic and eukaryotic cells differ in structure and function, including the methods of asexual and sexual reproduction.
Science (2015) Grade(s): 7 **All Resources:** 6 **Learning Activities:** 2 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Construct an explanation of the function (e.g., mitochondria releasing energy during cellular respiration) of specific cell structures (i.e., nucleus, cell membrane, cell wall, ribosomes, mitochondria, chloroplasts, and vacuoles) for maintaining a stable environment.
Science (2015) Grade(s): 7 **All Resources:** 7 **Learning Activities:** 3 **Lesson Plans:** 3 **Multimedia:** 1 **Unit Plans:** 0	Construct models and representations of organ systems (e.g., circulatory, digestive, respiratory, muscular, skeletal, nervous) to demonstrate how multiple interacting organs and systems work together to accomplish specific functions.

Ecosystems: Interactions, Energy, and Dynamics

Science (2015) Grade(s): 7	Examine the cycling of matter between abiotic and biotic parts of ecosystems to explain the flow of energy and the conservation of matter.

All Resources: 3 **Learning Activities:** 1 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	a. Obtain, evaluate, and communicate information about how food is broken down through chemical reactions to create new molecules that support growth and/or release energy as it moves through an organism. b. Generate a scientific explanation based on evidence for the role of photosynthesis and cellular respiration in the cycling of matter and flow of energy into and out of organisms.
Science (2015) Grade(s): 7 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Analyze and interpret data to provide evidence regarding how resource availability impacts individual organisms as well as populations of organisms within an ecosystem.
Science (2015) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Use empirical evidence from patterns and data to demonstrate how changes to physical or biological components of an ecosystem (e.g., deforestation, succession, drought, fire, disease, human activities, invasive species) can lead to shifts in populations.
Science (2015) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Construct an explanation to predict patterns of interactions in different ecosystems in terms of the relationships between and among organisms (e.g., competition, predation, mutualism, commensalism, parasitism).
Science (2015) Grade(s): 7 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Engage in argument to defend the effectiveness of a design solution that maintains biodiversity and ecosystem services (e.g., using scientific, economic, and social considerations regarding purifying water, recycling nutrients, preventing soil erosion).
Science (2015)	Use evidence and scientific reasoning to explain how characteristic animal behaviors

Grade(s): 7 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	(e.g., building nests to protect young from cold, herding to protect young from predators, attracting mates for breeding by producing special sounds and displaying colorful plumage, transferring pollen or seeds to create conditions for seed germination and growth) and specialized plant structures (e.g., flower brightness, nectar, and odor attracting birds that transfer pollen; hard outer shells on seeds providing protection prior to germination) affect the probability of successful reproduction of both animals and plants.
Science (2015) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Analyze and interpret data to predict how environmental conditions (e.g., weather, availability of nutrients, location) and genetic factors (e.g., selective breeding of cattle or crops) influence the growth of organisms (e.g., drought decreasing plant growth, adequate supply of nutrients for maintaining normal plant growth, identical plant seeds growing at different rates in different weather conditions, fish growing larger in large ponds than in small ponds).

Heredity: Inheritance and Variation of Traits

Science (2015) Grade(s): 7 **All Resources:** 7 **Learning Activities:** 1 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Construct and use models (e.g., monohybrid crosses using Punnett squares, diagrams, simulations) to explain that genetic variations between parent and offspring (e.g., different alleles, mutations) occur as a result of genetic differences in randomly inherited genes located on chromosomes and that additional variations may arise from alteration of genetic information.
Science (2015) Grade(s): 7 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Construct an explanation from evidence to describe how genetic mutations result in harmful, beneficial, or neutral effects to the structure and function of an organism.
Science (2015) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1	Gather and synthesize information regarding the impact of technologies (e.g., hand pollination, selective breeding, genetic engineering, genetic modification, gene therapy) on the inheritance and/or appearance of desired traits in organisms.

Multimedia:	0
Unit Plans:	0

Unity and Diversity

Science (2015) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Analyze and interpret data for patterns of change in anatomical structures of organisms using the fossil record and the chronological order of fossil appearance in rock layers.
Science (2015) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Construct an explanation based on evidence (e.g., cladogram, phylogenetic tree) for the anatomical similarities and differences among modern organisms and between modern and fossil organisms, including living fossils (e.g., alligator, horseshoe crab, nautilus, coelacanth).
Science (2015) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Obtain and evaluate pictorial data to compare patterns in the embryological development across multiple species to identify relationships not evident in the adult anatomy.
Science (2015) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Construct an explanation from evidence that natural selection acting over generations may lead to the predominance of certain traits that support successful survival and reproduction of a population and to the suppression of other traits.

Science Grade 8

Back

Matter and Its Interactions

Science (2015) Grade(s): 8 **All Resources:** 5 **Learning Activities:** 3 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Analyze patterns within the periodic table to construct models (e.g., molecular-level models, including drawings; computer representations) that illustrate the structure, composition, and characteristics of atoms and molecules.
Science (2015) Grade(s): 8 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Plan and carry out investigations to generate evidence supporting the claim that one pure substance can be distinguished from another based on characteristic properties.
Science (2015) Grade(s): 8 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Construct explanations based on evidence from investigations to differentiate among compounds, mixtures, and solutions. a. Collect and analyze information to illustrate how synthetic materials (e.g., medicine, food additives, alternative fuels, plastics) are derived from natural resources and how they impact society.
Science (2015) Grade(s): 8 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Design and conduct an experiment to determine changes in particle motion, temperature, and state of a pure substance when thermal energy is added to or removed from a system.
Science (2015) Grade(s): 8	Observe and analyze characteristic properties of substances (e.g., odor, density, solubility, flammability, melting point, boiling point) before and after the substances combine to

All Resources: 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	determine if a chemical reaction has occurred.
Science (2015) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Create a model, diagram, or digital simulation to describe conservation of mass in a chemical reaction and explain the resulting differences between products and reactants.
Science (2015) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Design, construct, and test a device (e.g., glow stick, hand warmer, hot or cold pack, thermal wrap) that either releases or absorbs thermal energy by chemical reactions (e.g., dissolving ammonium chloride or calcium chloride in water) and modify the device as needed based on criteria (e.g., amount/concentration, time, temperature).*

Motion and Stability: Forces and Interactions

Science (2015) Grade(s): 8 **All Resources:** 6 **Learning Activities:** 1 **Lesson Plans:** 3 **Multimedia:** 2 **Unit Plans:** 0	Use Newton's first law to demonstrate and explain that an object is either at rest or moves at a constant velocity unless acted upon by an external force (e.g., model car on a table remaining at rest until pushed).
Science (2015) Grade(s): 8 **All Resources:** 9 **Learning Activities:** 2 **Lesson Plans:** 5 **Multimedia:** 2	Use Newton's second law to demonstrate and explain how changes in an object's motion depend on the sum of the external forces on the object and the mass of the object (e.g., billiard balls moving when hit with a cue stick).

Unit Plans: 0	
Science (2015) Grade(s): 8 **All Resources:** 7 **Learning Activities:** 1 **Lesson Plans:** 4 **Multimedia:** 2 **Unit Plans:** 0	Use Newton's third law to design a model to demonstrate and explain the resulting motion of two colliding objects (e.g., two cars bumping into each other, a hammer hitting a nail).*
Science (2015) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Plan and carry out investigations to evaluate how various factors (e.g., electric force produced between two charged objects at various positions; magnetic force produced by an electromagnet with varying number of wire turns, varying number or size of dry cells, and varying size of iron core) affect the strength of electric and magnetic forces.
Science (2015) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Construct an argument from evidence explaining that fields exist between objects exerting forces on each other (e.g., interactions of magnets, electrically charged strips of tape, electrically charged pith balls, gravitational pull of the moon creating tides) even when the objects are not in contact.

Energy

Science (2015) Grade(s): 8 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Create and analyze graphical displays of data to illustrate the relationships of kinetic energy to the mass and speed of an object (e.g., riding a bicycle at different speeds, hitting a table tennis ball versus a golf ball, rolling similar toy cars with different masses down an incline).
Science (2015) Grade(s): 8 **All Resources:** 2 **Learning Activities:** 1	Use models to construct an explanation of how a system of objects may contain varying types and amounts of potential energy (e.g., observing the movement of a roller coaster cart at various inclines, changing the tension in a rubber band, varying the number of batteries connected in a series, observing a balloon with static electrical charge being brought closer to a classmate's hair).

Lesson Plans: 1 **Multimedia:** 0 **Unit Plans:** 0	
Science (2015) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze and interpret data from experiments to determine how various factors affect energy transfer as measured by temperature (e.g., comparing final water temperatures after different masses of ice melt in the same volume of water with the same initial temperature, observing the temperature change of samples of different materials with the same mass and the same material with different masses when adding a specific amount of energy).
Science (2015) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply the law of conservation of energy to develop arguments supporting the claim that when the kinetic energy of an object changes, energy is transferred to or from the object (e.g., bowling ball hitting pins, brakes being applied to a car).

Waves and Their Applications in Technologies for Information Transfer

Science (2015) Grade(s): 8 **All Resources:** 2 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Create and manipulate a model of a simple wave to predict and describe the relationships between wave properties (e.g., frequency, amplitude, wavelength) and energy. a. Analyze and interpret data to illustrate an electromagnetic spectrum.
Science (2015) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use models to demonstrate how light and sound waves differ in how they are absorbed, reflected, and transmitted through different types of media.
Science (2015)	Integrate qualitative information to explain that common communication devices (e.g.,

Grade(s): 8		cellular telephones, radios, remote controls, Wi-Fi components, global positioning systems [GPS], wireless technology components) use electromagnetic waves to encode and transmit information.
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	

Biology

From Molecules to Organisms: Structures and Processes

Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Use models to compare and contrast how the structural characteristics of carbohydrates, nucleic acids, proteins, and lipids define their function in organisms.
Science (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 3 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Obtain, evaluate, and communicate information to describe the function and diversity of organelles and structures in various types of cells (e.g., muscle cells having a large amount of mitochondria, plasmids in bacteria, chloroplasts in plant cells).
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Formulate an evidence-based explanation regarding how the composition of deoxyribonucleic acid (DNA) determines the structural organization of proteins. a. Obtain and evaluate experiments of major scientists and communicate their contributions to the development of the structure of DNA and to the development of the central dogma of molecular biology. b. Obtain, evaluate, and communicate information that explains how advancements in genetic technology (e.g., Human Genome Project, Encyclopedia of DNA Elements [ENCODE] project, 1000 Genomes Project) have contributed to the understanding as to how a genetic change at the DNA level may affect proteins and, in turn, influence the appearance of traits. c. Obtain information to identify errors that occur during DNA replication (e.g., deletion, insertion, translocation, substitution, inversion, frame-shift, point mutations).
Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0	Develop and use models to explain the role of the cell cycle during growth and maintenance in multicellular organisms (e.g., normal growth and/or uncontrolled growth resulting in tumors).

Unit Plans: 0	
Science (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 2 **Unit Plans:** 0	Plan and carry out investigations to explain feedback mechanisms (e.g., sweating and shivering) and cellular processes (e.g., active and passive transport) that maintain homeostasis. a. Plan and carry out investigations to explain how the unique properties of water (e.g., polarity, cohesion, adhesion) are vital to maintaining homeostasis in organisms.
Science (2015) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 3 **Lesson Plans:** 3 **Multimedia:** 1 **Unit Plans:** 0	Analyze and interpret data from investigations to explain the role of products and reactants of photosynthesis and cellular respiration in the cycling of matter and the flow of energy. a. Plan and carry out investigations to explain the interactions among pigments, absorption of light, and reflection of light.

Ecosystems: Interactions, Energy, and Dynamics

Science (2015) Grade(s): 9 - 12 **All Resources:** 8 **Learning Activities:** 2 **Lesson Plans:** 4 **Multimedia:** 2 **Unit Plans:** 0	Develop and use models to illustrate examples of ecological hierarchy levels, including biosphere, biome, ecosystem, community, population, and organism.
Science (2015) Grade(s): 9 - 12 **All Resources:** 13 **Learning Activities:** 0 **Lesson Plans:** 10 **Multimedia:** 3 **Unit Plans:** 0	Develop and use models to describe the cycling of matter (e.g., carbon, nitrogen, water) and flow of energy (e.g., food chains, food webs, biomass pyramids, ten percent law) between abiotic and biotic factors in ecosystems.
Science (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 1	Use mathematical comparisons and visual representations to support or refute explanations of factors that affect population growth (e.g., exponential, linear, logistic).

Lesson Plans:	3
Multimedia:	2
Unit Plans:	0

Science (2015) Grade(s): 9 - 12	Construct an explanation and design a real-world solution to address changing conditions and ecological succession caused by density-dependent and/or density-independent factors.*
All Resources:	7
Learning Activities:	1
Lesson Plans:	4
Multimedia:	2
Unit Plans:	0

Heredity: Inheritance and Variation of Traits

Science (2015) Grade(s): 9 - 12	Analyze and interpret data collected from probability calculations to explain the variation of expressed traits within a population. a. Use mathematics and computation to predict phenotypic and genotypic ratios and percentages by constructing Punnett squares, including using both homozygous and heterozygous allele pairs. b. Develop and use models to demonstrate codominance, incomplete dominance, and Mendel's laws of segregation and independent assortment. c. Analyze and interpret data (e.g., pedigree charts, family and population studies) regarding Mendelian and complex genetic disorders (e.g., sickle-cell anemia, cystic fibrosis, type 2 diabetes) to determine patterns of genetic inheritance and disease risks from both genetic and environmental factors.
All Resources:	4
Learning Activities:	1
Lesson Plans:	3
Multimedia:	0
Unit Plans:	0

Science (2015) Grade(s): 9 - 12	Develop and use a model to analyze the structure of chromosomes and how new genetic combinations occur through the process of meiosis. a. Analyze data to draw conclusions about genetic disorders caused by errors in meiosis (e.g., Down syndrome, Turner syndrome).
All Resources:	2
Learning Activities:	1
Lesson Plans:	1
Multimedia:	0
Unit Plans:	0

Unity and Diversity

Science (2015) Grade(s): 9 - 12	Obtain, evaluate, and communicate information to explain how organisms are classified by physical characteristics, organized into levels of taxonomy, and identified by binomial nomenclature (e.g., taxonomic classification, dichotomous keys). a. Engage in argument to justify the grouping of viruses in a category separate from living things.
All Resources:	26
Learning Activities:	8
Lesson	12

Plans: **Multimedia:** 6 **Unit Plans:** 0	
Science (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Analyze and interpret data to evaluate adaptations resulting from natural and artificial selection that may cause changes in populations over time (e.g., antibiotic-resistant bacteria, beak types, peppered moths, pest-resistant crops).
Science (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Engage in argument from evidence (e.g., mathematical models such as distribution graphs) to explain how the diversity of organisms is affected by overpopulation of species, variation due to genetic mutations, and competition for limited resources.
Science (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze scientific evidence (e.g., DNA, fossil records, cladograms, biogeography) to support hypotheses of common ancestry and biological evolution.

Chemistry

Matter and Its Interactions

Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Obtain and communicate information from historical experiments (e.g., work by Mendeleev and Moseley, Rutherford's gold foil experiment, Thomson's cathode ray experiment, Millikan's oil drop experiment, Bohr's interpretation of bright line spectra) to determine the structure and function of an atom and to analyze the patterns represented in the periodic table.
Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Develop and use models of atomic nuclei to explain why the abundance-weighted average of isotopes of an element yields the published atomic mass.
Science (2015) Grade(s): 9 - 12 **All Resources:** 13 **Learning Activities:** 3 **Lesson Plans:** 9 **Multimedia:** 1 **Unit Plans:** 0	Use the periodic table as a systematic representation to predict properties of elements based on their valence electron arrangement. a. Analyze data such as physical properties to explain periodic trends of the elements, including metal/nonmetal/metalloid behavior, electrical/heat conductivity, electronegativity and electron affinity, ionization energy, and atomic-covalent/ionic radii, and how they relate to position in the periodic table. b. Develop and use models (e.g., Lewis dot, 3-D ball-and-stick, space-filling, valence-shell electron-pair repulsion [VSEPR]) to predict the type of bonding and shape of simple compounds. c. Use the periodic table as a model to derive formulas and names of ionic and covalent compounds.
Science (2015) Grade(s): 9 - 12 **All Resources:** 8 **Learning Activities:** 0 **Lesson Plans:** 7 **Multimedia:** 1 **Unit Plans:** 0	Plan and conduct an investigation to classify properties of matter as intensive (e.g., density, viscosity, specific heat, melting point, boiling point) or extensive (e.g., mass, volume, heat) and demonstrate how intensive properties can be used to identify a compound.

Science (2015) Grade(s): 9 - 12 **All Resources:** 13 **Learning Activities:** 4 **Lesson Plans:** 7 **Multimedia:** 2 **Unit Plans:** 0	Plan and conduct investigations to demonstrate different types of simple chemical reactions based on valence electron arrangements of the reactants and determine the quantity of products and reactants. a. Use mathematics and computational thinking to represent the ratio of reactants and products in terms of masses, molecules, and moles. b. Use mathematics and computational thinking to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.
Science (2015) Grade(s): 9 - 12 **All Resources:** 9 **Learning Activities:** 0 **Lesson Plans:** 8 **Multimedia:** 1 **Unit Plans:** 0	Use mathematics and computational thinking to express the concentrations of solutions quantitatively using molarity. a. Develop and use models to explain how solutes are dissolved in solvents. b. Analyze and interpret data to explain effects of temperature on the solubility of solid, liquid, and gaseous solutes in a solvent and the effects of pressure on the solubility of gaseous solutes. c. Design and conduct experiments to test the conductivity of common ionic and covalent substances in a solution. d. Use the concept of pH as a model to predict the relative properties of strong, weak, concentrated, and dilute acids and bases (e.g., Arrhenius and Brønsted-Lowry acids and bases).
Science (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Plan and carry out investigations to explain the behavior of ideal gases in terms of pressure, volume, temperature, and number of particles. a. Use mathematics to describe the relationships among pressure, temperature, and volume of an enclosed gas when only the amount of gas is constant. b. Use mathematical and computational thinking based on the ideal gas law to determine molar quantities.
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Refine the design of a given chemical system to illustrate how LeChâtelier's principle affects a dynamic chemical equilibrium when subjected to an outside stress (e.g., heating and cooling a saturated sugar- water solution).*

Motion and Stability: Forces and Interactions

Science (2015) Grade(s): 9 - 12	Analyze and interpret data (e.g., melting point, boiling point, solubility, phase-change diagrams) to compare the strength of intermolecular forces and how these forces affect

All Resources: 6 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 2 **Unit Plans:** 0	physical properties and changes.

Energy

Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Plan and conduct experiments that demonstrate how changes in a system (e.g., phase changes, pressure of a gas) validate the kinetic molecular theory. a. Develop a model to explain the relationship between the average kinetic energy of the particles in a substance and the temperature of the substance (e.g., no kinetic energy equaling absolute zero [0K or -273.15°C]).
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Construct an explanation that describes how the release or absorption of energy from a system depends upon changes in the components of the system. a. Develop a model to illustrate how the changes in total bond energy determine whether a chemical reaction is endothermic or exothermic. b. Plan and conduct an investigation that demonstrates the transfer of thermal energy in a closed system (e.g., using heat capacities of two components of differing temperatures).

Earth and Space Science

Earth's Place in the Universe

Science (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 2 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	Develop and use models to illustrate the lifespan of the sun, including energy released during nuclear fusion that eventually reaches Earth through radiation.
Science (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 3 **Unit Plans:** 0	Engage in argument from evidence to compare various theories for the formation and changing nature of the universe and our solar system (e.g., Big Bang Theory, Hubble's law, steady state theory, light spectra, motion of distant galaxies, composition of matter in the universe).
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 1 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Evaluate and communicate scientific information (e.g., Hertzsprung-Russell diagram) in reference to the life cycle of stars using data of both atomic emission and absorption spectra of stars to make inferences about the presence of certain elements.
Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Apply mathematics and computational thinking in reference to Kepler's laws, Newton's laws of motion, and Newton's gravitational laws to predict the orbital motion of natural and man-made objects in the solar system.
Science (2015) Grade(s): 9 - 12 **All Resources:** 0	Use mathematics to explain the relationship of the seasons to the tilt of Earth's axis (e.g., zenith angle, solar angle, surface area) and its revolution about the sun, addressing intensity and distribution of sunlight on Earth's surface.

Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Science (2015) Grade(s): 9 - 12	Obtain and evaluate information about Copernicus, Galileo, Kepler, Newton, and Einstein to communicate how their findings challenged conventional thinking and allowed for academic advancements and space exploration.
All Resources:	15
Learning Activities:	0
Lesson Plans:	1
Multimedia:	14
Unit Plans:	0

Earth's Systems

Science (2015) Grade(s): 9 - 12	Analyze and interpret evidence regarding the theory of plate tectonics, including geologic activity along plate boundaries and magnetic patterns in undersea rocks, to explain the ages and movements of continental and oceanic crusts.
All Resources:	2
Learning Activities:	0
Lesson Plans:	1
Multimedia:	1
Unit Plans:	0

Science (2015) Grade(s): 9 - 12	Develop a time scale model of Earth's biological and geological history to establish relative and absolute age of major events in Earth's history (e.g., radiometric dating, models of geologic cross sections, sedimentary layering, fossilization, early life forms, folding, faulting, igneous intrusions).
All Resources:	1
Learning Activities:	0
Lesson Plans:	1
Multimedia:	0
Unit Plans:	0

Science (2015) Grade(s): 9 - 12	Obtain, evaluate, and communicate information to explain how constructive and destructive processes (e.g., weathering, erosion, volcanism, orogeny, plate tectonics, tectonic uplift) shape Earth's land features (e.g., mountains, valleys, plateaus) and sea features (e.g., trenches, ridges, seamounts).
All Resources:	5
Learning Activities:	0
Lesson Plans:	2
Multimedia:	3
Unit Plans:	0

Science (2015)	Construct an explanation from evidence for the processes that generate the

Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 3 **Unit Plans:** 0	transformation of rocks in Earth's crust, including chemical composition of minerals and characteristics of sedimentary, igneous, and metamorphic rocks.
Science (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 2 **Unit Plans:** 0	Obtain and communicate information about significant geologic characteristics (e.g., types of rocks and geologic ages, earthquake zones, sinkholes, caves, abundant fossil fauna, mineral and energy resources) that impact life in Alabama and the southeastern United States.
Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Develop a model of Earth's layers using available evidence to explain the role of thermal convection in the movement of Earth's materials (e.g., seismic waves, movement of tectonic plates).
Science (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 2 **Unit Plans:** 0	Analyze and interpret data of interactions between the hydrologic and rock cycles to explain the mechanical impacts (e.g., stream transportation and deposition, erosion, frost-wedging) and chemical impacts (e.g., oxidation, hydrolysis, carbonation) of Earth materials by water's properties.
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Construct explanations from evidence to describe how changes in the flow of energy through Earth's systems (e.g., volcanic eruptions, solar output, ocean circulation, surface temperatures, precipitation patterns, glacial ice volumes, sea levels, Coriolis effect) impact the climate.

Science (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	Obtain, evaluate, and communicate information to verify that weather (e.g., temperature, relative humidity, air pressure, dew point, adiabatic cooling, condensation, precipitation, winds, ocean currents, barometric pressure, wind velocity) is influenced by energy transfer within and among the atmosphere, lithosphere, biosphere, and hydrosphere. a. Analyze patterns in weather data to predict various systems, including fronts and severe storms. b. Use maps and other visualizations to analyze large data sets that illustrate the frequency, magnitude, and resulting damage from severe weather events in order to predict the likelihood and severity of future events.

Environmental Science

Earth and Human Activity

Science (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 1 **Lesson Plans:** 2 **Multimedia:** 2 **Unit Plans:** 0	nvestigate and analyze the use of nonrenewable energy sources (e.g., fossil fuels, nuclear, natural gas) and renewable energy sources (e.g., solar, wind, hydroelectric, geothermal) and propose solutions for their impact on the environment.
Science (2015) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 2 **Lesson Plans:** 3 **Multimedia:** 1 **Unit Plans:** 0	Use models to illustrate and communicate the role of photosynthesis and cellular respiration as carbon cycles through the biosphere, atmosphere, hydrosphere, and geosphere.
Science (2015) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 3 **Unit Plans:** 0	Use mathematics and graphic models to compare factors affecting biodiversity and populations in ecosystems.
Science (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 2 **Unit Plans:** 0	Engage in argument from evidence to evaluate how biological or physical changes within ecosystems (e.g., ecological succession, seasonal flooding, volcanic eruptions) affect the number and types of organisms, and that changing conditions may result in a new or altered ecosystem.
Science (2015) Grade(s): 9 - 12 **All Resources:** 0	Engage in argument from evidence to compare how individual versus group behavior (e.g., flocking; cooperative behaviors such as hunting, migrating, and swarming) may affect a species' chance to survive and reproduce over time.

Learning Activities: 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Science (2015) Grade(s): 9 - 12 **All Resources:** 8 **Learning Activities:** 1 **Lesson Plans:** 6 **Multimedia:** 1 **Unit Plans:** 0	Obtain, evaluate, and communicate information to describe how human activity may affect biodiversity and genetic variation of organisms, including threatened and endangered species.
Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Analyze and interpret data to investigate how a single change on Earth's surface may cause changes to other Earth systems (e.g., loss of ground vegetation causing an increase in water runoff and soil erosion).
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Engage in an evidence-based argument to explain how over time Earth's systems affect the biosphere and the biosphere affects Earth's systems (e.g., microbial life increasing the formation of soil; corals creating reefs that alter patterns of erosion and deposition along coastlines).
Science (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 4 **Unit Plans:** 0	Develop and use models to trace the flow of water, nitrogen, and phosphorus through the hydrosphere, atmosphere, geosphere, and biosphere.
Science (2015) Grade(s): 9 - 12	Design solutions for protection of natural water resources (e.g., bioassessment, methods of water treatment and conservation) considering properties, uses, and pollutants (e.g., eutrophication, industrial effluents, agricultural runoffs, point and nonpoint pollution

All Resources: 5 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 2 **Unit Plans:** 0	resources).*
Science (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 4 **Unit Plans:** 0	Engage in argument from evidence to defend how coastal, marine, and freshwater sources (e.g., estuaries, marshes, tidal pools, wetlands, beaches, inlets, rivers, lakes, oceans, coral reefs) support biodiversity, economic stability, and human recreation.
Science (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze and interpret data and climate models to predict how global or regional climate change can affect Earth's systems (e.g., precipitation and temperature and their associated impacts on sea level, glacial ice volumes, and atmosphere and ocean composition).
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 0	Obtain, evaluate, and communicate information based on evidence to explain how key natural resources (e.g., water sources, fertile soils, concentrations of minerals and fossil fuels), natural hazards, and climate changes influence human activity (e.g., mass migrations).
Science (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 2 **Unit Plans:** 0	Analyze cost-benefit ratios of competing solutions for developing, conserving, managing, recycling, and reusing energy and mineral resources to minimize impacts in natural systems (e.g., determining best practices for agricultural soil use, mining for coal, and exploring for petroleum and natural gas sources).*
Science (2015)	Construct an explanation based on evidence to determine the relationships among

Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	management of natural resources, human sustainability, and biodiversity (e.g., resources, waste management, per capita consumption, agricultural efficiency, urban planning).
Science (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	Obtain and evaluate information from published results of scientific computational models to illustrate the relationships among Earth's systems and how these relationships may be impacted by human activity (e.g., effects of an increase in atmospheric carbon dioxide on photosynthetic biomass, effect of ocean acidification on marine populations).
Science (2015) Grade(s): 9 - 12 **All Resources:** 15 **Learning Activities:** 8 **Lesson Plans:** 1 **Multimedia:** 6 **Unit Plans:** 0	Obtain, evaluate, and communicate geological and biological information to determine the types of organisms that live in major biomes. a. Analyze and interpret data collected through geographic research and field investigations (e.g., relief, topographic, and physiographic maps; rivers; forest types; watersheds) to describe the biodiversity by region for the state of Alabama (e.g., terrestrial, freshwater, marine, endangered, invasive).

