



ROMAN CATHOLIC
DIOCESE
OF **CHARLESTON**

Curriculum Report
Updated 2017-2018

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DIOCESE OF CHARLESTON MISSION STATEMENT

Catholic schools in the Diocese of Charleston will provide meaningful, engaging learning experiences and faith formation. Our school communities will be steeped in Catholic culture, rooted in Gospel values, and centered on the Eucharist. We will welcome families of diverse backgrounds who seek Catholic education for their children. We will value all students, acknowledge their unique gifts, and empower them to mature academically, spiritually, socially, emotionally, and physically.

The Catholic community of South Carolina will identify, cultivate, and support visionary school leaders and effective teachers who embody the Catholic mission. We will enable our educators to innovate and collaborate within and across schools and parishes.

The entire Catholic community of the Diocese of Charleston will support Catholic school education as an essential ministry of the Catholic Church. Through its engagement, the community will enable schools to demonstrate excellence in all facets of operation: relevant and rigorous curriculum, differentiated instruction, accountability and efficiency at all levels, ongoing strategic planning, marketing, financial sustainability, adaptability to local needs, and responsible stewardship of resources and facilities.

CURRICULUM COMMITTEE MEMBERS

Social Studies	Patti Lanthier	Christine Brooks	Peter Tonon	Kathy Smith
Melissa Lewis	Marie Phillips	Kelly Malyszek	David Milbrandt	Patricia Belton
Allison Austin	Libby Hughes	Deacon Bill Lacombe	Katherine Davis	Mary Ann Wheeler
Karen Floyd	Jim White	Charlie Tisdale	Jan Kroger	Rachel Ferrario
Tammie Maddock	Sam Duncan	Brenda Long	Stacy Marie Sattely	
Lindsey Siau	Sandy Bruno	Nancy Heath	Jamie Larkin	
Stacey Pippin	Mary Costantino	Jenny Humphreys	Julian Laskowski	
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Science	Sr. Judy Holler	Kathleen Kramp	Rose VanMetre	Nell Bramhall
Kathy Romer	Maria Cooper	Janice Certain	Maryann Commins	Kathy Masterton
Bridgette Crowell	Sr. John Agnes	Dr. Richard Borst	Haze Weinspach	Kristi Doyle
Calli Condon	Dawn Culbertson	Ashley Breda	Anne Gilmore	Kristine Galemmo
Libby Hughes	Lisa Jones	Rachel Green	Heather Rembold	Julie Lor
Michelle Harrison	Jolynn Prochaska	Alene Lowe	Walt Dupree	Joanne Anderson
Laura Bress	Lee Pasley	John Holzworth	Kris Blair	Krista Eckley
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Math	Tammie Richey	Kathy Romer	Kelly Bricco	Bonnie Moore
Rachel Ferrario	Jane Nicol	Heather Gingras	Jude Barrineau	Laura Webster
Mary Ann Wheeler	Laura Bress	Kendra Trexlet	JoLynn Prochaslea	Christina Brock
Nicole Frost	Kelly Permanente	Deanna Woodberry	Cherly Cambre	Matt Dakolios
Elizabeth Geetz	Suzette Hawkins	Kathleen Krame	Kathy Schertz	Barbara Bianchi
Kellie Wells	Kris Galemmo	Bridgette Kaya	Beth Martyn	Elizabeth Hasting
Patricia Belton	Bonnie Goltz	Dawn O'Donnell	Andrea Helms	Karen Luzzo

SUMMARY OF DIOCESAN CURRICULUM

1. The K-12 Diocesan Curriculum was developed in multiple stages by Grade K-12 teachers, diocesan administrators, and initially led by ACE Collaborative Staff from the University of Notre Dame.
2. The curriculum was developed using the knowledge of research based classroom practices, the needs of the Diocese of Charleston students, the expertise of Diocese of Charleston teachers, and referenced standards from other sources.
3. The Curriculum focuses both on content (what the students should know) and on practices and skills (what the students should be able to do). Therefore, *a broad range of research based instructional strategies should be used when designing units and lesson to help students achieve the outcomes.*
4. The emphasis of the Curriculum is on depth of understanding and using knowledge in a meaningful way, not breadth of coverage. Students are expected to thoroughly know and be able to use the concepts, practices, and skills across multiple context.
5. The Diocesan Curriculum is intended to set guidelines for the baseline, or “floor” for what all students should know and be able to do. *Individual teachers are encouraged to use their expertise and professional judgement to determine the level to go beyond these expectations in response to the learning needs and capabilities of their students.*
6. The Diocesan Curriculum is designed to work best when teachers work collaboratively and use a unit-planning approach to plan their instruction for the year.
7. The Diocesan Curriculum development is a cyclical process. In order to accommodate the changing needs of our current and future students, each curriculum will be reviewed and modified every five years. The content areas of Math, Social Studies and Science have been reviewed and are complete. The new ELA curriculum is in progress and will be ready for the 2018-2019 school year. The current cycle order includes; English Language Arts (2017), Special Content Areas (2018), Math (2019), Social Studies (2020), Science (2021). Religion content will be reviewed with each cycle of the core content areas.
8. This document contains the curriculum that has been reviewed and modified under the ACE Collaborative guidelines. Other curriculum that has not yet been modified may be found on the Diocesan website under the appropriate categories.

DIOCESE OF CHARLESTON APPROACH TO CURRICULUM

“Go into the whole world and spread the good news. Go therefore, and make disciples of all peoples. Baptize them and teach them to carry out everything I have commanded you.” (Mk. 16:15)

“Catholic schools afford the fullest and best opportunity to realize the fourfold purpose of Christian education, namely to provide an atmosphere in which the Gospel message is proclaimed, community in Christ is experienced, service to our sisters and brothers is the norm, and thanksgiving and worship of our God is cultivated.” (US Conference of Catholic Bishops, 2005)

Definition of Curriculum

Curriculum has many definitions in education. For the purposes of this document, curriculum is the most basically defined as “what we teach.” More specifically for this document, it is the concepts and skills that students are expected to understand and demonstrate in each grade level.

Classroom Curriculum

Teachers are responsible for developing the classroom curriculum that their students will experience each day. The Classroom Curriculum includes specific activities, experiments, simulations, readings, and other content from which students will learn the concepts and skills in the Diocesan Curriculum. It also includes the instructional strategies that teachers use to teach the concepts and skills, as well as the assessment strategies used to guide instruction and evaluate student growth. Each teacher’s Classroom Curriculum should be developed under the leadership of the Principal and attend to the needs of his or her own students, the expectations and priorities of the parents, the teacher’s judgement about what is in the best interest of his or her students, and the traditions and charisms of the school.

Each unit of instruction should be documented by use of a Unit Cover Page. The Unit Cover Page should provide a summary of the unit rationale, the scope and sequence of the daily lesson plans, and a snapshot of the key instructional strategies used during instruction. The Diocese of Charleston focuses on the following key instructional strategies; providing opportunities for extending and refinement of knowledge based on student ability, application of knowledge to real-world situations in which students will understand how to use the knowledge in a meaningful way, and alternative forms of assessment such as performance assessments that measure the student’s ability by other methods than a pencil-paper or multiple-choice test.

THE UNIT COVER PAGE

PURPOSE

The Unit Cover Page is designed to provide a comprehensive snapshot of each unit taught throughout the year. It should showcase the curriculum, the sequence in which the material was covered, and the teaching strategies used to meet the needs of all learners. Completing the cover pages after a unit has been taught allows teacher to reflect on their lesson plans, and identify their own strengths and weaknesses. This, in turn, allows teachers to modify their instruction to meet the needs of their current learners.

INDICATIONS OF BEST PRACTICES

To ensure that all teachers are utilizing best practices and can self-reflect on their own practices, it is required that teachers indicate the basic components of ACE Model teaching on their cover page.

Acquiring and Integrating (A&I): Acquiring and Integration lessons involve the introduction of new material and the integration of new material to prior knowledge. These lessons provide opportunities for students to link new information to information they already know or have learned in previous lessons. They provide straightforward information related to the Unit Goal that is accessible to all students

Extending and Refining (E&R): Extending and refining practices include providing opportunities for students who need more practice (refining) with a given topic or skill and providing a challenge (extending) for those students who have mastered the basics of the topic or skill. These lessons challenge all students to deepen or broaden their thinking about Unit Concepts. Tiered assignments are often used based on basic, proficient, and advanced questions.

Traditional Test (TT): The traditional test is a form of assessment given to students to provide feedback on student learning. The traditional test should always be used as a learning tool and not a final judgement of student success. It is required to have some form of instruction beyond the traditional test to provide opportunities for students to learn from their mistakes and make improvements.

Using Knowledge Meaningfully (UKM): The UKM component consists of lessons or activities that incorporate information in a way in which students must use the information they have learned in a relevant form.

Performance Assessment (PA): All students should be provided with opportunities to show what they have learned in an alternative format. These lessons holistically assess student achievement of the Unit Goal and Unit Concepts.

SAMPLE UNIT COVER PAGE

Unit # 1		Cover Page Title	Course Page Estimated Duration	Unit Cover Page Duration
Click to Return to Course Page				
Unit Rationale		The purpose of this unit is to..		
Unit Goal		SWBAT.... (provided on the curriculum sheet)		
Unit Prior Knowledge		Before the unit begins, students will have a working knowledge on the concepts of...		
Unit Assessment		Students will be assessed by...		
Lesson # (Click on the LP# to jump to that LP)	Estimated # of days	Lesson Objective Lesson Assessment	Benchmarks, Standards or Mastery Codes	
LP1	3	Objective: SWBAT.. describes the objective for the first lesson plan. (A&I) (E&R)	DOC.MATH.1.1	
		Assessment: Informal questions, homework, and teacher observations		
LP2	4	Objective: SWBAT... describes the objective for the second lesson plan. (A&I) (UKM)		
		Assessment: Students demonstrate gained knowledge through application (PA)		
LP3	2	Objective: SWBAT.. describes the objective for the third lesson plan. (A&I) (E&R) (UKM)		
		Assessment: In-class quiz, homework		
LP4	1	Objective: SWBAT...		
		Assessment: (TT)		
LP5	2	Objective: SWBAT...describes the objective for the fourth lesson plan. (E&R) (UKM) (PA)		
		Assessment: Performance Assessment and Test corrections		

KINDERGARTERN CURRICULUM

Kindergarten

KINDERGARTEN SCIENCE CURRICULUM

Kindergarten Unit Goals

Unit	Unit Goal
Human Body	SWBAT identify the parts and functions of the body.
Weather Patterns	SWBAT compare and contrast the four seasons.
Living Things	SWBAT identify the needs of plants and animals.
Matter	SWBAT sort objects based on their properties of matter.
Energy	SWBAT identify the relationship between energy and forces.

Kindergarten Unit Standards

Unit	Standard	SWBAT:
1 Human Body	DOC.SCI.K.1.1	Identify various body parts
	DOC.SCI.K.1.2	Identify the functions of various body parts
	DOC.SCI.K.1.3	Identify the five senses and correlating body parts
	DOC.SCI.K.1.4	Describe objects using all five senses
2 Weather Patterns	DOC.SCI.K.2.1	Identify the four seasons
	DOC.SCI.K.2.2	Sequence the order of the seasons
	DOC.SCI.K.2.3	Describe basic weather conditions
	DOC.SCI.K.2.4	Record weather conditions over a period of time
	DOC.SCI.K.2.5	Interpret data on a weather chart
	DOC.SCI.K.2.6	Compare weather to activities and dress
3 Living Things	DOC.SCI.K.3.1	Classify items as living or nonliving
	DOC.SCI.K.3.2	Identify basic needs of plants and animals
	DOC.SCI.K.3.3	Identify the basic parts of a plant
	DOC.SCI.K.3.4	Observe the growth and change of a seed into a plant
	DOC.SCI.K.3.5	Identify the uses of plants and animals
4 Matter	DOC.SCI.K.4.1	Identify the three states of matter
	DOC.SCI.K.4.2	Sort objects by their properties
	DOC.SCI.K.4.3	Identify objects that sink and float
5 Energy	DOC.SCI.K.5.1	Identify objects that are attracted to magnets
	DOC.SCI.K.5.2	Sort magnetic and nonmagnetic objects
	DOC.SCI.K.5.3	Define a force of a push or a pull
	DOC.SCI.K.5.4	Observe and identify forces (friction, gravity-weight) that slow down, stop, or increase an object's motion
	DOC.SCI.K.5.5	Describe what happens when objects are in motion
	DOC.SCI.K.5.6	Describe how energy is used to do work and causes objects to move

KINDERGARTEN SOCIAL STUDIES CURRICULUM

Kindergarten Unit Goals

Unit	Unit Goal
Discovering Me and My Family	SWBAT define self and family as a part of a community and church.
Becoming a Good Citizen	SWBAT identify how to be a good citizen and roles of authority in home, school, church, and community.
Discovering My Community	SWBAT classify roles of community helpers and the exchange of goods and services.
Living in My Community: Needs and Wants	SWBAT explain the difference between wants and needs.
Celebrating Our Country and Traditions	SWBAT identify people, events, traditions, and symbols of our country and our church.
Exploring God's World: Maps and Globes	SWBAT recognize basic geographical locations, features, and direction on a map and globe.

Kindergarten Unit Standards

Unit	Standard	SWBAT
1: Me and My Family	DOC.SS.K.1.1	Identify how individuals are similar and different
	DOC.SS.K.1.2	Recognize and identify how families have both similar and different characteristics
2: Becoming a Good Citizen	DOC.SS.K.2.1	Identify qualities of good citizenship (honesty, courage, determination)
	DOC.SS.K.2.2	Demonstrate good citizenship in the classroom (responsibility, cooperation, respect)
	DOC.SS.K.2.3	Explain the purpose of rules and the consequences of breaking them
	DOC.SS.K.2.3	Discuss time, treasure, and talent in relationship to our church community
	DOC.SS.K.2.4	Explain and demonstrate sportsmanship and fair play
3: Discovering My Community	DOC.SS.K.3.1	Identify people in the school and community who enforce rules that keep people safe
	DOC.SS.K.3.2	Identify community businesses and the goods and services they provide
	DOC.SS.K.3.3	Explain the methods of receiving goods and services
	DOC.SS.K.3.4	Match descriptions of work to the correct jobs
4: Living in My Community	DOC.SS.K.4.1	Identify basic human needs (food, shelter, clothing) and wants (toys, games, treats)
	DOC.SS.K.4.2	Explain the difference between human needs and wants
	DOC.SS.K.4.3	Explain that people have jobs to earn money to meet their basic needs
5: Our Country and Traditions	DOC.SS.K.5.1	Recognize the importance of symbols that are examples of principles of American democracy (national anthem, flag)
	DOC.SS.K.5.2	Identify significant American and Catholic figures (Washington, Lincoln, etc.)
	DOC.SS.K.5.3	Identify reasons for celebrating national holidays
6: Exploring God's World	DOC.SS.K.6.1	Identify the location of school, home, neighborhood, community, city, and state on a map

	DOC.SS.K.6.2	List examples of connections to his/her immediate surroundings
	DOC.SS.K.6.3	Recognize natural features of the environment through a variety of materials

KINDERGARTEN MATH CURRICULUM

Kindergarten Unit Goals

Identify Geometric Shapes and Model Patterns	SWBAT construct patterns using classified shapes with 1, 2 or 3 attributes.
Numbers: 1-10 Counting, comparing, sorting, and graphing	SWBAT illustrate the relationship between numbers 0-10 and quantities they represent.
Numbers: 11-20 counting, comparing, sorting, and graphing	SWBAT illustrate the relationship between numbers 11-20 and quantities they represent.
Addition 1-10	SWBAT model addition as putting together and adding to.
Subtraction 1-10	SWBAT model subtraction by taking apart and taking from.
Identifying coins and their value	SWBAT compare the value of pennies, nickels, and dimes.
Identifying units of time	SWBAT explain a measure of time to include months of the year, days of the week and hours of the day to the hour on analog and digital clocks.
Measuring length, weight, and capacity	SWBAT compare length, height, temperature, capacity, and weight with non-standard units.
Data and Concrete Graphs	SWBAT interpret data using concrete graphs.