Human Anatomy and Physiology

From Molecules to Organisms: Structures and Processes

Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Develop and use models and appropriate terminology to identify regions, directions, planes, and cavities in the human body to locate organs and systems.
Science (2015) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 4 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	Analyze characteristics of tissue types (e.g., epithelial tissue) and construct an explanation of how the chemical and structural organizations of the cells that form these tissues are specialized to conduct the function of that tissue (e.g., lining, protecting).
Science (2015) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 3 **Lesson Plans:** 2 **Multimedia:** 2 **Unit Plans:** 0	Obtain and communicate information to explain the integumentary system's structure and function, including layers and accessories of skin and types of membranes. a. Analyze the effects of pathological conditions (e.g., burns, skin cancer, bacterial and viral infections, chemical dermatitis) to determine the body's attempt to maintain homeostasis.
Science (2015) Grade(s): 9 - 12 **All Resources:** 8 **Learning Activities:** 3 **Lesson Plans:** 2 **Multimedia:** 3 **Unit Plans:** 0	Use models to identify the structure and function of the skeletal system (e.g., classification of bones by shape, classification of joints and the appendicular and axial skeletons). a. Obtain and communicate information to demonstrate understanding of the growth and development of the skeletal system (e.g., bone growth and remodeling). b. Obtain and communicate information to demonstrate understanding of the pathology of the skeletal system (e.g., types of bone fractures and their treatment, osteoporosis, rickets, other bone diseases).
Science (2015) Grade(s): 9 - 12 **All Resources:** 7	Develop and use models to illustrate the anatomy of the muscular system, including muscle locations and groups, actions, origins and insertions. a. Plan and conduct investigations to explain the physiology of the muscular system (e.g.,

Learning Activities: 2 **Lesson Plans:** 3 **Multimedia:** 2 **Unit Plans:** 0	muscle contraction/relaxation, muscle fatigue, muscle tone), including pathological conditions (e.g., muscular dystrophy).
Science (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 2 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Obtain, evaluate, and communicate information regarding how the central nervous system and peripheral nervous system interrelate, including how these systems affect all other body systems to maintain homeostasis. a. Use scientific evidence to evaluate the effects of pathology on the nervous system (e.g., Parkinson's disease, Alzheimer's disease, cerebral palsy, head trauma) and argue possible prevention and treatment options. b. Design a medication to treat a disorder associated with neurotransmission, including mode of entry into the body, form of medication, and desired effects.*
Science (2015) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 4 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	Use models to determine the relationship between the structures in and functions of the cardiovascular system (e.g., components of blood, blood circulation through the heart and systems of the body, ABO blood groups, anatomy of the heart, types of blood vessels). a. Engage in argument from evidence regarding possible prevention and treatment options related to the pathology of the cardiovascular system (e.g., myocardial infarction, mitral valve prolapse, varicose veins, arteriosclerosis, anemia, high blood pressure). b. Design and carry out an experiment to test various conditions that affect the heart (e.g., heart rate, blood pressure, electrocardiogram [ECG] output).
Science (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 1 **Lesson Plans:** 2 **Multimedia:** 2 **Unit Plans:** 0	Communicate scientific information to explain the relationship between the structures and functions, both mechanical (e.g., chewing, churning in stomach) and chemical (e.g., enzymes, hydrochloric acid [HCl] in stomach), of the digestive system, including the accessory organs (e.g., salivary glands, pancreas). a. Obtain and communicate information to demonstrate an understanding of the disorders of the digestive system (e.g., ulcers, Crohn's disease, diverticulitis).
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Develop and use a model to explain how the organs of the respiratory system function. a. Engage in argument from evidence describing how environmental (e.g., cigarette smoke, polluted air) and genetic factors may affect the respiratory system, possibly leading to pathological conditions (e.g., cystic fibrosis).
Science (2015) Grade(s): 9 - 12	Obtain, evaluate, and communicate information to differentiate between the male and female reproductive systems, including pathological conditions that affect each.

All Resources: 4 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 3 **Unit Plans:** 0	a. Use models to demonstrate what occurs in fetal development at each stage of pregnancy.
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 0	Use models to differentiate the structures of the urinary system and to describe their functions. a. Analyze and interpret data related to the urinary system to show the relationship between homeostatic imbalances and disease (e.g., kidney stones, effects of pH imbalances).
Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Obtain and communicate information to explain the lymphatic organs and their structure and function. a. Develop and use a model to explain the body's lines of defense and immunity. b. Obtain and communicate information to demonstrate an understanding of the disorders of the immune system (e.g., acquired immunodeficiency syndrome [AIDS], severe combined immunodeficiency [SCID]).
Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Obtain, evaluate, and communicate information to support the claim that the endocrine glands secrete hormones that help the body maintain homeostasis through feedback loops. a. Analyze the effects of pathological conditions (e.g., pituitary dwarfism, Addison's disease, diabetes mellitus) caused by imbalance of the hormones of the endocrine glands.

Physical Science

Matter and Its Interactions

Science (2015) Grade(s): 9 - 12 **All Resources:** 23 **Learning Activities:** 4 **Lesson Plans:** 16 **Multimedia:** 3 **Unit Plans:** 0	Use the periodic table as a model to predict the relative properties and trends (e.g., reactivity of metals; types of bonds formed, including ionic, covalent, and polar covalent; numbers of bonds formed; reactions with oxygen) of main group elements based on the patterns of valence electrons in atoms.
Science (2015) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	Plan and carry out investigations (e.g., squeezing a balloon, placing a balloon on ice) to identify the relationships that exist among the pressure, volume, density, and temperature of a confined gas .
Science (2015) Grade(s): 9 - 12 **All Resources:** 8 **Learning Activities:** 3 **Lesson Plans:** 3 **Multimedia:** 2 **Unit Plans:** 0	Analyze and interpret data from a simple chemical reaction or combustion reaction involving main group elements.
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 1 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Analyze and interpret data using acid-base indicators (e.g., color-changing markers, pH paper) to distinguish between acids and bases, including comparisons between strong and weak acids and bases.
Science (2015) Grade(s): 9 - 12 **All Resources:** 6	Use mathematical representations to support and verify the claim that atoms, and therefore mass, are conserved during a simple chemical reaction.

Learning Activities: 1 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	
Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Develop models to illustrate the concept of half-life for radioactive decay. a. Research and communicate information about types of naturally occurring radiation and their properties. b. Develop arguments for and against nuclear power generation compared to other types of power generation.

Motion and Stability: Forces and Interactions

Science (2015) Grade(s): 9 - 12 **All Resources:** 14 **Learning Activities:** 1 **Lesson Plans:** 4 **Multimedia:** 9 **Unit Plans:** 0	Analyze and interpret data for one- and two-dimensional motion applying basic concepts of distance, displacement, speed, velocity, and acceleration (e.g., velocity versus time graphs, displacement versus time graphs, acceleration versus time graphs).
Science (2015) Grade(s): 9 - 12 **All Resources:** 17 **Learning Activities:** 2 **Lesson Plans:** 5 **Multimedia:** 10 **Unit Plans:** 0	Apply Newton's laws to predict the resulting motion of a system by constructing force diagrams that identify the external forces acting on the system, including friction (e.g., a book on a table, an object being pushed across a floor, an accelerating car).
Science (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 3 **Unit Plans:** 0	Use mathematical equations (e.g., $(m_1v_1 + m_2v_2)_{before} = (m_1v_1 + m_2v_2)_{after}$) and diagrams to explain that the total momentum of a system of objects is conserved when there is no net external force on the system. a. Use the laws of conservation of mechanical energy and momentum to predict the result of one-dimensional elastic collisions.
Science (2015)	Construct simple series and parallel circuits containing resistors and batteries and apply

Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Ohm's law to solve typical problems demonstrating the effect of changing values of resistors and voltages.

Energy

Science (2015) Grade(s): 9 - 12 **All Resources:** 10 **Learning Activities:** 1 **Lesson Plans:** 6 **Multimedia:** 3 **Unit Plans:** 0	Design and conduct investigations to verify the law of conservation of energy, including transformations of potential energy, kinetic energy, thermal energy, and the effect of any work performed on or by the system.
Science (2015) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 1 **Lesson Plans:** 3 **Multimedia:** 1 **Unit Plans:** 0	Design, build, and test the ability of a device (e.g., Rube Goldberg devices, wind turbines, solar cells, solar ovens) to convert one form of energy into another form of energy.*

Waves and Their Applications in Technologies for Information Transfer

Science (2015) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 2 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Use mathematical representations to demonstrate the relationships among wavelength, frequency, and speed of waves (e.g., the relation $v = \lambda f$) traveling in various media (e.g., electromagnetic radiation traveling in a vacuum and glass, sound waves traveling through air and water, seismic waves traveling through Earth).
Science (2015) Grade(s): 9 - 12 **All Resources:** 1	Propose and defend a hypothesis based on information gathered from published materials (e.g., trade books, magazines, Internet resources, videos) for and against various claims for the safety of electromagnetic radiation.

Learning Activities: 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Obtain and communicate information from published materials to explain how transmitting and receiving devices (e.g., cellular telephones, medical-imaging technology, solar cells, wireless Internet, scanners, **So**und **N**avigation **a**nd **R**anging [SONAR]) use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.

Physics

Motion and Stability: Forces and Interactions

Science (2015) Grade(s): 9 - 12 **All Resources:** 15 **Learning Activities:** 1 **Lesson Plans:** 5 **Multimedia:** 9 **Unit Plans:** 0	nvestigate and analyze, based on evidence obtained through observation or experimental design, the motion of an object using both graphical and mathematical models (e.g., creating or interpreting graphs of position, velocity, and acceleration versus time graphs for one- and two-dimensional motion; solving problems using kinematic equations for the case of constant acceleration) that may include descriptors such as position, distance traveled, displacement, speed, velocity, and acceleration.
Science (2015) Grade(s): 9 - 12 **All Resources:** 13 **Learning Activities:** 2 **Lesson Plans:** 2 **Multimedia:** 9 **Unit Plans:** 0	dentify external forces in a system and apply Newton's laws graphically by using models such as free-body diagrams to explain how the motion of an object is affected, ranging from simple to complex, and including circular motion. a. Use mathematical computations to derive simple equations of motion for various systems using Newton's second law. b. Use mathematical computations to explain the nature of forces (e.g., tension, friction, normal) related to Newton's second and third laws.
Science (2015) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 0	Evaluate qualitatively and quantitatively the relationship between the force acting on an object, the time of interaction, and the change in momentum using the impulse-momentum theorem.
Science (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify and analyze forces responsible for changes in rotational motion and develop an understanding of the effect of rotational inertia on the motion of a rotating object (e.g., merry-go-round, spinning toy, spinning figure skater, stellar collapse [supernova], rapidly spinning pulsar).

Energy

Science (2015) Grade(s): 9 - 12	Construct models that illustrate how energy is related to work performed on or by an object and explain how different forms of energy are transformed from one form to another (e.g., distinguishing between kinetic, potential, and other forms of energy such as thermal and

All Resources: 6 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 2 **Unit Plans:** 0	sound; applying both the work-energy theorem and the law of conservation of energy to systems such as roller coasters, falling objects, and spring-mass systems; discussing the effect of frictional forces on energy conservation and how it affects the motion of an object).
Science (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	nvestigate collisions, both elastic and inelastic, to evaluate the effects on momentum and energy conservation.
Science (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Plan and carry out investigations to provide evidence that the first and second laws of thermodynamics relate work and heat transfers to the change in internal energy of a system with limits on the ability to do useful work (e.g., heat engine transforming heat at high temperature into mechanical energy and low-temperature waste heat, refrigerator absorbing heat from the cold reservoir and giving off heat to the hot reservoir with work being done). a. Develop models to illustrate methods of heat transfer by conduction (e.g., an ice cube in water), convection (e.g., currents that transfer heat from the interior up to the surface), and radiation (e.g., an object in sunlight). b. Engage in argument from evidence regarding how the second law of thermodynamics applies to the entropy of open and closed systems.

Waves and Their Applications in Technologies for Information Transfer

Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	nvestigate the nature of wave behavior to illustrate the concept of the superposition principle responsible for wave patterns, constructive and destructive interference, and standing waves (e.g., organ pipes, tuned exhaust systems). a. Predict and explore how wave behavior is applied to scientific phenomena such as the Doppler effect and **So**und **N**avigation **a**nd **R**anging (SONAR).
Science (2015) Grade(s): 9 - 12 **All Resources:** 2	Obtain and evaluate information regarding technical devices to describe wave propagation of electromagnetic radiation and compare it to sound propagation. (e.g., wireless telephones, magnetic resonance imaging [MRI], microwave systems, **Ra**dio **D**etection **a**nd **R**anging [RADAR], SONAR, ultrasound).

Learning Activities: 2 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Science (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Plan and carry out investigations that evaluate the mathematical explanations of light as related to optical systems (e.g., reflection, refraction, diffraction, intensity, polarization, Snell's law, the inverse square law).
Science (2015) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Develop and use models to illustrate electric and magnetic fields, including how each is created (e.g., charging by either conduction or induction and polarizing; sketching field lines for situations such as point charges, a charged straight wire, or a current carrying wires such as solenoids; calculating the forces due to Coulomb's laws), and predict the motion of charged particles in each field and the energy required to move a charge between two points in each field.
Science (2015) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use the principles of Ohm's and Kirchhoff's laws to design, construct, and analyze combination circuits using typical components (e.g., resistors, capacitors, diodes, sources of power).

Social Studies Grade 7

Social Studies (2010) Grade(s): 7 **All Resources:** 13 **Learning Activities:** 0 **Lesson Plans:** 12 **Multimedia:** 1 **Unit Plans:** 0	Compare influences of ancient Greece, the Roman Republic, the Judeo-Christian tradition, the Magna Carta, federalism, the Mayflower Compact, the English Bill of Rights, the House of Burgesses, and the Petition of Rights on the government of the United States.
Social Studies (2010) Grade(s): 7 **All Resources:** 16 **Learning Activities:** 0 **Lesson Plans:** 15 **Multimedia:** 1 **Unit Plans:** 0	Explain essential characteristics of the political system of the United States, including the organization and function of political parties and the process of selecting political leaders. • Describing the influence of John Locke, Thomas Hobbes, Jean-Jacques Rousseau, Thomas Paine, Niccolò Machiavelli, Charles de Montesquieu, and François-Marie Arouet (Voltaire) on the political system of the United States
Social Studies (2010) Grade(s): 7 **All Resources:** 8 **Learning Activities:** 1 **Lesson Plans:** 7 **Multimedia:** 0 **Unit Plans:** 0	Compare the government of the United States with other governmental systems, including monarchy, limited monarchy, oligarchy, dictatorship, theocracy, and pure democracy.
Social Studies (2010) Grade(s): 7 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	Describe structures of state and local governments in the United States, including major Alabama offices and officeholders. (Alabama) • Describing how local and state governments are funded (Alabama)
Social Studies (2010)	Compare duties and functions of members of the legislative, executive, and judicial branches of Alabama's local and state governments and of the national government. (Alabama)

Grade(s): 7 **All Resources:** 20 **Learning Activities:** 1 **Lesson Plans:** 17 **Multimedia:** 2 **Unit Plans:** 0	• Locating political and geographic districts of the legislative, executive, and judicial branches of Alabama's local and state governments and of the national government (Alabama) • Describing the organization and jurisdiction of courts at the local, state, and national levels within the judicial system of the United States (Alabama) • Explaining concepts of separation of powers and checks and balances among the three branches of state and national governments (Alabama)
Social Studies (2010) Grade(s): 7 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 1 **Unit Plans:** 0	Explain the importance of juvenile, adult, civil, and criminal laws within the judicial system of the United States. • Explaining rights of citizens as guaranteed by the Bill of Rights under the Constitution of the United States • Explaining what is meant by the term *rule of law* • Justifying consequences of committing a civil or criminal offense • Contrasting juvenile and adult laws at local, state, and federal levels (Alabama)
Social Studies (2010) Grade(s): 7 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Determine how people organize economic systems to address basic economic questions regarding which goods and services will be produced, how they will be distributed, and who will consume them. • Using economic concepts to explain historical and current developments and issues in global, national, state, or local contexts (Alabama) Example: increase in oil prices resulting from supply and demand • Analyzing agriculture, tourism, and urban growth in Alabama for their impact on economic development (Alabama)
Social Studies (2010) Grade(s): 7 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 1 **Unit Plans:** 0	Appraise the relationship between the consumer and the marketplace in the economy of the United States regarding scarcity, opportunity cost, trade-off decision making, and the stock market. • Describing effects of government policies on the free market • Identifying laws protecting rights of consumers and avenues of recourse when those rights are violated • Comparing economic systems, including market, command, and traditional
Social Studies (2010) Grade(s): 7 **All Resources:** 10 **Learning Activities:** 0	Apply principles of money management to the preparation of a personal budget that addresses housing, transportation, food, clothing, medical expenses, insurance, checking and savings accounts, loans, investments, credit, and comparison shopping.

Lesson Plans: 10 **Multimedia:** 0 **Unit Plans:** 0	
Social Studies (2010) Grade(s): 7 **All Resources:** 23 **Learning Activities:** 0 **Lesson Plans:** 18 **Multimedia:** 5 **Unit Plans:** 0	Describe individual and civic responsibilities of citizens of the United States. Examples: individual—respect for rights of others, self-discipline, negotiation, compromise, fiscal responsibility civic—respect for law, patriotism, participation in political process, fiscal responsibility • Differentiating rights, privileges, duties, and responsibilities between citizens and noncitizens • Explaining how United States' citizenship is acquired by immigrants • Explaining character traits that are beneficial to individuals and society Examples: honesty, courage, compassion, civility, loyalty
Social Studies (2010) Grade(s): 7 **All Resources:** 12 **Learning Activities:** 0 **Lesson Plans:** 9 **Multimedia:** 3 **Unit Plans:** 0	Compare changes in social and economic conditions in the United States during the twentieth and twenty-first centuries. Examples: social—family values, peer pressure, education opportunities, women in the workplace economic—career opportunities, disposable income, consumption of goods and services • Determining benefits of Alabama's role in world trade (Alabama) • Tracing the political and social impact of the modern Civil Rights Movement from 1954 to the present, including Alabama's role (Alabama)
Social Studies (2010) Grade(s): 7 **All Resources:** 22 **Learning Activities:** 0 **Lesson Plans:** 15 **Multimedia:** 7 **Unit Plans:** 0	Describe how the United States can be improved by individual and group participation in civic and community activities. • Identifying options for civic and community action Examples: investigating the feasibility of a specific solution to a traffic problem, developing a plan for construction of a subdivision, using maps to make and justify decisions about best locations for public facilities • Determining ways to participate in the political process Examples: voting, running for office, serving on a jury, writing letters, being involved in political parties and political campaigns
Social Studies (2010) Grade(s): 7 **All Resources:** 7 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 2	Identify contemporary American issues since 2001, including the establishment of the United States Department of Homeland Security, the enactment of the Patriot Act of 2001, and the impact of media analysis.

Unit Plans: 0	
Social Studies (2010) Grade(s): 7 **All Resources:** 33 **Learning Activities:** 0 **Lesson Plans:** 26 **Multimedia:** 7 **Unit Plans:** 0	Describe the world in spatial terms using maps and other geographic representations, tools, and technologies. • Explaining the use of map essentials, including type, projections, scale, legend, distance, direction, grid, and symbols Examples: type—reference, thematic, planimetric, topographic, globe and map projections, aerial photographs, satellite images distance—fractional, graphic, and verbal scales direction—lines of latitude and longitude, cardinal and intermediate directions • Identifying geospatial technologies to acquire, process, and report information from a spatial perspective Examples: Google Earth, Global Positioning System (GPS), geographic information system (GIS), satellite-remote sensing, aerial photography • Utilizing maps to explain relationships and environments among people and places, including trade patterns, governmental alliances, and immigration patterns • Applying mental maps to answer geographic questions, including how experiences and cultures influence perceptions and decisions • Categorizing the geographic organization of people, places, and environments using spatial models Examples: urban land-use patterns, distribution and linkages of cities, migration patterns, population-density patterns, spread of culture traits, spread of contagious diseases through a population
Social Studies (2010) Grade(s): 7 **All Resources:** 18 **Learning Activities:** 0 **Lesson Plans:** 15 **Multimedia:** 3 **Unit Plans:** 0	Determine how regions are used to describe the organization of Earth's surface. • Identifying physical and human features used as criteria for mapping formal, functional, and perceptual regions Examples: physical—landforms, climates, bodies of water, resources human—language, religion, culture, economy, government • Interpreting processes and reasons for regional change, including land use, urban growth, population, natural disasters, and trade • Analyzing interactions among regions to show transnational relationships, including the flow of commodities and Internet connectivity Examples: winter produce to Alabama from Chile and California, poultry from Alabama to other countries (Alabama) • Comparing how culture and experience influence individual perceptions of places and regions Examples: cultural influences—language, religion, ethnicity, iconography, symbology, stereotypes • Explaining globalization and its impact on people in all regions of the world Examples: quality and sustainability of life, international cooperation
Social Studies	Compare geographic patterns in the environment that result from processes within the

(2010) Grade(s): 7 **All Resources:** 18 **Learning Activities:** 0 **Lesson Plans:** 12 **Multimedia:** 6 **Unit Plans:** 0	atmosphere, biosphere, lithosphere, and hydrosphere of Earth's physical systems. • Comparing Earth-Sun relationships regarding seasons, fall hurricanes, monsoon rainfalls, and tornadoes • Explaining processes that shape the physical environment, including long-range effects of extreme weather phenomena Examples: processes—plate tectonics, glaciers, ocean and atmospheric circulation, El Niño long-range effects—erosion on agriculture, typhoons on coastal ecosystems • Describing characteristics and physical processes that influence the spatial distribution of ecosystems and biomes on Earth's surface • Comparing how ecosystems vary from place to place and over time Examples: place to place—differences in soil, climate, and topography over time—alteration or destruction of natural habitats due to effects of floods and forest fires, reduction of species diversity due to loss of natural habitats, reduction of wetlands due to replacement by farms, reduction of forest and farmland due to replacement by housing developments, reduction of previously cleared land due to reforestation efforts • Comparing geographic issues in different regions that result from human and natural processes Examples: human—increase or decrease in population, land-use change in tropical forests natural—hurricanes, tsunamis, tornadoes, floods
Social Studies (2010) Grade(s): 7 **All Resources:** 15 **Learning Activities:** 0 **Lesson Plans:** 12 **Multimedia:** 3 **Unit Plans:** 0	Evaluate spatial patterns and the demographic structure of population on Earth's surface in terms of density, dispersion, growth and mortality rates, natural increase, and doubling time. Examples: spatial patterns—major population clusters demographic structure—age and sex distribution using population pyramids • Predicting reasons and consequences of migration, including push and pull factors Examples: push—politics, war, famine pull—potential jobs, family
Social Studies (2010) Grade(s): 7 **All Resources:** 14 **Learning Activities:** 0 **Lesson Plans:** 12 **Multimedia:** 2	Explain how cultural features, traits, and diffusion help define regions, including religious structures, agricultural patterns, ethnic enclaves, ethnic restaurants, and the spread of Islam.

Unit Plans: 0	
Social Studies (2010) Grade(s): 7 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 1 **Unit Plans:** 0	Illustrate how primary, secondary, and tertiary economic activities have specific functions and spatial patterns. Examples: primary—forestry, agriculture, mining secondary—manufacturing furniture, grinding coffee beans, assembling automobiles tertiary—selling furniture, selling caffé latte, selling automobiles • Comparing one location to another for production of goods and services Examples: fast food restaurants in highly accessible locations, medical offices near hospitals, legal offices near courthouses, industries near major transportation routes • Analyzing the impact of economic interdependence and globalization on places and their populations Examples: seed corn produced in Iowa and planted in South America, silicon chips manufactured in California and installed in a computer made in China that is purchased in Australia • Explaining why countries enter into global trade agreements, including the North American Free Trade Agreement (NAFTA), the Dominican Republic-Central America Free Trade Agreement (DR-CAFTA), the European Union (EU), the Mercado Común del Sur (MERCOSUR), and the Association of Southeast Asian Nations (ASEAN)
Social Studies (2010) Grade(s): 7 **All Resources:** 15 **Learning Activities:** 0 **Lesson Plans:** 11 **Multimedia:** 4 **Unit Plans:** 0	Classify spatial patterns of settlement in different regions of the world, including types and sizes of settlement patterns. Examples: types—linear, clustered, grid sizes—large urban, small urban, and rural areas • Explaining human activities that resulted in the development of settlements at particular locations due to trade, political importance, or natural resources Examples: Timbuktu near caravan routes; Pittsburgh, Pennsylvania, and Birmingham, Alabama, as manufacturing centers near coal and iron ore deposits; Singapore near a major ocean transportation corridor (Alabama) • Describing settlement patterns in association with the location of resources Examples: fall line settlements near waterfalls used as a source of energy for mills, European industrial settlements near coal seams, spatial arrangement of towns and cities in North American Corn Belt settlements • Describing ways in which urban areas interact and influence surrounding regions Examples: daily commuters from nearby regions; communication centers that service nearby and distant locations through television, radio, newspapers, and the Internet; regional specialization in services or production
Social Studies (2010) Grade(s): 7 **All Resources:** 8	Determine political, military, cultural, and economic forces that contribute to cooperation and conflict among people. • Identifying political boundaries based on physical and human systems Examples: physical—rivers as boundaries between counties

Learning Activities: 0 **Lesson Plans:** 7 **Multimedia:** 1 **Unit Plans:** 0	human—streets as boundaries between local government units • Identifying effects of cooperation among countries in controlling territories Examples: Great Lakes environmental management by United States and Canada, United Nations (UN) Heritage sites and host countries, Antarctic Treaty on scientific research • Describing the eruption of territorial conflicts over borders, resources, land use, and ethnic and nationalistic identity Examples: India and Pakistan conflict over Jammu and Kashmir, the West Bank, the Sudan, Somalia piracy, ocean fishing and mineral rights, local land-use disputes
Social Studies (2010) Grade(s): 7 **All Resources:** 10 **Learning Activities:** 0 **Lesson Plans:** 7 **Multimedia:** 3 **Unit Plans:** 0	Explain how human actions modify the physical environment within and between places, including how human-induced changes affect the environment. Examples: within—construction of dams and downstream water availability for human consumption, agriculture, and aquatic ecosystems between—urban heat islands and global climate change, desertification and land degradation, pollution and ozone depletion
Social Studies (2010) Grade(s): 7 **All Resources:** 10 **Learning Activities:** 0 **Lesson Plans:** 7 **Multimedia:** 3 **Unit Plans:** 0	Explain how human systems develop in response to physical environmental conditions. Example: farming practices in different regions, including slash-and-burn agriculture, terrace farming, and center-pivot irrigation • Identifying types, locations, and characteristics of natural hazards, including earthquakes, hurricanes, tornadoes, and mudslides • Differentiating ways people prepare for and respond to natural hazards, including building storm shelters, conducting fire and tornado drills, and establishing building codes for construction
Social Studies (2010) Grade(s): 7 **All Resources:** 9 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 3 **Unit Plans:** 0	Explain the cultural concept of natural resources and changes in spatial distribution, quantity, and quality through time and by location. • Evaluating various cultural viewpoints regarding the use or value of natural resources Examples: salt and gold as valued commodities, petroleum product use and the invention of the internal combustion engine • Identifying issues regarding depletion of nonrenewable resources and the sustainability of renewable resources Examples: ocean shelf and Arctic exploration for petroleum, hybrid engines in cars, wind-powered generators, solar collection panels
Social Studies (2010) Grade(s): 7	Explain ways geographic features and environmental issues have influenced historical events.

All Resources:	11	Examples: geographic features—fall line, Cumberland Gap, Westward Expansion in the United States, weather conditions at Valley Forge and the outcome of the American Revolution, role of ocean currents and winds during exploration by Christopher Columbus environmental issues—boundary disputes, ownership of ocean resources, revitalization of downtown areas
Learning Activities:	0	
Lesson Plans:	10	
Multimedia:	1	
Unit Plans:	0	

Social Studies Grade 8

Social Studies (2010) Grade(s): 8 **All Resources:** 9 **Learning Activities:** 2 **Lesson Plans:** 7 **Multimedia:** 0 **Unit Plans:** 0	Explain how artifacts and other archaeological findings provide evidence of the nature and movement of prehistoric groups of people. Examples: cave paintings, Ice Man, Lucy, fossils, pottery • Identifying the founding of Rome as the basis of the calendar established by Julius Caesar and used in early Western civilization for over a thousand years • Identifying the birth of Christ as the basis of the Gregorian calendar used in the United States since its beginning and in most countries of the world today, signified by *B.C.* and *A.D.* • Using vocabulary terms other than *B.C.* and *A.D.* to describe time Examples: *B.C.E., C.E.* • Identifying terms used to describe characteristics of early societies and family structures Examples: *monogamous, polygamous, nomadic*
Social Studies (2010) Grade(s): 8 **All Resources:** 16 **Learning Activities:** 2 **Lesson Plans:** 13 **Multimedia:** 1 **Unit Plans:** 0	Analyze characteristics of early civilizations in respect to technology, division of labor, government, calendar, and writings. • Comparing significant features of civilizations that developed in the Tigris-Euphrates, Nile, Indus, and Huang He River Valleys Examples: natural environment, urban development, social hierarchy, written language, ethical and religious belief systems, government and military institutions, economic systems • Identifying on a map locations of cultural hearths of early civilizations Examples: Mesopotamia, Nile River Valley
Social Studies (2010) Grade(s): 8 **All Resources:** 8 **Learning Activities:** 0 **Lesson Plans:** 8 **Multimedia:** 0 **Unit Plans:** 0	Compare the development of early world religions and philosophies and their key tenets. Examples: Judaism, Hinduism, Confucianism, Taoism, Christianity, Buddhism, Islam, Greek and Roman gods • Identifying cultural contributions of early world religions and philosophies Examples: Judaism, Hinduism, Confucianism, Taoism, Christianity, Buddhism, Islam, Greek and Roman gods, Phoenicians
Social Studies (2010) Grade(s): 8 **All Resources:** 8 **Learning Activities:** 1 **Lesson** 7	dentify cultural contributions of Classical Greece, including politics, intellectual life, arts, literature, architecture, and science.

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Social Studies (2010) Grade(s): 8 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Describe the role of Alexander the Great in the Hellenistic world. Examples: serving as political and military leader, encouraging cultural interaction, allowing religious diversity • Defining boundaries of Alexander the Great's empire and its economic impact • Identifying reasons for the separation of Alexander the Great's empire into successor kingdoms • Evaluating major contributions of Hellenistic art, philosophy, science, and political thought
Social Studies (2010) Grade(s): 8 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Trace the expansion of the Roman Republic and its transformation into an empire, including key geographic, political, and economic elements. Examples: expansion—illustrating the spread of Roman influence with charts, graphs, timelines, or maps transformation—noting reforms of Augustus, listing effects of Pax Romana • Interpreting spatial distributions and patterns of the Roman Republic using geographic tools and technologies
Social Studies (2010) Grade(s): 8 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 1 **Unit Plans:** 0	Describe the widespread impact of the Roman Empire. Example: spread of Roman law and political theory, citizenship and slavery, architecture and engineering, religions, sculptures and paintings, literature, and the Latin language • Tracing important aspects of the diffusion of Christianity, including its relationship to Judaism, missionary impulse, organizational development, transition from persecution to acceptance in the Roman Empire, and church doctrine • Explaining the role of economics, societal changes, Christianity, political and military problems, external factors, and the size and diversity of the Roman Empire in its decline and fall
Social Studies (2010) Grade(s): 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Describe the development of a classical civilization in India and China. Examples: India—religions, arts and literature, philosophies, empires, caste system China—religions, politics, centrality of the family, Zhou and Han Dynasties, inventions, economic impact of the Silk Road and European trade, dynastic transitions • Identifying the effect of monsoons on India • Identifying landforms and climate regions of China Example: marking landforms and climate regions of China on a map
Social Studies (2010)	Describe the rise of the Byzantine Empire, its institutions, and its legacy, including the influence of the Emperors Constantine and Justinian and the effect of the Byzantine

Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Empire on art, religion, architecture, and law. • Identifying factors leading to the establishment of the Eastern Orthodox Church
Social Studies (2010) Grade(s): 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	Trace the development of the early Russian state and the expansion of its trade systems. Examples: rise of Kiev and Muscovy, conversion to Orthodox Christianity, movement of peoples of Central Asia, Mongol conquest, rise of czars
Social Studies (2010) Grade(s): 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Describe early Islamic civilizations, including the development of religious, social, and political systems. • Tracing the spread of Islamic ideas through invasion and conquest throughout the Middle East, northern Africa, and western Europe
Social Studies (2010) Grade(s): 8 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Describe China's influence on culture, politics, and economics in Japan, Korea, and Southeast Asia. Examples: culture—describing the influence on art, architecture, language, and religion politics—describing changes in civil service economics—introducing patterns of trade
Social Studies (2010) Grade(s): 8 **All Resources:** 7 **Learning Activities:** 0	Compare the African civilizations of Ghana, Mali, and Songhai to include geography, religions, slave trade, economic systems, empires, and cultures. • Tracing the spread of language, religion, and customs from one African civilization to another • Illustrating the impact of trade among Ghana, Mali, and Songhai Examples: using map symbols, interpreting distribution maps, creating a timeline

Lesson Plans: 7 **Multimedia:** 0 **Unit Plans:** 0	
Social Studies (2010) Grade(s): 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	Describe key aspects of pre-Columbian cultures in the Americas including the Olmecs, Mayas, Aztecs, Incas, and North American tribes. Examples: pyramids, wars among pre-Columbian people, religious rituals, irrigation, Iroquois Confederacy • Locating on a map sites of pre-Columbian cultures Examples: Maya, Inca, Inuit, Creek, Cherokee
Social Studies (2010) Grade(s): 8 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Describe military and governmental events that shaped Europe in the early Middle Ages (600-1000 A.D.). Examples: invasions, military leaders • Describing the role of the early medieval church • Describing the impact of new agricultural methods on manorialism and feudalism
Social Studies (2010) Grade(s): 8 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Describe major cultural changes in Western Europe in the High Middle Ages (1000-1300 A.D.). Examples: the Church, scholasticism, the Crusades • Describing changing roles of church and governmental leadership • Comparing political developments in France, England, and the Holy Roman Empire, including the signing of the Magna Carta • Describing the growth of trade and towns resulting in the rise of the middle class
Social Studies (2010) Grade(s): 8 **All Resources:** 7 **Learning Activities:** 1 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Explain how events and conditions fostered political and economic changes in the late Middle Ages and led to the origins of the Renaissance. Examples: the Crusades, Hundred Years' War, Black Death, rise of the middle class, commercial prosperity • Identifying changes in the arts, architecture, literature, and science in the late Middle Ages (1300-1400 A.D.)

Geography (7)

Social Studies (2010) Grade(s): 7 **All Resources:** 33 **Learning Activities:** 0 **Lesson Plans:** 26 **Multimedia:** 7 **Unit Plans:** 0	Describe the world in spatial terms using maps and other geographic representations, tools, and technologies. • Explaining the use of map essentials, including type, projections, scale, legend, distance, direction, grid, and symbols Examples: type—reference, thematic, planimetric, topographic, globe and map projections, aerial photographs, satellite images distance—fractional, graphic, and verbal scales direction—lines of latitude and longitude, cardinal and intermediate directions • Identifying geospatial technologies to acquire, process, and report information from a spatial perspective Examples: Google Earth, Global Positioning System (GPS), geographic information system (GIS), satellite-remote sensing, aerial photography • Utilizing maps to explain relationships and environments among people and places, including trade patterns, governmental alliances, and immigration patterns • Applying mental maps to answer geographic questions, including how experiences and cultures influence perceptions and decisions • Categorizing the geographic organization of people, places, and environments using spatial models Examples: urban land-use patterns, distribution and linkages of cities, migration patterns, population-density patterns, spread of culture traits, spread of contagious diseases through a population
Social Studies (2010) Grade(s): 7 **All Resources:** 18 **Learning Activities:** 0 **Lesson Plans:** 15 **Multimedia:** 3 **Unit Plans:** 0	Determine how regions are used to describe the organization of Earth's surface. • Identifying physical and human features used as criteria for mapping formal, functional, and perceptual regions Examples: physical—landforms, climates, bodies of water, resources human—language, religion, culture, economy, government • Interpreting processes and reasons for regional change, including land use, urban growth, population, natural disasters, and trade • Analyzing interactions among regions to show transnational relationships, including the flow of commodities and Internet connectivity Examples: winter produce to Alabama from Chile and California, poultry from Alabama to other countries (Alabama) • Comparing how culture and experience influence individual perceptions of places and regions Examples: cultural influences—language, religion, ethnicity, iconography, symbology, stereotypes • Explaining globalization and its impact on people in all regions of the world Examples: quality and sustainability of life, international cooperation

Social Studies (2010) Grade(s): 7 **All Resources:** 18 **Learning Activities:** 0 **Lesson Plans:** 12 **Multimedia:** 6 **Unit Plans:** 0	Compare geographic patterns in the environment that result from processes within the atmosphere, biosphere, lithosphere, and hydrosphere of Earth's physical systems. • Comparing Earth-Sun relationships regarding seasons, fall hurricanes, monsoon rainfalls, and tornadoes • Explaining processes that shape the physical environment, including long-range effects of extreme weather phenomena Examples: processes—plate tectonics, glaciers, ocean and atmospheric circulation, El Niño long-range effects—erosion on agriculture, typhoons on coastal ecosystems • Describing characteristics and physical processes that influence the spatial distribution of ecosystems and biomes on Earth's surface • Comparing how ecosystems vary from place to place and over time Examples: place to place—differences in soil, climate, and topography over time—alteration or destruction of natural habitats due to effects of floods and forest fires, reduction of species diversity due to loss of natural habitats, reduction of wetlands due to replacement by farms, reduction of forest and farmland due to replacement by housing developments, reduction of previously cleared land due to reforestation efforts • Comparing geographic issues in different regions that result from human and natural processes Examples: human—increase or decrease in population, land-use change in tropical forests natural—hurricanes, tsunamis, tornadoes, floods
Social Studies (2010) Grade(s): 7 **All Resources:** 15 **Learning Activities:** 0 **Lesson Plans:** 12 **Multimedia:** 3 **Unit Plans:** 0	Evaluate spatial patterns and the demographic structure of population on Earth's surface in terms of density, dispersion, growth and mortality rates, natural increase, and doubling time. Examples: spatial patterns—major population clusters demographic structure—age and sex distribution using population pyramids • Predicting reasons and consequences of migration, including push and pull factors Examples: push—politics, war, famine pull—potential jobs, family
Social Studies (2010) Grade(s): 7 **All Resources:** 14 **Learning Activities:** 0 **Lesson Plans:** 12 **Multimedia:** 2	Explain how cultural features, traits, and diffusion help define regions, including religious structures, agricultural patterns, ethnic enclaves, ethnic restaurants, and the spread of Islam.

Unit Plans: 0	
Social Studies (2010) Grade(s): 7 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 1 **Unit Plans:** 0	Illustrate how primary, secondary, and tertiary economic activities have specific functions and spatial patterns. Examples: primary—forestry, agriculture, mining secondary—manufacturing furniture, grinding coffee beans, assembling automobiles tertiary—selling furniture, selling caffé latte, selling automobiles • Comparing one location to another for production of goods and services Examples: fast food restaurants in highly accessible locations, medical offices near hospitals, legal offices near courthouses, industries near major transportation routes • Analyzing the impact of economic interdependence and globalization on places and their populations Examples: seed corn produced in Iowa and planted in South America, silicon chips manufactured in California and installed in a computer made in China that is purchased in Australia • Explaining why countries enter into global trade agreements, including the North American Free Trade Agreement (NAFTA), the Dominican Republic-Central America Free Trade Agreement (DR-CAFTA), the European Union (EU), the Mercado Común del Sur (MERCOSUR), and the Association of Southeast Asian Nations (ASEAN)
Social Studies (2010) Grade(s): 7 **All Resources:** 15 **Learning Activities:** 0 **Lesson Plans:** 11 **Multimedia:** 4 **Unit Plans:** 0	Classify spatial patterns of settlement in different regions of the world, including types and sizes of settlement patterns. Examples: types—linear, clustered, grid sizes—large urban, small urban, and rural areas • Explaining human activities that resulted in the development of settlements at particular locations due to trade, political importance, or natural resources Examples: Timbuktu near caravan routes; Pittsburgh, Pennsylvania, and Birmingham, Alabama, as manufacturing centers near coal and iron ore deposits; Singapore near a major ocean transportation corridor (Alabama) • Describing settlement patterns in association with the location of resources Examples: fall line settlements near waterfalls used as a source of energy for mills, European industrial settlements near coal seams, spatial arrangement of towns and cities in North American Corn Belt settlements • Describing ways in which urban areas interact and influence surrounding regions Examples: daily commuters from nearby regions; communication centers that service nearby and distant locations through television, radio, newspapers, and the Internet; regional specialization in services or production
Social Studies (2010) Grade(s): 7 **All Resources:** 8	Determine political, military, cultural, and economic forces that contribute to cooperation and conflict among people. • Identifying political boundaries based on physical and human systems Examples: physical—rivers as boundaries between counties

Learning Activities: 0 **Lesson Plans:** 7 **Multimedia:** 1 **Unit Plans:** 0	human—streets as boundaries between local government units • Identifying effects of cooperation among countries in controlling territories Examples: Great Lakes environmental management by United States and Canada, United Nations (UN) Heritage sites and host countries, Antarctic Treaty on scientific research • Describing the eruption of territorial conflicts over borders, resources, land use, and ethnic and nationalistic identity Examples: India and Pakistan conflict over Jammu and Kashmir, the West Bank, the Sudan, Somalia piracy, ocean fishing and mineral rights, local land-use disputes
Social Studies (2010) Grade(s): 7 **All Resources:** 10 **Learning Activities:** 0 **Lesson Plans:** 7 **Multimedia:** 3 **Unit Plans:** 0	Explain how human actions modify the physical environment within and between places, including how human-induced changes affect the environment. Examples: within—construction of dams and downstream water availability for human consumption, agriculture, and aquatic ecosystems between—urban heat islands and global climate change, desertification and land degradation, pollution and ozone depletion
Social Studies (2010) Grade(s): 7 **All Resources:** 10 **Learning Activities:** 0 **Lesson Plans:** 7 **Multimedia:** 3 **Unit Plans:** 0	Explain how human systems develop in response to physical environmental conditions. Example: farming practices in different regions, including slash-and-burn agriculture, terrace farming, and center-pivot irrigation • Identifying types, locations, and characteristics of natural hazards, including earthquakes, hurricanes, tornadoes, and mudslides • Differentiating ways people prepare for and respond to natural hazards, including building storm shelters, conducting fire and tornado drills, and establishing building codes for construction
Social Studies (2010) Grade(s): 7 **All Resources:** 9 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 3 **Unit Plans:** 0	Explain the cultural concept of natural resources and changes in spatial distribution, quantity, and quality through time and by location. • Evaluating various cultural viewpoints regarding the use or value of natural resources Examples: salt and gold as valued commodities, petroleum product use and the invention of the internal combustion engine • Identifying issues regarding depletion of nonrenewable resources and the sustainability of renewable resources Examples: ocean shelf and Arctic exploration for petroleum, hybrid engines in cars, wind-powered generators, solar collection panels
Social Studies (2010) Grade(s): 7	Explain ways geographic features and environmental issues have influenced historical events.

All Resources:	11	Examples: geographic features—fall line, Cumberland Gap, Westward Expansion in the United States, weather conditions at Valley Forge and the outcome of the American Revolution, role of ocean currents and winds during exploration by Christopher Columbus
Learning Activities:	0	
Lesson Plans:	10	environmental issues—boundary disputes, ownership of ocean resources, revitalization of downtown areas
Multimedia:	1	
Unit Plans:	0	

Civics (7)

Social Studies (2010) Grade(s): 7 **All Resources:** 13 **Learning Activities:** 0 **Lesson Plans:** 12 **Multimedia:** 1 **Unit Plans:** 0	Compare influences of ancient Greece, the Roman Republic, the Judeo-Christian tradition, the Magna Carta, federalism, the Mayflower Compact, the English Bill of Rights, the House of Burgesses, and the Petition of Rights on the government of the United States.
Social Studies (2010) Grade(s): 7 **All Resources:** 16 **Learning Activities:** 0 **Lesson Plans:** 15 **Multimedia:** 1 **Unit Plans:** 0	Explain essential characteristics of the political system of the United States, including the organization and function of political parties and the process of selecting political leaders. • Describing the influence of John Locke, Thomas Hobbes, Jean-Jacques Rousseau, Thomas Paine, Niccolò Machiavelli, Charles de Montesquieu, and François-Marie Arouet (Voltaire) on the political system of the United States
Social Studies (2010) Grade(s): 7 **All Resources:** 8 **Learning Activities:** 1 **Lesson Plans:** 7 **Multimedia:** 0 **Unit Plans:** 0	Compare the government of the United States with other governmental systems, including monarchy, limited monarchy, oligarchy, dictatorship, theocracy, and pure democracy.
Social Studies (2010) Grade(s): 7 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	Describe structures of state and local governments in the United States, including major Alabama offices and officeholders. (Alabama) • Describing how local and state governments are funded (Alabama)
Social Studies (2010)	Compare duties and functions of members of the legislative, executive, and judicial branches of Alabama's local and state governments and of the national government. (Alabama)

Grade(s): 7 **All Resources:** 20 **Learning Activities:** 1 **Lesson Plans:** 17 **Multimedia:** 2 **Unit Plans:** 0	• Locating political and geographic districts of the legislative, executive, and judicial branches of Alabama's local and state governments and of the national government (Alabama) • Describing the organization and jurisdiction of courts at the local, state, and national levels within the judicial system of the United States (Alabama) • Explaining concepts of separation of powers and checks and balances among the three branches of state and national governments (Alabama)
Social Studies (2010) Grade(s): 7 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 1 **Unit Plans:** 0	Explain the importance of juvenile, adult, civil, and criminal laws within the judicial system of the United States. • Explaining rights of citizens as guaranteed by the Bill of Rights under the Constitution of the United States • Explaining what is meant by the term *rule of law* • Justifying consequences of committing a civil or criminal offense • Contrasting juvenile and adult laws at local, state, and federal levels (Alabama)
Social Studies (2010) Grade(s): 7 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Determine how people organize economic systems to address basic economic questions regarding which goods and services will be produced, how they will be distributed, and who will consume them. • Using economic concepts to explain historical and current developments and issues in global, national, state, or local contexts (Alabama) Example: increase in oil prices resulting from supply and demand • Analyzing agriculture, tourism, and urban growth in Alabama for their impact on economic development (Alabama)
Social Studies (2010) Grade(s): 7 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 1 **Unit Plans:** 0	Appraise the relationship between the consumer and the marketplace in the economy of the United States regarding scarcity, opportunity cost, trade-off decision making, and the stock market. • Describing effects of government policies on the free market • Identifying laws protecting rights of consumers and avenues of recourse when those rights are violated • Comparing economic systems, including market, command, and traditional
Social Studies (2010) Grade(s): 7 **All Resources:** 10 **Learning Activities:** 0	Apply principles of money management to the preparation of a personal budget that addresses housing, transportation, food, clothing, medical expenses, insurance, checking and savings accounts, loans, investments, credit, and comparison shopping.

Lesson Plans: 10 **Multimedia:** 0 **Unit Plans:** 0	
Social Studies (2010) Grade(s): 7 **All Resources:** 23 **Learning Activities:** 0 **Lesson Plans:** 18 **Multimedia:** 5 **Unit Plans:** 0	Describe individual and civic responsibilities of citizens of the United States. Examples: individual—respect for rights of others, self-discipline, negotiation, compromise, fiscal responsibility civic—respect for law, patriotism, participation in political process, fiscal responsibility • Differentiating rights, privileges, duties, and responsibilities between citizens and noncitizens • Explaining how United States' citizenship is acquired by immigrants • Explaining character traits that are beneficial to individuals and society Examples: honesty, courage, compassion, civility, loyalty
Social Studies (2010) Grade(s): 7 **All Resources:** 12 **Learning Activities:** 0 **Lesson Plans:** 9 **Multimedia:** 3 **Unit Plans:** 0	Compare changes in social and economic conditions in the United States during the twentieth and twenty-first centuries. Examples: social—family values, peer pressure, education opportunities, women in the workplace economic—career opportunities, disposable income, consumption of goods and services • Determining benefits of Alabama's role in world trade (Alabama) • Tracing the political and social impact of the modern Civil Rights Movement from 1954 to the present, including Alabama's role (Alabama)
Social Studies (2010) Grade(s): 7 **All Resources:** 22 **Learning Activities:** 0 **Lesson Plans:** 15 **Multimedia:** 7 **Unit Plans:** 0	Describe how the United States can be improved by individual and group participation in civic and community activities. • Identifying options for civic and community action Examples: investigating the feasibility of a specific solution to a traffic problem, developing a plan for construction of a subdivision, using maps to make and justify decisions about best locations for public facilities • Determining ways to participate in the political process Examples: voting, running for office, serving on a jury, writing letters, being involved in political parties and political campaigns
Social Studies (2010) Grade(s): 7 **All Resources:** 7 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 2	Identify contemporary American issues since 2001, including the establishment of the United States Department of Homeland Security, the enactment of the Patriot Act of 2001, and the impact of media analysis.

Unit Plans:	0

World History: 1500 to the Present (9)

Social Studies (2010) Grade(s): 9 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Describe developments in Italy and Northern Europe during the Renaissance period with respect to humanism, arts and literature, intellectual development, increased trade, and advances in technology.
Social Studies (2010) Grade(s): 9 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the role of mercantilism and imperialism in European exploration and colonization in the sixteenth century, including the Columbian Exchange. • Describing the impact of the Commercial Revolution on European society • Identifying major ocean currents, wind patterns, landforms, and climates affecting European exploration Example: marking ocean currents and wind patterns on a map
Social Studies (2010) Grade(s): 9 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain causes of the Reformation and its impact, including tensions between religious and secular authorities, reformers and doctrines, the Counter-Reformation, the English Reformation, and wars of religion.
Social Studies (2010) Grade(s): 9 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Explain the relationship between physical geography and cultural development in India, Africa, Japan, and China in the early Global Age, including trade and travel, natural resources, and movement and isolation of peoples and ideas. • Depicting the general location of, size of, and distance between regions in the early Global Age Example: drawing sketch maps
Social Studies (2010)	Describe the rise of absolutism and constitutionalism and their impact on European nations.