Kindergarten Unit Standards

Unit	Standard	SWBAT:
1 Geometric Basics	DOC.MATH.K.1.1	Describe the relationship of an object compared to another object (including terms such as below, above, beside, between, inside, outside, in front of, or behind)
	DOC.MATH.K.1.2	Describe and classify 2-D shapes (triangle, square, rectangle, hexagon, circle) and 3-D shapes (cone, cylinder, cube, sphere) in real world situations
	DOC.MATH.K.1.3	Analyze 2-D and 3-D shapes by size, corners, and symmetry
	DOC.MATH.K.1.4	Construct 2-D and 3-D shapes
	DOC.MATH.K.1.5	Identify patterns visually, with sounds, and objects (AB, AAB, ABB, ABC)
2 Number Sense (1-10)	DOC.MATH.K.2.1	Count by ones to ten
	DOC.MATH.K.2.2	Understand that number represents quantity (1-10)
	DOC.MATH.K.2.3	Read and represent numbers 1-10 with a written numeral
	DOC.MATH.K.2.4	Count a number of objects (1-10)
	DOC.MATH.K.2.5	Compare the number of objects in a group (up to 10) to the number of objects in another group using greater than, less than, and equal to
	DOC.MATH.K.2.6	Compare written numbers up to 10 with greater than, less than, and equal to
3 Number Sense (11-20)	DOC.MATH.K.3.1	Count by ones and tens up to 20
	DOC.MATH.K.3.2	Read and represent numbers 1-20 with a written numeral
	DOC.MATH.K.3.3	Count the number of objects (1-20) in an arrangement

	DOC.MATH.K.3.4	Compare the number of objects in a group (up to 20) to the number of objects in another group using greater than, less than, and equal to
	DOC.MATH.K.3.5	Compare written numbers up to 20 with greater than, less than, and equal to
4 Operations: Addition	DOC.MATH.K.4.1	Understand the addition of numbers within 10 by using models, explanations, equations, and expressions
	DOC.MATH.K.4.2	Demonstrate understanding of addition within 10 through real-world examples, problems, and objects
	DOC.MATH.K.4.3	Create a number (up to 10) using two numbers (1-10) through objects and equations
5 Operations: Subtraction	DOC.MATH.K.5.1	Understand the subtraction of numbers within 10 by using models, explanations, equations, and expressions
	DOC.MATH.K.5.2	Demonstrate understanding of subtraction within 10 through real-world examples, problems, and objects
6 Measurement: Money	DOC.MATH.K.6.1	Understand the value of a penny, nickel, and dime
	DOC.MATH.K.6.2	Compare the numerical values of pennies, nickels, and dimes
7 Measurement: Time	DOC.MATH.K.7.1	Identify units of time including days of the week, months of the year, hours in the day
	DOC.MATH.K.7.2	Compare units of time using greater than, less than, and equal to
8 Measurement: Weight, Length, & Capacity	DOC.MATH.K.8.1	Identify measurable quantities of an object such as length, weight, and volume
	DOC.MATH.K.8.2	Compare objects using greater than, less than, and equal to regarding length, height, weight, capacity, and size
9 Data	DOC.MATH.K.9.1	Classify data into 2 to 3 categories within 1-20 items
	DOC.MATH.K.9.2	Count data items with tally marks and numbers
	DOC.MATH.K.9.3	Represent data with basic picture graphs, bar graphs, and pictographs

1ST GRADE CURRICULUM

1st Grade

1ST GRADE SCIENCE CURRICULUM

1st Grade Unit Goals

Animals	SWBAT identify the various characteristics and needs of animals and how their adaptations help them fulfill those needs to survive
Plants	SWBAT identify the parts of a plant and their functions
Sound	SWBAT plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate
Light	SWBAT investigate the effects of different amounts of light and their effects on different materials
Astronomy	SWBAT describe the patterns that can be predicted using patterns of our universe

1st Grade Unit Standards

Unit	Standard	SWBAT
1 Animals	DOC.SCI.1.1.1	Identify the basic needs and parts of animals
	DOC.SCI.1.1.2	Describe how animals change and grow (life cycle)
	DOC.SCI.1.1.3	Differentiate between animals in different habitats and the adaptations necessary for survival
	DOC.SCI.1.1.4	Recognize the similarities and differences between parents and offspring
2 Plants	DOC.SCI.1.2.1	Identify the relationship between the part of the plant and its function
	DOC.SCI.1.2.2	Identify the needs of a plant to survive and reproduce
	DOC.SCI.1.2.3	Recognize the order of a plant life cycle
	DOC.SCI.1.2.4	Identify the different ways seeds can be dispersed
	DOC.SCI.1.2.5	Identify edible parts of a plant
3 Sound	DOC.SCI.1.3.1	Identify that sound originates from vibrating sounds
	DOC.SCI.1.3.2	Compare high, low, and medium sound pitches
	DOC.SCI.1.3.3	Observe how sound carries through different states of matter
	DOC.SCI.1.3.4	Recognize the parts of the ear used to receive sound
4 Light	DOC.SCI.1.4.1	Identify objects that can be seen if light is available to illuminate them or if they give off their own light.
	DOC.SCI.1.4.2	Identify materials that allow light to pass and those that do not
	DOC.SCI.1.4.3	Observe that mirrors can be used to redirect light beams
	DOC.SCI.1.4.4	
5 Astronomy	DOC.SCI.1.5.1	Recall patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted
	DOC.SCI.1.5.2	Model relative positions of the sun, moon, and stars
	DOC.SCI.1.5.3	Demonstrate how the Earth rotates on an axis
	DOC.SCI.1.5.4	Explain how the Earth orbits the sun
	DOC.SCI.1.5.5	Identify the phases of the moon

1ST GRADE SOCIAL STUDIES CURRICULUM

1st Grade Unit Goals

Geography- Where are we?	SWBAT identify locations and land formations using map keys and cardinal directions.
Community and Citizenship- Who am I, and how do I make a difference?	SWBAT explain the rules, laws, and responsibilities as they relate to school, church, and community.
Government- Who are our leaders?	SWBAT identify important leaders of our community, church, and country.
History- Where have we been? Where are we now?	SWBAT identify characteristics of our national and Christian identity including symbols, holidays, and historical figures.
Economics- What role will I play?	SWBAT identify needs and wants and how they relate to spending, saving, and jobs in our family and community.
Cultures and Customs- Who are our neighbors?	SWBAT compare how families live and work in various cultures.

1st Grade Unit Standards

Unit	Standard	SWBAT
1 Geography	DOC.SS.1.1.1	Identify specific areas on a simple map (State on US map, US on a globe)
	DOC.SS.1.1.2	Use basic map symbols and cardinal directions
	DOC.SS.1.1.3	Locate physical features (rivers, lakes, mountains) and man-made features (North and South Poles, Equator) on a globe
2 Community and Citizenship	DOC.SS.1.2.1	Demonstrate appropriate skills necessary for working in a group or community
	DOC.SS.1.2.2	Identify and list responsibilities in the school, church, and community
	DOC.SS.1.2.3	Discuss authorities make and enforce laws to protect citizens
	DOC.SS.1.2.4	Discuss personal freedom and opportunity for all
3 Government	DOC.SS.1.3.1	Summarize the concept of authority and provide examples of people in authority
	DOC.SS.1.3.2	Identify and explain the roles of leaders in the family, school, church, and community
	DOC.SS.1.3.3	Recall the contributions made by historic, political, and religious figures to democracy in the United States (Franklin, Jefferson, Parks, etc)
4 History	DOC.SS.1.4.1	Identify the basic values of American democracy
	DOC.SS.1.4.2	Identify the different levels of government
	DOC.SS.1.4.3	Identify key influential figures in the community, state, and church
	DOC.SS.1.4.3	Identify school (mascot, songs, etc), community (firehouse, city hall, church), state (landmarks) and national (constitution, pledge of allegiance, liberty bell, etc) symbols, landmarks, and documents
5 Economics	DOC.SS.1.5.1	Explain methods of obtaining goods and services
	DOC.SS.1.5.2	Identify ways in which families and communities cooperate and compromise in order to meet their needs and wants

	DOC.SS.1.5.3	Summarize jobs in the community (firefighter, doctor, mailperson, etc)
6 Cultures and Customs	DOC.SS.1.6.1	Summarize the ways in which people are both alike and different
	DOC.SS.1.6.2	Summarize the characteristics that contribute to personal identity
	DOC.SS.1.6.3	Explain the elements of community life and how they may differ from one community to another

1ST GRADE MATH CURRICULUM

1st Grade Unit Goals

Adding and subtracting from 1-10	SWBAT model addition and subtraction problems with in 10.
Place value to 100	SWBAT illustrate that the digits of a two-digit number represent amounts of hundreds, tens and ones.
Extension of using addition from sums to 20	SWBAT use a variety of strategies to calculate and represent addition sums to 20
Extension of subtraction; differences from 20.	SWBAT use a variety of strategies to calculate and represent subtraction from 20
Geometry	SWBAT describe plane and solid shapes and identify parts of shapes and their attributes.
Comparing length, height, weight temperature, volume, and time intervals	SWBAT use appropriate units and tools to measure and compare two objects or events according to one or more of the following attributes: length, height, weight, temperature and volume.
Measuring time to the hour and 1/2 hour	SWBAT explain measure of time to include sequencing days of week, months of year and hours of day to hour and half hour on analog and digital clocks.
Identifying the value of coins and bills	SWBAT organize pennies, nickels, dimes, quarters and dollar bills to display a variety of price values with a total value of one hundred cents or less.
Graphing data	SWBAT interpret graphs with data up to 4 categories using bar graphs, tally charts, picture graphs and picto graphs.

1st Grade Unit Standards

Unit	Standard	SWBAT
1 Addition and Subtraction (1-10)	DOC.MATH.1.1.1	Understand how counting relates to addition and subtraction (1-10)
	DOC.MATH.1.1.2	Demonstrate addition and subtraction through 20
	DOC.MATH.1.1.3	Understand the meaning of the equal sign in expressions
	DOC.MATH.1.1.4	Analyze addition and subtraction equations with equal signs
2 Place Value (1-100)	DOC.MATH.1.2.1	Understand place value and bundling through 120
	DOC.MATH.1.2.2	Write numbers as ones and tens up to 120
	DOC.MATH.1.2.3	Understand that two-digit numbers can be broken down into tens and ones
	DOC.MATH.1.2.4	Compare two 2-digit numbers using greater than, less than, and equal to
	DOC.MATH.1.2.5	Determine numbers that are 10 more or 10 less than a given number through 120
3 Operations (Addition through 20)	DOC.MATH.1.3.1	Utilize the Commutative and Associative properties of addition to find the sum of 2 or 3 addends up to 20
	DOC.MATH.1.3.2	Analyze addition sentences and number lines up to 20
	DOC.MATH.1.3.3	Add 2-digit numbers with 1-digit numbers without regrouping

	DOC.MATH.1.3.4	Use real-world models for addition through 20
4 Operations (Subtraction through 20)		
	DOC.MATH.1.4.1	Understand subtraction and addition relationship through 20
	DOC.MATH.1.4.2	Analyze subtraction sentences and number lines up to 20
	DOC.MATH.1.4.3	Subtract 2-digit number and 1-digit numbers without regrouping
	DOC.MATH.1.4.4	Use real-world models for subtraction through 20
5 Geometry	DOC.MATH.1.5.1	Identify and explain repeating patterns using pictures and words
	DOC.MATH.1.5.2	Identify characteristics of 2-D shapes
	DOC.MATH.1.5.3	Combine 2 or more 2-D and 3-D shapes to create new figures
	DOC.MATH.1.5.4	Examine part of a whole by dividing 2-D shapes into equal parts through symmetry
6 Measurement (Length, Weight, and Volume)		
	DOC.MATH.1.6.1	Measure and compare objects by length, weight, and volume using standard and non-standard units
	DOC.MATH.1.6.2	Measure and compare temperature using Celsius and Fahrenheit scales
	DOC.MATH.1.6.3	Apply addition and subtraction facts to measurement of length, weight, and volume
7 Measurement (Time)	DOC.MATH.1.7.1	Compare digital and analog clocks as forms of time measurement
	DOC.MATH.1.7.2	Explain the patterns of time measurement
	DOC.MATH.1.7.3	Apply addition and subtraction facts to measurement of time
8 Measurement (Money)	DOC.MATH.1.8.1	Identify the penny, nickel, dime, and quarter and its value
	DOC.MATH.1.8.2	Compare the number of coins with greater than, less than, and equal to
	DOC.MATH.1.8.3	Apply addition and subtraction facts to measurement of money
9 Data	DOC.MATH.1.9.1	Collect and organize data with up to 3 categories using tallies and surveys
	DOC.MATH.1.9.2	Represent collected data with bar graphs, picture graphs, and pictographs

2ND GRADE CURRICULUM

2nd Grade

2ND GRADE SCIENCE CURRICULUM

2nd Grade Unit Goals

Properties and Changes of Matter	SWBAT plan and conduct an investigation to describe and classify different types of materials based upon their observable properties.
Landforms and Bodies of Water	SWBAT recognize different types of landforms and bodies of water.
Changes of the Earth	SWBAT represent how the Earth's landforms and bodies of water have changed and how they continue to change through natural phenomenon, such as weathering, erosion, volcanoes, and earthquakes.
The Needs of Plants	SWBAT identify the needs of plants and how their adaptations help them fulfill those needs.
Biodiversity	SWBAT compare and contrast a variety of animal habitats and how the plants and animals in those habitats change over time.

2nd Grade Unit Standards

Unit	Standard	SWBAT:
1 Properties and Changes of Matter	DOC.SCI.2.1.1	Use scientific vocabulary to describe three states of matter
	DOC.SCI.2.1.2	Sort material into three groups based on their states of matter
	DOC.SCI.2.1.3	Classify objects as solid, liquid, or gases
	DOC.SCI.2.1.4	Illustrate the three states of matter
	DOC.SCI.2.1.5	Depict the atoms in the three states of matter
2 Landforms and Bodies of Water	DOC.SCI.2.2.1	Label cardinal directions on a compass rose
	DOC.SCI.2.2.2	Identify legend, compass rose, and continents on a map
	DOC.SCI.2.2.3	Describe mountains, hills, plains, deserts, and plateaus
	DOC.SCI.2.2.4	Define island, peninsula, ocean, lake, pond, and bay
3 Changes of the Earth	DOC.SCI.2.3.1	Classify landforms and bodies of water according to their geological features and identify them on a map
	DOC.SCI.2.3.2	Describe changes in the earth due to slow (erosion, weather and deposition) and rapid processes (earthquakes, landslides or other natural disasters).
	DOC.SCI.2.3.3	Identify the impact of humans on the environment. (including recycling, reducing, reusing, different types of pollution, and alternative energy sources)
	DOC.SCI.2.3.4	Recognize that rocks can be composed of one or more minerals
	DOC.SCI.2.3.5	Describe how rocks can be classified according to their physical features.
4 The Needs of Plants	DOC.SCI.2.4.1	Differentiate between habitats based on climate.

	DOC.SCI.2.4.2	Explain how changes in the habitats of plants and animals affect their survival
	DOC.SCI.2.4.3	Observe the characteristics of an organism's habitat that allow the organism to survive there
	DOC.SCI.2.4.4	Illustrate the life cycles of seed plants and various animals and summarize how they grow and are adapted to conditions within their habitat
	DOC.SCI.2.4.5	Recall how changes in the habitats of plants and animals affect their survival
5 Biodiversity	DOC.SCI.2.5.1	Investigate the relationship between animals/plant characteristics and the features of the environments where they live.
	DOC.SCI.2.5.1	Make observations of plants and animals to compare the diversity of life in different habitats.
	DOC.SCI.2.5.2	Classify plants and animals as they relate to food chains/food webs (herbivores, carnivores, omnivores and decomposers) and their relationship to their ecosystem
	DOC.SCI.2.5.3	Summarize the organization of simple food chains (including the roles of producers, consumers, and decomposers).
	DOC.SCI.2.5.4	Compare and contrast the characteristics of organisms (plants/animals) from different environments
	DOC.SCI.2.5.5	Examine fossils or pictures of fossils and make inferences about the organisms and from which they originated.
	DOC.SCI.2.5.6	Develop a model about plants and animals demonstrating their relationship as they mature and grow.

2ND GRADE SOCIAL STUDIES CURRICULUM

2nd Grade Unit Goals

Cultural Diversity: Celebrations, Traditions, and Symbols	SWBAT describe his/her family and culture.
Being a Citizen at Home, School, and Community	SWBAT describe ways he/she can honor and respect other people and America.
Working Together (Goods and Services)	SWBAT explain how goods and services are provided and used.
Using Map Concepts	SWBAT construct a map of a location using map symbols and compass rose.
Mapping the World	SWBAT locate the seven continents and four oceans on a world map.
Government- American People Working Together	SWBAT identify the leaders of local, state, and national government and their responsibilities.
Historical People and Events	SWBAT demonstrate people and events who have impacted the lives of the people of the United States.
Timelines and Chronological Order	SWBAT classify historical people and events including those of the Catholic Faith by time order.

2nd Grade Unit Standards

Unit	Standard	SWBAT
1: Cultural Diversity	DOC.SS.2.1.1	Recognize the basic elements that make up a cultural region in the United States
	DOC.SS.2.1.2	Recognize how people within the school, community, state, and nation are both similar and different
	DOC.SS.2.1.3	Explain and identify cultural differences within the community
	DOC.SS.2.1.4	Recognize and describe the contributions of different cultural groups in SC and the nation
2: Citizenship	DOC.SS.2.2.1	Examine civic responsibility and demonstrate good citizenship
	DOC.SS.2.2.2	Investigate and show how community, states, and nation are united by symbols that represent citizenship
3: Goods and Services	DOC.SS.2.3.1	Describe how producers and consumers work together in making and using goods and services
	DOC.SS.2.3.2	Describe choices people make in using goods and services
	DOC.SS.2.3.3	Explain the roles of buyers and sellers in creating markets and pricing
	DOC.SS.2.3.4	Explain how work provides income for goods and services
4: Map Concepts	DOC.SS.2.4.1	Identify common map signs and symbols and know their meanings (stop sign, hazard, pedestrian crossing, bike routes, railroad crossings)
	DOC.SS.2.4.2	Identify and use information on a map and globe including legends
	DOC.SS.2.4.3	Locate school, city, state, and US on a map and globe
5: Mapping the World	DOC.SS.2.5.1	Locate and label the following on a globe or map (7 continents, 5 oceans, poles, and equator)
	DOC.SS.2.5.2	Using a map or globe, link cultures/nationalities with your community to their place of origin
6: Government	DOC.SS.2.6.1	Recognize different types of local laws

	DOC.SS.2.6.2	Identify the roles of leaders in the local government and how they enforce laws
	DOC.SS.2.6.3	Explain the ways the local and state governments contribute to the federal system
7: History	DOC.SS.2.7.1	Summarize the cultural contributions of the Native Americans
	DOC.SS.2.7.2	Summarize the cultural contributions of the African Americans
8: Timelines	DOC.SS.2.8.1	Summarize the changes in the local community over time
	DOC.SS.2.8.2	Identify historical figures in order by time
	DOC.SS.2.8.3	Identify historical events in order by time
	DOC.SS.2.8.4	Identify Catholic figures and events in order by time

2nd GRADE MATH CURRICULUM

2nd Grade Unit Goals

Addition and subtraction facts to 20	SWBAT Use a variety of strategies to calculate addition and subtraction facts up to 20.
Place value; ones, tens, hundreds, thousands	SWBAT Explain place value of the digits to the thousands with the use of addition and subtraction.
Two and three-digit addition and subtraction without regrouping	SWBAT Use a variety of strategies to calculate and represent addition and subtraction facts without regrouping.
Two and three-digit addition and subtraction with regrouping	SWBAT Use a variety of strategies to solve addition and subtraction problems with regrouping.
Count and compare money	SWBAT Calculate the value of coins and bills to solve real world word problems.
Comparing length, width, capacity	SWBAT Compare units of measurement using standard and non-standard forms such as length, width, and capacity.
Compare and calculate time	SWBAT Measure time in increments.
Graphing data	SWBAT Produce graphs to represent data.
Geometry	SWBAT Construct and deconstruct geometric shapes based on their attributes.
Fractions: Geometric Portioning	SWBAT Represent partitions as equal parts of the whole -into halves, thirds, and fourths - with models and mathematical symbols
Introduction to multiplication	SWBAT Construct multiplication problems using arrays and repeated addition.

2nd Grade Unit Standards

Unit	Standard	SWBAT:
1 Operations: Addition and Subtraction	DOC.MATH.2.1.1.	Add and subtract numbers through 20 considering place value
	DOC.MATH.2.1.2	Add and subtract numbers through 20 using models, symbols, and drawings
	DOC.MATH.2.1.3	Determine if a number is odd or even (through 20)
2 Place Value	DOC.MATH.2.2.1	Understand place value through 1,000
	DOC.MATH.2.2.2	Count by ones, tens, and hundreds to 1,000
	DOC.MATH.2.2.3	Read and write numbers through 1,000
	DOC.MATH.2.2.4	Compare two numbers up to 3 digits with greater than, less than, and equal to
	DOC.MATH.2.2.5	Identify numbers that are 10 or 100 more or less than another number
3 Operations (2 and 3 digit addition/subtraction without regrouping)	DOC.MATH.2.3.1	Add and subtract two and three-digit numbers through 1,000 without regrouping
	DOC.MATH.2.3.2	Solve real-world problems using addition and subtraction through 1,000 without regrouping

	DOC.MATH.2.3.3	Add and subtract four or more numbers up to 3-digits without regrouping
4 Operations (2 and 3-digit addition/subtraction with regrouping)	DOC.MATH.2.4.1	Add and subtract two and three-digit numbers through 1,000 with regrouping
	DOC.MATH.2.4.2	Solve real-world problems using addition and subtraction through 1,000 with regrouping
	DOC.MATH.2.4.3	Add and subtract four or more numbers up to 3-digits with regrouping
5 Measurement: Money	DOC.MATH.2.5.1	Identify the penny, nickel, dime, quarter, and dollar
	DOC.MATH.2.5.2	Compare given amounts of money using greater than, less than, and equal to
	DOC.MATH.2.5.3	Apply addition and subtraction facts to measurement of money
	DOC.MATH.2.5.4	Solve real-world problems using money, signs, purchases, and making change
6 Measurement: Length and Volume	DOC.MATH.2.6.1	Measure and compare the length of objects using various measuring tools (meter stick, ruler, etc.) in standard and non-standard units
	DOC.MATH.2.6.2	Compare measurements of different objects in similar units and different units
	DOC.MATH.2.6.3	Measure and compare the volume of liter, gallon, half gallon, and quart
	DOC.MATH.2.6.4	Solve real-world problems using addition and subtraction facts in measurement of length and volume
7 Measurement: Time	DOC.MATH.2.7.1	Interpret time using number sense and counting skills to 5-minute intervals
	DOC.MATH.2.7.2	Read and write clock times (both analog and digital) using am and pm notation
	DOC.MATH.2.7.3	Solve real-world problems using time measurement
8 Graphing	DOC.MATH.2.8.1	Represent whole numbers on a number line from 0 to 100 with equal spacing
	DOC.MATH.2.8.2	Collect data from measurement of objects and represent data on a line plot
	DOC.MATH.2.8.3	Collect data for 4 categories and represent data using picture graphs and bar graphs (single unit scale)
	DOC.MATH.2.8.4	Interpret data provided in tables, bar graphs, and picture graphs
9 Geometry	DOC.MATH.2.9.1	Identify triangles, quadrilaterals, hexagons, and cubes based on angles, edges, and faces
	DOC.MATH.2.9.2	Recognize and draw shapes with given number of angles and sides
	DOC.MATH.2.9.3	Recognize repetition in order to make generalizations
10 Fractions: Geometric Proportioning	DOC.MATH.2.10.1	Partition shapes into equal proportions
	DOC.MATH.2.10.2	Partition circles and rectangles into equal parts
	DOC.MATH.2.10.3	Identify halves, thirds, quarters, and equal parts of objects

11 Fractions: Geometric Proportioning	DOC.MATH.2.11.1	Use skip counting as related to multiplication
	DOC.MATH.2.11.2	Write basic multiplication and division sentences

3RD GRADE CURRICULUM

3rd Grade

3RD GRADE SCIENCE CURRICULUM

3rd Grade Unit Goals

Seasons and Weather	SWBAT Organize observable data to describe typical weather conditions, including weather related hazards, expected during a particular season.
Climates	SWBAT Describe climates in different regions of the world.
Life Cycles	SWBAT Develop models to describe that organisms have diverse life cycles but all have common life features.
Traits	SWBAT Analyze observable evidence that traits are inherited from parents and that environment can influence traits.
Variations and Survival	SWBAT Construct an explanation based on evidence to explain how variations in characteristics contribute to an organisms' survival.
Habitats	SWBAT Argue the effects of changing habitat on survival and of different responses organisms have to habitat change.
Fossils	SWBAT Analyze fossil data to provide evidence of the types of environments and habitats that existed in the past.

3rd Grade Unit Standards

Unit	Standard	SWBAT
1 Seasons and Weather	DOC.SCI.3.1.1	Identify cloud types and their implications
	DOC.SCI.3.1.2	Describe the water cycle and its relationship to weather
	DOC.SCI.3.1.3	Identify weather patterns in the four seasons
	DOC.SCI.3.1.4	Describe weather hazards in different parts of the world
2 Climates	DOC.SCI.3.2.1	Describe the relationship between weather and climate
	DOC.SCI.3.2.2	Identify different climates around the world
	DOC.SCI.3.2.3	Describe characteristics of different climates around the world including relationship between landforms, water & weather.
3 Life Cycles	DOC.SCI.3.3.1	Identify that the cell is the basic unit of life.
	DOC.SCI.3.3.2	Describe the Life Cycle of egg laying animals/ (butterfly and frog), mammals (dog) and compare and contrast these life cycles.
	DOC.SCI.3.3.3	Make observations about the diverse life cycles of plants, egg laying animals and mammals.
	DOC.SCI.3.4.1	Define and give examples of learned and inherited traits.
4 Traits	DOC.SCI.3.4.2	Identify the similarities and differences in traits between parents and offspring.
	DOC.SCI.3.4.3	Describe the relationship between heredity (the passing of characteristics from parents to offspring). And genetics, (the genes and variations in organisms).
	DOC.SCI.3.4.4	Identify traits influenced by the environment.
5 Variations and Survival	DOC.SCI.3.5.1	Define survival and its relationship to adaptation and traits.
	DOC.SCI.3.5.2	Discuss specific traits for defense (camouflage), or finding food (claws, beaks, night vision).
	DOC.SCI.3.5.3	Describe interdependence of organisms within a food chain.

6 Habitats	DOC.SCI.3.6.1	Identify habitats and the food water and shelter they provide.
	DOC.SCI.3.6.2	Describe the causes of habitat change (e.g., severe weather, human impacts)
	DOC.SCI.3.6.3	Explain the impact of habitat changes on its environment.
	DOC.SCI.3.6.3	Identify the plant and animal responses to habitat change (stay and survive, stay and die, move).
7 Fossils	DOC.SCI.3.7.1	Explain what a fossil is and what they tell scientists about the environments and habitats they came from.
	DOC.SCI.3.7.2	Compare and contrast the types of fossils, mold, cast, and trace.

3rd GRADE SOCIAL STUDIES CURRICULUM

3rd Grade Unit Goals

South Carolina Geography and Resources: How do South Carolina's geographic regions and resources impact its citizens?	SWBAT Explain the importance of geography, using map skills, and availability of resources in meeting the needs of the citizens of South Carolina.
South Carolina Government and Citizenship: Who? What? Why?	SWBAT Describe the formation of the local and state government and our role as citizens of the Catholic Church.
The Lives of Native Americans in South Carolina	SWBAT Summarize the contact, cooperation, and conflict between Native American tribes in South Carolina.
The Lives of Native Americans in America	SWBAT Outline the contact, cooperation, and conflict between Native American tribes in America.
Explorers: God, gold, and/ or glory?	SWBAT Compare and contrast the contributions of various explorers to the culture of our nation and the Catholic Church.
Settlements: How did the failures and successes of the early settlements help form our nation?	SWBAT Explain reasons, obstacles, and accomplishments of early settlements.
Cultural Exchange and Early Economics: What were the benefits and drawbacks of interactions between the Native Americans and settlers?	SWBAT Describe the benefits and drawbacks of interactions between the Native Americans and settlers.
Establishment of the 13 Colonies	SWBAT Compare and contrast reasons for settlement of the original 13 colonies.

3rd Grade Unit Standards

Unit	Standard	SWBAT
1: SC Geography and Resources	DOC.SS.3.1.1	Identify on a map the location and characteristics of significant physical features of SC, including landforms, river systems, major cities, and climate regions
	DOC.SS.3.1.2	Categorize the 6 geographical regions of SC according to physical and human characteristics
	DOC.SS.3.1.3	Interpret thematic maps of SC places and regions that show how and where people live, work, worship, use land and transport
	DOC.SS.3.1.4	Explain the effects of human systems on the physical landscape of SC over time including natural resources, climate, agriculture, and economic development.
2: SC Government and Citizenship	DOC.SS.3.2.1	Identify and explain the rights and responsibilities individuals have in the schools, communities, state, and nation
	DOC.SS.3.2.2	Discuss ways SC (and other states) contribute to making our nation and participate in federal system of government
	DOC.SS.3.2.3	Identify roles of the government and how they meet individual's needs
3: Lives of Native Americans in SC	DOC.SS.3.3.1	Explain how Native Americans helped shape the landscape of SC including population distribution, patterns of migration, natural resources, climate, agriculture, and economic development
	DOC.SS.3.3.2	Compare the culture, governance, and geographic location of different Native American nations in SC (Cherokee, Catawba, Edisto, Yamasee)

	DOC.SS.3.3.3	Explain the impact that European colonization had on Native Americans, including conflicts between the settlers and Native Americans incorporating the need to respect different cultures and appreciate other cultures' conditions
4: Lives of Native Americans in America	DOC.SS.3.4.1	Locate where Native Americans settled with emphasis on the Arctic (Inuit) Northwest (Kwakiutl), Plateau (Nez Perce), Southwest (Hopi), Plains (Pawnee), and Southeast (Seminole)
	DOC.SS.3.4.2	Describe how Native Americans used their environment to obtain food, clothing, and shelter.
	DOC.SS.3.4.3	Describe how early Native American cultures developed.
5: Explorers. God, Gold and/or Glory	DOC.SS.3.5.1	Summarize the activities and accomplishments of key explorers of SC (De Soto, Ribault, Pardo, Hilton, Woodward)
	DOC.SS.3.5.2	Identify early and diverse settlers and explain their reasons for their settlement and their contributions to the colony
	DOC.SS.3.5.3	Describe the government, culture, and economy of colonial SC and contributions of the colonists under Lord Proprietors and the Royal colonial government
6: Settlements	DOC.SS.3.6.1	Describe relationships between human settlement and physical geography
	DOC.SS.3.6.2	Explain the motives behind the exploration and settlement of SC by English, Spanish, and the French
	DOC.SS.3.6.3	Identify on a map and explain the sea and land routes of the explorers of SC and compare the geographic features of the areas they explored
7: Cultural Exchange and Early Economics	DOC.SS.3.7.1	Identify elements of culture (language, religion, customs, art, etc.)
	DOC.SS.3.7.2	Compare elements of local communities with communities from different parts of the world
	DOC.SS.3.7.3	Identify the interrelationship between the environment and the community development
	DOC.SS.3.7.4	Examine the impacts of two or more cultures interacting with one another
8: Establishment of the 13 Colonies	DOC.SS.3.8.1	Identify the English, French, and Spanish Colonies in North America, including geography, resources, climate, and map skills
	DOC.SS.3.8.2	Describe colonial life in America as experienced by various people, including large landowners, farmers, artisans, women, indentured servants, slaves and Native Americans.

3rd GRADE MATH CURRICULUM

3rd Grade Unit Goals

Place value, rounding, and estimation of whole numbers	SWBAT apply rounding strategies to make reasonable estimations for real world problems.
Addition and subtraction--Whole numbers, up to 4-digits	SWBAT use addition and subtraction within 1000 to solve real-world problems by using models and equations.
Data collection, graphing, and time	SWBAT interpret bar graphs, pictographs, line plots, and clocks to the nearest minute.
Multiplication and division through 12's Facts	SWBAT fluently calculate products and quotients for facts through 12s.
Multi-digit Multiplication and Division	SWBAT solve real world problems using multiplication and division of whole numbers up to 3-digit by 1-digit numbers in equal group situations.
Representing and comparing fractions	SWBAT analyze simple fractions by comparing their size or equivalency.
Measurement--length	SWBAT solve real-world problems involving length.
Geometry--Shapes, area and perimeter	SWBAT classify 2 and 3 dimensional shapes by attributes, including size, shape, area, and perimeter.
Measurement--mass and volume	SWBAT solve real-world problems involving mass and volume.

3rd Grade Unit Standards

Unit	Standard	SWBAT
1 Place Value	DOC.MATH.3.1.1	Use place value to the nearest 10, 100, and 1,000
	DOC.MATH.3.1.2	Read and write numbers through 100,000 in standard, expanded, and word form
	DOC.MATH.3.1.3	Compare and arrange numbers through 1,000 using greater than, less than, and equal to
	DOC.MATH.3.1.4	Use strategies to round numbers to the nearest 10, 100, and 1,000
2 Operations: Adding and Subtracting Whole Numbers	DOC.MATH.3.2.1	Add numbers of 4 digits with and without regrouping
	DOC.MATH.3.2.2	Subtracting numbers of 4 digits with and without regrouping
	DOC.MATH.3.2.3	Solve simple addition and subtraction equations with missing variables
	DOC.MATH.3.2.4	Solve addition and subtraction real word problems using multiple strategies
	DOC.MATH.3.2.5	Estimate addition and subtraction problems using addition and subtraction as inverse operations
3 Data	DOC.MATH.3.3.1	Read and write time to the nearest minute using am and pm notation
	DOC.MATH.3.3.2	Solve problems using addition and subtraction of time intervals in minutes
	DOC.MATH.3.3.3	Collect, organize, and represent data with several categories through bar graphs and pictographs
	DOC.MATH.3.3.4	Create line plots of given data sets

	DOC.MATH.3.3.5	Interpret data from given bar graphs, pictographs, and line plots
4 Operations: Multiplication and Division		
	DOC.MATH.3.4.1	Use equal groups and arrays to represent a multiplication sentence
	DOC.MATH.3.4.2	Fluently calculate products and quotients for facts through 12s.
	DOC.MATH.3.4.3	Use repeated subtraction to demonstrate the concept of division
	DOC.MATH.3.4.4	Apply the properties of operations (Associative, Commutative) to solving multiplication and division problems
	DOC.MATH.3.4.5	Solve multi-step word problems utilizing multiplication and division through 12
5 Operations: Multi-digit	DOC.MATH.3.5.1	Solve problems with multiplication of 2-digit and 3-digit by 1-digit
	DOC.MATH.3.5.2	Solve problems with division of 2-digit and 3-digit by 1 digit
	DOC.MATH.3.5.3	Solve multi-step problems using addition, subtraction, multiplication, and division of whole numbers and having whole number answers
	DOC.MATH.3.5.4	Solve real-world problems involving multiplication and division of 2-digit and 3-digit numbers
6 Fractions	DOC.MATH.3.6.1	Relate fractions to the idea that the whole is partitioned into equal parts
	DOC.MATH.3.6.2	Represent fractions on a number line based on counts of a unit fraction
	DOC.MATH.3.6.3	Explain equivalency of fractions through number lines, pictures, and models
	DOC.MATH.3.6.4	Compare simple fractions and determine greater than, less than, or equal to values
	DOC.MATH.3.6.5	Solve real-world problems using fractions
7 Measurement: Length	DOC.MATH.3.7.1	Measure objects to the nearest inch, half inch, and quarter inch (and cm)
	DOC.MATH.3.7.2	Solve one and two step real-world problems using length measurement
8 Geometry: Shapes, Area, and Perimeter	DOC.MATH.3.8.1	Classify 2 and 3 dimensional shapes according to their characteristics.
	DOC.MATH.3.8.2	Calculate area as an array and multiplication
	DOC.MATH.3.8.3	Calculate perimeter of basic shapes using edges and measurement
	DOC.MATH.3.8.4	Solve real-world problems using area and perimeter
9 Measurement: Mass and Volume	DOC.MATH.3.9.1	Measure and compare the mass of objects
	DOC.MATH.3.9.2	Measure and compare the volumes of substances
	DOC.MATH.3.9.3	Solve real-world problems using measurements of mass and volume

4TH GRADE CURRICULUM

4th Grade

4TH GRADE SCIENCE CURRICULUM

4th Grade Unit Goals

Scientific Method	SWBAT plan a simple investigation using the scientific method, with teacher guidance.
Energy: Electricity	SWBAT build a simple circuit to demonstrate the flow of electricity
Energy: Sound	SWBAT describe the transfer of sound waves as they travel through matter, including the human ear.
Energy: Light	SWBAT develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.
Energy Sources	SWBAT investigate the sources of energy and the impact of energy uses on the environment.
Motion and Simple Machines	SWBAT create simple and compound machines to demonstrate motion.

4th Grade Unit Standards

Unit	Standard	SWBAT
1 Scientific Method	DOC.SCI.4.1.1	Identify and explain the steps of the scientific method.
	DOC.SCI.4.1.2	Use the scientific method during a simple investigation.
	DOC.SCI.4.1.3	Explain how the scientific method is used in real world situations.
2 Energy: Electricity	DOC.SCI.4.2.1	Identify and describe electric circuits and currents.
	DOC.SCI.4.2.2	Describe heat as energy.
	DOC.SCI.4.2.3	Explain the basics of magnetism, poles and static electricity.
	DOC.SCI.4.3.4	Demonstrate and explain forces of attraction and repulsion.
3 Energy: Sound	DOC.SCI.4.3.1	Describe the basics of wave, including amplitude and frequency, in relation to volume and pitch.
	DOC.SCI.4.3.2	Explain vibrational energy.
	DOC.SCI.4.3.3	Identify the basic parts of the ear.
	DOC.SCI.4.3.4	Explain how the ear receives sound.
4 Energy: Light	DOC.SCI.4.4.1	Define reflection and refraction of light.
	DOC.SCI.4.4.2	Explain the energy of light using the electromagnetic spectrum.
	DOC.SCI.4.4.3	Identify the basic structure of the eye.
	DOC.SCI.4.4.4	Explain how the eye can see light.
5 Energy Sources	DOC.SCI.4.5.1	Identify and give examples of renewable resources.
	DOC.SCI.4.5.2	Identify and give examples of non-renewable resources.
	DOC.SCI.4.5.3	Compare and contrast energy sources (coal, oil, wind, solar, water, natural gas, etc.)
6 Motion and Simple Machines	DOC.SCI.4.6.1	Define and give examples of work.
	DOC.SCI.4.6.2	Define and give examples of forces.
	DOC.SCI.4.6.3	Describe simple machines and how they work (lever, inclined plane, wedge, screw, wheel and axle, gears)
	DOC.SCI.4.6.4	Describe and give an example of a compound machine.