Grade(s): 9 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	• Contrasting philosophies of Thomas Hobbes and John Locke and the belief in the divine right of kings • Comparing absolutism as it developed in France, Russia, and Prussia, including the reigns of Louis XIV, Peter the Great, and Frederick the Great • Identifying major provisions of the Petition of Rights and the English Bill of Rights
Social Studies (2010) Grade(s): 9 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify significant ideas and achievements of scientists and philosophers of the Scientific Revolution and the Age of Enlightenment. Examples: Scientific Revolution—astronomical theories of Nicolaus Copernicus and Galileo Galilei, Sir Isaac Newton's law of gravity Age of Enlightenment—philosophies of Charles de Montesquieu, François-Marie Arouet (Voltaire), and Jean-Jacques Rousseau
Social Studies (2010) Grade(s): 9 **All Resources:** 2 **Learning Activities:** 2 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	)escribe the impact of the French Revolution on Europe, including political evolution, social evolution, and diffusion of nationalism and liberalism. • Identifying causes of the French Revolution • Describing the influence of the American Revolution on the French Revolution • Identifying objectives of different groups participating in the French Revolution • Describing the role of Napoléon Bonaparte as an empire builder
Social Studies (2010) Grade(s): 9 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	ompare revolutions in Latin America and the Caribbean, including Haiti, Colombia, Venezuela, Argentina, Chile, and Mexico. • Identifying the location of countries in Latin America
Social Studies (2010) Grade(s): 9 **All Resources:** 2 **Learning Activities:** 0	)escribe the impact of technological inventions, conditions of labor, and the economic theories of capitalism, liberalism, socialism, and Marxism during the Industrial Revolution on the economies, societies, and politics of Europe. • Identifying important inventors in Europe during the Industrial Revolution • Comparing the Industrial Revolution in England to later revolutions in Europe

Lesson Plans: 1 **Multimedia:** 1 **Unit Plans:** 0	
Social Studies (2010) Grade(s): 9 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Describe the influence of urbanization on the Western World during the nineteenth century. Examples: interaction with the environment, provisions for public health, increased opportunities for upward mobility, changes in social stratification, development of Romanticism and Realism, development of Impressionism and Cubism • Describing the search for political democracy and social justice in the Western World Examples: European Revolution of 1848, slavery and emancipation in the United States, emancipation of serfs in Russia, universal manhood suffrage, women's suffrage
Social Studies (2010) Grade(s): 9 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the impact of European nationalism and Western imperialism as forces of global transformation, including the unification of Italy and Germany, the rise of Japan's power in East Asia, economic roots of imperialism, imperialist ideology, colonialism and national rivalries, and United States' imperialism. • Describing resistance to European imperialism in Africa, Japan, and China
Social Studies (2010) Grade(s): 9 **All Resources:** 10 **Learning Activities:** 1 **Lesson Plans:** 8 **Multimedia:** 1 **Unit Plans:** 0	Explain causes and consequences of World War I, including imperialism, militarism, nationalism, and the alliance system. • Describing the rise of Communism in Russia during World War I Examples: return of Vladimir Lenin, rise of the Bolsheviks • Describing military technology used during World War I • Identifying problems created by the Treaty of Versailles of 1919 Examples: Germany's reparations and war guilt, international controversy over the League of Nations • Identifying alliances during World War I and boundary changes after World War I
Social Studies (2010) Grade(s): 9 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain challenges of the post-World War I period. Examples: 1920s cultural disillusionment, colonial rebellion and turmoil in Ireland and India, attempts to achieve political stability in Europe • Identifying causes of the Great Depression • Characterizing the global impact of the Great Depression

Social Studies (2010) Grade(s): 9 **All Resources:** 10 **Learning Activities:** 2 **Lesson Plans:** 7 **Multimedia:** 1 **Unit Plans:** 0	Describe causes and consequences of World War II. Examples: causes—unanswered aggression, Axis goal of world conquest consequences—changes in political boundaries; Allied goals; lasting issues such as the Holocaust, Atomic Age, and Nuremberg Trials • Explaining the rise of militarist and totalitarian states in Italy, Germany, the Soviet Union, and Japan • Identifying turning points of World War II in the European and Pacific Theaters • Depicting geographic locations of world events between 1939 and 1945 • Identifying on a map changes in national borders as a result of World War II
Social Studies (2010) Grade(s): 9 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Describe post-World War II realignment and reconstruction in Europe, Asia, and Latin America, including the end of colonial empires. Examples: reconstruction of Japan; nationalism in India, Pakistan, Indonesia, and Africa; Chinese Communist Revolution; creation of the Jewish state of Israel; Cuban Revolution; Central American conflicts • Explaining origins of the Cold War Examples: Yalta and Potsdam Conferences, "Iron Curtain," Truman Doctrine, Marshall Plan, United Nations, North Atlantic Treaty Organization (NATO), Warsaw Pact • Tracing the progression of the Cold War Examples: nuclear weapons, European power struggles, Korean War, Berlin Wall, Cuban Missile Crisis, Vietnam War
Social Studies (2010) Grade(s): 9 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Describe the role of nationalism, militarism, and civil war in today's world, including the use of terrorism and modern weapons at the close of the twentieth and the beginning of the twenty-first centuries. • Describing the collapse of the Soviet Empire and Russia's struggle for democracy, free markets, and economic recovery and the roles of Mikhail Gorbachev, Ronald Reagan, and Boris Yeltsin Examples: economic failures, demands for national and human rights, resistance from Eastern Europe, reunification of Germany • Describing effects of internal conflict, nationalism, and enmity in South Africa, Northern Ireland, Chile, the Middle East, Somalia and Rwanda, Cambodia, and the Balkans • Characterizing the War on Terrorism, including the significance of the Iran Hostage Crisis; the Gulf Wars; the September 11, 2001, terrorist attacks; and the Israeli-Palestinian conflict • Depicting geographic locations of major world events from 1945 to the present
Social Studies (2010) Grade(s): 9 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1	Describe emerging democracies from the late twentieth century to the present. • Discussing problems and opportunities involving science, technology, and the environment in the late twentieth century Examples: genetic engineering, space exploration • Identifying problems involving civil liberties and human rights from 1945 to the present and ways in which these problems have been addressed • Relating economic changes to social changes in countries adopting democratic forms

Multimedia:	0	of government
Unit Plans:	0	

United States History I: Beginnings to the Industrial Revolution (10)

Social Studies (2010) Grade(s): 10 **All Resources:** 12 **Learning Activities:** 1 **Lesson Plans:** 8 **Multimedia:** 3 **Unit Plans:** 0	Compare effects of economic, geographic, social, and political conditions before and after European explorations of the fifteenth through seventeenth centuries on Europeans, American colonists, Africans, and indigenous Americans. [A.1.a., A.1.b., A. 1.d., A.1.g., A.1.i.] • Describing the influence of the Crusades, Renaissance, and Reformation on European exploration • Comparing European motives for establishing colonies, including mercantilism, religious persecution, poverty, oppression, and new opportunities • Analyzing the course of the Columbian Exchange for its impact on the global economy • Explaining triangular trade and the development of slavery in the colonies
Social Studies (2010) Grade(s): 10 **All Resources:** 13 **Learning Activities:** 0 **Lesson Plans:** 12 **Multimedia:** 1 **Unit Plans:** 0	Compare regional differences among early New England, Middle, and Southern colonies regarding economics, geography, culture, government, and American Indian relations. [A.1.a., A.1.b., A.1.d., A.1.g., A.1.i.] • Explaining the role of essential documents in the establishment of colonial governments, including the Magna Carta, the English Bill of Rights, and the Mayflower Compact • Explaining the significance of the House of Burgesses and New England town meetings in colonial politics • Describing the impact of the Great Awakening on colonial society
Social Studies (2010) Grade(s): 10 **All Resources:** 31 **Learning Activities:** 2 **Lesson Plans:** 24 **Multimedia:** 5 **Unit Plans:** 0	Trace the chronology of events leading to the American Revolution, including the French and Indian War, passage of the Stamp Act, the Boston Tea Party, the Boston Massacre, passage of the Intolerable Acts, the Battles of Lexington and Concord, the publication of *Common Sense*, and the signing of the Declaration of Independence. [A.1.a., A.1.b., A.1.d., A.1.g., A.1.i.] • Explaining the role of key revolutionary leaders, including George Washington; John Adams; Thomas Jefferson; Patrick Henry; Samuel Adams; Paul Revere; Crispus Attucks; and Gilbert du Motier, Marquis de Lafayette • Explaining the significance of revolutionary battles, including Bunker Hill, Trenton, Saratoga, and Yorktown • Summarizing major ideas of the Declaration of Independence, including the theories of John Locke, Charles de Montesquieu, and Jean-Jacques Rousseau • Comparing perspectives of differing groups in society and their roles in the American Revolution, including men, women, white settlers, free and enslaved African Americans, and American Indians • Describing how provisions of the Treaty of Paris of 1783 affected relations of the United States with European nations and American Indians
Social Studies (2010) Grade(s): 10 **All Resources:** 23 **Learning** 2	Describe the political system of the United States based on the Constitution of the United States. [A.1.a., A.1.b., A.1.d., A.1.g., A.1.i.] • Interpreting the Preamble to the Constitution of the United States; separation of powers; federal system; elastic clause; the Bill of Rights; and the Thirteenth, Fourteenth, Fifteenth, and Nineteenth Amendments as key elements of the Constitution of the United States • Describing inadequacies of the Articles of Confederation

Activities: **Lesson Plans:** 19 **Multimedia:** 2 **Unit Plans:** 0	• Distinguishing personalities, issues, ideologies, and compromises related to the Constitutional Convention and the ratification of the Constitution of the United States, including the role of the Federalist papers • Identifying factors leading to the development and establishment of political parties, including Alexander Hamilton's economic policies, conflicting views of Thomas Jefferson and Alexander Hamilton, George Washington's Farewell Address, and the election of 1800
Social Studies (2010) Grade(s): 10 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Explain key cases that helped shape the United States Supreme Court, including *Marbury versus Madison, McCullough versus Maryland*, and *Cherokee Nation versus Georgia*. [A.1.a., A.1.b., A.1.d., A.1.g., A.1.i.] • Explaining concepts of loose and strict interpretations of the Constitution of the United States
Social Studies (2010) Grade(s): 10 **All Resources:** 20 **Learning Activities:** 0 **Lesson Plans:** 19 **Multimedia:** 1 **Unit Plans:** 0	Describe relations of the United States with Britain and France from 1781 to 1823, including the XYZ Affair, the War of 1812, and the Monroe Doctrine. [A.1.a., A.1.b., A.1.d., A.1.g., A.1.i.] Examples: Embargo Act, Alien and Sedition Acts, impressment
Social Studies (2010) Grade(s): 10 **All Resources:** 12 **Learning Activities:** 2 **Lesson Plans:** 8 **Multimedia:** 2 **Unit Plans:** 0	Describe causes, courses, and consequences of United States' expansionism prior to the Civil War, including the Treaty of Paris of 1783, the Northwest Ordinance of 1785, the Northwest Ordinance of 1787, the Louisiana Purchase, the Indian Removal Act, the Trail of Tears, Manifest Destiny, the Mexican War and Cession, Texas Independence, the acquisition of Oregon, the California Gold Rush, and the Western Trails. [A.1.a., A.1.c., A.1.e., A.1.f., A.1.g., A.1.i., A.1.j.]
Social Studies (2010) Grade(s): 10 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 1	Compare major events in Alabama from 1781 to 1823, including statehood as part of the expanding nation, acquisition of land, settlement, and the Creek War, to those of the developing nation. (Alabama) [A.1.a., A.1.c., A.1.e., A.1.f., A.1.g., A.1.i., A.1.j.]

Unit Plans: 0	
Social Studies (2010) Grade(s): 10 **All Resources:** 16 **Learning Activities:** 0 **Lesson Plans:** 13 **Multimedia:** 3 **Unit Plans:** 0	Explain dynamics of economic nationalism during the Era of Good Feelings, including transportation systems, Henry Clay's American System, slavery and the emergence of the plantation system, and the beginning of industrialism in the Northeast. [A.1.a., A.1.c., A.1.e., A.1.f., A.1.g., A.1.i., A.1.j.] Examples: Waltham-Lowell system, "old" immigration, changing technologies
Social Studies (2010) Grade(s): 10 **All Resources:** 10 **Learning Activities:** 0 **Lesson Plans:** 10 **Multimedia:** 0 **Unit Plans:** 0	Analyze key ideas of Jacksonian Democracy for their impact on political participation, political parties, and constitutional government. [A.1.a., A.1.c., A.1.e., A.1.f., A.1.g., A.1.i., A.1.j.] • Explaining the spoils system, nullification, extension of voting rights, the Indian Removal Act, and the common man ideal
Social Studies (2010) Grade(s): 10 **All Resources:** 11 **Learning Activities:** 0 **Lesson Plans:** 11 **Multimedia:** 0 **Unit Plans:** 0	Evaluate the impact of American social and political reform on the emergence of a distinct culture. [A.1.a., A.1.c., A.1.e., A.1.f., A.1.g., A.1.i., A.1.j.] • Explaining the impact of the Second Great Awakening on the emergence of a national identity • Explaining the emergence of uniquely American writers Examples: James Fenimore Cooper, Henry David Thoreau, Edgar Allen Poe • Explaining the influence of Elizabeth Cady Stanton, Dorothea Lynde Dix, and Susan B. Anthony on the development of social reform movements prior to the Civil War
Social Studies (2010) Grade(s): 10 **All Resources:** 17 **Learning Activities:** 2 **Lesson Plans:** 14 **Multimedia:** 1 **Unit Plans:** 0	Describe the founding of the first abolitionist societies by Benjamin Rush and Benjamin Franklin and the role played by later critics of slavery, including William Lloyd Garrison, Frederick Douglass, Sojourner Truth, Angelina and Sarah Grimké, Henry David Thoreau, and Charles Sumner. [A.1.a., A.1.c., A.1.e., A.1.f., A.1.g., A.1.i., A.1.j.] • Describing the rise of religious movements in opposition to slavery, including objections of the Quakers • Explaining the importance of the Northwest Ordinance of 1787 that banned slavery in new states north of the Ohio River • Describing the rise of the Underground Railroad and its leaders, including Harriet Tubman and the impact of Harriet Beecher Stowe's *Uncle Tom's Cabin*, on the abolitionist movement
Social Studies (2010) Grade(s): 10 **All** 19	Summarize major legislation and court decisions from 1800 to 1861 that led to increasing sectionalism, including the Missouri Compromise of 1820, the Compromise of 1850, the Fugitive Slave Acts, the Kansas-Nebraska Act, and the Dred Scott decision. [A.1.a., A.1.c., A.1.e., A.1.f., A.1.g., A.1.i., A.1.j.]

Resources: **Learning Activities:** 1 **Lesson Plans:** 14 **Multimedia:** 4 **Unit Plans:** 0	• Describing Alabama's role in the developing sectionalism of the United States from 1819 to 1861, including participation in slavery, secession, the Indian War, and reliance on cotton (Alabama) • Analyzing the Westward Expansion from 1803 to 1861 to determine its effect on sectionalism, including the Louisiana Purchase, Texas Annexation, and the Mexican Cession • Describing tariff debates and the nullification crisis between 1800 and 1861 • Analyzing the formation of the Republican Party for its impact on the 1860 election of Abraham Lincoln as President of the United States
Social Studies (2010) Grade(s): 10 **All Resources:** 24 **Learning Activities:** 1 **Lesson Plans:** 16 **Multimedia:** 7 **Unit Plans:** 0	Describe how the Civil War influenced the United States, including the Anaconda Plan and the major battles of Bull Run, Antietam, Vicksburg, and Gettysburg and Sherman's March to the Sea. [A.1.a., A.1.b., A.1.c., A.1.d., A.1.e., A.1.i., A.1.k.] • Identifying key Northern and Southern Civil War personalities, including Abraham Lincoln, Jefferson Davis, Ulysses S. Grant, Robert E. Lee, Thomas Jonathan "Stonewall" Jackson, and William Tecumseh Sherman Example: President Abraham Lincoln's philosophy of union, executive orders, and leadership • Analyzing the impact of the division of the nation during the Civil War regarding resources, population distribution, and transportation • Explaining reasons border states remained in the Union during the Civil War • Describing nonmilitary events and life during the Civil War, including the Homestead Act, the Morrill Act, Northern draft riots, the Emancipation Proclamation, and the Gettysburg Address • Describing the role of women in American society during the Civil War, including efforts made by Elizabeth Blackwell and Clara Barton • Tracing Alabama's involvement in the Civil War (Alabama)
Social Studies (2010) Grade(s): 10 **All Resources:** 13 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 7 **Unit Plans:** 0	Compare congressional and presidential reconstruction plans, including African-American political participation. [A.1.a., A.1.b., A.1.c., A.1.d., A.1.e., A.1.i., A.1.k.] • Tracing economic changes in the post-Civil War period for whites and African Americans in the North and South, including the effectiveness of the Freedmen's Bureau • Describing social restructuring of the South, including Southern military districts, the role of carpetbaggers and scalawags, the creation of the black codes, and the Ku Klux Klan • Describing the Compromise of 1877 • Summarizing post-Civil War constitutional amendments, including the Thirteenth, Fourteenth, and Fifteenth Amendments • Explaining causes for the impeachment of President Andrew Johnson • Explaining the impact of the Jim Crow laws and *Plessey versus Ferguson* on the social and political structure of the New South after Reconstruction • Analyzing political and social motives that shaped the Constitution of Alabama of 1901 to determine their long-term effect on politics and economics in Alabama (Alabama)
Social Studies (2010) Grade(s): 10 **All Resources:** 7 **Learning Activities:** 0 **Lesson** 4	Explain the transition of the United States from an agrarian society to an industrial nation prior to World War I. [A.1.a., A.1.b., A.1.c., A.1.d., A.1.e., A.1.h., A.1.i., A.1.k.] • Describing the impact of Manifest Destiny on the economic and technological development of the post-Civil War West, including mining, the cattle industry, and the transcontinental railroad • Identifying the changing role of the American farmer, including the establishment of the Granger movement and the Populist Party and agrarian rebellion over currency issues • Evaluating the Dawes Act for its effect on tribal identity, land ownership, and

Plans:		assimilation of American Indians between Reconstruction and World War I
Multimedia:	3	• Comparing population percentages, motives, and settlement patterns of immigrants from Asia, Africa, Europe, and Latin America, including the Chinese Exclusion Act regarding immigration quotas
Unit Plans:	0	

United States History II: The Industrial Revolution to the Present (11)

Social Studies (2010) Grade(s): 11 **All Resources:** 16 **Learning Activities:** 0 **Lesson Plans:** 10 **Multimedia:** 6 **Unit Plans:** 0	Explain the transition of the United States from an agrarian society to an industrial nation prior to World War I. [A.1.a., A.1.b., A.1.c., A.1.d., A.1.e., A.1.f., A.1.i., A.1.k.] • Interpreting the impact of change from workshop to factory on workers' lives, including the New Industrial Age from 1870 to 1900, the American Federation of Labor-Congress of Industrial Organizations (AFL-CIO), the Industrial Workers of the World (IWW), the Pullman Strike, the Haymarket Square Riot, and the impact of John D. Rockefeller, Andrew Carnegie, Samuel Gompers, Eugene V. Debs, A. Philip Randolph, and Thomas Alva Edison
Social Studies (2010) Grade(s): 11 **All Resources:** 15 **Learning Activities:** 0 **Lesson Plans:** 13 **Multimedia:** 2 **Unit Plans:** 0	Evaluate social and political origins, accomplishments, and limitations of Progressivism. [A.1.a., A.1.b., A.1.c., A.1.d., A.1.e., A.1.f., A.1.i., A.1.k.] • Explaining the impact of the Populist Movement on the role of the federal government in American society • Assessing the impact of muckrakers on public opinion during the Progressive movement, including Upton Sinclair, Jacob A. Riis, and Ida M. Tarbell Examples: women's suffrage, Ida B. Wells-Barnett, temperance movement • Explaining national legislation affecting the Progressive movement, including the Sherman Antitrust Act and the Clayton Antitrust Act • Determining the influence of the Niagara Movement, the National Association for the Advancement of Colored People (NAACP), Booker T. Washington, W. E. B. Du Bois, Marcus Garvey, and Carter G. Woodson on the Progressive Era • Assessing the significance of the public education movement initiated by Horace Mann • Comparing the presidential leadership of Theodore Roosevelt, William Howard Taft, and Woodrow Wilson in obtaining passage of measures regarding trust-busting, the Hepburn Act, the Pure Food and Drug Act, the Federal Trade Commission, the Federal Reserve Act, and conservation
Social Studies (2010) Grade(s): 11 **All Resources:** 11 **Learning Activities:** 1 **Lesson Plans:** 10 **Multimedia:** 0 **Unit Plans:** 0	Explain the United States' changing role in the early twentieth century as a world power. [A.1.a., A.1.b., A.1.c., A.1.d., A.1.e., A.1.f., A.1.i., A.1.k.] • Describing causes of the Spanish-American War, including yellow journalism, the sinking of the Battleship USS Maine, and economic interests in Cuba • Identifying the role of the Rough Riders on the iconic status of President Theodore Roosevelt • Describing consequences of the Spanish-American War, including the Treaty of Paris of 1898, insurgency in the Philippines, and territorial expansion in the Pacific and Caribbean • Analyzing the involvement of the United States in the Hawaiian Islands for economic and imperialistic interests • Appraising Alabama's contributions to the United States between Reconstruction and World War I, including those of William Crawford Gorgas, Joseph Wheeler, and John Tyler Morgan (Alabama) • Evaluating the role of the Open Door policy and the Roosevelt Corollary on America's expanding economic and geographic interests • Comparing the executive leadership represented by William Howard Taft's Dollar

	Diplomacy, Theodore Roosevelt's Big Stick Diplomacy, and Woodrow Wilson's Moral Diplomacy
Social Studies (2010) Grade(s): 11 **All Resources:** 24 **Learning Activities:** 2 **Lesson Plans:** 19 **Multimedia:** 3 **Unit Plans:** 0	Describe causes, events, and the impact of military involvement of the United States in World War I, including mobilization and economic and political changes. [A.1.a., A.1.b., A.1.d., A.1.f., A.1.i., A.1.j., A.1.k.] • Identifying the role of militarism, alliances, imperialism, and nationalism in World War I • Explaining controversies over the Treaty of Versailles of 1919, Woodrow Wilson's Fourteen Points, and the League of Nations • Explaining how the Treaty of Versailles led to worsening economic and political conditions in Europe, including greater opportunities for the rise of fascist states in Germany, Italy, and Spain • Comparing short- and long-term effects of changing boundaries in pre- and post-World War I in Europe and the Middle East, leading to the creation of new countries
Social Studies (2010) Grade(s): 11 **All Resources:** 25 **Learning Activities:** 1 **Lesson Plans:** 20 **Multimedia:** 4 **Unit Plans:** 0	Evaluate the impact of social changes and the influence of key figures in the United States from World War I through the 1920s, including Prohibition, the passage of the Nineteenth Amendment, the Scopes Trial, limits on immigration, Ku Klux Klan activities, the Red Scare, the Harlem Renaissance, the Great Migration, the Jazz Age, Susan B. Anthony, Margaret Sanger, Elizabeth Cady Stanton, W. C. Handy, and Zelda Fitzgerald. (Alabama) [A.1.a., A.1.b., A.1.d., A.1.f., A.1.i., A.1.j., A.1.k.] • Analyzing radio, cinema, and print media for their impact on the creation of mass culture • Analyzing works of major American artists and writers, including F. Scott Fitzgerald, Ernest Hemingway, Langston Hughes, and H. L. Mencken, to characterize the era of the 1920s • Determining the relationship between technological innovations and the creation of increased leisure time
Social Studies (2010) Grade(s): 11 **All Resources:** 40 **Learning Activities:** 9 **Lesson Plans:** 10 **Multimedia:** 21 **Unit Plans:** 0	Describe social and economic conditions from the 1920s through the Great Depression regarding factors leading to a deepening crisis, including the collapse of the farming economy and the stock market crash of 1929. [A.1.a., A.1.b., A.1.d., A.1.f., A.1.i., A.1.j., A.1.k.] • Assessing effects of overproduction, stock market speculation, and restrictive monetary policies on the pending economic crisis • Describing the impact of the Smoot-Hawley Tariff Act on the global economy and the resulting worldwide depression • Identifying notable authors of the 1920s, including John Steinbeck, William Faulkner, and Zora Neale Hurston (Alabama) • Analyzing the Great Depression for its impact on the American family Examples: Bonus Army, Hoovervilles, Dust Bowl, Dorothea Lange
Social Studies (2010) Grade(s): 11 **All Resources:** 46 **Learning Activities:** 11 **Lesson Plans:** 14 **Multimedia:** 21	Explain strengths and weaknesses of the New Deal in managing problems of the Great Depression through relief, recovery, and reform programs, including the Tennessee Valley Authority (TVA), the Works Progress Administration (WPA), the Civilian Conservation Corps (CCC), and the Social Security Act. [A.1.a., A.1.b., A.1.d., A.1.f., A.1.i., A.1.j., A.1.k.] • Analyzing conditions created by the Dust Bowl for their impact on migration patterns during the Great Depression

Unit Plans: 0	
Social Studies (2010) Grade(s): 11 **All Resources:** 19 **Learning Activities:** 2 **Lesson Plans:** 11 **Multimedia:** 6 **Unit Plans:** 0	Summarize events leading to World War II, including the militarization of the Rhineland, Germany's seizure of Austria and Czechoslovakia, Japan's invasion of China, and the Rape of Nanjing. [A.1.b., A.1.c., A.1.d., A.1.e., A.1.g., A.1.i., A.1.k.] • Analyzing the impact of fascism, Nazism, and communism on growing conflicts in Europe • Explaining the isolationist debate as it evolved from the 1920s to the bombing of Pearl Harbor and the subsequent change in United States' foreign policy • Identifying roles of significant World War II leaders Examples: Franklin D. Roosevelt, Harry S. Truman, Dwight D. Eisenhower, George S. Patton, Sir Winston Churchill, Bernard Montgomery, Joseph Stalin, Benito Mussolini, Emperor Hirohito, Hedeki Tōjō, Erwin Rommel, Adolf Hitler • Evaluating the impact of the Munich Pact and the failed British policy of appeasement resulting in the invasion of Poland
Social Studies (2010) Grade(s): 11 **All Resources:** 30 **Learning Activities:** 6 **Lesson Plans:** 18 **Multimedia:** 6 **Unit Plans:** 0	Describe the significance of major battles, events, and consequences of World War II campaigns, including North Africa, Midway, Normandy, Okinawa, the Battle of the Bulge, Iwo Jima, and the Yalta and Potsdam Conferences. [A.1.b., A.1.c., A.1.d., A.1.e., A.1.g., A.1.i., A.1.k.] • Locating on a map or globe the major battles of World War II and the extent of the Allied and Axis territorial expansion • Describing military strategies of World War II, including blitzkrieg, island-hopping, and amphibious landings • Explaining reasons for and results of dropping atomic bombs on Japan • Explaining events and consequences of war crimes committed during World War II, including the Holocaust, the Bataan Death March, the Nuremberg Trials, the post-war Universal Declaration of Human Rights, and the Genocide Convention
Social Studies (2010) Grade(s): 11 **All Resources:** 20 **Learning Activities:** 0 **Lesson Plans:** 12 **Multimedia:** 8 **Unit Plans:** 0	Describe the impact of World War II on the lives of American citizens, including wartime economic measures, population shifts, growth in the middle class, growth of industrialization, advancements in science and technology, increased wealth in the African-American community, racial and ethnic tensions, Servicemen's Readjustment Act of 1944 (G. I. Bill of Rights), and desegregation of the military. [A.1.b., A.1.c., A.1.d., A.1.e., A.1.g., A.1.i., A.1.k.] • Describing Alabama's participation in World War II, including the role of the Tuskegee Airmen, the Aliceville Prisoner of War (POW) camp, growth of the Port of Mobile, production of Birmingham steel, and the establishment of military bases (Alabama)
Social Studies (2010) Grade(s): 11 **All Resources:** 16 **Learning Activities:** 0 **Lesson Plans:** 13 **Multimedia:** 3 **Unit Plans:** 0	Describe the international role of the United States from 1945 through 1960 relative to the Truman Doctrine, the Marshall Plan, the Berlin Blockade, and the North Atlantic Treaty Organization (NATO). [A.1.b., A.1.c., A.1.d., A.1.e., A.1.g., A.1.i., A.1.k.] • Describing Cold War policies and issues, the domino theory, McCarthyism, and their consequences, including the institution of loyalty oaths under Harry S. Truman, the Alger Hiss case, the House Un-American Activities Committee, and the execution of Julius and Ethel Rosenberg Examples: G.I. Bill of Rights, consumer economy, Sputnik, rock and roll, bomb shelters, Federal-Aid Highway Act • Locating areas of conflict during the Cold War from 1945 to 1960, including East and