4TH GRADE SOCIAL STUDIES CURRICULUM

4th Grade Unit Goals

U. S. Geography: Where are we?	SWBAT interpret maps in order to locate landforms, states and capitals, natural resources, regions and global features
Life in the Colonies	SWBAT give examples of religious influence, economic activities and politics among the three colonial regions.
Tension in the Colonies	SWBAT explain the religious, political, and economic factors that led to the Revolutionary War.
American Revolution: Give me liberty or give me death!	SWBAT summarize the outcomes and influences of major battles and leaders of the American Revolution.
Constitution/Government: A New Nation is Born	SWBAT explain the creation and structure of the U.S. government, the rights and responsibilities of United States citizens, and the influence of religious institutions on the government and citizenship.
Westward Expansion: Treaties, wars, and purchases	SWBAT describe the causes and effects of westward expansion of the U.S.
Civil War: A Nation Divided	SWBAT describe the political, social, and economic causes, key battles, and effects of the American Civil War.
Reconstruction: Repairing a Nation	SWBAT explain the goals of Reconstruction, including, but not limited to, the Thirteenth, Fourteenth and Fifteenth Amendments, Freedmen's Bureau and sharecropping.

4th Grade Unit Standards

Unit	Standard	SWBAT
1: US Geography	DOC.SS.4.1.1	Identify specific landforms in the United States on a map and globe
	DOC.SS.4.1.2	Identify the states and their capitals
	DOC.SS.4.1.3	Describe how explorers adapted or failed to adapt to various physical environments
	DOC.SS.4.1.4	Describe how explorers adapted or failed to adapt to various physical environments
2: Life in Colonies	DOC.SS.4.2.1	Describe the exploration of North America including obstacles
	DOC.SS.4.2.2	Describe cooperation's and conflicts between European explorers and American Indians
	DOC.SS.4.2.3	Identify reasons why colonies were founded
	DOC.SS.4.2.4	Describe the religious, economic, and political influences among the three colonial regions
3: Tensions in Colonies	DOC.SS.4.3.1	Compare and contrast colonial life in New England, Mid-Atlantic, and Southern colonies (education, economy, religion)
	DOC.SS.4.3.2	Describe colonial life from various perspectives (landowners, farmers, women, children, slaves, and Native Americans)
	DOC.SS.4.3.3	Identify the religious, economic, and political factors that led to the American Revolutionary War
4: American Revolution	DOC.SS.4.4.1	Identify events that shaped the revolutionary movement in America (French and Indian War, 1765 Stamp Act, Sons of Liberty, Daughters of Liberty, Boston Massacre, Boston Tea Party)

	DOC.SS.4.4.2	Describe the influence of key individuals and groups during the American Revolution (King George III, Washington, Franklin, Jefferson, Arnold, Henry, Adams, Revere)
	DOC.SS.4.4.3	Describe major events of the American Revolution and explain the factors leading to American victory and British defeat
	DOC.SS.4.4.4	Explain the importance of the Declaration of Independence (who, how, and why)
5: Constitution/Government	DOC.SS.4.5.1	Identify leaders of Constitutional Convention (Madison, Washington, Franklin)
	DOC.SS.4.5.2	Identify and discuss issues debated at Constitutional Convention
	DOC.SS.4.5.3	Identify the rights and responsibilities of US Citizens
	DOC.SS.4.5.4	Explain the creation and structure of government
6: Westward Expansion	DOC.SS.4.6.1	List the causes and effects of the War of 1812
	DOC.SS.4.6.2	Explain the impact of westward expansion on American Indians (Trail of Tears, Battle of Little Bighorn, forced relocation of American Indians)
	DOC.SS.4.6.3	Describe territorial expansion with emphasis on LA purchase, Lewis and Clark expedition and acquisition of TX (Alamo), OR (Oregon Trail) and CA (Gold Rush)
7: Civil War	DOC.SS.4.7.1	Identify Uncle Tom's Cabin and John Brown's raid on Harpers Ferry and how they are related to the Civil War
	DOC.SS.5.7.2	Describe tensions between the north and south due to states rights and slavery
	DOC.SS.5.7.3	Identify major battles and events of the Civil War
	DOC.SS.5.7.4	Describe contributions of Lincoln, Lee, Grant, Davis, Jackson, and Sherman
	DOC.SS.5.7.5	Describe the effects of the Civil War on the north and south
	DOC.SS.5.7.6	Identify the political, economic, and social factors of the Civil War
8: Reconstruction	DOC.SS.5.8.1	Explain the Bureau of Refugees, Freedman and Abandoned Lands
	DOC.SS.5.8.2	Explain how slavery was replaced
	DOC.SS.5.8.3	Describe the effects of Jim Crow laws and practices
	DOC.SS.5.8.4	Identify and explain the importance of the 13th, 14th, and 15th amendments

4TH GRADE MATH CURRICULUM

4th Grade Unit Goals

Numeration--place value and rounding	SWBAT apply place value concepts through millions to express numbers in standard, word, and expanded forms, compare and round whole numbers to a given place, and add and subtract multidigit numbers.
Multiplication of whole numbers: 4 digits by 1 digit	SWBAT multiply whole numbers up to 4 digits by 1 digit.
Multiplication of whole numbers: 2 digits by 2 digits	SWBAT multiply 2 two-digit numbers.
Division by 1-digit divisors with and without remainders	SWBAT divide up to a four-digit dividend by 1-digit divisor with and without remainders.
Fraction Equivalence and Ordering	SWBAT apply properties of fractions to compare fractions using benchmarks, common denominators, or equivalency.
Operations with Fractions	SWBAT apply rules of fractions to add and subtract fractions and mixed numbers with like denominators and multiply a fraction by a whole number
Decimals to Hundredths - Addition, Subtraction, Multiplication	SWBAT apply concepts of decimals to the hundredths to compare, add, subtract, and multiply decimals, and to convert fractions to decimals notation
Geometry--angles, lines, shapes, and solids	SWBAT classify, with justification, 2D and 3D figures based upon attributes such as lines, angles, and symmetry
Area and perimeter	SWBAT apply area and perimeter formulas for rectangles in real world and mathematical problems.
Measurement and Graphs	SWBAT solve real world and mathematical problems involving distances, elapsed time, liquid volume and masses, and represent data through use of line plots and graphs.

4th Grade Unit Standards

Unit	Standard	SWBAT
1: Place Value	DOC.MATH.4.1.1	Convert between place values for multi-digit whole numbers
	DOC.MATH.4.1.2	Use rounding to estimate whole numbers to any given place value
	DOC.MATH.4.1.3	Add and subtract multi-digit whole numbers
	DOC.MATH.4.1.4	Solve real-world problems involving estimation, addition, and subtraction
2: Multiplication (4 digit by 1 digit)	DOC.MATH.4.2.1	Identify factors of a whole number and determine if the number is prime or composite
	DOC.MATH.4.2.2	Multiply up to a 4-digit number by a 1-digit number including zero
	DOC.MATH.4.2.3	Interpret multiplication equations with multiplication facts up to 12
	DOC.MATH.4.2.4	Solve real-world problems using 4-digit numbers multiplied by a 1-digit number
3: Multiplication (2-digit by 2-digit)	DOC.MATH.4.3.1	Multiply a 2-digit number by a 2-digit number using place value and operations

	DOC.MATH.4.3.2	Use multiplication patterns (by 10, 100, 1000) to understand place value
	DOC.MATH.4.3.3	Identify factors, prime numbers, and composite numbers
	DOC.MATH.4.3.4	Solve real-world problems using multiplication of 2-digit numbers by 2-digit numbers
4: Division (1-digit without remainders)	DOC.MATH.4.4.1	Divide up to a 4-digit number by a 1-digit number without remainders
	DOC.MATH.4.4.2	Use division patterns (by 10, 100, 1000) to understand place value
	DOC.MATH.4.4.3	Solve real-world division problems using up to 4-digit numbers by a 1-digit number without remainders
5: Fractions (Equivalence and Ordering)		
	DOC.MATH.4.5.1	Identify and write prime and composite numbers
	DOC.MATH.4.5.2	Compare and order fractions with like and unlike denominators
	DOC.MATH.4.5.3	Identify and write equivalent fractions
	DOC.MATH.4.5.4	Solve real-world problems related to ordering and comparing fractions
6: Fractions (Operations)		
	DOC.MATH.4.6.1	Graph fractions on a number line
	DOC.MATH.4.6.2	Add and subtract fractions with like denominators
	DOC.MATH.4.6.3	Add and subtract mixed numbers
	DOC.MATH.4.6.4	Multiply fractions by whole numbers
	DOC.MATH.4.6.5	Solve real-world problems with fractions using models and explanations
7: Decimals (Operations)		
	DOC.MATH.4.7.1	Write fractions with denominators of 10 as equivalent fractions with denominator of 100
	DOC.MATH.4.7.2	Add and subtract decimals to the 100th place
	DOC.MATH.4.7.3	Convert between fractions, mixed numbers, and decimals
	DOC.MATH.4.7.4	Solve real-world problems using addition, subtraction, and multiplication of fractions and decimals related to money
8: Geometry (Lines and Angles)		
	DOC.MATH.4.8.1	Construct lines, line segments, points, rays, angles (right, acute, obtuse), parallel and perpendicular lines
	DOC.MATH.4.8.2	Identify angle degrees in relationship to a circle
	DOC.MATH.4.8.3	Measure and construct angles using a protractor
	DOC.MATH.4.8.4	Solve real-world problems using addition and subtraction of angle measurements
9: Geometry (Area and Perimeter)		
	DOC.MATH.4.9.1	Calculate and compare the area of rectangles
	DOC.MATH.4.9.2	Calculate and compare the perimeter of rectangles
	DOC.MATH.4.9.3	Solve real-world problems involving area and perimeter measurements of rectangles
10: Data	DOC.MATH.4.10.1	Use, convert, and compare customary and metric units
	DOC.MATH.4.10.2	Solve problems involving distance, length, time, volume, mass, and money using addition, subtraction, multiplication, and division
	DOC.MATH.4.10.3	Create line plots for data and determine the mean, median, and mode

5TH GRADE CURRICULUM

5th Grade

5TH GRADE SCIENCE CURRICULUM

5th Grade Unit Goals

Scientific Method	SWBAT plan a simple investigation using the scientific method, with limited teacher guidance.
Living and Nonliving Factors	SWBAT classify living and nonliving factors.
Human Body Systems	SWBAT identify the parts and functions of the human body systems.
Plants	SWBAT describe vascular and non-vascular plants and their processes.
Biomes and Human Impact	SWBAT differentiate among the various biomes and understand the impact of the human footprint on Earth's resources and environment.
Rock and Mineral Classification	SWBAT classify rocks and minerals by various properties and how they are formed.
The Relationships of Earth, Sun, and Moon	SWBAT create a model to explain the relationship among the Earth, the Sun, and the Moon.
The Solar System, and Beyond	SWBAT compare and contrast the movement, patterns, and physical characteristics of objects in space over time.

5th Grade Unit Standards

Unit	Standard	SWBAT
1 Scientific Method	DOC.SCI.5.1.1	Introduce the process of scientific method; ask a question, gather data, form a hypothesis, perform an experiment, analyze data, and draw a conclusion.
	DOC.SCI.5.1.2	Develop an appropriate question to use the Scientific Method
	DOC.SCI.5.1.3	Find appropriate resources to gather data
	DOC.SCI.5.1.4	Learn how to form a hypothesis using data
	DOC.SCI.5.1.5	Create an experiment using safe lab practices
	DOC.SCI.5.1.6	Analyze data and display it appropriately using independent and dependent variables with labeling
	DOC.SCI.5.1.7	Be able to draw logical conclusions from each of the steps taken of the Scientific Method and communicate them accurately using scientific vocabulary
2 Living and Nonliving Factors	DOC.SCI.5.2.1	Identify biotic and abiotic features of a habitat and how they interrelate
	DOC.SCI.5.2.2	Identify the relation of kingdom, genus and species. Discuss the five major kingdoms.
	DOC.SCI.5.2.3	Recognize adaptations of living organisms that allow them to live in their environment
	DOC.SCI.5.2.4	Describe abiotic factors that affect an environment (water, air, soil, temperature, precipitation)
3 Human Body Systems	DOC.SCI.5.3.1	Identify major systems of the body (respiratory, circulatory, skeletal, muscular, nervous, digestive, and excretory)
	DOC.SCI.5.3.2	Identify the major organs in each system and their function
	DOC.SCI.5.3.3	Know how the different systems work together
	DOC.SCI.5.3.4	Identify different conditions that affect body systems

4 Plants	DOC.SCI.5.4.1	Classify plants as vascular or nonvascular, seed bearing or not, and flowering or not.
	DOC.SCI.5.4.2	Identify features of a plants; (leaves, stem, roots, stomata and basic parts of a flower...)
	DOC.SCI.5.4.3	Recognize adaptations of plants that allow them to live in their environments
	DOC.SCI.5.4.4	Understand the process and purpose of photosynthesis
5 Biomes and Human Impact	DOC.SCI.5.5.1	Identify different environments and how they relate to climate.
	DOC.SCI.5.5.2	Recognize the different biotic and abiotic features in an environment
	DOC.SCI.5.5.3	Explain how humans positively and negatively affect environments
	DOC.SCI.5.5.4	Identify invasive species and their impact on an environment
6 Rock and Mineral Classification	DOC.SCI.5.6.1	Identify different minerals (hardness, luster, color, streak, shape and magnetism)
	DOC.SCI.5.6.2	Identify different uses for minerals
	DOC.SCI.5.6.3	Identify the types of rocks (igneous, metamorphic, and sedimentary) and how they are formed through the rock cycle.
	DOC.SCI.5.6.4	Describe how forces changes the earth's surface including weathering, deposition, and erosion
7 Relationship between Earth Sun and Moon	DOC.SCI.5.7.1	Understand the rotation of the Earth, Moon, and the Sun.
	DOC.SCI.5.7.2	Compare variation of brightness, color, and size of a star by using the Hertzsprung-Russell diagram.
	DOC.SCI.5.7.3	Describe the change of seasons depending on the tilt and rotation of the Earth around the Sun.
	DOC.SCI.5.7.4	Describe lunar phases, including terms such as crescent, waxing, waning, gibbous, full and new moons
	DOC.SCI.5.7.5	Compare and contrast the differences between solar and lunar eclipses.
8 Solar System and Beyond	DOC.SCI.5.8.1	Describe characteristics and location of the planets
	DOC.SCI.5.8.2	Identify major types of galaxies.
	DOC.SCI.5.8.3	Describe the causes for the presence or absence of stars in the night sky throughout the year.
	DOC.SCI.5.8.4	Explain how galaxies are moving and the universe is expanding.

5TH GRADE SOCIAL STUDIES CURRICULUM

5th Grade Unit Goals

World Geography- Where in the world are we?	SWBAT locate major countries and bodies of water in relation to their longitude, latitude, and general location on a globe or map.
Westward Expansion post-Civil War	SWBAT summarize how technologies (such as railroads, the steel plow and barbed wire), federal policies (such as subsidies for the railroads and the Homestead Act), and access to natural resources affected the development of the West.
Industrialization, Migration, and Big Business	SWBAT summarize the social, political and economic impact of the Industrial Revolution, immigration and the rise of big business.
Rise of the United States	SWBAT analyze with scaffolding how American territorial and economic growth led to global competition and war (WWI) from Industrial Revolution to the 1920's.
Twenties and Thirties	SWBAT compare and contrast the economic, political and social changes which took place between the 1920's and 1930's.
World War II	SWBAT summarize the major causes, principle events, key figures, developments in technology and the social and political impacts of WWII on the American home front and the world.
Cold War Era- Tear down that wall!	SWBAT identify the conflicts of the Cold War between the Union of Soviet Socialist Republics (USSR) and the United States, including McCarthyism, the spread of communism, the Korean Conflict, Sputnik, the Berlin Wall, the Cuban Missile Crisis, and the Vietnam War.
Civil Rights Movement- All men are created equal	SWBAT outline key figures, legislation and societal changes of the Civil Rights Movement from post-Civil War Era to present.
America's Role in Today's World- "We must be the great arsenal of Democracy." FDR	SWBAT identify the political, social, economic, and environmental challenges faced by the United States and the Catholic Church during the period from the collapse of the Soviet Union to the present.

5th Grade Unit Standards

Unit	Standard	SWBAT
1: Geography	DOC.SS.5.1.1	Identify countries, landforms, and major bodies of water on a globe
	DOC.SS.5.1.2	Identify locations according to latitude and longitude directions
2: Westward Expansion	DOC.SS.5.2.1	
	DOC.SS.5.2.2	Explain how access to natural resources affected the development of the West
	DOC.SS.5.2.3	Identify the federal policies that affected the expansion and development of the West
3: Industrialization, Migration, and Big Business	DOC.SS.5.3.1	Explain how travelers and settlers had to overcome physical constraints by using technological advances, including the first transcontinental railroad
	DOC.SS.5.3.2	Explain how new inventions and technologies propelled the Industrial Revolution

	DOC.SS.5.3.3	Identify prominent entrepreneurs, inventors, and scientists and summarize their endeavors, inventions, and discoveries (Bell, Wright Brothers, Einstein, Edison, Carnegie)
	DOC.SS.5.3.4	Explain why immigrants came to the US and describe the hardships they faced, contributions they made to the growth of American culture
	DOC.SS.5.3.5	Explain how cities and industries led to progressive reforms, including labor reforms, business reforms, and Prohibition
4: Rise of US	DOC.SS.5.4.1	Identify ways that American growth led to global competition
	DOC.SS.5.4.2	Explain how new inventions and technologies propelled the Industrial Revolution
	DOC.SS.5.4.3	Identify prominent entrepreneurs, inventors, and scientists and summarize their endeavors, inventions, and discoveries (Bell, Wright Brothers, Einstein, Edison, Carnegie)
5: 20's and 30's	DOC.SS.5.5.1	Summarize the daily life in the post-World War I period of the 1920's, including improvements in the standard of living, transportation, and entertainment; the impact of the 19 th Amendment, the Great Migration, the Harlem Renaissance, and Prohibition; and racial and ethnic conflict
	DOC.SS.5.5.2	Summarize the causes of the Great Depression, including overproduction and declining purchasing power, the bursting of the stock market bubble in 1929, and the resulting unemployment, failed economic institutions; and the effects of the Dust Bowl.
	DOC.SS.5.5.3	Explain the principal events related to the involvement of the United States in World War II.
	DOC.SS.5.5.4	Analyze the key figures and key developments during World War II and their impacts on the United States economy.
6: WW II	DOC.SS.5.6.1	Identify and explain the causes, key events, battles, and figures of WWII
	DOC.SS.5.6.2	Summarize the key developments in technology, aviation, weaponry, and communication and explain their impacts on WWII and the economy of the US
	DOC.SS.5.6.3	Summarize the political, social, and economic impact of WWII (include changes in women's roles, attitudes toward Japanese Americans, nation-state boundaries and governments)
7: Cold War Era	DOC.SS.5.7.1	Explain how the US sought to stop communism from spreading through Berlin airlift, Korean War, and North Atlantic Treaty organization
	DOC.SS.5.7.2	Describe how the Cold War was a worldwide struggle between the US and the Soviet Union (Cuban Missile Crisis and causes of the arms race)
	DOC.SS.5.7.3	Explain the differing economic and political philosophies of the USSR and the US (Communism, McCarthyism, Korean War, Berlin Wall, space race, Vietnam War)
	DOC.SS.5.7.4	Explain the effects of increasing worldwide economic interdependence following WWII (between and among nations)
8: Civil Rights Movement	DOC.SS.5.8.1	Explain the key events of the civil rights movement (Brown vs Board of Education, Montgomery Bus Boycott, March on Washington, Civil Rights Act, Voting Rights Act)
	DOC.SS.5.8.2	Identify the key figures of the Civil Rights movement (Thurgood Marshall, Lyndon B Johnson, Cesar Chavez, Rosa Parks, Martin Luther King, Jr)
	DOC.SS.5.8.3	Discuss the significance of technologies of TV and space exploration and the social and political impacts

5TH GRADE MATH CURRICULUM

5th Grade Unit Goals

Place Value	SWBAT analyze place value, expanded form, and rounding of whole numbers and decimals from thousandths to billions.
Number Operations/Addition and Subtraction (base 10)	SWBAT perform addition and subtraction operations with multi-digit whole numbers and decimals to thousandths including solving real world problems.
Number Operations/Multiplication and Division (base 10)	SWBAT solve multiplication problems with multi- digit whole numbers and decimals from millions to thousandths using division with multi-digit divisors.
Fractions	SWBAT add and subtract fractions and mixed numbers with unlike denominators.
Fractions	SWBAT solve mathematical and real-world problems using multiplication and division of fractions.
Patterns, Relationships and Order of Operations	SWBAT evaluate algebraic and numerical expressions including the use of order of operations.
Measurement Conversions	SWBAT solve multi-step real world problems by converting units within a given measurement system (customary/metric).
Geometric Properties of 2D Shapes	SWBAT analyze geometric properties and relationships of 2D shapes to define and classify them in a hierarchy based on properties.
Volume of 3D Shapes	SWBAT apply geometric principles to deconstruct 3D shapes and find surface areas and volume of prisms.
Data Analysis, Probability, and Graphing	SWBAT organize data and probability to create and interpret graphs, line plots, and coordinate planes.
Place Value	SWBAT analyze place value, expanded form, and rounding of whole numbers and decimals from thousandths to billions.
Number Operations/Addition and Subtraction (base 10)	SWBAT perform addition and subtraction operations with multi-digit whole numbers and decimals to thousandths including solving real world problems.
Number Operations/Multiplication and Division(base 10)	SWBAT solve multiplication problems with multi- digit whole numbers and decimals from millions to thousandths using division with multi-digit divisors.
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Data Analysis, Probability, and Graphing	SWBAT organize data and probability to create and interpret graphs, line plots, and coordinate planes.

5th Grade Unit Standards

Unit	Standard	SWBAT
1 Place Value	DOC.MATH.5.1.1	Recognize the relationship and convert between thousandths to billions
	DOC.MATH.5.1.2	Identify and use patterns of zero when multiplying and dividing by powers of 10
	DOC.MATH.5.1.3	Read and write decimals in expanded, standard, and word form
	DOC.MATH.5.1.4	Compare and order whole numbers and decimals
2 Operations (Addition and Subtraction)	DOC.MATH.5.2.1	Estimate decimal sums and differences
	DOC.MATH.5.2.2	Add and subtract multi-digit whole numbers, decimals, and combinations of whole numbers and decimals
	DOC.MATH.5.2.3	Solve real-world problems that apply addition and subtraction of whole numbers and decimals
3 Operations (Multiplication and Division Base 10)	DOC.MATH.5.3.1	Multiply up to a 4-digit number by 2-digit and 3-digit numbers including zeros
	DOC.MATH.5.3.2	Estimate products of multi-digit numbers and decimals to thousandths
	DOC.MATH.5.3.3	Demonstrate an understanding of the relationship between multiplication and division
	DOC.MATH.5.3.4	Use divisibility rules and patterns to solve multi-digit problems including zeros in the quotient
	DOC.MATH.5.3.5	Solve real-world problems that apply multiplication and division of multi-digit numbers
4 Fractions (Addition and Subtraction)	DOC.MATH.5.4.1	Identify greatest common factor, prime numbers, composite numbers, and least common denominators
	DOC.MATH.5.4.2	Write fractions in simplest forms
	DOC.MATH.5.4.3	Convert between mixed numbers and improper fractions
	DOC.MATH.5.4.4	Add and subtract fractions and mixed numbers with unlike denominators
	DOC.MATH.5.4.5	Solve real-world problems applying addition and subtraction of fractions, whole numbers, and mixed numbers
5 Fractions (Multiplication and Division)	DOC.MATH.5.5.1	Estimate the products of fractions and whole numbers
	DOC.MATH.5.5.2	Multiply fractions by a whole number, fractions by a mixed-number, and fractions by fractions
	DOC.MATH.5.5.3	Divide whole numbers by fractions, fractions by fractions, and mixed numbers by fractions
	DOC.MATH.5.5.4	Solve real-world problems applying multiplication and division of fractions, whole numbers, and mixed numbers
6 Algebraic Operations	DOC.MATH.5.6.1	Evaluate numerical expressions involving symbols (parentheses, brackets, braces)

	DOC.MATH.5.6.2	Use the order of operations to solve and write numerical expressions
	DOC.MATH.5.6.3	Explain the relationship between patterns using function tables
	DOC.MATH.5.6.4	Solve and create single variable equations
	DOC.MATH.5.6.5	Solve real-world problems that apply the order of operations
7 Measurement and Conversions	DOC.MATH.5.7.1	Convert between smaller and larger customary units (in, ft., yd., sec, min) and metric units (mm, cm, g, kg, etc.)
	DOC.MATH.5.7.2	Solve real-world problems applying conversion of units
8 Geometry (2-D)	DOC.MATH.5.8.1	Identify the attributes of 2-D figures
	DOC.MATH.5.8.2	Classify and describe types of quadrilaterals
	DOC.MATH.5.8.3	Calculate the area of rectangles and squares using derived formulas
9 Geometry (3-D)	DOC.MATH.5.9.1	Use multiplication and addition of cubes to solve for volume
	DOC.MATH.5.9.2	Calculate the volume and surface area of rectangular prisms and cubes using derived formulas
	DOC.MATH.5.9.3	Solve real-world problems using volume and surface area calculations for 3-D figures
10 Data	DOC.MATH.5.10.1	Create and interpret line plots
	DOC.MATH.5.10.2	Define a coordinate system including x-axis, y-axis, origin, 4 quadrants, ordered pairs, and distance
	DOC.MATH.5.10.3	Solve real-world problems using the coordinate plane system
	DOC.MATH.5.10.4	Use data to determine mean, median, mode, and range

6TH GRADE CURRICULUM

6th Grade

6TH GRADE SCIENCE CURRICULUM

6th Grade Unit Goals

Geologic Time	SWBAT construct an evidence based explanation from rock strata for how the geologic time scale is used to organize earth's history
Plate Tectonics	SWBAT analyze and interpret geological data of past and current plate motions.
Earthquakes and Volcanoes	SWBAT develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.
Water Cycle and Oceanography	SWBAT develop a model of characteristic s of ocean water, ocean life, and ocean zones in relation to earth's cycles.
Atmosphere	SWBAT compare and contrast the composition and characteristics of the different layers of the atmosphere.
Weather	SWBAT collect data to provide evidence for how the motions and complex reactions of air masses result and change weather conditions.
Climate	SWBAT: create a model to explain how rotation of the Earth and unequal heating cause changes that determine regional climates.
Energy Resources	SWBAT construct an evidence based argument for the explanation in the role of Earth's energy resources.

6th Grade Unit Standards

Unit	Standard	SWBAT
1 Geological Time	DOC.SCI.6.1.1	Identify different types of fossils and explain how fossils are formed.
	DOC.SCI.6.1.2	Describe what fossils tell about organisms and environments of the past.
	DOC.SCI.6.1.3	Compare and contrast relative and absolute age of rocks
	DOC.SCI.6.1.4	Explain how the law of superposition and index fossils are useful for dating rock
	DOC.SCI.6.1.5	Describe the characteristics of ancient Earth
	DOC.SCI.6.1.6	Describe major events during Earth's Eras
2 Plate Tectonics	DOC.SCI.6.2.1	Describe the structure of Earth
	DOC.SCI.6.2.2	Explain the cause of convection currents in the Earth's mantle
	DOC.SCI.6.2.3	Explain the theory of continental drift and provide evidence to support the theory
	DOC.SCI.6.2.4	Explain the theory of sea-floor spreading and provide evidence to support the theory

	DOC.SCI.6.3.5	Explain the theory of plate tectonics
	DOC.SCI.6.3.6	Describe the three types of boundaries and relate these boundaries to changes on Earth's surface
	DOC.SCI.6.3.7	Describe the stresses on Earth's crust and the resulting land features resulting from these stresses
	DOC.SCI.6.3.8	Explain how the energy of an earthquake moves through the Earth
	DOC.SCI.6.3.9	Identify volcanic regions on Earth and relate their location to movements of the plates
3 Earthquakes and Volcanoes	DOC.SCI.6.3.1	Describe the stresses on Earth's crust and the resulting land features from these stresses (Earthquakes and Volcanoes).
	DOC.SCI.6.3.2	Explain how the energy of an earthquake moves through the Earth.
	DOC.SCI.6.3.3	Identify volcanic regions on Earth and relate their location to movements of the plates.
	DOC.SCI.6.3.4	Use the magma composition of a volcano to predict the type of volcanic eruption and resulting landform.
	DOC.SCI.6.3.5	Describe how scientists use instruments to predict and measure earthquake activity.
4 Weather Cycle and Oceanography	DOC.SCI.6.4.1	Explain how water moves through the water cycle
	DOC.SCI.6.4.2	Describe the distribution of Earth's water
	DOC.SCI.6.4.3	Explain how waves form and describe wave characteristics
	DOC.SCI.6.4.4	Explain how waves change as they approach shore
	DOC. SCI.6.4.5	Explain the causes of tides and explain what affects wave height
	DOC.SCI.6.4.6	Describe the chemical makeup of ocean water
	DOC.SCI.6.4.7	Explain how conditions in the ocean change with depth
	DOC.SCI.6.4.8	Identify the features and main sections of the ocean floor
	DOC.SCI.6.4.9	Describe the conditions of the different zones into which scientists divide the ocean
	DOC.SCI.6.4.10	Describe impact of human activity on the quality of water on Earth
5 Atmosphere	DOC.SCI.6.5.1	Describe the composition of Earth's' atmosphere
	DOC.SCI.6.5.2	Relate changes in altitude to changes in temperature and pressure
	DOC.SCI.6.5.3	Identify and describe the characteristics of the four main layers of the atmosphere
	DOC.SCI.6.5.4	Explain what happens to the sun's energy in the atmosphere and at Earth's surface
	DOC.SCI.6.5.5	Explain how air pressure is measured.
	DOC.SCI.6.5.6	Investigate air quality and relate it to human activity

6 Weather	DOC.SCI.6.6.1	Explain how clouds form
	DOC.SCI.6.6.2	Identify the major types of air masses that affect weather in North America and describe their movement
	DOC.SCI.6.6.3	Describe the four types of fronts and explain the weather associated with each
	DOC.SCI.6.6.4	Explain the weather that is associated with high and low pressure
	DOC.SCI.6.6.5	List the major kinds of storms (hurricanes, tornadoes, thunderstorms) and explain how they form
	DOC.SCI.6.6.6	Explain how weather forecasters predict the weather
	DOC.SCI.6.6.7	Interpret information shown on weather maps
	DOC.SCI.6.6.8	Identify factors that influence temperature and precipitation
	DOC.SCI.6.6.9	State and describe how scientists explain winds
	DOC.SCI.6.6.10	Compare and contrast local and global winds
7 Climate	DOC.SCI.6.7.1	Describe the six major climate regions
	DOC.SCI.6.7.2	Distinguish between weather and climate
	DOC.SCI.6.7.3	List factors that determine climate
	DOC.SCI.6.7.4	Determine what factors may cause changes in climate
	DOC.SCI.6.7.5	Describe how global warming and the Greenhouse effect are connected and relate to human activity
8 Energy Resources	DOC.SCI.6.8.1	Describe the origin of fossil fuels and explain disadvantages regarding the continued use of fossil fuels.
	DOC.SCI.6.8.2	Compare and contrast renewable and nonrenewable resources.
	DOC.SCI.6.8.3	Explain how natural resources can be conserved.
	DOC.SCI.6.8.4	Explain advantages and disadvantages of the various alternative energy sources (geothermal, solar, nuclear, wind, hydroelectric and biomass)

6th GRADE SOCIAL STUDIES CURRICULUM

6th Grade Unit Goals

Prehistory: Mesopotamia and Early Civilizations	SWBAT explain the origins and development of early civilizations.
Ancient Egypt and the Israelites	SWBAT analyze the development of Egyptian and Hebrew cultures and their contributions to the modern world.
Eastern Civilizations	SWBAT analyze the impact of religion on India and China's major developments and advancements.
Greek Civilization	SWBAT illustrate evidence of Greek civilization found in modern society.
Roman Civilization	SWBAT analyze the political, economic, and social advancements of Roman civilization and its impact on the modern world.
North and South of the Sahara: African Empires and the Spread of Islam	SWBAT compare and contrast regions affected by Islamic and African civilizations.
Mesoamerican Empires	SWBAT differentiate the advancements of Mesoamerican cultures.
The Dark Ages and the Medieval Era	SWBAT relate the political, economic, social and religious events of the Middle Ages.
Early Renaissance	SWBAT analyze the factors that contributed to the beginning of the Renaissance.

6th Grade Unit Standards

Unit	Standard	SWBAT
1: Prehistory Mesopotamia and Early Civilizations	DOC.SS.6.1.1	Explain the hunter-gatherer communities in regard to their geographic, social, and cultural characteristics, including adaptation to the natural environment
	DOC.SS.6.1.2	Explain the emergence of agriculture and its effects on early human communities
	DOC.SS.6.1.3	Using maps, globes, and models explain the role of the natural environment in shaping early civilizations
	DOC.SS.6.1.4	Compare the cultural, social, and political features and contributions of early civilizations
2: Ancient Egypt and Israelites	DOC.SS.6.2.1	Describe the relationship among ancient civilization of the world (scientific discoveries, architecture, politics, cultures, and religious systems)
	DOC.SS.6.2.2	Describe characteristics of ancient civilizations of Egypt, Mesopotamia and China
	DOC.SS.6.2.3	Explain contributions of ancient civilizations to later civilizations in terms of government, economics, historical figures, and religion
3: Eastern Civilizations	DOC.SS.6.3.1	Describe the geographical, political, economic, religious, and social structures of early civilizations of China
	DOC.SS.6.3.2	Discuss the importance of Huang-He Valley, Shang dynasty, geographical features related to governance, and Confucius
	DOC.SS.6.3.3	Describe historical influence of China on the world
	DOC.SS.6.3.4	Discuss major religions including Hinduism, Buddhism, Judaism, Christianity, and Islam

	DOC.SS.6.3.5	Describe the influence of geography on the growth and impact of Islam and Christianity on cultures
4: Greek Civilizations	DOC.SS.6.4.1	Describe the geographical, political, economic, religious, and social characteristics of ancient Greek, Roman, Ottoman, Indian, Arabic, African, and Middle Eastern civilizations
	DOC.SS.6.4.2	Explain how Mediterranean geography influenced development and civilizations
	DOC.SS.6.4.3	Identify the concepts of government and the role of citizenship
	DOC.SS.6.4.4	Identify key scientific and cultural achievements including art and architecture
	DOC.SS.6.4.5	Identify and discuss key historical figures of the time and their roles
5: Roman Civilizations	DOC.SS.6.5.1	Describe the political, economic, social, and geographical characteristics of Medieval European life
	DOC.SS.6.5.2	Identify and explain the Byzantine empire, fall of the Roman Empire, new forms of government and feudalism
	DOC.SS.6.5.3	Discuss the significance of the Magna Carta
	DOC.SS.6.5.4	Describe the role of the Roman Catholic Church and monasteries
	DOC.SS.6.5.5	Identify key figures and their roles (Charlemagne, Joan of Arc, Marco Polo)
6: North and South of Sahara African Empires and Spread of Islam	DOC.SS.6.6.1	Locate selected features of Africa (Sahara, Sahel, Congo River, Niger River, Nile River, Lake Tanganyika, Lake Victoria, Atlas Mountains, Kalahari Desert)
	DOC.SS.6.6.2	Describe the diverse cultures of African (Arab, Ashanti, Bantu, Swahili)
	DOC.SS.6.6.3	Discuss the forms of government including the terms unitary, confederation, federal, autocratic, oligarchic, democratic
	DOC.SS.6.6.4	Explain how European partitioning across Africa contributed to conflict, civil war, and artificial political boundaries
	DOC.SS.6.6.5	
7: Mesoamerica Empires	DOC.SS.6.7.1	Identify the locations, landforms, and climates of Mexico, Central America, and South America and the effects on Mayan, Aztec, and Incan cultures
	DOC.SS.6.7.2	Explain how the Aztec and Incan empire were defeated by the Spanish
	DOC.SS.6.7.3	Describe the culture and traditions of the Mayan, Aztec, and Incan cultures
	DOC.SS.6.7.4	Explain the Meso-American achievements in astronomy and math (calendar and seasonal changes)
8: Dark Ages to Medieval Era	DOC.SS.6.8.1	Explain feudalism and its relationship to the development of European nation-states and monarchies (life of peasants, economy, power)
	DOC.SS.6.8.2	Discuss the crusades and the rise of towns
	DOC.SS.6.8.3	Describe the spread of Christianity and the introduction of Asian and African ideas to Europe

	DOC.SS.6.8.4	Explain the development of English government and legal practices and the contributions to the development of representative government in England
	DOC.SS.6.8.5	Use a map to illustrate the origins and spread of the bubonic plague and its impact on society
9: Early Renaissance	DOC.SS.6.9.1	Describe the ways in which classical learning and the arts brought about a new balance between intellect and faith
	DOC.SS.6.9.2	Explain the importance of Florence and the growth of trading cities
	DOC.SS.6.9.3	Discuss the impact of the re-opening of the Silk Road and the travel path of Marco Polo
	DOC.SS.6.9.4	Explain the advances in art, science, math, engineering, astronomy, and anatomy (Dante Alighieri, Leonardo da Vinci, Michelangelo, Shakespeare)

6th GRADE MATH CURRICULUM

6th Grade Unit Goals

Operations of Decimals	SWBAT apply operations of multi-digit decimals.
Fractions: Addition and Subtraction	SWBAT apply addition and subtraction properties to solve problems with fractions.
Fractions: Multiplication and Division	SWBAT apply multiplication and division properties to solve problems with fractions.
Ratios, Rates, Proportions, and Percents	SWBAT analyze ratios, rates, proportions, and percents.
Introduction to Integers	SWBAT evaluate expressions with integers. (operations with integers optional)
Numeric and Algebraic Expressions	SWBAT evaluate numerical and algebraic expressions
Equations and Inequalities	SWBAT solve one-variable equations and inequalities using dependent and independent variables (integers optional).
Geometric: Formulas of Perimeter, Area, Surface Area & Volume (can be two units if needed)	SWBAT solve real-world and mathematical problems involving perimeter, area, surface area, and volume.
Data Analysis and Graphs	SWBAT apply principles of data analysis to model and solve problems using various representations such as graphs, tables, and equations.