	West Germany, Hungary, Poland, Cuba, Korea, and China
Social Studies (2010) Grade(s): 11 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	Describe major initiatives of the John F. Kennedy and Lyndon B. Johnson Administrations. [A.1.b., A.1.c., A.1.d., A.1.e., A.1.g., A.1.i., A.1.k.] Examples: President Kennedy—New Frontier, President Johnson—Great Society • Describing Alabama's role in the space program under the New Frontier (Alabama) Examples: National Aeronautics and Space Administration (NASA), space race, satellites • Describing major foreign events and issues of the John F. Kennedy Administration, including construction of the Berlin Wall, the Bay of Pigs invasion, and the Cuban missile crisis
Social Studies (2010) Grade(s): 11 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 2 **Unit Plans:** 0	Trace the course of the involvement of the United States in Vietnam from the 1950s to 1975, including the Battle of Dien Bien Phu, the Gulf of Tonkin Resolution, the Tet Offensive, destabilization of Laos, secret bombings of Cambodia, and the fall of Saigon. [A.1.b., A.1.c., A.1.d., A.1.e., A.1.g., A.1.i., A.1.k.] • Locating on a map or globe the divisions of Vietnam, the Ho Chi Minh Trail, and major battle sites • Describing the creation of North and South Vietnam
Social Studies (2010) Grade(s): 11 **All Resources:** 69 **Learning Activities:** 1 **Lesson Plans:** 32 **Multimedia:** 36 **Unit Plans:** 0	Trace events of the modern Civil Rights Movement from post-World War II to 1970 that resulted in social and economic changes, including the Montgomery Bus Boycott, the desegregation of Little Rock Central High School, the March on Washington, Freedom Rides, the Sixteenth Street Baptist Church bombing, and the Selma-to-Montgomery March. (Alabama) [A.1.c., A.1.d., A.1.f., A.1.i., A.1.j., A.1.k.] • Tracing the federal government's involvement in the modern Civil Rights Movement, including the abolition of the poll tax, the nationalization of state militias, *Brown versus Board of Education* in 1954, the Civil Rights Acts of 1957 and 1964, and the Voting Rights Act of 1965 • Explaining contributions of individuals and groups to the modern Civil Rights Movement, including Martin Luther King, Jr.; James Meredith; Medgar Evers; Thurgood Marshall; the Southern Christian Leadership Conference (SCLC); the Student Nonviolent Coordinating Committee (SNCC); the Congress of Racial Equality (CORE); the National Association for the Advancement of Colored People (NAACP); and the civil rights foot soldiers • Appraising contributions of persons and events in Alabama that influenced the modern Civil Rights Movement, including Rosa Parks, Autherine Lucy, John Patterson, George C. Wallace, Vivian Malone Jones, Fred Shuttlesworth, the Children's March, and key local persons and events (Alabama) • Describing the development of a Black Power movement, including the change in focus of the SNCC, the rise of Malcolm X, and Stokely Carmichael and the Black Panther movement • Describing the economic impact of African-American entrepreneurs on the modern Civil Rights Movement, including S. B. Fuller and A. G. Gaston (Alabama)
Social Studies (2010) Grade(s): 11	Describe changing social and cultural conditions in the United States during the 1950s, 1960s, and 1970s. [A.1.c., A.1.d., A.1.f., A.1.i., A.1.j., A.1.k.] Examples: economic impact on the culture, feminist movement, recession, Arab oil

All Resources: 35 **Learning Activities:** 4 **Lesson Plans:** 7 **Multimedia:** 24 **Unit Plans:** 0	embargo, technical revolution
Social Studies (2010) Grade(s): 11 **All Resources:** 10 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 5 **Unit Plans:** 0	Describe significant foreign and domestic issues of presidential administrations from Richard M. Nixon to the present. [A.1.a., A.1.b., A.1.c., A.1.d., A.1.e., A.1.g., A.1.h., A.1.i., A.1.k.] Examples: Nixon's policy of détente; Cambodia; Watergate scandal; pardon of Nixon; Iranian hostage situation; Reaganomics; Libyan crisis; end of the Cold War; Persian Gulf War; impeachment trial of William "Bill" Clinton; terrorist attack of September 11, 2001; Operation Iraqi Freedom; war in Afghanistan; election of the first African-American president, Barack Obama; terrorism; global warming; immigration

Contemporary World Issues and Civic Engagement (9-12)

Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 2 **Lesson Plans:** 2 **Multimedia:** 2 **Unit Plans:** 0	Describe current news stories from various perspectives, including geographical, historical, political, social, and cultural. • Evaluating the impact of current news stories on the individual and on local, state, national, and international communities (Alabama) • Comparing current news stories to related past events • Analyzing news stories for implications regarding nations of the world • Locating on a map areas affected by events described in news stories • Interpreting statistical data related to political, social, and economic issues in current events
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Compare the relationship of governments and economies to events occurring in specific nations. • Identifying recurring historical patterns in regions around the world • Describing costs and benefits of trade among nations in an interdependent world • Comparing ways different countries address individual and national economic and social problems, including child care, tax rates, economic regulations, health care, national debt, and unemployment
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 9 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 4 **Unit Plans:** 0	Compare civic responsibilities, individual rights, opportunities, and privileges of citizens of the United States to those of citizens of other nations.
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Analyze scientific and technological changes for their impact on the United States and the world.
Social Studies (2010)	Analyze cultural elements, including language, art, music, literature, and belief systems, to determine how they facilitate global understanding or misunderstanding.

Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 1 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 2 **Lesson Plans:** 2 **Multimedia:** 3 **Unit Plans:** 0	Compare information presented through various media, including television, newspapers, magazines, journals, and the Internet. • Explaining the reliability of news stories and their sources • Describing the use, misuse, and meaning of different media materials, including photographs, artwork, and film clips • Critiquing viewpoints presented in editorial writing and political cartoons, including the use of symbols that represent viewpoints • Describing the role of intentional and unintentional bias and flawed samplings
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 4 **Learning Activities:** 2 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	dentify strategies that facilitate public discussion on societal issues, including debating various positions, using a deliberative process, blogging, and presenting public forums.
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Organize a service-learning project, including research and implementation, that addresses an identified community or global issue having an impact on the quality of life of individuals and groups.

Human Geography (9-12)

Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Describe spatial patterns of world populations to discern major clusters of population density and reasons for these patterns. Examples: East Asia, India
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	dentify world migration patterns caused by displacement issues. Example: African refugees relocating from the Republic of Sierra Leone to Scandinavia • Explaining how Southeast Asian ethnic minorities, including Hmong, Lhasa, and Akha, adapt to life in the United States • Tracing the migration of ethnic minorities in Kunming to urban cities in China • Explaining how the displacement of American Indians to reservations affected many areas of the United States, including Alabama (Alabama)
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	dentify the characteristics, distribution, and complexity of Earth's cultural mosaics. • Explaining essential aspects of culture, including social structure, languages, belief systems, customs, religion, traditions, art, food, architecture, and technology
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 1 **Unit Plans:** 0	Describe elements of the landscape as a mirror of culture. • Explaining how landscapes reflect cultural traits and preferences • Distinguishing various types of architecture, including rural, urban, and religious structures Examples: religious land uses, advertisements for ethnic restaurants
Social Studies (2010)	Compare the geographic distribution of linguistic features around the world. • Identifying the world's most widely spoken languages

Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	• Describing how linguistic diversity creates cultural conflict
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain how religion influences cultures around the globe. • Identifying major religions, their source areas, and spatial expansion • Interpreting different ceremonies based on religious traditions, including marriages, funerals, and coming-of-age • Describing how religion influences political views around the world
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Describe patterns of settlement in different regions of the world. Examples: linear, grid, cluster, urban sprawl
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Analyze the interaction of urban places for their impact on surrounding regions. • Describing urban hinterlands • Explaining dimensions of urban sprawl
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0	Explain how economic interdependence and globalization impact many countries and their populations. • Tracing the flow of commodities from one region to another • Comparing advantages and disadvantages of global trade agreements

Lesson Plans: 1 **Multimedia:** 0 **Unit Plans:** 0	
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 1 **Unit Plans:** 0	Recognize how human-environmental interaction affects culture in today's society. Examples: population growth in the Galapagos Islands damaging the environment of endemic plant and animal species, deforestation in the Pantanal affecting the world's largest freshwater ecosystem, green technologies affecting humans and the environment
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Interpret human geography as it relates to gender. • Contrasting roles of men and women around the world • Describing ways the diffusion of ideas affects gender roles within societies Example: effects of Grameen Bank loans
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Distinguish among cultural health patterns around the world. Example: exercise patterns and mortality rates in Asia, the United States, Europe, South America, and Australia • Comparing dietary trends in Africa, Asia, the United States, Europe, and South America • Tracing disease prevalence and efficiency of treatment around the world, including malaria, dengue fever, acquired immunodeficiency syndrome (AIDS), parasites, and obesity
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Critique music, art, and dance as vehicles for understanding world cultures. • Categorizing musical instruments as a means to understanding culture, including the didgeridoo in the aboriginal culture in Australia • Identifying music genres and dance styles around the world Examples: genres—Naxi, Peruvian, pop dance styles—reggae, folk • Explaining how culture from various countries is expressed through adornments Examples: jewelry, clothing • Relating artwork and artists to history

	Examples: Fabergé eggs, commissioned paintings and sculptures
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 1 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Describe how tourism shapes cultural traditions and population growth. • Explaining how regions become major business centers of tourism and trade, including the cities of Dubai, Bangkok, New York, and Shanghai • Identifying how trends, including ecotourism and the cruise industry, affect island culture in tropical areas

Psychology (9-12)

Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Trace the development of psychology as a scientific discipline evolving from other fields of study. • Describing early psychological and biological inquiries that led to contemporary approaches and methods of experimentation, including ideologies of Aristotle, John Locke, Wilhelm Wundt, Charles Darwin, William James, Frantz Fanon, and G. Stanley Hall • Differentiating among various modern schools of thought and perspectives in psychology that have evolved since 1879, including each school's view on concepts of aggression or appetite • Illustrating how modern psychologists utilize multiple perspectives to understand behavior and mental processes • Identifying major subfields and career opportunities related to psychology
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe research strategies used by psychologists to explore mental processes and behavior. • Describing the type of methodology and strategies used by researchers in different psychological studies Examples: surveys, naturalistic observations, case studies, longitudinal studies, cross-sectional studies • Contrasting independent, dependent, and confounding variables and control and experimental groups • Identifying systematic procedures necessary for conducting an experiment and improving the validity of results • Describing the use of statistics in evaluating research, including calculating the mean, median, and mode from a set of data; conducting a simple correlational analysis using either calculators or computer software; and explaining the meaning of statistical significance
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain how processes of the central and peripheral nervous systems underlie behavior and mental processes, including how neurons are the basis for neural communication. • Describing how neurons communicate, including the role of neurotransmitters in behavior and the electrochemical process • Comparing the effect of drugs and toxins on the brain and neurotransmitters • Describing how different sections of the brain have specialized yet interdependent functions, including functions of different lobes and hemispheres of the cerebral cortex and consequences of damage to specific sections of the brain • Describing different technologies used to study the brain and nervous system • Analyzing behavior genetics for its contribution to the understanding of behavior and mental processes, including differentiating between deoxyribonucleic acid (DNA), chromosomes, and genes; identifying effects of chromosomal abnormalities; and explaining how genetics and environmental factors work together to determine inherited traits
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning** 0	Describe the interconnected processes of sensation and perception. • Explaining the role of sensory systems in human behavior, including sight, sound, smell, touch, and pain • Explaining how what is perceived can be different from what is sensed, including how attention and environmental cues can affect the ability to accurately sense and perceive the world

Activities: **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	• Describing the role of Gestalt principles and concepts in perception
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain ways to promote psychological wellness. • Describing physiological processes associated with stress, including hormones associated with stress responses • Describing Hans Selye's general adaptation syndrome (GAS) • Describing the flight-or-fight response in terms of the autonomic and somatic nervous systems • Contrasting positive and negative ways of coping with stress related to problem-focused coping, aggression, and emotion-focused coping • Explaining approach-approach, approach-avoidance, and avoidance-avoidance conflicts • Identifying various eating disorders and conditions Examples: anorexia nervosa, bulimia nervosa, obesity
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the physical, cognitive, and social development across the life span of a person from the prenatal through aging stages. • Outlining the stage-of-development theories of Jean Piaget, Erik H. Erikson, Sigmund Freud, Carol Gilligan, and Lawrence Kohlberg
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the processes and importance of memory, including how information is encoded and stored, mnemonic devices, schemas related to short-term memory, working memory, and long-term memory. • Distinguishing between surface and deep processing in memory development • Comparing ways memories are stored in the brain, including episodic and procedural • Identifying different parts of the brain that store memory • Differentiating among different types of amnesia • Describing how information is retrieved from memory • Explaining how memories can be reconstructed and misremembered
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0	Describe ways in which organisms learn, including the processes of classical conditioning, operant conditioning, and observational conditioning. • Identifying unconditioned stimuli (UCS), conditioned stimuli (CS), unconditioned responses (UCR), and conditioned responses (CR) • Describing the law of effect • Describing original experiments conducted by B. F. Skinner, Albert Bandura, Ivan Pavlov, John B. Watson, and Rosalie Rayner • Differentiating between reinforcement and punishment, positive and negative reinforcement, and various schedules of reinforcement

Multimedia: 0 **Unit Plans:** 0	• Describing biological limitations on operantly conditioned learning • Differentiating between observational learning and modeling • Analyzing watching violent media for effects on violent behavior
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe how organisms think and solve problems, including processes involved in accurate thinking. • Identifying the role of mental images and verbal symbols in the thought process • Explaining how concepts are formed • Differentiating between algorithms and heuristics • Analyzing different types of heuristics to determine effects on problem solving
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the qualities and development of language. • Identifying common phonemes and morphemes of language • Describing how understanding syntax and grammar affect language comprehension • Demonstrating how qualities of sign language are similar to spoken language • Describing how infants move from babbling to usage of complete sentences • Explaining how hearing loss in infants and children can affect the development of spoken language
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare various states of consciousness evident in human behavior, including the process of sleeping and dreaming. • Explaining states of sleep throughout an average night's sleep, including nonrapid eye movement (NREM) and rapid eye movement (REM) • Describing the mechanism of the circadian rhythm • Evaluating the importance of sleep to good performance • Comparing theories regarding the use and meaning of dreams • Analyzing the use of psychoactive drugs for effects on people, including the mechanisms of addiction, withdrawal, and tolerance • Evaluating the phenomenon of hypnosis and its possible uses
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Describe the role of motivation and emotion in human behavior. • Identifying theories that explain motivational processes, including cognitive, biological, and psychological reasons for motivational behavior, and Abraham Maslow's hierarchy of needs and arousal theory • Describing situational cues that cause emotions, including anger, curiosity, and anxiety • Differentiating among theories of emotion • Identifying universally recognized emotions
Social Studies (2010)	Describe methods of assessing individual differences and theories of intelligence, including Charles E. Spearman's general (g) factor of intelligence, Howard Gardner's multiple intelligences, and Robert J. Sternberg's triarchic theory of intelligence.

Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	• Describing different types of intelligence tests, including the Flynn effect • Describing how intelligence may be influenced by differences in heredity and environment and by biases toward ethnic minority and socioeconomic groups
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain the role of personality development in human behavior. • Differentiating among personality theories, including psychoanalytic, sociocognitive, trait, and humanistic theories of personality • Describing different measures of personality, including the Neuroticism-Extroversion-Openness Personality Inventory (NEO-PI), the Minnesota Multiphasic Personality Inventory (MMPI), and projective tests
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe major psychological disorders and their treatments. • Differentiating between normal and abnormal behavior • Describing different approaches for explaining mental illness, including biological and medical, cognitive, and sociocultural models • Differentiating types of mental illness, including mood, anxiety, somatoform, schizophrenic, dissociative, and personality disorders
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe how attitudes, conditions of obedience and conformity, and other influences affect actions and shape human behavior, including actor-observer, self-server, social facilitation, social loafing, bystander effect, groupthink, and group polarization. • Explaining the fundamental attribution error • Critiquing Stanley Milgram's work with obedience and S. E. Asch's work with conformity
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0	Describe various careers pursued by psychologists, including medical and mental health care fields, the business world, education, law and criminal justice, and research.

Lesson Plans: 0 **Multimedia:** 0 **Unit Plans:** 0	
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain how culture and gender influence behavior. • Identifying gender differences and similarities • Explaining ways in which gender differences are developed • Describing ways in which gender roles are assigned in different cultures

Sociology (9-12)

Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the development of sociology as a social science field of study. • Identifying important figures in the field of sociology, including Karl Marx, Émile Durkheim, Max Weber, George Herbert Mead, and W. E. B. Du Bois • Identifying characteristics of sociology, including functional integration, power, social action, social structure, and culture
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain methods and tools of research used by sociologists to study human society, including surveys, polls, statistics, demographic information, case studies, participant observations, and program evaluations. • Differentiating between qualitative and quantitative research methods
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe how values and norms influence individual behavior. • Comparing ways in which cultures differ, change, and resist change, including countercultures, subcultures, and ethnocentric beliefs • Comparing the use of various symbols within and across societies Examples: objects, gestures, sounds, images • Explaining the significance of socialization in human development • Illustrating key concepts of socialization, including self-concept, looking-glass self, significant others, and role-taking • Determining the role of family, school, peer groups, and the media in socializing young people • Explaining the process of socialization in adulthood
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Identify antisocial behaviors, including social deviance, addiction, terrorism, anomie, and related arguments for the strain theory and the conflict theory. • Contrasting violent crime, property crime, and victimless crime with white-collar crime • Comparing methods for dealing with antisocial behavior, including imprisonment, restitution, community service, rehabilitation, education, and therapy
Social Studies	Describe how environment and genetics affect personality, including self-concept and

(2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	temperament.
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify stages of development across the life cycle, including birth, childhood, adolescence, adulthood, parenthood, middle age, and late adulthood. • Describing the value of birth cohorts as a research device
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe types and characteristics of groups. • Explaining the relationship between social stratification and social class, including status ascription versus achievement, intergenerational social mobility, and structural occupational change • Relating the importance of group dynamics, including size, leadership, decision making, and gender roles • Distinguishing between the terms, *race* and *ethnicity* and *prejudice* and *discrimination* • Describing social inequalities experienced as related to gender and age
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the structure and function of the family unit, including traditional, extended, nuclear, single-parent, and blended families involving the roles of parent, child, and spouse. • Identifying problems facing families, including abuse, divorce, teen pregnancy, poverty, addiction, family violence, and care of elderly family members
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 1 **Learning** 0	Explain the purpose of social systems and institutions, including schools, churches, voluntary associations, and governments. • Describing origins and beliefs of various religions • Distinguishing among the concepts of power, coercion, and authority • Comparing charismatic, traditional, and rational-legal authority

Activities: **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe social movement and social change. • Comparing various forms of collective behavior, including mobs, riots, fads, and crowds • Identifying major ethical and social issues facing modern society Examples: technological, governmental, medical • Explaining the impact of the modern Civil Rights Movement, the women's movement, the gun rights movement, the green movement, and other minority movements in the United States
Social Studies (2010) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Contrast population patterns using the birth rate, death rate, migration rate, and dependency rate. • Identifying the impact of urbanization on human social patterns • Analyzing factors that affect the depletion of natural resources for their impact on social and economic development • Projecting future population patterns

United States Government (12)

Social Studies (2010) Grade(s): 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Explain historical and philosophical origins that shaped the government of the United States, including the Magna Carta, the Petition of Rights, the English Bill of Rights, the Mayflower Compact, the Virginia Declaration of Rights, and the influence of Thomas Hobbes, John Locke, Charles de Montesquieu, Jean-Jaques Rousseau, and the Great Awakening. • Comparing characteristics of limited and unlimited governments throughout the world, including constitutional, authoritarian, and totalitarian governments Examples: constitutional—United States authoritarian—Iran totalitarian—North Korea
Social Studies (2010) Grade(s): 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Summarize the significance of the First and Second Continental Congresses, the Declaration of Independence, Shays' Rebellion, and the Articles of Confederation of 1781 on the writing and ratification of the Constitution of the United States of 1787 and the Bill of Rights of 1791.
Social Studies (2010) Grade(s): 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Analyze major features of the Constitution of the United States and the Bill of Rights for purposes, organization, functions, and principles, including rule of law, federalism, limited government, popular sovereignty, judicial review, separation of powers, and checks and balances. • Explaining main ideas of the debate over ratification that included the Federalist papers • Analyzing the Bill of Rights for its application to historical and current issues • Outlining the formal process of amending the Constitution of the United States
Social Studies (2010) Grade(s): 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Explain how the federal system of the United States divides powers between national and state governments. (Alabama) • Summarizing obligations that the Constitution of the United States places on a nation for the benefit of the states, including admitting new states and cooperative federalism • Evaluating the role of the national government in interstate relations

Social Studies (2010) Grade(s): 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Compare specific functions, organizations, and purposes of local and state governments, including implementing fiscal and monetary policies, ensuring personal security, and regulating transportation. (Alabama) • Analyzing the Constitution of Alabama of 1901 to determine its impact on local funding and campaign funding (Alabama) • Describing the influence of special interest groups on state government (Alabama)
Social Studies (2010) Grade(s): 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Analyze the expansion of suffrage for its effect on the political system of the United States, including suffrage for non-property owners, women, African Americans, and persons eighteen years of age. • Describing implications of participation of large numbers of minorities and women in parties and campaigns • Analyzing the black codes, the Jim Crow laws, and the Selma-to-Montgomery March for their impact on the passage of the Voting Rights Act of 1965 (Alabama)
Social Studies (2010) Grade(s): 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Describe the process of local, state, and national elections, including the organization, role, and constituency of political parties. (Alabama) • Explaining campaign funding and spending • Evaluating the impact of reapportionment, redistricting, and voter turnout on elections
Social Studies (2010) Grade(s): 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Describe functions and the development of special interest groups and campaign contributions by political action committees and their impact on state and national elections. (Alabama) • Analyzing rulings by the United States Supreme Court, including *Buckley versus Valeo*, regarding campaign financing to determine the effect on the election process
Social Studies (2010) Grade(s): 12 **All Resources:** 4	Trace the impact of the media on the political process and public opinion in the United States, including party press, penny press, print media, yellow journalism, radio, television, and electronic media. • Describing regional differences in public opinion in the United States • Analyzing television and electronic media for their impact on the election process and

Learning Activities: 1 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	campaign spending from the John F. Kennedy-Richard M. Nixon debate to the election of Barack Obama as President of the United States • Explaining the effect of attack advertisements on voter selection of candidates
Social Studies (2010) Grade(s): 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Evaluate roles political parties play in the functioning of the political system of the United States. • Describing the role of third-party candidates in political elections in the United States • Explaining major characteristics of contemporary political parties in the United States, including the role of conventions, party leadership, formal and informal memberships, and regional strongholds • Describing the influence of political parties on individuals and elected officials, including the development of party machines, rise of independent voters, and disillusionment with party systems
Social Studies (2010) Grade(s): 12 **All Resources:** 5 **Learning Activities:** 1 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Evaluate constitutional provisions of the legislative branch of the government of the United States, including checks by the legislative branch on other branches of government. • Comparing rules of operations and hierarchies of Congress, including roles of the Speaker of the House, the Senate President Pro Tempore, majority and minority leaders, and party whips • Identifying the significance of Congressional committee structure and types of committees • Tracing the legislative process, including types of votes and committee action, from a bill's presentation to presidential action
Social Studies (2010) Grade(s): 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	Evaluate constitutional provisions of the executive branch of the government of the United States, including checks by the executive branch on other branches of government and powers, duties as head of state and head of government, the electoral process, and the Twenty-fifth Amendment. • Critiquing informal powers of the President of the United States, including press conferences, State of the Union addresses, total media access, head of party, and symbolic powers of the Oval Office • Identifying the influence of White House staff on the President of the United States • Ranking powers held by the President's Cabinet, including roles of Cabinet secretaries, appropriations by Congress, appointment and confirmation, and operation of organization • Comparing diverse backgrounds, socioeconomic status, and levels of education of United States' presidents
Social Studies (2010) Grade(s): 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3	Evaluate constitutional provisions of the judicial branch of government of the United States, including checks by the judicial branch on other branches of government, limits on judicial power, and the process by which cases are argued before the United States Supreme Court. • Explaining the structure and jurisdiction of court systems of the United States, including lower courts and appellate courts • Identifying the impact of landmark United States Supreme Court cases on constitutional interpretation Examples: *Marbury versus Madison, Miranda versus Arizona, Tinker versus Des Moines,*

Multimedia: 0 **Unit Plans:** 0	*Gideon versus Wainwright, Reno versus American Civil Liberties Union, United States versus Nixon, McCulloch versus Maryland, Wallace versus Jaffree, Wyatt versus Stickney, Powell versus Alabama* (Alabama) • Describing the shifting political balance of the court system, including the appointment process, the ideology of justices, influences on court decisions regarding executive and legislative opinion, public opinion, and the desire for impartiality • Contrasting strict and loose constructionist views of the Constitution of the United States
Social Studies (2010) Grade(s): 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	Describe the role of citizens in American democracy, including the meaning, rights, and responsibilities of citizenship; due process and other rights guaranteed by the Constitution of the United States; and participation in the election process. • Explaining how the balance between individual versus majority rule and state versus national authority is essential to the functioning of the American democratic society (Alabama) Examples: majority rule and minority rights, liberty and equality, state and national authority in a federal system, civil disobedience and rule of law, freedom of the press, right to a fair trial, relationship of religion and government (Alabama)
Social Studies (2010) Grade(s): 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Explain the role and consequences of domestic and foreign policy decisions, including scientific and technological advancements and humanitarian, cultural, economic, and political changes. Examples: isolationism versus internationalism, policy of containment, policy of détente, multilateralism, war on terrorism • Evaluating financial, political, and social costs of national security

Economics (12)

Social Studies (2010) Grade(s): 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Explain why productive resources are limited and why individuals, businesses, and governments have to make choices in order to meet needs and wants. • Explaining scarcity as a basic condition that exists when unlimited wants exceed limited productive resources • Explaining land (an example of a natural resource), labor (an example of a human resource), capital (an example of a physical or human resource), and entrepreneurship to be the factors of production • Explaining opportunity cost as the next best alternative to relinquish when individuals, businesses, and governments confront scarcity by making choices
Social Studies (2010) Grade(s): 12 **All Resources:** 2 **Learning Activities:** 1 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Explain how rational decision making entails comparing additional costs of alternatives to additional benefits. • Illustrating on a production-possibilities curve how rational decision making involves trade-offs between two options • Explaining rational decision making as the comparison between marginal benefits and marginal costs of an action
Social Studies (2010) Grade(s): 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Describe different economic systems used to allocate scarce goods and services. • Defining command, market, and mixed economic systems • Describing how different economic systems answer the three basic economic questions of what to produce, how to produce, and for whom to produce • Evaluating how each type of system addresses private ownership, profit motive, consumer sovereignty, competition, and government regulation
Social Studies (2010) Grade(s): 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Describe the role of government in a market economy, including promoting and securing competition, protecting private property rights, promoting equity, providing public goods and services, resolving externalities and other market failures, and stabilizing growth in the economy. • Explaining how government regulation and deregulation policies affect consumers and producers
Social Studies (2010)	Explain that a country's standard of living depends upon its ability to produce goods and services.