6th Grade Unit Standards

Unit	Standard	SWBAT
1 Operations (Decimals)	DOC.MATH.6.1.1	Add, subtract, multiply, and divide multi-digit decimal numbers
	DOC.MATH.6.1.2	Solve real-world problems using multi-digit numbers and decimals
2 Fractions (Addition and Subtraction)	DOC.MATH.6.2.1	Simply and write equivalent fractions
	DOC.MATH.6.2.2	Add and subtract fractions, improper fractions, mixed numbers, and whole numbers
3 Fractions (Multiplication and Division)	DOC.MATH.6.3.1	Determine common factors and multiples of 2 whole numbers (gcf, lcm)
	DOC.MATH.6.3.2	Multiply and divide fractions, improper fractions, mixed numbers, and whole numbers
4 Ratios	DOC.MATH.6.4.1	Explain the relationship between 2 quantities including part of a whole
	DOC.MATH.6.4.2	Use ratios to describe rates
	DOC.MATH.6.4.3	Write equivalent ratios
	DOC.MATH.6.4.4	Relate the concept of rate per 100 to percentages, parts, and wholes
	DOC.MATH.6.4.5	Convert between fractions and percents
5 Integers	DOC.MATH.6.4.6	Solve real-world problems involving ratios, rates, and percentages
	DOC.MATH.6.5.1	Use a number line to show all rational numbers
	DOC.MATH.6.5.2	Explain that positive and negative representations of a number are opposites in direction and value

	DOC.MATH.6.5.3	Use absolute value to represent a numbers distance from zero on a number line
	DOC.MATH.6.5.4	order rational numbers including absolute value of negative numbers
	DOC.MATH.6.5.5	Use knowledge of rational numbers to plot points and find distance between points on a coordinate plane
	DOC.MATH.6.5.6	Convert between fractions, decimals, and percents
6 Expressions	DOC.MATH.6.6.1	Write and solve numerical expressions involving whole numbers and order of operations
	DOC.MATH.6.6.2	Apply mathematical properties (Commutative, Associative, Distributive, Identity, and Inverse) to construct equivalent expressions
	DOC.MATH.6.6.3	Use variables in expressions to represent quantities
	DOC.MATH.6.6.4	Solve real-world problems using variables and expressions
7 Equations and Inequalities	DOC.MATH.6.7.1	Solve one variable inequalities using greater than, less than, and equal to and graph the solution on a number line
	DOC.MATH.6.7.2	Identify multiple solutions to an inequality equation
	DOC.MATH.6.7.3	Identify and solve for independent and dependent variables
8 Geometry	DOC.MATH.6.8.1	Find areas of triangles, quadrilaterals, and polygons by constructing or deconstructing into other shapes
	DOC.MATH.6.8.2	Identify and describe properties of polygons
	DOC.MATH.6.8.3	Use modeling to construct the formulas for volume of a right rectangular prism
	DOC.MATH.6.8.4	Use derived formulas to find volume and surface area of prisms and pyramids
	DOC.MATH.6.8.5	Solve real-world problems related to perimeter, volume, and surface area
9 Data	DOC.MATH.6.9.1	Identify and solve for measures of central tendency (mean, median, mode)
	DOC.MATH.6.9.2	Describe data based on spread (range, interquartile range, mean, absolute value) and shape (skewed, symmetrical)
	DOC.MATH.6.9.3	Select appropriate representations for given data set (pictographs, line plots, frequency tables, bar graphs, circles, histograms, box and whisker plots, stem and leafs, scatter plots)

7TH GRADE CURRICULUM

7th Grade

7th GRADE SCIENCE CURRICULUM

7th Grade Unit Goals

What is Life?	SWBAT develop arguments to provide evidence that living things are comprised of cells.
Levels of Classification	SWBAT categorize organisms according to characteristics based on the methods of taxonomy.
Life Processes	SWBAT illustrate processes needed for life.
Genetics and Heredity	SWBAT develop models to describe the transfer of traits from parents to offspring.
Adaptations and Diversity	SWBAT point out how the relationships among the natural occurring inherited trait variations of sexual reproduction, the pressures of environmental change, and population adaptations over time lead to species diversity.
Human Body & Wellness	SWBAT argue with evidence that the body is a system of interacting subsystems composed of cells and construct a scientific explanation based on evidence for how environmental factors impact the health of an organism.
Ecology	SWBAT illustrate the interactions among organisms across multiple ecosystems including the energy flow among abiotic and biotic factors.

7th Grade Unit Standards

Unit	Standard	SWBAT
1 What is Life?	DOC.SCI.7.1.1	Conduct an investigation to provide evidence that all living things are made up of one or more cells
	DOC.SCI.7.1.2	Use models to explain how specialized structures (organelles) interact to produce and transport proteins.
	DOC.SCI.7.1.3	Design and use a model to demonstrate the function of a cell and its parts.
	DOC.SCI.7.1.4	Interpret data on cell structure to compare and contrast different types of cells.
	DOC.SCI.7.1.5	Describe the structure and function of cells, tissues, organs, and organ systems.
2 Levels of Classification	DOC.SCI.7.2.1	Compare and contrast prokaryotic and eukaryotic cells.
	DOC.SCI.7.2.2	Demonstrate the process for the development of a dichotomous key.
	DOC.SCI.7.2.3	Classify organisms based on physical characteristics using a dichotomous key of the six-kingdom system.
	DOC.SCI.7.2.4	Outline Linnaeus' contributions to taxonomy.
3 Life Processes	DOC.SCI.7.3.1	Explain the relationship between photosynthesis and respiration in the flow of energy into and out of living organisms.

	DOC.SCI.7.3.2	Explain the importance of maintaining homeostasis within different environments.
	DOC.SCI.7.3.3	Describe the processes of osmosis and diffusion.
	DOC.SCI.7.3.4	Use models to illustrate the changes that occur in a cell during the cell cycle with emphasis on mitosis and meiosis.
4 Genetics and Heredity	DOC.SCI.7.4.1	Recognize that cells contain genes and that each gene carries two alleles that determine the inherited traits of an organism.
	DOC.SCI.7.4.2	Investigate the structure and role of DNA in the transmission of genetic information between generations.
	DOC.SCI.7.4.3	Construct and interpret a Punnett Square for probabilities of traits with emphasis on genotype and phenotype distinction.
	DOC.SCI.7.4.4	Describe the role of RNA in protein synthesis as it relates to genetic disorders and mutations.
5 Adaptations and Diversity	DOC.SCI.7.5.1	Explain how the fossil record documents the appearance, diversification and extinction of many life forms.
	DOC.SCI.7.5.2	Examine the evolution of living organisms through inherited characteristics that promote survival of organisms and the survival of successive generations of their offspring.
	DOC.SCI.7.5.3	Describe ways in which species on earth have evolved due to natural selection.
	DOC.SCI.7.5.4	Explain how biological evolution accounts for the unity and diversity of living organisms.
6 Human Body and Wellness	DOC.SCI.7.6.1	Explain the relationships of human body systems.
	DOC.SCI.7.6.2	Analyze how various organisms grow and develop during their lifetimes.
	DOC.SCI.7.6.3	Compare and contrast viruses and bacteria.
	DOC.SCI.7.6.4	Explain how microorganisms are either beneficial or harmful to an organism.
7 Ecology	DOC.SCI.7.8.1	Develop a model to illustrate the flow of energy among living and nonliving parts of an ecosystem.
	DOC.SCI.7.8.2	Explain the effects of conservation and preservation as related to renewable and nonrenewable resources.
	DOC.SCI.7.8.3	Explain how the changes in abiotic and biotic factors can affect populations within an ecosystem.
	DOC.SCI.7.8.4	Compare and contrast the roles of organisms within the following relationships: predator/prey, symbiotic, and producer/consumer/decomposer.
	DOC.SCI.7.8.5	Analyze the human impact on the environment.

7TH GRADE SOCIAL STUDIES CURRICULUM

7th Grade Unit Goals

Middle Ages and Renaissance: A Changing World	SWBAT connect the fall of feudalism to the political and social changes of the Renaissance.
Reformation and Age of Discovery: Risk Takers of the Age	SWBAT correlate the political and social changes of the Renaissance to the Reformation that led to the Age of Discovery.
Exploration and Colonization: Growing Pains	SWBAT analyze the contributions of the European explorers and their impact on the New World.
Enlightenment and Revolutions: Liberty and Equality	SWBAT examine the political, social, religious, and economic changes of the Enlightenment that led to the Age of Revolutions.
Imperialism and Colonial Empires: European Scramble	SWBAT assess the global impact of imperialism and colonialism.
Nationalism and War World I: Alliances and the 'War to end all wars'	SWBAT summarize the development of Nationalism and connect its impact to WWI.
Rise of Fascism and Communism and WWII: Ideologies Clash	SWBAT summarize the causes and effects of WWII.
The Cold War Era (1945 - 1991): 'With great power, comes great responsibility.' Voltaire	SWBAT distinguish the ideologies and motivations of the East and West during the Cold War Era.
The Modern Era and the 21st Century: The Media and a Shrinking World	SWBAT connect modern global relations to historical foundations.

7th Grade Unit Standards

Unit	Standard	SWBAT
1: Middle Ages and Renaissance	DOC.SS.7.1.1	Describe how Northern Italy became wealthy through international trade.
	DOC.SS.7.1.2	Explain how the Northern Renaissance contributed many different styles of artists to our history; including painters, poets, architects, writers, intellectuals, and clergymen.
	DOC.SS.7.1.3	Explain how the spread of the Italian Renaissance sparked an interest in the arts and ancient roman culture; including the value of Humanism.
	DOC.SS.7.1.4	Explain how the Northern Renaissance led to a new self-confidence that enabled Europeans to challenge the authority
	DOC.SS.7.1.5	Describe “Renaissance men” and how they were the most well-known, influential men in all of history.
	DOC.SS.7.1.6	Explain the rebirth of learning during the Renaissance led to the Reformation.
2: Reformation and Age of Discovery	DOC.SS.7.2.1	Identify causes of internal turmoil and the weakening of the Catholic Church
	DOC.SS.7.2.2	Identify theological, political and economic ideas of major figures (Erasmus, Luther, Calvin, Tyndale)
	DOC.SS.7.2.3	Explain how Protestant's new practices of church self-government influenced the development of democratic practices and ideas of feudalism
	DOC.SS.7.2.4	Explain how counter reformation revitalized the Catholic Church (St. Ignatius of Loyola, Jesuits, Council of Trent)

	DOC.SS.7.2.5	Describe the Golden Age and the cooperation between the Jews and Muslims that led to the promotion of art, literature, and science
	DOC.SS.7.2.6	Describe the Scientific revolution and the major scientists and their theories (Copernicus, Galileo, Kepler, Newton)
3: Exploration and Colonization	DOC.SS.7.3.1	Identify the great voyages of discovery, locations of routes, and the influent on the new European worldview
	DOC.SS.7.3.2	Discuss the exchange of plants, animals, technology, culture, and ideas among Europe, Asia, Africa, and Americans
4: Enlightenment and Revolutions	DOC.SS.7.4.1	Explain how ideas from the Enlightenment can be traced back to Renaissance, Reformation, and Scientific movements
	DOC.SS.7.4.2	Explain how democratic thought and instructions were inflected by the Enlightenment thinkers (Locke, Montesquieu, American founders)
5: Imperialism and Colonial Empires	DOC.SS.7.5.1	Explain the origins and consequences of European overseas expansion in the 15th and 16th centuries.
	DOC.SS.7.5.2	Describe how European society experienced political, economic, and cultural transformation in an age of global intercommunication, 1450-1750.
	DOC.SS.7.5.3	Describe the extent and limits of Chinese regional power under the Ming dynasty.
	DOC.SS.7.5.4	Transformations in Asian societies in the era of European expansion.
	DOC.SS.7.5.5	Describe the major global trends from 1450 to 1770.
	DOC.SS.7.5.6	Describe how states and people of European descent became dominant in the Americas between the 16th and 18th centuries.
6: Nationalism and WWI	DOC.SS.7.6.1	Explain the causes and key events of WWI (nationalism, conflicts, rivalries, mechanization of war, Russian Revolution, entry of US into war)
	DOC.SS.7.6.2	Explain the outcome of WWI (League of Nations, Treaty of Versailles, shifts on borders)
7: Rise of Fascism and Communism	DOC.SS.7.7.1	Explain the worldwide depression that took place in the 1930's including the economic and, political responses to the depression and rise of Nazism in Germany
	DOC.SS.7.7.2	Understand the role of the Catholic Church in its response to human need and the suppression of peoples
	DOC.SS.7.7.3	Summarize the Holocaust and its impact on European society and Jewish culture
	DOC.SS.7.7.4	Identify the need of Catholic Social Justice Programs to remedy human suffering
8: Cold War Era	DOC.SS.7.8.1	Summarize the events of the Cold War (Soviet domination of Eastern Europe, Communist party, Berlin Wall, Vietnam and Korea, Cuban Missile Crisis, revolutionary movements in Africa, development of military, space and nuclear technologies)
	DOC.SS.7.8.2	Explain the major features of the political and social changes that occurred in the Middle East in the post-WWII period (nationalism, Israel, and ongoing conflicts)
	DOC.SS.7.8.3	Compare features of the nationalism and independence movements in different regions in the post WWII period (Gandhi and the nonviolent movement for India's independence and emergence of nationalist movements in African and Asian countries)

9: Modern Era	DOC.SS.7.9.1	Describe the development of early prehistoric people, their agriculture, and settlements
	DOC.SS.7.9.2	Analyze the development and historical significance of Hinduism, Judaism, Buddhism, Christianity, and Islam
	DOC.SS.7.9.3	Describe the world in transition (religion, culture, language, and government structure)
	DOC.SS.7.9.4	Discuss the results of Renaissance thoughts and theories including; rediscovery of Greek and Roman ideas, humanism and it's impact, scientific approach and innovations in arts and sciences.

7th GRADE MATH CURRICULUM

7th Grade Unit Goals

Integrating understanding of operations with Rational Numbers	SWBAT demonstrate an integrated understanding of the properties of rational numbers and their applications to mathematical and real-world problems.
Operation with integers	SWBAT apply operations to simplify numerical expressions containing integers.
Application of Proportions	SWBAT apply knowledge of ratios to write and solve proportions.
Application of Percents	SWBAT apply principles of percentages to solve real-world problems.
Multi-Step Expressions, Equations, & Inequalities	SWBAT simplify algebraic expressions and solve equations and inequalities.
2-D Geometry	SWBAT use formulas to solve problems involving angle measures and 2-D figures.
3-D Geometry	SWBAT demonstrate relationships between 2-D & 3-D geometric figures through descriptions and formulas.
Data Analysis and Graphs	SWBAT draw inferences about populations from data and graphs.
Meaning and uses of Probability	SWBAT draw inferences about a population to evaluate chance processes and probability models.