Grade(s): 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 1 **Unit Plans:** 0	• Explaining productivity as the amount of outputs, or goods and services, produced from inputs, or factors of production • Describing how investments in factories, equipment, education, new technology, training, and health improve economic growth and living standards
Social Studies (2010) Grade(s): 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Describe how specialization and voluntary exchange between buyers and sellers lead to mutually beneficial outcomes. • Illustrating on a circular-flow diagram the product market; the factor market; the real flow of goods and services between and among businesses, households, and government; and the flow of money • Constructing examples of specialization and exchange • Illustrating on a table and graph the law of supply and demand • Describing the role of buyers and sellers in determining market clearing price • Illustrating on a table and graph how supply and demand determine equilibrium price and quantity • Illustrating on a graph of supply and demand how price movements eliminate shortages and surpluses • Illustrating on a graph how different factors cause changes in a market supply and demand • Explaining how prices serve as incentives in a market economy
Social Studies (2010) Grade(s): 12 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 1 **Unit Plans:** 0	Describe the organization and role of business. • Comparing types of business firms, including sole proprietorships, partnerships, and corporations • Explaining the role of profit as an incentive, including short-term versus long-run decisions, for all firms • Describing basic characteristics of pure competition, monopoly, monopolistic competition, and oligopoly • Explaining ways firms finance operations, including retained earnings, stocks, and debt, and the advantages and disadvantages of each • Explaining ways firms engage in price and nonprice competition • Recognizing the role of economic institutions, including labor unions and nonprofit organizations, in market economies
Social Studies (2010) Grade(s): 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Explain the impact of the labor market on the United States' economy. • Identifying regional characteristics of the labor force of the United States, including gender, race, socioeconomic background, education, age, and regional specialization • Explaining how supply of and demand for labor affect wages • Describing characteristics that are most likely to increase wage and nonwage benefits, including skill, productivity, education, occupation, and mobility • Explaining how unemployment and inflation impose costs on individuals and nations • Determining the relationship of Alabama and the United States to the global economy regarding current technological innovations and industries (Alabama) Examples: World Wide Web, peanut industry, telecommunications industry, aerospace industry • Tracing the history of labor unions and methods of contract negotiation by labor and management (Alabama)

Social Studies (2010) Grade(s): 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Describe methods used to measure overall economic activity, including the Gross Domestic Product (GDP), the Consumer Price Index (CPI), inflation, and unemployment. • Explaining how overall levels of income, employment, and prices are determined by spending decisions of households, businesses, and government; net exports in the short run; and production decisions of firms and technology in the long run • Identifying structural, cyclical, and frictional unemployment • Describing stages of the business cycle and how employment and inflation change during those stages
Social Studies (2010) Grade(s): 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Explain the structure, role, and functions of the United States Federal Reserve System. • Describing how the United States Federal Reserve System oversees the banking system and regulates the quantity of money in the economy • Defining monetary policy • Describing how the central bank uses its tools of monetary policy to promote price stability, full employment, and economic growth
Social Studies (2010) Grade(s): 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Explain how the government uses fiscal policy to promote the economic goals of price stability, full employment, and economic growth. • Defining fiscal policy and the use of taxation and government purchases • Comparing government deficits and the national debt
Social Studies (2010) Grade(s): 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Explain why individuals, businesses, and governments trade goods and services in the global economy. • Defining absolute advantage and comparative advantage • Explaining how gains from trade, whether between two individuals or two countries, are based on the principle of comparative advantage • Defining exchange rates • Explaining how changes in exchange rates impact purchasing powers of individuals and businesses • Explaining tariffs, quotas, embargoes, standards, and subsidies as trade barriers • Explaining why countries sometimes impose trade barriers and sometimes advocate free trade

Career/Technical Education

Career Cluster Electives

Career Preparedness

Personal Decision Making

Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate knowledge of a systematic approach to a decision-making process (specifically, opportunity costs and trade-offs), including factors regarding academic planning and career development, financial literacy, and technology. Example: decision-making process steps—define the problem, brainstorm, list alternatives, evaluate alternatives and identify consequences, propose a solution

Academic Planning and Career Development

Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Understand the effect of workplace behaviors. a. Examine appropriate workplace behaviors, including attitude, work ethic, responsibility, dependability, punctuality, integrity, time management, effort, adherence to dress code, communication (written, verbal, and nonverbal), teamwork, and other workplace etiquette. b. Identify inappropriate workplace behaviors, including violence and sexual harassment and procedures for addressing such behaviors. c. Recognize the importance of and capitalize on diversity in the workplace.
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze personal skills, interests, and abilities and relate them to current career opportunities. a. Participate in assessments that identify personal areas of interest and aptitude, including utilizing results to develop a four-year high school educational plan. b. Explore individual career options from the 16 National Career Clusters to examine specific job descriptions, requirements, salaries, and employment outlooks. c. Identify safety and health standards in the workplace for daily procedures, emergency procedures, equipment/tools, dress, use of technology, and work area maintenance.
Career Cluster Electives	Determine the correlation of personal preference, education, and training to the demands of the workforce.

(2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	a. Select a personal career goal based upon results of interest and aptitude assessments. b. Investigate employee benefits and incentives related to identified career choices. Examples: medical insurance options, retirement benefits, life insurance options, long- and short-term disability insurance options c. Calculate net pay from a given gross salary by subtracting required and non-required deductions. d. Utilize advanced database features (i.e., merging, sorting, filtering, formulas) to examine the effect of career choice on lifestyle, including how interest, ability, and educational achievement relate to the attainment of personal, social, educational, and career goals.
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	nvestigate the postsecondary/higher education admissions process, including completing admission and financial aid applications (e.g., Free Application for Federal Student Aid (FAFSA), grants, loans, scholarships, personal financing).
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Examine the employment process, including searching for a job, filling out a job application, writing a r ésum é, developing and practicing interview skills, and completing required employment forms (e.g., W-4, I-9). a. Utilize word processing software to demonstrate professional writing skills by producing and editing business and personal correspondence documents.
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson** 0	Generate an electronic portfolio using digital tools (e.g., Webpage, wikis, blogs, podcast), including a cover letter; a current résumé; a completed job application; interest, aptitude, and achievement assessment results; curriculum samples (e.g., academic research, educational projects); four-year high school educational plan; education/career preparedness checklist; and other examples of academic and career preparedness achievements (e.g., student organizations, club memberships, honors, credentials, certificates, awards, community service experiences, recommendations). a. Utilize advanced features of word processing (e.g., outlining; developing forms; applying tracking changes, hyperlinking, mail merging).

Plans: **Multimedia:** 0 **Unit Plans:** 0	b. Create presentations using effective communication skills and advanced features of multimedia, including photo, video, and audio editing.

Technology Skill Applications

Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Diagnose problems with hardware, software, and advanced network systems. Examples: printer, projector, power supply, task manager, network connectivity
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate advanced technology skills, including compressing, converting, importing, exporting, backing up files, and transferring data among applications.
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare functions of various operating systems. Examples: Windows, Mac OS X, Linux, Android, iOS
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0	Analyze cultural, social, economic, environmental, and political effects, and trends of technology to assess emerging technologies and forecast innovations. a. Demonstrate proficiency in the use of emerging technology resources, including social networking and other electronic communications (e.g., desktop conferencing, mobile technology, listservs, blogs, virtual reality, online file sharing).

Lesson Plans: 0 **Multimedia:** 0 **Unit Plans:** 0	
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate appropriate digital citizenship through safe, ethical, and legal use of technology systems and digital content. a. Explain consequences of illegal and unethical use of technology systems and digital content. Examples: cyberbullying, plagiarism b. Interpret copyright laws and policies with regard to ownership and use of digital content. c. Explain the implications of creating and maintaining a positive digital footprint. d. Critique Internet and digital information for validity, reliability, accuracy, bias, and current relevance. e. Cite sources of digital content using a style manual. Examples: Modern Language Association (MLA), American Psychological Association (APA)
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Utilize an online learning-management system to engage in collaborative learning projects, discussions, and assessments beyond the traditional classroom that are goal-oriented, focused, project-based, and inquiry-oriented. Examples: Moodle, Edmodo, Blackboard, Canvas
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain specific steps that consumers can take to minimize exposure to identity theft, fraudulent schemes, unethical sales practices, and exorbitant service fees. a. Identify online safety precautions, including data-encryption, password strength, clearing browser cache, firewalls, and antivirus software.

Managing Finances and Budgeting

Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Develop a plan for managing earning, spending, saving, and giving using spreadsheets, online resources, or commercial software. a. Create a budget, net worth statement, and income expense statement using a spreadsheet. b. Utilize spreadsheet features, including formulas, functions, sorting, filtering, charts, and graphs. c. Identify types of income other than wages, including rent, interest, and profit earned from various resources. d. Evaluate various methods for acquiring goods and making major purchases. Examples: borrowing, renting, leasing, paying cash
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Evaluate the effect of personal preferences, advertising, marketing, peer pressure, and family history on consumer choices and decision making in the marketplace. a. Compare goods and services to determine best value, including sales tax, tips, coupons, discounts, product quality, and unit pricing. b. Explore how to use different payment methods, including cash, debit card, credit card, online payments, mobile devices, checks, payroll cards, layaway plans, and automatic bank deductions.

Saving and Investing

Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Distinguish differences between the purpose of saving and the objectives associated with investing a. Explain how using the principles of compound interest and the Rule of 72 in investing builds wealth to meet financial goals. b. Evaluate various ways to buy and sell investments, including mutual funds, exchange-traded funds (ETFs), stocks, bonds, certificates of deposit (CDs), real estate, and commodities.

Banking and Financial Institutions

Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning** 0	Analyze various types of financial institutions. a. Evaluate services and related costs associated with financial institutions in terms of personal banking needs. Examples: checking and savings accounts, personal checks, cashier checks, overdraft fees

Activities: **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate how to manage checking and savings accounts, balance bank statements, and use online financial services.

Credit and Debt

Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine advantages and disadvantages of using credit. a. Analyze credit card offerings for the effect on personal finances. Examples: annual percentage rate (APR), grace period, incentive buying, methods of calculating interest, fees
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Examine why credit ratings and credit reports are important to consumers. a. Explain ways of building and maintaining a good credit score. b. Determine the implication of entering into contracts and binding agreements. (e.g. college loans, cell phone contracts, car loans, collateral loans, passbook loans, mortgages). c. Describe legal and illegal types of credit that carry high interest rates, including payday loans, rent-to-buy agreements, and loan-sharking. d. Assess the implications of bankruptcy, including Chapter 7, Chapter 11, and Chapter 13.

Risk Management and Insurance

Career Cluster Electives (2008) Grade(s): 9 - 12	Determine the type of insurance associated with different types of risks, including automobile, personal and professional liability, home, apartment, property, health, life, long-term care, and disability.

All Resources: 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	a. Analyze factors that reduce the cost of insurance. b. Identify perils that are insurable. Examples: injury, loss, destruction
Career Cluster Electives (2008) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Develop a plan for financial security in the event of disaster, including secure storage of financial records and personal documents, available cash reserve, household inventory list, and medical records retention.

Entrepreneurship

Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Evaluate social and civil responsibilities of business ownership. Examples: environmental issues, ethical issues, employment issues
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Describe typical behavioral characteristics of an effective entrepreneur. • Identifying personal strengths and weaknesses to determine the need for additional information
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Critique a variety of business classifications, including retailers, wholesalers, services, and manufacturers, to determine potential business ventures.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0	Compare types of business ownership. Examples: sole proprietorship, franchise, partnership, limited liability corporation (LLC), corporation

Unit Plans: 0	
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine technological needs of a small business, including hardware, software, networking, and telecommunications.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Explain risk factors that affect entrepreneurs, including financial, psychological, and physiological aspects.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze national and international economic fluctuations to determine their effect on business markets of interest.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Develop a business plan, including identifying an executive summary; conducting a marketing and competitive analysis report; and developing a marketing, management, and financial plan.

Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze credit and collection policies to determine consumer credit plans.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain taxes associated with business ownership and employment, including local, state, and federal taxes.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use mathematics skills to analyze profit and loss margins for a business.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze government regulations to identify their impact on business ownership.
Career Cluster Electives	Explain laws and regulations related to hiring and retaining employees.

(2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine marketing functions needed for effective business ownership.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Interpret research data to determine market-driven problems faced by entrepreneurs. Examples: research data—business journals, stock market reports, newspapers, international trends
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine career opportunities, responsibilities, and educational and credentialing requirements related to various entrepreneurship ventures.
Career Cluster Electives (2009)	Identify advantages and disadvantages of Internet entrepreneurial opportunities. • Creating an effective e-business site • Designing a customer survey for an e-business

Grade(s): 9 - 12		Examples: customer needs and satisfaction survey, demographics survey, products survey
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	

Personal Finance

Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare factors that impact consumer purchasing decisions throughout the life span. Examples: personal choice and values, attitudes, wants and needs, social influences
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Describe state and federal consumer protection laws for individuals and families, including identity protection and credit laws.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Determine procedures for resolving consumer problems and complaints.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0	Explain the importance of taking responsibility for personal financial decisions.

Unit Plans: 0	
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 0 **Lesson Plans:** 7 **Multimedia:** 0 **Unit Plans:** 0	Determine factors that affect money management, including career choice, education, skills, and economic conditions. • Identifying opportunity costs of financial decisions
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Explain how taxes, government transfer payments, and employee benefits relate to disposable income. • Comparing net and gross income
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Determine practices that allow individuals and families to maintain financial security. Examples: determining needs and wants, creating a budget, setting goals, keeping records, developing a personal financial plan, saving, investing
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare money-management tools and services available from financial institutions. Examples: checking and savings account statements, online banking procedures, direct deposit, money transfer services, loans, online payment services

Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate procedures for completing and filing income tax forms, including utilizing software in income tax preparation. • Explaining terms used in personal tax forms
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain factors that affect creditworthiness. • Assessing credit options available to individuals and families • Identifying ways to avoid or correct credit problems • Analyzing dangers incurred by young adults with credit cards • Determining sources, types, and risks of loans for individuals or families • Describing the steps in obtaining a credit report
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare benefits of saving and investing for individuals or families, including factors that affect the rate of return on investments, sources of investment information, characteristics of savings and investment options, and stages of investing. • Calculating annual interest and annual yield
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Distinguish between retirement and estate planning options available to individuals and families.
Career Cluster Electives	Compare types, lengths, and costs of care, life, health, disability, homeowner, and renter insurance, including disability, waiting period, and disability benefits.

(2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	• Exploring the impact of uninsured and underinsured motorists • Explaining the difference between independent insurance agencies and franchised agencies
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Critique the impact of advertising and sales propaganda on individual and family spending decisions.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze shopping skills in relation to individual and family resource management across the life span. • Comparing technologically advanced products and services Examples: choosing a telephone service provider, buying a home computer, choosing an Internet service provider
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Determine strategies for acquiring the most economical product or service. Examples: product research, comparison shopping, shopping plan
Career Cluster Electives (2009)	Determine factors that affect the cost of goods and services, including sales tax, tips, coupons, discounts, and unit pricing.

Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Prioritize steps involved in making consumer purchases, including transportation and housing. • Calculating cost and finance charges • Defining terminology associated with consumer purchases • Predicting required maintenance of transportation and housing
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Determine the impact of technology on personal financial management.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Explain career options and entrepreneurial opportunities related to the management of personal financial resources.

Agriculture, Food, and Natural Resources

Agriscience

Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify major agricultural commodities in the local area, state, nation, and world. • Sequencing major changes and accomplishments in the history of agriculture • Describing various agricultural organizations and their roles in the agricultural industry • Defining agriculture and major divisions of the agricultural industry.
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	)etermine factors in developing an effective career plan, including procedures for obtaining employment. • Identifying various careers in the agricultural industry
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify tool and equipment safety procedures in woodworking, welding, electrical, small engine, plumbing, and masonry operations.
Agriculture, Food, and Natural	Utilize technology to access, manage, and integrate information in the agricultural industry. Examples: Internet, spreadsheets, databases

Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	• Identifying technological advancements that enhance the agricultural industry
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply problem-solving skills to resolve agribusiness issues. • Explaining the eight steps in the decision-making process • Describing fundamental principles of economics that affect the management of a business, including supply and demand
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify characteristics of a SAE program, including manageability, record keeping, availability of facilities, and financing. • Identifying principles of financial literacy • Describing factors to be considered in agricultural entrepreneurial opportunities Examples: risk, reward, business climate, obtaining finances
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson** 0	Demonstrate communication skills, including prepared public speaking, extemporaneous speaking, creed speaking, and parliamentary procedure, through career development events (CDEs). • Demonstrating leadership and teamwork skills gained through student organization activities Examples: activities—CDEs, proficiency awards, officer leadership opportunities, teamwork opportunities

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify methods for conserving the environment. Identify methods for conserving the environment. • Explaining the importance of natural resources • Describing techniques for recycling, reusing, and reducing the use of natural resources
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify major soil areas in Alabama. • Identifying layers of soil in a soil profile • Determining the texture of various soil samples • Determining the land capability class for a given plot of land • Explaining how to adjust soil pH
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Determine characteristics and functions of plants. • Explaining plant processes, including photosynthesis, respiration, and transpiration • Identifying the sixteen essential elements needed for plant health and growth • Identifying various requirements needed to produce successful vegetable gardens, greenhouse plants, and landscape plants • Propagating plants sexually and asexually • Explaining how agricultural crops can be utilized as alternative fuel sources
Agriculture, Food, and Natural Resources (2009)	Determine forest management practices. • Identifying trees for local, state, national, and global markets • Applying mathematical concepts to the measurement of trees and land

Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Identify common breeds of livestock and their characteristics, including cattle, swine, sheep, equine, and poultry. • Identifying species-specific terminology used to describe livestock Examples: bovine—bull, cow, heifer, steer, calf - equine—stallion, mare, foal, gelding, filly - swine—boar, sow, piglet, gilt, barrow • Explaining practices used to manage livestock, including handling, breeding, vaccinating, and transporting • Determining nutritional requirements for livestock, including cattle, swine, sheep, equine, and poultry
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Differentiate among types of aquaculture enterprises in Alabama, including catfish, crawfish, shrimp, and tilapia.
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0	Assess ethical and legal responsibilities for conduct in wildlife management. • Identifying state hunting laws and regulations concerning wildlife • Explaining hunter ethics • Determining management practices used to enhance wildlife habitats • Explaining hunting safety practices

Unit Plans: 0	
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the importance of pest management in the agricultural industry. • Comparing types of pesticides and how they control pests
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply mathematical, reading, and writing skills used in woodworking. • Developing a plan of procedure for a woodworking project • Interpreting a plan of procedure for a woodworking project • Demonstrating procedures for constructing a woodworking project, including completing a bill of materials, calculating board feet, selecting tools, applying measurements, cutting, assembling, and finishing
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate procedures used in arc welding.
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All** 0	Explain the theory of operation for two- and four-cycle small engines. • Performing routine care and maintenance on small engines

Resources: **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate procedures used in wiring electrical circuits.
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Identify procedures for installing and maintaining water and sewage lines for agricultural structures. • Demonstrating the installation of plumbing fixtures

Introduction to Veterinary Science

Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare job characteristics of various careers in veterinary science.
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify safety precautions for veterinary science personnel.
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe responsibilities of animal control and humane societies. • Describing responsible ownership of animals
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12	Describe humane treatment of animals.

All Resources: 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe effects of captivity on exotic animals.
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify laws and regulations involving animals. Examples: leash laws, noise control, mandatory euthanasia
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe various body systems of animals, including skeletal, muscular, circulatory, respiratory, nervous, urinary, endocrine, and digestive.

Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify methods of disease prevention in animals. Examples: worming, vaccination • Analyzing symptoms of animal diseases for diagnostic purposes • Selecting drugs to treat animals Examples: antibiotics, wormers • Describing environmental factors affecting animals
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate procedures for administering vaccinations, including subcutaneous and intramuscular.
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Identify proper hygiene for animals.
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning** 0	Describe normal and abnormal animal behaviors. Examples: normal—signs of contentment, playfulness - abnormal—aggression, loss of appetite

Activities: **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Agriculture, Food, and Natural Resources (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Differentiate among veterinary services for various animals.

Business, Management, and Administration

Law in Society

Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	nterpret components and categories of state and federal criminal law. Example: steps in criminal proceedings
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Differentiate between ethics and law using research results. • Determining consequences of illegal and unethical conduct • Interpreting laws related to the illegal and unethical use of computers
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Critique influences, sources, and structure of the law and court systems. Example: connection to constitution and branches of government
Business, Management, and	Analyze classifications of law, including procedural and substantive and private and public, for distinguishing characteristics.

Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Determine career and entrepreneurial opportunities, responsibilities, and educational and credentialing requirements related to the legal profession.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	nterpret components of civil law, including negligence, torts, intentional torts, strict liability, and absolute liability. Examples: categories and penalties of civil law
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson** 0	Critique components of contract law. Examples: characteristics of contract law, effects of breach of contract

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Critique components of national and international sales and consumer law. • Analyzing sales laws to determine compliance with Uniform Commercial Code • Comparing express and implied warranties • Interpreting contracts • Identifying the protections and penalties provided by copyright and trademark laws Examples: print, music, video, software
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze labor relation components to determine effects on employees and employers.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare various relationships associated with Agency Law as they relate to conducting global business Examples: agent and professional athlete, broker and seller
Business, Management, and Administration (2009)	Explain legal rules that apply to real property ownership.

Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare various types of bankruptcy law and their impact on business and consumers.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain types of insurance options available to consumers.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0	Explain laws that apply to marriage, divorce, and child custody.

Unit Plans: 0	
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze various resources to acquire legal assistance.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain the purpose of environmental laws.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine how trusts and wills are used in estate planning.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All** 0	Analyze e-business and e-marketing laws, regulations, and procedures to determine their effects on business and consumers.

Resources:	
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Computer Essentials

Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 5 **Learning Activities:** 3 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Exhibit proper use of basic computer components, including hardware, operating systems, software, file management, and network functions.
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate correct procedure for basic computer and printer maintenance, including routine hardware and software problem solving. Examples: changing printer cartridge, replenishing paper, scanning disk, defragmenting disk, clearing paper jams
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Demonstrate correct data input techniques with acceptable speed and accuracy. Example: touch method
Business, Management, and Administration (2009) Grade(s): 7 - 8	Utilize word processing skills, including creating page layout, proofreading, editing, printing, and saving.

All Resources: 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Use spreadsheet software to create, save, open, edit, and print a workbook or worksheet. • Utilizing formulas for problem solving applicable to a spreadsheet • Creating charts to interpret spreadsheet data
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 5 **Unit Plans:** 0	Create a database file. Examples: tables, reports, forms, queries
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate procedures for creating, saving, retrieving, and delivering multimedia presentations.

Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 3 **Learning Activities:** 1 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Demonstrate use of the Internet in business. Examples: research, travel, correspondence, advertisement • Identifying misuses of the Internet in business Examples: slamming, spamming, flaming
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 2 **Unit Plans:** 0	Utilize research results to determine career and entrepreneurial opportunities, responsibilities, and educational and credentialing requirements in entry-level information technology professions.
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 3 **Unit Plans:** 0	Analyze information technology for its impact on society.
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 1 **Learning** 0	Describe ethical considerations resulting from technological advances. Examples: hacking, privacy, restricted sites, copyright and intellectual property rights, viruses, consequences, misuse

Activities:	
Lesson Plans:	0
Multimedia:	1
Unit Plans:	0

Human Services

Food and Nutrition

Human Services (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 2	Analyze national and international food production and distribution systems to determine the influence of each on the food supply.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 3	Explain how food choices and food production are influenced by psychological, social, cultural, nutritional, economical, global, environmental, geographical, and technological factors.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 5	nterpret legislation and regulations related to food production and consumption.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 2	Determine nutritional and fitness needs of individuals and families across the life span.

Human Services (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 2	Analyze nutritional standards in planning recipes and menus to meet nutritional needs of individuals across the life span. Examples: USDA Dietary Guidelines for Americans, USDA Food Guide Pyramid
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 1	Evaluate the impact of diet fads, food addictions, and eating disorders on fitness and wellness.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 1	Describe the impact of daily food choices on health and wellness.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 1	Determine current trends and issues in health, wellness, and nutrition.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 8	Prepare a nutritious menu. • Interpreting recipes in food production • Demonstrating safe and correct use of equipment • Practicing food safety in food production, handling, service, and storage • Using correct hygiene and health procedures

Learning Activities: 0 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 5	• Organizing kitchen space • Demonstrating a variety of creative food presentation techniques
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 1	Compare the cost and nutritive value of preparing food at home versus purchasing fast foods. • Describing savings through bulk food purchasing
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 5	Apply management principles when planning, purchasing, preparing, storing, and serving food.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 3	Judge the quality of prepared food.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0	Demonstrate etiquette, manners, and proper table settings for various occasions.

Unit Plans: 2	
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 2	Analyze recipes and menus from other countries for nutritional values.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 3	Demonstrate food preparation techniques used in national and international cuisines.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate food preparation techniques required when preparing food for special occasions. • Analyzing methods of serving food for special occasions Examples: receptions, luncheons, buffets
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate a variety of creative food presentation techniques.
Human Services (2009) Grade(s): 9 - 12 **All** 1	Determine the impact of technology on food production, choices, and nutrition. Examples: biotechnology, hormone injection

Resources: **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 1	
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Identify careers and entrepreneurial opportunities in the field of food and nutrition.

Introduction to Cosmetology

Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply mathematical, reading, writing, critical-thinking, decision-making, and problem-solving skills to perform the work of the cosmetology industry.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate teamwork and skills necessary for developing long-range goals and projects that impact the cosmetology industry. Example: career and technical student organization (CTSO) program of work
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Utilize technology and information technology tools that impact the management and services provided by the cosmetology industry.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Apply safety rules and regulations related to cosmetology, including fire equipment, tools, Material Safety Data Sheets (MSDS), and Environmental Protection Agency (EPA) procedures.
Human Services (2009)	Explain the origin and historical advancements of hairstyling in cosmetology and barbering.

Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	dentify pioneers of modern cosmetology and their contributions to the industry.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe career opportunities available in the cosmetology industry. Examples: stylist, barber, salon manager, esthetician, nail technician, makeup artist
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Apply concepts related to personal hygiene, physical poise, professional dress, and workplace ethics in cosmetology and barbering.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0	Demonstrate effective communication skills while performing duties associated with cosmetology.

Lesson Plans: 2 **Multimedia:** 0 **Unit Plans:** 0	
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Identify types and classifications of bacteria. Examples: nonpathogenic, pathogenic
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Practice infection control techniques relative to cosmetology, including performing wet and dry sanitizing procedures for safety and decontamination. • Differentiating between sterilization, disinfection, and sanitation • Using Occupational Safety and Health Administration (OSHA) codes for infection control and disposal of chemicals in cosmetology
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate draping procedures for hair services. Examples: dry, wet, chemical
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate procedures for shampooing, rinsing, conditioning, and caring for the scalp and hair. • Identifying various types of shampoos and conditioners, emulsions and suspensions, and pH codes • Analyzing conditions of the scalp and hair • Applying procedures for scalp massages and treatments Examples: hot oil treatment, ultraviolet ray treatment
Human	Explain principles and elements of hairstyle and design.

Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	• Explaining the relationship of facial types to styling principle for male and female design • Describing the use of various tools and equipment for hair styling • Identifying the five elements and five principles of hair design • Identifying basic patterns for haircutting
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Apply techniques for hair shaping and design. • Utilizing correct hair shaping terminology • Demonstrating how to section hair, including basic elevation, angles, and guidelines • Demonstrating face shaving and beard and mustache trimming techniques based on facial structure, including final shaving of the face and neck
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate methods of haircutting, including clipper over comb, wet and dry, arching, scissor cut, and razor cut. • Demonstrating correct techniques of holding combs, shears, clippers, trimmers, razors, and thermal styling tools • Demonstrating edge and clean neckline with razor, clipper, or shears
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate hair styling techniques, including braiding, pressing, wrapping, and roller control.

Parenting

Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe family structures and their impact on parenting, including stages of the family life cycle, functions of each family member, and ways to maintain a strong family.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain roles and responsibilities of parents across the child's life span. • Comparing myths and realities of parenting
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze factors that influence the decision to become a parent, including cost of having and rearing a child; environmental influences impacting the health of the child and mother; age, maturity, and genetics of the parents; and the need to assess career goals.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain the impact of birth defects on the decision to become a parent, including types, causes, prevention, and treatment.
Human Services (2009)	Explain the social, financial, emotional, and educational challenges of teen pregnancy and parenthood, including the risks to the mother and child.

Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine factors associated with pregnancy and childbirth, including the signs and physical changes associated with pregnancy, stages of prenatal development, pros and cons of prenatal testing, stages of the birth process, and postnatal care for the mother and infant.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Recognize the impact children have on individual family members.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare child development theories. • Identifying child development stages
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0	Describe parenting practices for children who are gifted, mentally ill, or intellectually or physically disabled.

Lesson Plans: 0 **Multimedia:** 0 **Unit Plans:** 0	
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine ways parents meet children's physical, intellectual, emotional, and social needs, including promoting independence, enhancing a child's self-concept, teaching self-discipline, teaching consequences of behavior, building children's character, and selecting age-appropriate toys for infants, toddlers, and preschoolers.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Evaluate methods used by parents to help children cope with stress and family crisis.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe skills for promoting communication between parent and child.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe ways a parent can foster early brain development and lifelong learning. Examples: language, play, reading, music, art, dramatic play
Human	Identify appropriate child care providers, agencies, services, resources, and other

Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	support systems available to meet the needs of parents and children. • Explaining ways to balance work and family
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain how parents protect children from harm, disease, and illness, including identifying preventive healthcare practices. • Comparing childhood diseases, symptoms, and treatments
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Summarize childhood emergency situations and appropriate responses.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare types, causes, and prevention of child abuse and neglect.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning** 0	Prepare nutritious snacks and meals for children. • Applying sanitation procedures in the kitchen • Exhibiting safe and correct use of kitchen equipment

Activities: **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 1	
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine the impact of technology on parenting and parenting practices.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Explain career options related to parenting, parent-child relationships, and services provided to parents.

Fashion Design

Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Define terminology used in the apparel and textile industries, including haute couture, avant-garde, composite garments, tailored garments, and draped garments.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze the impact of national and international regulations and legislation for fashion.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the impact of apparel and textile industries on the United States and world economies.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze roles of trade associations and publications to determine their influence on the apparel and textile industries.
Human Services (2009)	Define types of products in apparel and textile industries.

Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Evaluate the influence of history on fashion, including the impact of historical costumes and the achievements of famous fashion designers. • Interpreting the impact of fashion cycles on fashion
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare theories of various fashion movements. Examples: trickle-down, trickle-up, trickle-across
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain how fabric selection affects the cut and style of garments.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0	Evaluate the impact of design labels, manufacturers, and types of stores on the marketing and sales of apparel and textile industries.

Lesson Plans: 0 **Multimedia:** 0 **Unit Plans:** 0	
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Distinguish between classifications of apparel used in the fashion industry. Examples: children, sportswear, young men
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze styles of garments for their effect on various body types.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Critique the construction, care, and maintenance of apparel in relation to textile characteristics.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze space, tools, equipment, and furnishing requirements for a design studio.
Human	Explain the process that leads to fashion design.

Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Example: inspiration, research, idea, sketch, sample, revision
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate fashion illustration skills to design a fashion line, including sketching fashion figures and apparel, using varied media and techniques, and applying basic and complex color schemes.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply elements and principles of design to create fashion. Examples: line, shape, space, texture, pattern, balance
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate draping and flat pattern-making techniques.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning** 0	Demonstrate techniques used to create new designs from an original garment, accessory, or textile product.

Activities: **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Design fashions to meet the special needs of clients.
Human Services (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Utilize technology to design and create fashion.

Law, Public Safety, Corrections and Security

Introduction to Criminal Justice

Law, Public Safety, Corrections, and Security (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe career opportunities in the criminal justice system. • Identifying leadership opportunities, benefits, and awards available through participation in Career and Technical Student Organization (CTSO) events • Demonstrating procedures for obtaining employment, including developing a résumé, completing a job application, and participating in a mock interview
Law, Public Safety, Corrections, and Security (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	nterpret the code of ethics for the criminal justice system.
Law, Public Safety, Corrections, and Security (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain how political, moral, and economic concerns lead to the development of laws. • Differentiating state and federal laws • Describing the impact of local ordinances
Law, Public Safety, Corrections,	Compare federal, state, and municipal ordinances. • Describing Alabama's court system

and Security (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Law, Public Safety, Corrections, and Security (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the role of individuals involved in the trial process.
Law, Public Safety, Corrections, and Security (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify programs and agencies within the juvenile justice system. • Identifying law enforcement procedures related for juvenile delinquent offenders
Law, Public Safety, Corrections, and Security (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson** 0	Evaluate federal, state, and local correctional systems. • Describing various types of community-based programs provided by correctional systems

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Law, Public Safety, Corrections, and Security (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	• Identify factors that may affect human relations in criminal justice operations within culturally diverse communities.

Law and Society

Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	nterpret components and categories of state and federal criminal law. Example: steps in criminal proceedings
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	)ifferentiate between ethics and law using research results. • Determining consequences of illegal and unethical conduct • Interpreting laws related to the illegal and unethical use of computers
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Critique influences, sources, and structure of the law and court systems. Example: connection to constitution and branches of government
Business, Management, and Administration (2009) Grade(s): 9 - 12	Analyze classifications of law, including procedural and substantive and private and public, for distinguishing characteristics.

All Resources: 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Determine career and entrepreneurial opportunities, responsibilities, and educational and credentialing requirements related to the legal profession.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	nterpret components of civil law, including negligence, torts, intentional torts, strict liability, and absolute liability. Examples: categories and penalties of civil law
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Critique components of contract law. Examples: characteristics of contract law, effects of breach of contract

Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Critique components of national and international sales and consumer law. • Analyzing sales laws to determine compliance with Uniform Commercial Code • Comparing express and implied warranties • Interpreting contracts • Identifying the protections and penalties provided by copyright and trademark laws Examples: print, music, video, software
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze labor relation components to determine effects on employees and employers.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare various relationships associated with Agency Law as they relate to conducting global business Examples: agent and professional athlete, broker and seller
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning** 0	Explain legal rules that apply to real property ownership.

Activities: **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare various types of bankruptcy law and their impact on business and consumers.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain types of insurance options available to consumers.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain laws that apply to marriage, divorce, and child custody.
Business, Management, and	Analyze various resources to acquire legal assistance.

Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain the purpose of environmental laws.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine how trusts and wills are used in estate planning.
Business, Management, and Administration (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson** 0	Analyze e-business and e-marketing laws, regulations, and procedures to determine their effects on business and consumers.

Plans:	
Multimedia:	0
Unit Plans:	0

Marketing, Sales, and Service

Computer Essentials

Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 5 **Learning Activities:** 3 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Exhibit proper use of basic computer components, including hardware, operating systems, software, file management, and network functions.
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate correct procedure for basic computer and printer maintenance, including routine hardware and software problem solving. Examples: changing printer cartridge, replenishing paper, scanning disk, defragmenting disk, clearing paper jams
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Demonstrate correct data input techniques with acceptable speed and accuracy. Example: touch method
Business, Management, and	Utilize word processing skills, including creating page layout, proofreading, editing, printing, and saving.

Administration (2009) Grade(s): 7 - 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Use spreadsheet software to create, save, open, edit, and print a workbook or worksheet. • Utilizing formulas for problem solving applicable to a spreadsheet • Creating charts to interpret spreadsheet data
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 6 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 5 **Unit Plans:** 0	Create a database file. Examples: tables, reports, forms, queries
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 1 **Learning Activities:** 0 **Lesson** 1	Demonstrate procedures for creating, saving, retrieving, and delivering multimedia presentations.

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 3 **Learning Activities:** 1 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Demonstrate use of the Internet in business. Examples: research, travel, correspondence, advertisement • Identifying misuses of the Internet in business Examples: slamming, spamming, flaming
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 2 **Unit Plans:** 0	Utilize research results to determine career and entrepreneurial opportunities, responsibilities, and educational and credentialing requirements in entry-level information technology professions.
Business, Management, and Administration (2009) Grade(s): 7 - 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 3 **Unit Plans:** 0	Analyze information technology for its impact on society.
Business, Management, and Administration (2009)	Describe ethical considerations resulting from technological advances. Examples: hacking, privacy, restricted sites, copyright and intellectual property rights, viruses, consequences, misuse

Grade(s): 7 - 8	
All Resources:	1
Learning Activities:	0
Lesson Plans:	0
Multimedia:	1
Unit Plans:	0

Entrepreneurship

Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Evaluate social and civil responsibilities of business ownership. Examples: environmental issues, ethical issues, employment issues
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Describe typical behavioral characteristics of an effective entrepreneur. • Identifying personal strengths and weaknesses to determine the need for additional information
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Critique a variety of business classifications, including retailers, wholesalers, services, and manufacturers, to determine potential business ventures.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0	Compare types of business ownership. Examples: sole proprietorship, franchise, partnership, limited liability corporation (LLC), corporation

Unit Plans: 0	
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine technological needs of a small business, including hardware, software, networking, and telecommunications.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Explain risk factors that affect entrepreneurs, including financial, psychological, and physiological aspects.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze national and international economic fluctuations to determine their effect on business markets of interest.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	Develop a business plan, including identifying an executive summary; conducting a marketing and competitive analysis report; and developing a marketing, management, and financial plan.

Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze credit and collection policies to determine consumer credit plans.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain taxes associated with business ownership and employment, including local, state, and federal taxes.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use mathematics skills to analyze profit and loss margins for a business.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze government regulations to identify their impact on business ownership.
Career Cluster Electives	Explain laws and regulations related to hiring and retaining employees.

(2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine marketing functions needed for effective business ownership.
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Interpret research data to determine market-driven problems faced by entrepreneurs. Examples: research data—business journals, stock market reports, newspapers, international trends
Career Cluster Electives (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine career opportunities, responsibilities, and educational and credentialing requirements related to various entrepreneurship ventures.
Career Cluster Electives (2009)	Identify advantages and disadvantages of Internet entrepreneurial opportunities. • Creating an effective e-business site • Designing a customer survey for an e-business

Grade(s): 9 - 12		Examples: customer needs and satisfaction survey, demographics survey, products survey
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	

Hospitality and Tourism

Culinary Arts I

Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 1	Determine personnel and fiscal management factors related to the food service and hospitality industries. Examples: personnel—staffing, supervising, scheduling, setting goals, determining policies and procedures - fiscal—budgeting, keeping records, controlling inventory, receiving food products, purchasing • Explaining liability laws regarding property management • Identifying customer service, public relations, and promotion programs as marketing strategies for the food and service industry
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Create a business plan for a food service establishment.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Describe the importance of planning, coordinating and supervising production in the food laboratory.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	dentify credentialing requirements for the food services and hospitality industry.

Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 2	Outline compliance requirements for sanitation and health inspections, including proper appearance and hygiene, the use of protective gloves and clothing, correct food handling techniques, and correct use of knives and kitchen equipment.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain procedures for maintaining a safe work area, including first aid and cardiopulmonary resuscitation (CPR), types of fires and containment procedures, fire evacuation procedures, proper lifting and carrying procedures, electric and mechanical hazards, and the procedures for reporting accidents.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Design various menus, based on supply and demand, including cycle and computer-based menus skills.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate cost control measures when setting menu prices for food.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0	Identify factors to be considered when planning menus, including current food trends, nutritional information, and availability of seasonal and regional foods. • Calculating as purchased (AP) and edible portion (EP) amounts

Learning Activities: 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Define food preparation and service terms, including kitchen brigade titles, salamander, lowboy, hot station, and china cap.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply basic industrial cooking techniques, including using scales, determining recipe yields, applying mise-en-place, using spices and herbs, and utilizing dry, moist, and combination heat methods.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Evaluate quality of food products, including taste, texture, aroma, and appearance.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0	Prepare grade manager, main entrees, stocks, soups, sauces, gravies, and baked products and desserts Examples: grade manager—salads, emulsified salad dressings, hors d'oeuvres, closed, open-faced, grilled, and fried sandwiches - main entrees—egg dishes, milk products, cheese, fruit, vegetables, pasta, grain, cereal, rice, legumes, beef, vegetarian items, poultry, seafood, game dishes - stocks—bouquet garni, mirepoix, sachet de piece, white, brown, fish, vegetable

Unit Plans: 0	- soups—clear, thick, specialty - sauces—espagnole, béchamel, roux, tomato, hollandaise, velouté - gravies—reconstituted broken sauces; - baked products and desserts—pancakes, crepes, waffles, yeast products, cookies, cakes, glazed icings, pies, pastries, merigues, custards, chiffon fillings, candies, poached fruits, mousses, soufflés, pastry creams, Bavarian creams
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine procedures for setting up rooms for special occasions and various styles of food.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Evaluate the applicability of convenience food items in various menus.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare different methods of heat transfer in food preparation. Examples: convection, conduction, radiant heat, microwave
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0	Analyze ways the nutritive value of food is altered by time, water, preparation, cooking, and storage.

Lesson Plans: 0 **Multimedia:** 0 **Unit Plans:** 0	
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 1	Demonstrate effective food presentation techniques, including plating, portioning, garnishing, and packaging.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 1	Demonstrate procedures used to plan, prepare, and provide banquet and catering services.
Hospitality and Tourism (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Evaluate equipment and procedures used for packing and transporting food, utensils, and equipment for catering.

Driver Traffic and Safety Education (10-12)

Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain requirements for obtaining an Alabama Learner License and an Alabama Driver License, including any restrictions. • Identifying individuals who may not be licensed • Listing costs for obtaining and requirements for renewing various types of licenses • Explaining the Alabama Graduated Driver License law • Identifying the difference between suspension, revocation, and cancellation of driving privileges • Explaining the difference between driving as a privilege versus driving as a right
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe Alabama's basic speed law. • Comparing statutory, posted, and advisory speed limits
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	List situations that require drivers to bring vehicles to a complete stop. Examples: approaching a school bus displaying red flashing lights and stop signal arm, exiting private property or parking lots, turning right on red, approaching a flagman directing traffic • Describing legal requirements and safe driving practices concerning school and church buses
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12	Name situations that require drivers to yield right-of-way. Examples: approaching and entering intersections, making left turns, entering highways, approaching railroad grade crossings, encountering emergency vehicles

All Resources: 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe traffic signs and pavement markings that regulate various passing situations.
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify traffic signs, traffic signals, and pavement markings as basic types of traffic controls.
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	nterpret Alabama's Safety Belt and Child Restraint laws.

Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Explain requirements mandated by the Alabama Department of Public Safety regarding motor vehicle registration and the Mandatory Liability Insurance Act. Examples: storing vehicle tag receipt and proof of vehicle liability insurance in the driving compartment
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	dentify responsibilities of owning and operating a vehicle, including factors involved in purchasing a vehicle, purchasing insurance, and maintaining a vehicle. Examples: - purchasing vehicle--fuel economy, financing - purchasing vehicle insurance--costs, types of coverage - vehicle maintenance--checking fluid levels, tire pressure, tire tread depth, and condition of belts
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe proper procedures for pre-starting, starting, and stopping a vehicle.
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning** 0	Explain basic maneuvers of driving, including steering, braking, passing, lane changing, merging, parking, signaling, and turning. Examples: - steering--hand-over-hand, push-pull-feed - braking--anti-lock brakes versus conventional brakes

Activities: **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	- parking--uphill with or without a curb, downhill with or without a curb, angle, perpendicular, parallel - turning--right, left, three-point
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain defensive driving techniques, including the Smith System and the search, identify, predict, decide, and execute (SIPDE) process.
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Analyze data regarding inexperienced drivers and traffic collisions. • Evaluating the negative impact of peer influence on youthful drivers • Explaining the relationship between speed and traffic fatalities • Identifying distractions that result in inattention while driving Example: using cellular telephones while driving
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain how alcohol and other drugs affect driving ability. • Identifying prescription and nonprescription drugs as the two general types of drugs • Explaining the synergistic effect of alcohol and other drugs • Explaining Alabama's driving under the influence (DUI) law, including levels of influence, consequences, implied consent, actual physical control, and zero tolerance • Describing effects of emotional and physical short-term impairments on driving Examples: - emotional--anger causing aggressive driving or road rage, extreme sadness causing lack of attention to driving - physical--suffering from illness, injury, fatigue
Driver and Traffic Safety	Describe driver responsibilities toward other highway users, including pedestrians, motorcyclists, bicyclists, and drivers of commercial vehicles and buses.

Education Course (2007) Grade(s): 10 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Examples: recognizing locations where other highway users may appear, recognizing rights of other highway users, anticipating actions of other highway users, locating "no zone" areas of large vehicles, analyzing stopping distances for large vehicles
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Identify dangerous driving situations that may occur on rural roads and urban streets. Examples: - rural roads--unfenced animals, slow-moving farm equipment, off-road vehicles - urban streets--parked cars, pedestrians, one-way thoroughfares • Describing correct procedures for entering and exiting limited and controlled access highways • Describing correct procedures to follow when confronted with road emergencies and collisions Examples: - emergencies--tire failure, engine overheating, engine failure, objects in roadway, hydroplaning - collisions--head-on, side-impact, rear-end • Explaining proper procedures for reporting traffic accidents Examples: driver responsibilities, witness responsibilities • Explaining methods to minimize risks during ideal conditions, adverse road conditions, and periods of reduced visibility Examples: increasing following distance, using headlights, cleaning windshield often, reducing speed • Explaining safe procedures for approaching and driving through various railroad grade crossings
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0	Describe appropriate behavior to be used when detained by a law enforcement officer. Examples: keeping hands in full sight, remaining in vehicle, avoiding sudden movements, displaying proper demeanor

Lesson Plans: 0 **Multimedia:** 0 **Unit Plans:** 0	
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain how nature affects the ability to properly control a vehicle. Examples: sudden gust of wind causing vehicle to swerve, fog causing reduced visibility
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe Alabama's boating laws, basic vessel operation, required boating equipment, and possible hazards involved in safe and responsible boating. • Defining marine terminology
Driver and Traffic Safety Education Course (2007) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate proficiency in basic vehicle control in a variety of environments. Examples: demonstrating proper procedures for right and left turns, turnabouts, angle and perpendicular parking, parking and starting on a hill; safely negotiating controlled and uncontrolled intersections, lane changes, passing, merging • Demonstrating proficiency in the use of controls, devices, and gauges located in the driving compartment
Driver and Traffic Safety Education Course (2007)	Demonstrate defensive driving skills using the Smith System and the SIPDE process.

Grade(s): 10 - 12		
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	

Health Education Grade 7

Health (2009) Grade(s): 7		Describe resources that provide health care services. Examples: county health departments, American Red Cross, American Diabetes Association
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	
Health (2009) Grade(s): 7		Explain cultural influences on health behaviors, including social norms, family traditions, and stereotypes. Example: family eating habits
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	
Health (2009) Grade(s): 7		Describe how health is affected by the environment. Example: respiratory problems caused by second-hand smoke
All Resources:	2	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	2	
Unit Plans:	0	
Health (2009) Grade(s): 7		Evaluate advances in technology that can improve environmental health. Examples: alternative energy sources, recycled products
All	0	

Resources: **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Health (2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the influence of family history, culture, and environment on the causes and prevention of disease and other health problems.
Health (2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Propose strategies for self-defense, including parking lot safety, Internet safety, and telephone safety.
Health (2009) Grade(s): 7 **All Resources:** 11 **Learning Activities:** 1 **Lesson Plans:** 1 **Multimedia:** 9 **Unit Plans:** 0	Demonstrate decision-making skills as they relate to situations involving health risks. Examples: responding appropriately to sexual harassment, avoiding physical conflict, objecting to verbal and physical bullying, avoiding inappropriate electronic communication
Health (2009) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Plan a healthy meal. • Comparing nutrient density in a variety of snacks and beverages
Health (2009)	Explain ways microorganisms can cause food-borne illnesses.

Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Health (2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe diseases of the nervous, reproductive, circulatory, and respiratory systems.
Health (2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare short- and long-term effects of risky behaviors that compromise adolescent health. • Predicting potential health consequences of popular trends, including tattooing, piercing, and self-mutilation
Health (2009) Grade(s): 7 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 1	Identify disease-causing agents. Examples: viruses, protozoa, bacteria, fungi
Health (2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Recognize substance misuse, abuse, and dependence. • Recognizing the legal age to purchase tobacco and alcohol in Alabama • Explaining psychological, legal, and financial consequences of substance abuse

Health Education Grade 8

Health (2009) Grade(s): 8 **All Resources:** **Learning Activities:** **Lesson Plans:** **Multimedia:** **Unit Plans:**	 0 0 0 0 0	dentify procedures for making consumer health complaints. Examples: speaking with a store manager, calling the Better Business Bureau, contacting a patient-relations representative
Health (2009) Grade(s): 8 **All Resources:** **Learning Activities:** **Lesson Plans:** **Multimedia:** **Unit Plans:**	 0 0 0 0 0	Describe health advocacy strategies. Examples: writing and recording public service announcements for school or community broadcasts, writing letters to editors of local newspapers, implementing a school health improvement project
Health (2009) Grade(s): 8 **All Resources:** **Learning Activities:** **Lesson Plans:** **Multimedia:** **Unit Plans:**	 6 0 1 5 0	dentify public environmental laws that protect personal health. Examples: dumping, polluting, littering
Health (2009) Grade(s): 8		Recognize cultural influences that impact health behaviors. Examples: family perceptions of health care professionals, family perceptions of healthy

All Resources:	0	body image, societal expectations of remaining abstinent until married
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	
Health (2009) Grade(s): 8		Describe behaviors that may prevent personal injury. Examples: wearing protective gear, using seat belts, handling flammable materials properly
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	
Health (2009) Grade(s): 8		Describe personal responsibility for reducing hazards and avoiding accidents.
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	
Health (2009) Grade(s): 8		Identify barriers to communication regarding health-related issues. Examples: fear, embarrassment, lack of vocabulary
All Resources:	2	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	2	
Unit Plans:	0	
Health (2009) Grade(s): 8		Identify strategies for controlling impulsive behaviors. Examples: - strategies—seeking mental health resources, utilizing conflict resolution techniques - behaviors—self-mutilation, aggressive outbursts
All Resources:	0	
Learning Activities:	0	
Lesson Plans:	0	
Multimedia:	0	
Unit Plans:	0	
Health (2009)		Describe common eating disorders.

Grade(s): 8 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 0	Examples: anorexia nervosa, bulimia nervosa, binge-eating
Health (2009) Grade(s): 8 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 0	Identify possible consequences of poor nutrition. Example: increased risk for heart disease, obesity, cancer, fatigue, poor academic performance, osteoporosis
Health (2009) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain benefits, limitations, and misuse of dietary supplements.
Health (2009) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe types of sexually transmitted infections (STIs). • Explaining benefits of abstinence • Identifying physical, social, and emotional effects of STIs • Describing long-term effects of HIV and AIDS on the human body Examples: destruction of the immune system, contraction of opportunistic infections
Health (2009) Grade(s): 8 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 0	Explain why mixing drugs can cause injury, illness, and death.

Health Education Grade 9-12

Health (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze technology for its influence on consumer health and health care.
Health (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe ways to advocate for a healthy environment.
Health (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe global environmental issues.
Health (2009) Grade(s): 9 - 12	dentify personal, financial, and legal responsibilities of parenthood. • Identifying negative consequences associated with teen parenthood

All Resources: 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 0	
Health (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify common causes of disability and premature death. Examples: sudden infant death syndrome (SIDS), unintentional and intentional injuries, cardiovascular disease, diabetes, cancer
Health (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	)emonstrate CPR and automated external defibrillator (AED) techniques and other first aid skills.
Health (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 0	Recognize personal responsibility for lifelong health. Examples: participating regularly in physical activity; practicing water safety; operating motor vehicles safely; scheduling annual physical exams, cancer screenings, and immunizations
Health (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	dentify symptoms, methods of treatment, and management of mental health disorders, depression, and stress. • Recognizing available resources and hotlines for mental health concerns Examples: - resources—school personnel, peers - hotlines—suicide prevention, rape crisis • Identifying warning signs and prevention strategies for suicide

Health (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 0	Describe significant life events that impact mental and emotional health. Examples: birth or death of a loved one, marriage, childbirth, adoption, divorce, illness, victimization, relocation, end-of-relationship
Health (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Analyze social and cultural messages about food and eating for their influence on nutrition choices. • Identifying factors that impact nutrition choices, including procurement, cost, and food preparation time • Describing persuasive techniques used by the media to influence decisions regarding purchasing food • Describing health consequences and treatment of eating disorders
Health (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe prevention and management strategies for acute and chronic health conditions.
Health (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Explain prevention methods for communicable diseases and infections. Examples: using standard precautions, practicing abstinence, scheduling immunizations
Health (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0	Explain the progression of HIV infection to AIDS.