7th Grade Unit Standards

Unit	Standard	SWBAT
1 Operations (Rational Numbers)	DOC.MATH.7.1.1	Convert between mixed numbers, improper fractions, decimals, fractions, mixed numbers, and percents
	DOC.MATH.7.1.2	Add and subtract all rational numbers using mathematical properties (Commutative, Associative, Distributive, Identity, and Inverse)
	DOC.MATH.7.1.3	Multiply and divide all rational numbers using mathematical properties (Commutative, Associative, Distributive, Identity, and Inverse)
	DOC.MATH.7.1.4	Use order of operations to solve equations with rational numbers
	DOC.MATH.7.1.5	Solve real-world problems that utilize all four operations with rational numbers
2 Operations (Integers)	DOC.MATH.7.2.1	Compare and order integers including absolute value
	DOC.MATH.7.2.2	Solve addition and subtraction equations using integers
	DOC.MATH.7.2.3	Solve multiplication and division equations using integers
	DOC.MATH.7.2.4	Solve real-world problems utilizing all four operations with integers
3 Proportions	DOC.MATH.7.3.1	Identify and write proportional relationships
	DOC.MATH.7.3.2	Relate proportionality to rates and unit rates
	DOC.MATH.7.3.3	Write equations to represent proportional relationships
	DOC.MATH.7.3.4	Determine scale factors for similar figures including perimeter, area, and volume change
4 Percents	DOC.MATH.7.4.1	Write and solve percent equations
	DOC.MATH.7.4.2	Calculate and describe percent change

	DOC.MATH.7.4.3	Solve real-world problems including topics of percent (interest, compound interest, tax, sales price, and populations)
5 Expressions and Equations	DOC.MATH.7.5.1	Interchange between word phrases and sentences to expressions and equations
	DOC.MATH.7.5.2	Solve two-step equations involving rational numbers
	DOC.MATH.7.5.3	Solve addition, subtraction, multiplication, and division inequalities involving 1 step and 2 steps
	DOC.MATH.7.5.4	Solve real-world problems involving equations, expressions, and inequalities
6 Geometry	DOC.MATH.7.6.1	Identify and construct angle relationships (supplementary, complementary, adjacent, and vertical)
	DOC.MATH.7.6.2	Calculate the area and perimeter of 2-D figures such as triangles, quadrilaterals, and polygons
	DOC.MATH.7.6.3	Calculate the volume and surface area of 3-D figures such as cubes, right rectangular prisms, and right triangular prisms
	DOC.MATH.7.6.4	Use formulas to calculate circumference, area, radius, and diameter of circles
7 3-D Geometry	DOC.MATH.7.7.1	Solve for area of 2-D figures (rectangles, parallelograms, triangles, and trapezoids)
	DOC.MATH.7.7.2	Solve for volume of 3-D figures (cubes, right rectangular prisms, right triangular prisms)
	DOC.MATH.7.7.3	Break down 3-D shapes into 2-D shapes
	DOC.MATH.7.7.4	Use the relationship between 2-D and 3-D figures to explain formulas for volume and surface area
	DOC.MATH.7.7.5	Solve real-world problems for area and volume of 2-D and 3-D figures
8 Data	DOC.MATH.7.8.1	Explain random and non-random sampling including bias
	DOC.MATH.7.8.2	Visually compare measure of central tendency (mean, median, mode) and variability (range, deviation) through data displays (scatter plot, histograms, stem and leaf, box and whisker, scatter, line, and circle)
	DOC.MATH.7.8.3	Make inferences from given data displays
9 Probability	DOC.MATH.7.9.1	Determine probability of simple events
	DOC.MATH.7.9.2	Explain the relationship between theoretical and experimental probabilities
	DOC.MATH.7.9.3	Make predictions about populations given probabilities
	DOC.MATH.7.9.4	Solve real-world problems involving probabilities, combinations, and permutations
	DOC.MATH.7.9.5	Design and use experiments to collect data and analyze probability

8TH GRADE CURRICULUM

8th Grade

8th GRADE SCIENCE CURRICULUM

8th Grade Unit Goals

The Atom	SWBAT develop models to represent and explain how atoms rearrange themselves to form new substances while conserving the total number of atoms.
Chemical Reactions	SWBAT analyze data on reactant and product properties to find if a chemical reaction has occurred and how heat transfers in the reaction.
Thermal Energy and Temperature	SWBAT develop models that describe and predict the effects of transferring thermal energy, the resulting relationships among particle energies and temperature, and ways to minimize or maximize thermal energy transfer.
Forces and Motion	SWBAT investigate and provide evidence for the factors that cause change in an object's motion and use Newton's Third Law to design a solution to a problem created by two colliding objects.
Forces Over Distance	SWBAT argue from evidence the directions and strengths of field forces.
Energy	SWBAT use graphical data displays to analyze and argue the relationship between kinetic and potential energy and an object's mass, speed and position in different situations.
Energy and Waves	SWBAT use mathematical representations to describe a simple model that relates wave characteristics to energy and wave properties to various materials.
Alternative Forms of Energy	SWBAT evaluate the efficacy of various forms of alternative energy.

8th Grade Unit Standards

Unit	Standard	SWBAT
1 The Atom	DOC.SCI.8.1.1	Define elements as a pure substance consisting of only one kind of atom
	DOC.SCI.8.1.2	Describe how the differences in the number of protons, neutrons, and electrons give each atom their unique physical and chemical properties.
	DOC.SCI.8.1.3	Identify the properties of an element based upon its location within the periodic table.
	DOC.SCI.8.1.4	Describe how subatomic particles participate in chemical reactions while the total mass is conserved
2 Chemical Reactions	DOC.SCI.8.2.1	Describe how atoms are rearranged to form new molecules in a chemical reaction (i.e. ionic and covalent bonds).
	DOC.SCI.8.2.2	Identify that the products of a chemical reaction have different physical and chemical properties from the reactants.
	DOC.SCI.8.2.3	Write basic, balanced chemical reactions.
	DOC.SCI.8.2.4	Describe pH to classify solutions as acids and bases in chemical reactions
	DOC.SCI.8.2.5	Compare and contrast chemical reactions in terms of energy (endothermic and exothermic)
3 Thermal Energy and Temperature	DOC.SCI.8.3.1	Use the definition of thermal energy as the total motion of atoms to describe the differences among solids, liquids, and gases.

	DOC.SCI.8.3.2	Contrast thermal energy with temperature (the measurement of the average of kinetic energy of the atoms in a substance).
	DOC.SCI.8.3.3	Describe how energy is spontaneously transferred from areas of higher thermal energy to lower energy by means of radiation, conduction and convection
4 Forces and Motion	DOC.SCI.8.4.1	Describe how the force of one object acting on another can cause an equal reaction on the second but in an opposite direction (Newton's Third Law)
	DOC.SCI.8.4.2	Construct a design to evaluate Newton's Third Law of Motion with regards to inertia, momentum, and speed involving the collision of two objects
	DOC.SCI.8.4.3	Describe the net forces acting on an object in relation to changes in mass and amount of force acting on the object.
	DOC.SCI.8.4.4	Identify independent and dependent variables which affect the forces of objects.
5 Forces Over Distance	DOC.SCI.8.5.1	Determine cause and effect factors which limit the strength of electric and magnetic forces.
	DOC.SCI.8.5.2	Describe how the gravitational forces of two objects depend on the masses and distance of those objects.
	DOC.SCI.8.5.3	Develop a model to demonstrate how forces exist between two objects not in contact with each other.
6 Energy	DOC.SCI.8.6.1	Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.
	DOC.SCI.8.6.2	Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.
	DOC.SCI.8.6.3	Construct, use and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.
7 Energy and Waves	DOC.SCI.8.7.1	Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.
	DOC.SCI.8.7.2	Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.
	DOC.SCI.8.7.3	Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy
8 Alternate Forms of Energy	DOC.SCI.8.8.1	Describe the differences among wind, solar, geothermal, nuclear, and hydroelectric forms of energy.
	DOC.SCI.8.8.2	Calculate efficiency and analyze the input and output of the various alternative forms of energy by using a model.
	DOC.SCI.8.8.3	Compare and contrast the pros and cons of the various alternative forms of energy based upon efficiency and human person's responsibilities of stewardship over God's creation.

8TH GRADE SOCIAL STUDIES CURRICULUM

8th Grade Unit Goals

Exploration and Colonization 1516-1763: Foundation of a Nation	SWBAT analyze the exploration and colonization of the United States and South Carolina.
Statehood and Government 1763-1837: Colonists to Citizens	SWBAT summarize the formation of the New National Government and the role of a citizen.
Antebellum Era 1838-1860: South Carolina, Prosperity at a Cost	SWBAT compare and contrast the significant factors that led to the growth and division of the United States during the Antebellum period.
Civil War and Reconstruction Era 1861-1877: A Nation Divided	SWBAT analyze the significance of the Civil War and its aftermath of events during Reconstruction with an emphasis on South Carolina.
The New South, Industrialization, and Expansion 1878-1914: Road to Modernization	SWBAT analyze, by region, the political, geographic, economic, and social changes that occurred in the United States after Reconstruction and with particular emphasis on South Carolina in the New South.
The World War Years 1914-1952: Emerging as a World Power	SWBAT analyze the political, economic and social changes that establish the US as a world power.
Rights and Responsibilities 1952-1991: All are Created Equal	SWBAT analyze the modern civil rights movement, world conflicts, and domestic turmoil.
The Technological Age: 1992 to Present- Innovation and the Media	SWBAT analyze the impact of technology and media on the political, economic and social changes in a global community.

8th Grade Unit Standards

Unit	Standard	SWBAT
1: Exploration and Colonization	DOC.SS.8.1.1	Summarize the Native American culture of the Eastern Woodlands tribal group, including the Catawba, Cherokee, and Yemassee.
	DOC.SS.8.1.2	Compare the motives, activities, and accomplishments of the exploration of South Carolina and North America by the Spanish, French, and English.
	DOC.SS.8.1.3	Explain the significance of enslaved and free Africans in developing culture and economy of the south including the growth of slave trade and resulting population imbalance between African and European settlers
2: Statehood and Government	DOC.SS.8.2.1	Explain the basic principles of government as established in the United States constitution.
	DOC.SS.8.2.2	Describe statehood and the role of citizens
3: Antebellum Era	DOC.SS.8.3.1	Explain the importance of agriculture in antebellum South Carolina, including the plantation system and the impact of the cotton gin on all social classes.
	DOC.SS.8.3.2	Analyze how sectionalism arose from racial tension, including Denmark Vesey plot, slave codes and the growth of the abolitionist movement.

	DOC.SS.8.3.3	Describe key issues that led to South Carolina's secession from the Union, including the nullification controversy and John C. Calhoun, the extension of slavery and the compromises over westward expansion, the Kansas-Nebraska Act, the Dred Scott decision, and the election of 1860.
4: Civil War and Reconstruction Era	DOC.SS.8.4.1	Compare the military strategies of the north and south during the Civil War and the fulfillment of these strategies in South Carolina and in the south as a whole; including the attack on Fort Sumter, the Union blockade of Charleston and other ports, the capture of Port Royal, and the development of the Hunley submarine.
	DOC.SS.8.4.2	Identify and describe the impact of explores including Robert Smalls and General T. Sherman's march through the state.
	DOC.SS.8.4.3	Compare the differing impact of the Civil War on South Carolinians in each of the various social classes, including those groups defined by race, gender and age.
	DOC.SS.8.4.4	Analyze the development of Reconstruction policy and its impact in South Carolina including the presidential and the congressional reconstruction plans, the role of black codes, and the Freedmen's Bureau.
	DOC.SS.8.4.5	Describe the economic impact of Reconstruction on South Carolinians in each of the various social classes.
	DOC.SS.8.4.6	Summarize the success and failures of Reconstruction in South Carolina
5: The New South, Industrialization and Expansion	DOC.SS.8.5.1	Compare industrial development in South Carolina to industrialization to the rest of the United States, including the expansion of railroads, the development of the phosphate and textile industries, and immigration.
	DOC.SS.8.5.2	Compare the plight of farmers in South Carolina with that of farmers throughout the United States, including the problems of overproduction, natural disasters, and sharecropping and encompassing the roles of Ben Tillman, the Populists, and land-grant colleges.
	DOC.SS.8.5.3	Compare migration patterns of South Carolinians to such patterns throughout the United States, including the movement from rural to urban areas and the migration of African Americans from the South to the North, Midwest, and West.
6: The World War Years	DOC.SS.8.6.1	Describe the social and economic impact of WW II on South Carolina with its impact on the rest of the United States
	DOC.SS.8.6.2	Describe the impact of the Cold War on South Carolina and compare that to the impact on the rest of the United States.
	DOC.SS.8.6.3	Describe the political, social and economic changes that established the United States as world power.
7: Rights and Responsibilities	DOC.SS.8.7.1	Analyze the movement for civil rights in South Carolina including the impact of the landmark court cases Elmore v. Rice and Briggs v. Elliot; civil rights leaders; the South Carolina equalization effort and other resistance to school integration; peaceful efforts to integrate beginning with colleges and demonstrations in South

		Carolina such as the Friendship nine and the Orangeburg Massacre.
	DOC.SS.8.7.2	Summarize key economic issues in South Carolina, including the decline of the textile industry, the state's continuing right-to-work status, the changes in agricultural emphasis, the growing globalization and foreign investment, the influx of immigrants and migrants into the Sunbelt, the increased protection of the environment, the expanding number of cultural offerings, and the changes in tax policy.
8: Technological Age	DOC.SS.8.8.1	Describe the impact of technology and the significance of a global community.
	DOC.SS.8.8.2	Describe the role of media on political, economic and social changes

8TH GRADE MATH CURRICULUM

8th Grade Unit Goals

Operations and comparisons of rational numbers	SWBAT evaluate problems using rational numbers, including absolute value, and the coordinate system.
Expressions and properties	SWBAT apply number properties to simplify, evaluate, and translate expressions.
Equations and inequalities	SWBAT solve more complex multi-step equations and inequalities using number properties.
Proportional relations	SWBAT analyze rates, proportions, similarity and congruence. Apply percents to real world situations
Bi-variate data and probability	SWBAT analyze scatter plots, probability and odds, and counting principles.
Exponents	SWBAT apply operations with radicals and integer exponents, including scientific notation, to simplify
Linear functions	SWBAT explain functions, slope, intercept, graphing systems of equation to solve, function notation, linear inequalities.
Real numbers	SWBAT differentiate between rational and irrational numbers, approximations, and actual values, to apply operations to rational and irrational numbers.
Geometric formulas and measurement	SWBAT apply geometric formulas to two- and three-dimensional figures, including circles, triangles, rectangles, cylinders, and triangular and rectangular prisms.
Transformational Geometry and angle relations	SWBAT defend an explanation of angle relationships by using properties of transformations and lines

8th Grade Unit Standards

Unit	Standard	SWBAT
1 Operations	DOC.MATH.8.1.1	Identify rational and irrational numbers
	DOC.MATH.8.1.2	Convert between decimals, fractions, mixed numbers and percents
	DOC.MATH.8.1.3	Solve for equivalent rational numbers
	DOC.MATH.8.1.4	Solve real-world problems with operations (addition, subtraction, multiplication, and division) of rational numbers
2 Expressions	DOC.MATH.8.2.1	Translate between verbal and numerical expressions
	DOC.MATH.8.2.2	Evaluate numerical and algebraic expressions
	DOC.MATH.8.2.3	Solve real-world problems with numerical and algebraic expressions
3 Equations and Inequalities	DOC.MATH.8.3.1	Solve linear equations and inequalities using variables on both sides, distributive property, and combining like terms
	DOC.MATH.8.3.2	Solve multi-step equations by grouping and combining like terms
	DOC.MATH.8.3.3	Solve real-world problems involving linear equations and inequalities with two variables
4 Proportions	DOC.MATH.8.4.1	Identify and write equations for direct and inverse relationships
	DOC.MATH.8.4.2	Compare different proportional relationships given different data representations
	DOC.MATH.8.4.3	Interpret unit rate as slope of a line ($y=mx+b$)

	DOC.MATH.8.4.4	Use scale drawings to determine proportional relationships
5 Data and Probability	DOC.MATH.8.5.1	Collect, interpret, and graph bivariate data
	DOC.MATH.8.5.2	Identify independent and dependent occurrences
	DOC.MATH.8.5.3	Interpret and describe data patterns (clustering, outliers, correlations, linear and nonlinear)
	DOC.MATH.8.5.4	Use probability to determine the likelihood of an event occurring
	DOC.MATH.8.5.5	Solve real-world problems involving probability, permutations, and combinations of data
6 Exponents	DOC.MATH.8.6.1	Identify and use the laws of exponents (product, quotient, power to power, product to power, quotient to power, zero power, and negative exponents)
	DOC.MATH.8.6.2	Explain the relationship between square and cube to square root and cube root
	DOC.MATH.8.6.3	Simplify and evaluate expressions and equations with exponents
	DOC.MATH.8.6.4	Convert between decimals and scientific notation
7 Linear Functions	DOC.MATH.8.7.1	Identify and explain functions using graphs, tables, and descriptions
	DOC.MATH.8.7.2	Interpret linear functions (inputs, outputs, dependent variables, independent variables)
	DOC.MATH.8.7.3	Graph linear functions (Slope intercept, point-slope forms)
	DOC.MATH.8.7.4	Compare parallel and perpendicular line slopes
	DOC.MATH.8.7.5	Solve real-world problems using functions and rate of change
8 Real Numbers	DOC.MATH.8.8.1	Identify and simplify square roots
	DOC.MATH.8.8.2	Estimate and evaluate square roots of perfect squares
	DOC.MATH.8.8.3	Estimate and evaluate cube roots of perfect cubes
	DOC.MATH.8.8.4	Solve for square roots of non-perfect squares and identify as irrational numbers
9 Geometry	DOC.MATH.8.9.1	Identify and write formulas for area of 2-D figures (circles, triangles, rectangles)
	DOC.MATH.8.9.2	Identify and write formulas for volume and surface area of 3-D figures (spheres, cylinders, cones, prisms, and pyramids)
10 Transformational Geometry	DOC.MATH.8.10.1	Rotate, reflect, and translate geometric figures
	DOC.MATH.8.10.2	Identify congruent and non-congruent figures using translation, reflection, and rotations
	DOC.MATH.8.10.3	Use transversals to explain complementary and supplementary angles
	DOC.MATH.8.10.4	Solve for missing angles using the sum of degrees in a figure and the relationship between interior and exterior angles

HIGH SCHOOL SOCIAL STUDIES CURRICULUM

ECONOMICS CURRICULUM

Economics Unit Goals

Unit	Unit Concept
Fundamental Economic Concepts: Scarcity's effect on markets	SWBAT apply the concepts of opportunity cost and scarcity to the production possibilities frontier and to personal decision making.
Free Markets and Supply and Demand: Price determination	SWBAT illustrate the impact of the market forces of supply and demand and government intervention on economic markets throughout the circular flow of income.
Banking, Credit, and Personal Finance: Financial institutions, markets, and individual households	SWBAT analyze the impact of banking and investment decisions on both personal finance and the business sector.
Macroeconomics: The federal government and the macroeconomy	SWBAT anticipate the impact of fiscal and monetary policy as well as investment decision making and aggregate consumption on the national economy.
Global Economy: The domino effect of national economic conditions on the world economy	SWBAT speculate on the impact of major national economic changes on the global economy such as natural disasters, government actions, political instability, and decision-making in the private sector in one or more nations.