Unit Plans: 0	
Health (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Interpret federal, state, and local laws as they relate to the purchase, sale, use, and possession of alcohol, tobacco, and other drugs. • Identifying local school system rules for substance use and abuse
Health (2009) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	Identify effects on health and behavior regarding the use of chemical substances, including prescription drugs, over-the-counter drugs, illegal drugs, alcohol, and tobacco.
Health (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain physiological effects of chemical substances on health and behavior. Examples: liver damage, emphysema, heart disease

Languages Other Than English (Foreign Languages) (6-8)

Languages Other Than English (Foreign Languages) (2006) Grade(s): 6 - 8 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4	Use formal and informal expressions to communicate in the target language. • Giving oral and written instructions in the target language • Expressing opinions and feelings in the target language Example: I like soccer. • Describing personality traits and physical characteristics in the target language Examples: - personality traits--My sister is friendly., Christopher Columbus is famous.; - physical characteristics--Ricky Martin is handsome., My dog is brown.

Multimedia: 0 **Unit Plans:** 0	• Utilizing idiomatic expressions of the target language Examples: - *llover a cántaros*--to rain cats and dogs, - *Coûter les yeux de la tête.*--It costs an arm and a leg., - *Hunger haben*--to be hungry
Languages Other Than English (Foreign Languages) (2006) Grade(s): 6 - 8 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 0 **Unit Plans:** 0	nterpret target language gestures, intonation, and visual clues. Examples: hand signals, voice inflections, facial expressions
Languages Other Than English (Foreign Languages) (2006) Grade(s): 6 - 8 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	dentify the main idea of nonfiction texts, including target language newspaper and magazine advertisements.
Languages Other Than English (Foreign Languages) (2006) Grade(s): 6 - 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson** 3	Create presentations in the target language. Examples: bulletin board displays, short plays, skits, video recordings

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Languages Other Than English (Foreign Languages) (2006) Grade(s): 6 - 8 **All Resources:** 7 **Learning Activities:** 0 **Lesson Plans:** 7 **Multimedia:** 0 **Unit Plans:** 0	Explain cultural practices of a target culture. Examples: celebrations, games, recreational activities
Languages Other Than English (Foreign Languages) (2006) Grade(s): 6 - 8 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	dentify trends found in various aspects of a target language culture. Examples: fashion, music, dance, movies
Languages Other Than English (Foreign Languages) (2006) Grade(s): 6 - 8 **All Resources:** 7 **Learning Activities:** 1 **Lesson Plans:** 6 **Multimedia:** 0 **Unit Plans:** 0	dentify major historic, scientific, and artistic target culture contributions or events. Examples: - historic--Napoleon Bonaparte and the Battle of Waterloo, - scientific--Louis Pasteur and pasteurization, - artistic--Ludwig von Beethoven and *Symphony No. 5*
Languages Other Than	Relate vocabulary of the target language to vocabulary of other subject areas.

English (Foreign Languages) (2006) Grade(s): 6 - 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Example: recognizing the prefix *bi*, meaning two, in the Spanish word *bicicleta* and in the English word bicycle
Languages Other Than English (Foreign Languages) (2006) Grade(s): 6 - 8 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 3 **Multimedia:** 0 **Unit Plans:** 0	Use spoken and written language to reflect knowledge of grammatical differences between English and the target language. Examples: formal and informal address, gender
Languages Other Than English (Foreign Languages) (2006) Grade(s): 6 - 8 **All Resources:** 5 **Learning Activities:** 0 **Lesson Plans:** 5 **Multimedia:** 0 **Unit Plans:** 0	Identify critical sound distinctions of the target language and of English that must be mastered to communicate meaning. Examples: - *papa*--potato, *papá*--daddy; - read--present tense, read--past tense
Languages Other Than English (Foreign Languages) (2006) Grade(s): 6 - 8 **All** 1	Compare verbal and nonverbal behavior of the target culture to the culture of the United States. Examples: - verbal--terms of endearment such as *mon petit chou* and sweetie, and felicitations such as *¡Bravo!* and Hurrah!;

Resources:	- nonverbal--bowing and shaking hands
Learning Activities: 0	
Lesson Plans: 1	
Multimedia: 0	
Unit Plans: 0	
Languages Other Than English (Foreign Languages) (2006)	Create presentations about the target culture for various audiences. Examples: classroom presentations, simple skits and songs for school and community presentations
Grade(s): 6 - 8	
All Resources: 13	
Learning Activities: 1	
Lesson Plans: 12	
Multimedia: 0	
Unit Plans: 0	

Latin Level I

Languages Other Than English (Foreign Languages) (2006)	Use Level I Latin grammar and syntax to read and write Latin. Examples: first-, second-, and third-declension nouns; six cases and their uses, including nominative--subject and predicate nominative; genitive--possession; dative--indirect object, with special adjectives; accusative--direct object, object of prepositions, duration of time, extent of space; ablative--manner, means, agent, accompaniment, place where, object of preposition, time when, within which; vocative--noun of direct address; first-, second-, and third-declension adjectives; personal, reflexive, relative, demonstrative, and interrogative pronouns; six tenses of verbs, four conjugations, active and passive voice, *sum, possum*; imperatives; present and perfect tense infinitives; vocabulary learned in the dictionary format
Grade(s): 9 - 12	
All Resources: 0	
Learning Activities: 0	
Lesson 0	

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Respond orally to simple Latin sentences and phrases.
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use correct pronunciation to read Latin sentences and phrases.
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe elements of Roman daily life. Examples: calendar, religion, government, social organization, food, clothing, architecture, entertainment, recreation
Languages Other Than	Describe the most important Greco-Roman deities, including their characteristics, duties, and associated myths.

English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Examples: Olympian gods, earth gods, mythical monsters, creation stories
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	.ocate historically important cities and major geographical features of Italy and western Europe. Examples: - cities--Rome, Pompeii, Capua, Ostia, Brundisium; - geographical features--Tiber, Arno, Po, Appian Way, Etruria, Britannia, Gallia, Germania, Graecia, Mare Nostrum, Aegean Sea, Adriatic Sea, Alps
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify Latin influences on other disciplines. Examples: - mathematics--Roman numerals, prefixes in metric system; - science--terminology used in anatomy, names of planets used in astronomy
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All** 0	dentify evidence of contributions of Roman civilization and language to diverse cultures. Examples: Roman architectural sites in the Middle East, North Africa, and Europe; artistic interpretation of classical themes during the Renaissance

Resources: **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Recognize Latin derivatives, cognates, and language patterns, including mottoes, phrases, and abbreviations used in English.
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Identify similarities of the culture of the United States to that of the Roman world, including architecture, daily life, and themes and heroes of classical mythology.
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0	List professional fields that employ Latin terminology. Examples: medical, legal, pharmacological, mathematical, scientific

Unit Plans:	0

Latin Level II

Languages Other Than English (Foreign Languages) (2006)	Use Level II Latin grammar and syntax to read and write Latin passages.
Grade(s): 9 - 12	Examples: fourth- and fifth-declension nouns and case usage, including genitive--partitive, description, object of certain adjectives and verbs, with *causa* or *gratia* to show purpose; dative--object of special verbs and compound verbs, purpose, reference, possession, dative of agent; accusative--place to which, subject of the indirect statement, with *ad* to show purpose; ablative--absolute, causal, object of deponent verbs, description, comparison, separation, respect, place from which, degree of difference; locative; indefinite and intensive pronouns; comparison of adjectives and adverbs; uses of *quam* with comparison of adjectives; irregular verbs, deponent verbs, participles, three tenses active and passive infinitives, four uses of infinitives, gerunds, gerundives, active
All Resources:	0
Learning	0

Activities: 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	and passive periphrastic, indirect statement; present and imperfect tenses of the subjunctive, volitive subjunctive, purpose, result subjunctive clauses; vocabulary learned in the dictionary format
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Answer questions demonstrating comprehension and interpretation of Latin phrases and passages.
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Recite passages in Latin using correct pronunciation and proper phrasing. Examples: United States Pledge of Allegiance in Latin, introduction to Caesar's *De Bello Gallico*
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain the significance of people, events, and political terms in Roman history. Examples: - people--early heroes, Sulla, Marius, Pompey, Caesar, Antony, Octavian, Constantine, Justinian; - events--founding of Rome by Etruscans, plebeian struggle, Punic Wars, civil wars; - political terms--monarchy, republic, laws, political parties, *cursus honorum*, First and Second Triumvirates

Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain differences in the actions of legendary Roman heroes and those of historical Roman figures. Example: actions of Marius, Sulla, Cicero, and Cincinnatus
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Locate historically important cities, countries, and geographical features of the ancient Mediterranean world. Examples: - cities--Carthage, Troy, Alexandria, Athens, Delphi, Constantinople; - countries--division of Gaul, Phoenicia, Magna Graecia, Crete, Sicily; - geographical features--Rubicon, Po, Nile, Rhine, Alps, Pyrenees
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe Latin influences on other disciplines, including English and Romance languages, history, and philosophy. Examples: influence of Epicurean and Stoic philosophies on contemporary ideas and literature, current study of Julius Caesar's military tactics
Languages Other Than English (Foreign Languages) (2006)	Describe the influences of Roman history on today's world. Examples: television series Rome; the movies *Gladiator, Cleopatra*, and *Troy*; archeological discoveries

Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Compare language patterns of Latin and English. Example: describing differences in expressions of indirect statements in Latin and English
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Utilize Latin prefixes, suffixes, and roots to expand English vocabulary. Examples: *re*call, *ad*vocate, *ad*mit, *ab*sent
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson** 0	Compare the geography and social, political, legal, military, and economic systems of the Roman world to systems of the modern world. Example: comparing a map of the Roman Empire to a contemporary map of the world

Plans: **Multimedia:** 0 **Unit Plans:** 0	
Languages Other Than English (Foreign Languages) (2006) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Identify ways the study of Latin is beneficial to the study of other languages. Example: similarities among the Latin word *homo*, the Spanish word *hombre*, and the French word *l'homme*

Physical Education Grade 7

Physical Education (2009) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply coordinated movements, strategies, and rules to achieve success in a variety of sports and activities.
Physical Education (2009) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate strategic positioning for offense and defense in game situations. Examples: staying between opponent and goal, moving between opponent and ball
Physical Education	Demonstrate dances used for social and recreational enjoyment and physical fitness enhancement.

(2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Physical Education (2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate a sequence of balancing skills by traveling on apparatus while working cooperatively with a partner to create a balance sequence. Examples: balancing on mats, walking a line on the floor
Physical Education (2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate relaxation and stress reduction exercises.
Physical Education (2009) Grade(s): 7 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate offensive skills, including pick, fake, and screen, for a variety of team sports.
Physical Education (2009)	Identify appropriate drills and repetitions to improve performance. Example: using nondominant hand or foot

Grade(s): 7 **All Resources:** 2 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 1 **Unit Plans:** 0	
Physical Education (2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe the concept of effort as it relates to improvement of skill execution. Example: slowing or accelerating skill execution to increase success
Physical Education (2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Analyze peer skill performance for efficiency in sport and recreational activities.
Physical Education (2009) Grade(s): 7 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain differences between legal and illegal behaviors in sports. Examples: National Collegiate Athletic Association rules, Alabama High School Athletic Association rules
Physical Education (2009) Grade(s): 7 **All** 0	Apply methods for communicating with confrontational opponents. • Practicing social courtesies in group activities

Resources:	
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Physical Education (2009)	Demonstrate elements, including sport competency, literacy, and enthusiasm, needed to accomplish a team goal in competitive and cooperative environments. Examples: remaining on task in a group activity, applying problem-solving skills, practicing safety procedures
Grade(s): 7	
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Physical Education (2009)	Identify factors that can be manipulated to achieve an overload in muscular strength and cardiorespiratory endurance. Examples: - muscular strength—repetitions, sets, recovery time - cardiorespiratory endurance—frequency, intensity, time, type
Grade(s): 7	
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Physical Education (2009)	Explain correlations among nutrition, exercise, and rest in the development of a healthy lifestyle.
Grade(s): 7	
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Physical Education Grade 8

Physical Education (2009) Grade(s): 8 **All Resources:** **Learning Activities:** **Lesson Plans:** **Multimedia:** **Unit Plans:**	 1 1 0 0 0	Demonstrate skills utilized in lifetime health-enhancing activities. Examples: throwing a flying disk, hitting a tennis ball, putting a golf ball
Physical Education (2009) Grade(s): 8 **All Resources:** **Learning Activities:** **Lesson Plans:** **Multimedia:** **Unit Plans:**	 0 0 0 0 0	Demonstrate aerobic movement skills and the performance of original dance routines. • Choreographing routines • Teaching student-created routines
Physical Education (2009) Grade(s): 8 **All Resources:** **Learning Activities:** **Lesson Plans:** **Multimedia:** **Unit Plans:**	 0 0 0 0 0	Demonstrate combinations of balancing and supporting skills.
Physical Education (2009) Grade(s): 8 **All Resources:** **Learning Activities:** **Lesson Plans:** **Multimedia:**	 4 1 0 3	Demonstrate skills used in individual, dual, and team sports. Examples: basketball, flag football, soccer, softball, volleyball, tennis, badminton

Unit Plans:	0

Physical Education (2009) Grade(s): 8	Demonstrate skills associated with adventure, outdoor, and recreational activities. Examples: orienteering, skating, cycling, walking, hiking
All Resources:	0
Learning Activities:	0
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Physical Education (2009) Grade(s): 8	Demonstrate player-to-player defensive strategy skills.
All Resources:	1
Learning Activities:	1
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Physical Education (2009) Grade(s): 8	dentify rules, regulations, tactics, strategies, and rituals utilized in individual, dual, and team sports.
All Resources:	1
Learning Activities:	1
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Physical Education (2009) Grade(s): 8	Apply movement concepts to sport, dance, gymnastics, recreational skill performances, and other physical activities. Example: utilizing flowing sequences with intentional changes in direction, speed, and flow
All Resources:	1
Learning Activities:	1
Lesson Plans:	0
Multimedia:	0
Unit Plans:	0

Physical Education (2009) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Summarize research findings of at least one local, national, or international game for its history, terminology, rules, and basic skills. Example: using the Internet or other research resources to produce portfolios, videos, slide presentations, photographs, or scrapbooks
Physical Education (2009) Grade(s): 8 **All Resources:** 1 **Learning Activities:** 1 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Solve problems in physical activity settings by identifying cause and potential solutions. Example: describing appropriate responses to an unfair call made by an official
Physical Education (2009) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe how recognizing opposing opinions and priorities, including displaying willingness to compromise, apply to teamwork and goal achievement.
Physical Education (2009) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply positive reinforcement to enhance peer physical performance during physical activity.
Physical Education	Explain long-term physiological and psychological benefits resulting from regular participation in physical activity.

(2009) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Physical Education (2009) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Identify the role of exercise in stress reduction.
Physical Education (2009) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply the F.I.T.T. principle to an individualized fitness plan.
Physical Education (2009) Grade(s): 8 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Design a personalized fitness plan.

Lifelong Individualized Fitness Education (9-12)

Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate movement combinations from a variety of physical activities that enhance cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition. Examples: running, weight training, circuit training, performing aerobic activities
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 2 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 2 **Unit Plans:** 0	Demonstrate complex movement sequences in a variety of physical activities. Examples: martial arts, dances, games, outdoor pursuits, individual and team sports
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Utilize rules and strategies for safe game play and selected lifetime activities. Example: organizing teams for modified games
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0	dentify short- and long-term health-enhancing benefits of physical activity. Examples: lowering resting heart rate, reducing stress level, increasing metabolism, strengthening the immune system • Identifying effects of age on physical activity preferences and participation • Explaining the relationship of physical, emotional, and cognitive factors that influence the rate of improvement in fitness performance

Unit Plans: 0	
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify requirements for selected careers in physical education, health, and fitness. • Identifying factors related to career choices
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify strategies for positive behavior modification and for social interaction among diverse populations. Example: using peer intervention to bring about desired changes in behavior
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain the impact of participating in multicultural physical activities. Example: developing cultural awareness
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate responsible personal and social behavior during physical activities. Examples: awareness of surroundings to avoid injury, respect for officials' decisions

Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate responsibilities of a leader or a follower to accomplish group goals.
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Critique a community service project that involves physical activity by identifying benefits, problems, compromises, and outcomes. Examples: walkathons, fun runs, Jump Rope for Heart fundraisers
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Utilize health and fitness technologies to develop a healthy lifestyle. Examples: heart-rate monitors, pedometers, spirometers, skinfold calipers • Measuring target physiological functions utilizing correct instruments • Calculating health risk based on body composition
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Utilize safe practices when participating in physical activities. Examples: avoiding high-caffeine energy drinks, avoiding dangerous supplements, considering weather conditions, considering medical conditions and personal physical conditions
Physical Education	Compare goals for attaining and maintaining fitness.

(2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Construct criteria for evaluation of commercial fitness and health products and services. Examples: cost, consumer reviews, availability
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Create a nutrition program that targets goals for maintaining energy and recommended body composition.
Physical Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Design a personal fitness plan that promotes activity for life. • Using selected assessments to modify an individualized fitness plan Examples: range of motion, skinfold, heart rate • Applying principles of specificity, overload, frequency, intensity, time, and progression to physical activities Examples: recording progress, selecting activities, arranging exercise, tracking progress • Demonstrating a lifestyle that includes participation in physical activity on a consistent basis

Physical Education Elective Course (10-12)

Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate complex movement patterns in a variety of activity settings. Examples: transitioning from a run to a lay-up in basketball, transitioning from a dribble to a pass in soccer, returning a tennis ball with a forehand ground stroke
Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Apply movement concepts and fitness principles to a variety of physical activity settings. Examples: offensive and defensive maneuvers in team sports, techniques in weight training
Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Determine characteristics of highly skilled physical performances. Examples: alertness in table tennis, accuracy in archery, agility in basketball
Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0	Analyze physical activity, sport, and recreational practices for safety, risks, and consequences. Example: staying behind shooting line in archery • Applying rules and procedures to avoid injuries

Lesson Plans: 0 **Multimedia:** 0 **Unit Plans:** 0	
Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Use competence, proficiency, and strategy skills to solve problems in a physical education environment. Examples: gathering data, considering alternatives
Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Evaluate facilities and programs within the community that may be utilized for maintaining lifelong fitness.
Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	dentify characteristics of a responsible leader, including honesty, respect for others, and self-control, in a physical education activity.
Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0	nterpret research regarding social effects associated with engaging in physical activity with others.

Learning Activities: 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	
Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate independence and self-responsibility in student-led physical activities. Examples: creating a dance or rope-jumping routine, applying rules and procedures without continuous supervision
Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate the level of fitness required for successful participation in a variety of physical activities. Example: performing aerobic activities for a minimum of 20 minutes
Physical Education (2009) Grade(s): 10 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Describe personal goals implemented in an individualized physical fitness performance plan.

Technology Education Grades 6-8

Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 1 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 0 **Unit Plans:** 0	Appraise technology systems to determine software and hardware compatibility.
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 124 **Learning Activities:** 13 **Lesson Plans:** 105 **Multimedia:** 6 **Unit Plans:** 0	Publish digital products that communicate curriculum concepts. Examples: Web pages, videos, podcasts, multimedia presentations
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 3 **Learning Activities:** 1 **Lesson Plans:** 1 **Multimedia:** 1 **Unit Plans:** 0	Explain how network systems are connected and used. Examples: file sharing, collaborating, wireless networking
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 4 **Learning Activities:** 0 **Lesson Plans:** 4 **Multimedia:** 0 **Unit Plans:** 0	Determine basic troubleshooting strategies to correct common hardware and software problems. Examples: checking connections, restarting equipment, creating a backup copy of digital data • Describing the importance of antivirus and security software
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 159 **Learning Activities:** 4 **Lesson Plans:** 151 **Multimedia:** 4 **Unit Plans:** 0	Use basic features of word processing, spreadsheets, databases, and presentation software. Examples: word processing—reports, letters, brochures - spreadsheets—discovering patterns, tracking spending, creating budgets - databases—contact list of addresses and telephone numbers - presentation software—slideshow

Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 95 **Learning Activities:** 3 **Lesson Plans:** 88 **Multimedia:** 4 **Unit Plans:** 0	Select specific digital tools for completing curriculum-related tasks. Examples: spreadsheet for budgets, word processing software for essays, probes for data collection
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 14 **Learning Activities:** 2 **Lesson Plans:** 12 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate correct keyboarding techniques.
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 19 **Learning Activities:** 7 **Lesson Plans:** 7 **Multimedia:** 5 **Unit Plans:** 0	dentify safe uses of social networking and electronic communication. • Recognizing dangers of online predators • Protecting personal information online
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 101 **Learning Activities:** 6 **Lesson Plans:** 88 **Multimedia:** 7 **Unit Plans:** 0	Practice responsible and legal use of technology systems and digital content. Examples: avoiding plagiarism; complying with acceptable-use policies, copyright laws, and fair use standards; recognizing secure Web sites • Identifying examples of computer crime and related penalties Examples: computer crime—phishing, spoofing, virus and worm dissemination, cyberbullying - penalties—fines, incarceration • Citing sources of digital content
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 10	Describe advances in technology and effects of each on the workplace and society. Examples: agriculture, manufacturing, medicine, warfare, transportation, communication, education

Learning Activities: 0 **Lesson Plans:** 8 **Multimedia:** 2 **Unit Plans:** 0	
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 128 **Learning Activities:** 9 **Lesson Plans:** 112 **Multimedia:** 7 **Unit Plans:** 0	Use digital tools and strategies to locate, collect, organize, evaluate, and synthesize information. Examples: locating—Boolean searches, graphic organizers, spreadsheets, databases - collecting—probeware, graphing calculators - organizing—graphic organizers, spreadsheets - evaluating—reviewing publication dates, determining credibility - synthesizing—word processing software, concept-mapping software
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 59 **Learning Activities:** 10 **Lesson Plans:** 35 **Multimedia:** 14 **Unit Plans:** 0	Use digital tools to communicate and collaborate at all levels from interpersonal to global. Examples: instant messages, e-mail, blogs, wikis, collaborative authoring tools, online learning communities • Demonstrating digital file transfer Examples: attaching, uploading, downloading
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 21 **Learning Activities:** 1 **Lesson Plans:** 20 **Multimedia:** 0 **Unit Plans:** 0	Use digital tools to formulate solutions to authentic problems. Examples: electronic graphing tools, probes, spreadsheets
Technology Education (2009) Grade(s): 6 - 8 **All Resources:** 50 **Learning Activities:** 10 **Lesson** 31	Use digital tools to generate new ideas, products, or processes. Examples: ideas—predictions, trends - products—animation, video - processes—models, simulations

Plans: **Multimedia:** 9 **Unit Plans:** 0	

Technology Education Grades 9-12

Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 0 **Learning Activities:** 0 **Lesson Plans:** 0 **Multimedia:** 0 **Unit Plans:** 0	Explain data encryption procedures.
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 2 **Multimedia:** 1 **Unit Plans:** 0	Diagnose hardware and software problems. Examples: viruses, error messages • Applying strategies to correct malfunctioning hardware and software • Performing routine hardware maintenance • Describing the importance of antivirus and security software
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 23 **Learning Activities:** 4 **Lesson Plans:** 19 **Multimedia:** 0 **Unit Plans:** 0	Demonstrate advanced technology skills, including compressing, converting, importing, exporting, and backing up files. • Transferring data among applications • Demonstrating digital file transfer Examples: attaching, uploading, downloading
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 42 **Learning Activities:** 2 **Lesson Plans:** 39 **Multimedia:** 1 **Unit Plans:** 0	Utilize advanced features of word processing software, including outlining, tracking changes, hyperlinking, and mail merging.
Technology Education	Utilize advanced features of spreadsheet software, including creating charts and graphs, sorting and filtering data, creating formulas, and applying functions.

(2009) Grade(s): 9 - 12 **All Resources:** 30 **Learning Activities:** 0 **Lesson Plans:** 29 **Multimedia:** 1 **Unit Plans:** 0	
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 93 **Learning Activities:** 5 **Lesson Plans:** 84 **Multimedia:** 3 **Unit Plans:** 1	Utilize advanced features of multimedia software, including image, video, and audio editing.
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 7 **Learning Activities:** 1 **Lesson Plans:** 4 **Multimedia:** 2 **Unit Plans:** 0	Utilize advanced features of database software, including merging data, sorting, filtering, querying, and creating reports.
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 12 **Learning Activities:** 4 **Lesson Plans:** 3 **Multimedia:** 5 **Unit Plans:** 0	Practice safe uses of social networking and electronic communication. • Recognizing dangers of online predators • Protecting personal information online Example: recognizing risk of identity theft
Technology Education (2009)	Practice ethical and legal use of technology systems and digital content. • Explaining consequences of illegal and unethical use of technology systems and digital content

Grade(s): 9 - 12 **All Resources:** 78 **Learning Activities:** 6 **Lesson Plans:** 64 **Multimedia:** 7 **Unit Plans:** 1	Examples: cyberbullying, plagiarism • Interpreting copyright laws and policies with regard to ownership and use of digital content • Citing sources of digital content using a style manual Examples: Modern Language Association (MLA), American Psychological Association (APA)
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 21 **Learning Activities:** 1 **Lesson Plans:** 12 **Multimedia:** 8 **Unit Plans:** 0	Analyze capabilities and limitations of current and emerging technologies. • Assessing effects of technology on culture, economics, politics, and the environment • Comparing capabilities of various technologies to address personal, social, lifelong learning, and career needs
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 97 **Learning Activities:** 1 **Lesson Plans:** 91 **Multimedia:** 5 **Unit Plans:** 0	Critique digital content for validity, accuracy, bias, currency, and relevance.
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 63 **Learning Activities:** 7 **Lesson Plans:** 42 **Multimedia:** 13 **Unit Plans:** 1	Use digital tools to publish curriculum-related content. Examples: Web page authoring software, coding software, wikis, blogs, podcasts
Technology Education (2009) Grade(s): 9 - 12 **All** 42	Demonstrate collaborative skills using curriculum-related content in digital environments. Examples: completing assignments online; interacting with experts and peers in a structured, online learning environment

Resources: **Learning Activities:** 5 **Lesson Plans:** 29 **Multimedia:** 8 **Unit Plans:** 0	
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 21 **Learning Activities:** 0 **Lesson Plans:** 16 **Multimedia:** 5 **Unit Plans:** 0	Use digital tools to defend solutions to authentic problems. Example: disaggregating data electronically
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 3 **Learning Activities:** 0 **Lesson Plans:** 1 **Multimedia:** 2 **Unit Plans:** 0	Forecast technology innovations based on trends.
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 14 **Learning Activities:** 2 **Lesson Plans:** 10 **Multimedia:** 2 **Unit Plans:** 0	Create a product that integrates information from multiple software applications. Example: pasting spreadsheet-generated charts into a presentation
Technology Education (2009) Grade(s): 9 - 12 **All Resources:** 2	Create an interactive digital product using programming logic. Examples: products—digital games, interactive learning tools - programming logic—"if-then" statements, authoring software

Learning Activities:	0
Lesson Plans:	2
Multimedia:	0
Unit Plans:	0