Economics Unit Standards

Unit	Standard	SWBAT
1 Fundamental Economic Concepts	DOC.SS.ECO.1.1	Define and explain the relationship of scarcity, goods, services and wants.
	DOC.SS.ECO.1.2	Identify and describe productive resources; capital, human, national and factors of production.
	DOC.SS.ECO.1.3	Give examples of human capital and describe its importance.
	DOC.SS.ECO.1.4	Identify the describe the roles of producers and consumers.
	DOC.SS.ECO.1.5	Provide examples of how people respond to positive and negative incentives and how that relates to past and current economic decisions.
2 Free Markets and Supply/Demand: Price Determination	DOC.SS.ECO.2.1	Explain how markets are created when exchange occurs between buyers and sellers.
	DOC.SS.ECO.2.2	Define and give examples of profit maximization and profit motive.
	DOC.SS.ECO.2.3	Analyze cost-benefit situations for decision making
	DOC.SS.ECO.2.4	Define and provide examples of how the lowering of prices creates competition among sellers.
	DOC.SS.ECO.2.5	Explain how an economically efficient market allocates goods and services to the buyers who are willing to pay for them.
	DOC.SS.ECO.2.6	Identify and provide examples of factors that impact the living standards of individuals and other economic entities.
3 Banking, Credit, Personal Finance (Financial Institutions, markets, individual households)	DOC.SS.ECO.3.1	Describe the role of price in the market system including; demand, elasticity, supply, competition, market structure, price ceilings and floors, and inflation.
	DOC.SS.ECO.3.2	Explain how market value of resources determines income.

	DOC.SS.ECO.3.3	Describe the legal and social framework of economic institutions.
	DOC.SS.ECO.3.4	Describe the role of credit especially in terms of mortgage, borrowing and banking.
	DOC.SS.ECO.3.5	Explain the role of interest and compound interest.
4 Macroeconomics: The government and the macroeconomy		
	DOC.SS.ECO.4.1	Explain the role of money including monetary policy, federal reserve, trade, exchange and interdependence.
	DOC.SS.ECO.4.2	Explain the role of interest rates including compound, real and nominal as well as the risk versus return on investments.
	DOC.SS.ECO.4.3	Identify productive resources and how they impact income.
	DOC.SS.ECO.4.4	Explain the concept of profit in terms of entrepreneurs, investors and innovators including cost-benefit analysis, risk, returns, and the role of the government.
	DOC.SS.ECO.4.5	Describe relationships between business cycles and unemployment, growth, price levels, wage rates, and investment.
5 Global Economy: The effect of national economic conditions on the world economy		
	DOC.SS.ECO.5.1	Identify the factors that impact the goods and services of a specific nation; technology, geography, labor availability
	DOC.SS.ECO.5.2	Explain how a rise of the global marketplace improves the well-being of all societies but benefits derived from globalization are unequal.
	DOC.SS.ECO.5.3	Describe how the global marketplace influences domestic labor markets, wage rates, unemployment, and disparities in earning potential.

US GOVERNMENT CURRICULUM

US Government Unit Goals

Unit	Unit Goal
Foundations of U.S. Government: The uniqueness of the US democracy	SWBAT evaluate the benefits, drawbacks, and uniqueness of the U.S. government system with regard to the federal, presidential, and democratic aspects compared to other governmental systems
Civil Liberties and Civil Rights: The expansion of civil liberties and civil rights	SWBAT analyze the civil liberties and the civil rights that apply to citizens from the U.S. Constitution and later federal legislation.
Opinions, Interests, and Organizations: Public opinion and public policy	SWBAT analyze the role of parties, interest groups, the media, and social movements in converting public opinion to public policy.
Institutions of the National Government: Checks and balances among the three branches	SWBAT distinguish between the power and responsibilities of each branch of government and its role in the system of checks and balances.
Public Policy Making: Domestic and foreign policy making	SWBAT evaluate the positive and negative impacts of major domestic and foreign policies that impact on the US.

US Government Unit Standards

Unit	Standard	SWBAT
1: Foundations of the US Government	DOC.SS.GV.1.1	Identify and describe the components of government including politics, power, authority, sovereignty, legitimacy, public institutions, efficacy, and civic life.
	DOC.SS.GV.1.2	Describe political theories regarding the purpose of government, it's existence and necessity.
	DOC.SS.GV.1.3	Describe the role of citizens related to government in democratic, republican, authoritarian, and totalitarian systems.
	DOC.SS.GV.1.4	Explain the organizational structure of government and how it functions effectively including the branches of government and legitimate bureaucratic institutions.
	DOC.SS.GV.1.5	Compare limited and unlimited government in relation to governance, rule of law, the role of constitutions, civil rights, political freedom, economic freedom, and the ability of citizens to impact the governing process.
	DOC.SS.GV.1.6	Evaluate the government roles in confederal, federal, and unitary systems including distribution of power, advantages and disadvantages of each system.
2: Civil Liberties and Civil Rights	DOC.SS.GV.2.1	Describe the roles of American citizens in the political process including civic responsibilities and interactions.
	DOC.SS.GV.2.2	Analyze the process of political socialization and its relation to political participation
	DOC.SS.GV.2.3	Explain how the fundamental values, principles, and rights may conflict within the American political system; explain why these conflicts arise and how they may be addressed.
	DOC.SS.GV.2.4	Describe the importance of civil rights and civil liberties for citizens and the role of the national government through the Bill of Rights, the judicial system, and the Fourteenth Amendment.

3: Opinions, Interests and Organizations	DOC.SS.GV.3.1	Explain how citizens monitor and influence public policy including political parties, interest groups, media, lobbying, donations, issue advocacy, and candidate support.
	DOC.SS.GV.3.2	Evaluate the role and function of common avenues utilized by citizens in political participation, including political parties, voting, pools, interest groups, and community service.
	DOC.SS.GV.3.3	Explain how US political culture (values, attitudes and beliefs) influences the formation, goals and implementation of public policy over time.
	DOC.SS.GV.3.4	Describe the roles that individual choice and state laws play in voter turnout in elections.
4: Institutions of the US Government	DOC.SS.GV.4.1	Evaluate the constitution including the expression of core principles of limited government, federalism, checks and balances, separation of powers, rule of law, popular sovereignty, republicanism, individual rights, freedom, equality, and self-government.
	DOC.SS.GV.4.2	Examine the formal and informal structure, role, responsibilities, and authority of the legislative, executive, and judicial branches of the national government.
	DOC.SS.GV.4.3	Describe federalism and its application in the US, including the concepts of enumerated, concurrent and reserved powers; the meaning of the 9 th and 10 th amendments; the principle of states' rights; the promotion of limited government; the protection of individual rights; and the potential for conflict among the levels of government.
	DOC.SS.GV.4.4	Describe the organization and responsibilities of the local and state governments in the US federal system; including the role of the state constitutions, the limitations on state governments, the typical organization of state governments, the relationship between state and local governments, and the major responsibilities of state governments.
5: Public Policy Making	DOC.SS.GV.5.1	Explain public policy and provide examples at the local, state and national levels
	DOC.SS.GV.5.2	Describe how public policies are formed and implemented
	DOC.SS.GV.5.3	Describe the benefits and potential problems of interest-group influence on elections and policy making.
	DOC.SS.GV.5.4	Describe the voting rights protections in the Constitution and in legislation.

US HISTORY CURRICULUM

US History Unit Goals

Unit	Unit Goal
Native and Colonial America: The clash of world cultures	SWBAT compare and contrast the reasons for exploration of various groups and the pros and cons of cultural diffusion between European, Native and African groups.
A New Nation: The birth of the United States	SWBAT analyze the causes, key events, and political ideas of the emerging republic as well as the effects of the American Revolution and later independence.
Confederation and Antebellum America: The transformation of early America	SWBAT explain how the United States developed in its early years in regards to federalism, border expansion, nationalism, and population increase.
Civil War and Reconstruction: The Divided Union	SWBAT analyze causes and effects of the Civil War as well as the various aspects of Reconstruction in regard to politics, economics, and social concerns.
Industrial America: The rise of an economic power	SWBAT analyze how the United States became the economic power of the world with reference to border expansion, industrialization, "big business," and technological innovations.
Progressivism and Imperialism: The clashes of power at home and abroad	SWBAT analyze the pros and cons of Progressive and Imperial developments in the United States including US involvement in World War I.
The 1920's and Great Depression and the New Deal: The birth of "modern" culture and economic transformation	SWBAT analyze cultural developments of the "Roaring" Twenties as well as causes and effects of the Great Depression and resulting New Deal.
World War II: The emergence of a world power	SWBAT analyze the causes, key battles, and effects of World War II on the United States society and its role in the world
The Cold War: The foreign democracy and cultural revolution at home	SWBAT analyze aspects of Cold War foreign policy and its effects on politics abroad and cultural revolution at home.
United States After the Cold War: Terrorism, immigration, economic and societal concerns	SWBAT analyze the importance of significant events since the fall of the Berlin Wall that have defined present day America, including diplomacy with the Middle East, changes in immigration, and the relationship between government decisions and society.

US Government Unit Standards

Unit	Standard	SWBAT
1: Native and Colonial America	DOC.SS.US.1.1	Describe Virginia's development; including the Virginia Company, tobacco cultivation, relationships with Native Americans and the development of slavery.
	DOC.SS.US.1.2	Describe the settlement of New England; including religious reasons, relations with Native Americans, the establishment of town meetings, legislature and religious tensions that led to the founding of Rhode Island, the half-way covenant, Salem Witch Trials, and loss of Massachusetts charter and the transition to a royal colony.
	DOC.SS.US.1.3	Explain the development of the mid-Atlantic colonies; including the Dutch settlements and subsequent English takeover.
	DOC.SS.US.1.4	Explain the reasons for French settlement of Quebec.
	DOC.SS.US.1.5	Analyze the impact of location and place on colonial settlement,

		transportation, and economic development; including the southern, middle and New England colonies.
	DOC.SS.US.1.6	Trace the ways that the economy and society of British North America developed; including mercantilism, trans-Atlantic trade, Middle Passage and the growth of African and Asian-American populations.
2: A New Nation: The birth of the United States	DOC.SS.US.2.1	Explain the significance of the French and Indian war and the 1763 Treaty of Paris in laying the groundwork for the American Revolution.
	DOC.SS.US.2.2	Describe the colonial response to British actions such as the Proclamation of 1763, the Stamp Act, and the Intolerable Acts as seen in Sons and Daughters of Liberty and Committees of Correspondence.
	DOC.SS.US.2.3	Explain the importance of Thomas Paine's Common Sense to the movement for independence.
	DOC.SS.US.2.4	Identify the ideological, military, and diplomatic aspects of the American Revolution including; the Declaration of Independence; John Locke, Thomas Jefferson, Benjamin Franklin, and George Washington
3: Confederation and Antebellum America	DOC.SS.US.3.1	Explain specific events and key ideas that brought about the adoption and implementation of the US Constitution.
	DOC.SS.US.3.2	Identify major arguments of the anti-Federalist and Federalists during the debate on ratification of the Constitution concerning form of government factions, checks and balances, and the power of the executive.
	DOC.SS.US.3.3	Analyze how the Bill of Rights serves as a protector of individual states' rights.
	DOC.SS.US.3.4	Analyze the impact of territorial expansion and population growth and the impact of this growth in the early decades of the new nation.
	DOC.SS.US.3.5	Explain the relationship between growing north-south divisions and the westward expansion.
4: Civil War and Reconstruction	DOC.SS.US.4.1	Identify key events and issues relating to the causes, course and consequence of the Civil War; including the Kansas-Nebraska Act, Dred Scott case, John Brown's Raid, and the Gettysburg speech
	DOC.SS.US.4.2	Describe the contributions of key individuals relating to the causes, course, and consequences of the Civil War; including Ulysses Grant, Robert E. Lee, Stonewall Jackson, William Sherman, and Jefferson Davis.
	DOC.SS.US.4.3	Explain the importance of and impact of geography on the battles; including Fort Sumter, Anietam, Vicksburg, Gettysburg, and the Battle for Atlanta
	DOC.SS.US.4.4	Describe the significance of the Emancipation Proclamation.
	DOC.SS.US.4.5	Identify and describe legal, political, and social dimensions of Reconstruction; including 13 th , 14 th and 15 th amendments, Ku Klux Klan, resistance to racial equality, and impeachment of Andrew Johnson
5: Industrial America	DOC.SS.US.5.1	Explain the impact of railroads and industries on organizations, big business, and the development of the West.

	DOC.SS.US.5.2	Identify John D. Rockefeller and the Standard Oil Company and the rise of trusts and monopolies.
	DOC.SS.US.5.3	Describe the inventions of Thomas Edison; electric light bulb, motion pictures, phonograph and their impacts on American life.
	DOC.SS.US.5.4	Describe Ellis Island, the change in immigrants' origins to southern and eastern Europe and the impact of this change on urban America.
	DOC.SS.US.5.5	Describe the growth of the western population and its impact on Native Americans with reference to Sitting Bull and Wounded Knee.
6: Progressivism and Imperialism	DOC.SS.US.6.1	Identify and explain the importance of Upton Sinclair's <i>The Jungle</i> and the federal oversight of the meatpacking industry.
	DOC.SS.US.6.2	Identify and explain the role of women in the reform movement; including Jane Addams and Hull House.
	DOC.SS.US.6.3	Describe the rise of Jim Crow, <i>Plessy v. Ferguson</i> , and the emergence of the NAACP.
	DOC.SS.US.6.4	Describe the significance of progressive reforms such as the initiative, recall, and referendum; direct election of senators; reform of labor laws; and efforts to improve living conditions for the poor in cities.
7: The Great Depression and the New Deal	DOC.SS.US.7.1	Describe the causes, including overproduction, under consumption, and stock market speculation that led to the stock market crash of 1929 and the Great Depression.
	DOC.SS.US.7.2	Identify factors that led to the Dust Bowl and the resulting movement and migration west.
	DOC.SS.US.7.3	Explain the social and political impact of widespread unemployment that resulted in developments such as Hoovervilles.
	DOC.SS.US.7.4	Describe Franklin Roosevelt's new Deal as a response to the depression and compare the ways governmental programs aided those in need.
	DOC.SS.US.7.5	Identify the political challenges to Roosevelt's domestic and international leadership
8: World War II	DOC.SS.US. 8.1	Explain Randolph's proposed march on Washington, D.C. and Roosevelt's response.
	DOC.SS.US.8.2	Describe the Japanese attack on Pearl Harbor and the internment of Japanese-Americans, German-Americans, and Italian-Americans
	DOC.SS.US.8.3	Identify and describe the major events of WWII including; lend-lease program, Battle of Midway, D-Day, and the fall of Berlin.
	DOC.SS.US. 8.4	Describe war mobilization, as indicated by rationing, war-time conversion, and the role of women in war industries.
	DOC.SS.US.8.5	Describe the Manhattan Project and the scientific, economic, and military implications of developing the atomic bomb.
9: The Cold War	DOC.SS.US.9.1	Describe the creation of the Marshall Plan, US commitment to Europe, Truman Doctrine, and the origins and implications of the containment policy.
	DOC.SS.US.9.2	Explain the impact of the new communist regime in China and the outbreak of the Korean War and describe how these events contributed to the rise of Senator Joseph McCarthy.
	DOC.SS.US.9.3	Describe the Cuban Revolution, Bay of Pigs and the Cuban missile crisis, the Vietnam War, the Tet Offensive and the growing

		opposition to war.
	DOC.SS.US. 9.4	Explain the role of geography on the US containment policy, the Korean War, the Bay of Pigs, the Cuban missile crisis and the Vietnam War.
10: The US After the Cold War	DOC.SS.US.10.1	Explain the impact of technological development and economic growth on the United States after the Cold War
	DOC.SS.US.10.2	Describe the baby boom, the impact of television on American culture and news coverage of the Civil Rights Movement.
	DOC.SS.US. 10.3	Explain how technology impacted American life; use of computer, air conditioning, and the scientific advancements such as the launch of Sputnik.

WORLD HISTORY CURRICULUM

World History Unit Goals

Unit	Unit Goal
Dawn of a New Age: Renaissance, Reformation, Exploration and Scientific Revolution	SWBAT Analyze the social, political, economic, religious, scientific, and cultural changes associated with Europe and Asia from 1350-1600.
The Age of Absolutism: Absolute Monarchies, Colonization, and Global Trade	SWBAT Summarize the impact of European Absolute Monarchs on global changes in Africa, the Americas and Asia.
The Age of Revolution and the Origins of Nationalism: Political and Philosophical Revolutions in the West	SWBAT Compare and contrast the causes and results of 15 th to 18 th century political revolutions as well as the Enlightenment in North America, Latin America and Europe.
The Industrial Age: Industrial Revolution and the Growth of Western Democracies	SWBAT Analyze the factors that gave rise to the Industrial Revolution and the subsequent results.
The Growth of Nationalism: Changes from Within	SWBAT Compare and contrast the growth of nationalism as a contributing factor to nineteenth century European revolutions.
The Rise of Modern Asian Societies: Asia and the Modern World, 1800-1910	SWBAT Summarize the tensions in China, Japan and India emphasizing the effects of imperialism and nationalism.
WWI and the Rise Totalitarianism: The First Global Conflict	SWBAT Analyze the relative importance of economic and political rivalries, ethnic and ideological conflicts, militarism, and imperialism as underlying causes of World War I and the Russian Revolution.
The World in Chaos: WWII and the End of the Old World Order	SWBAT Analyze the causes and effects of WWII including the role of nationalism and propaganda in mobilizing civilian populations around the world to support the Second World War.
Cold War: Origins and Demise	SWBAT Analyze the course of the Cold War and how the fall of the Soviet Union impacted the global community.
A New World Order	SWBAT Summarize the changes and conflicts in Africa and the Middle East and its effects on the global community, and evaluate benefits and costs of increasing worldwide trade and technological growth, including the movement of people and products, the growth of multi-national corporations, and the increase in cultural exchanges.

World History Unit Standards

Unit	Standard	SWBAT
1: Renaissance, Reformation, Exploration and Scientific Revolution	DOC.SS.WD.1.1	Describe the diffusion of people and goods between Europe, Asia, and Africa to show the networks of economic interdependence and cultural interactions.
	DOC.SS.WD.1.2	Explain the impact of the Crusades and the Renaissance on

		European exploration, including humanism, the revival of learning, and the transfer of knowledge about sailing and ancient philosophy.
	DOC.SS.WD.1.3	Evaluate the impact of the collapse of European feudal institutions and the spread of towns on the transmission of goods, people, and ideas in Europe.
	DOC.SS.WD.1.4	Explain how the development of banks in Europe influenced the transfer of goods.
	DOC.SS.WD.1.5	Identify artistic and scientific achievements of Leonardo da Vinci and Michelangelo.
	DOC.SS.WD.1.6	Analyze the impact of the Protestant Reformation, the Counter Reformation and the English Reformation.
2: The Age of Absolutism	DOC.SS.WD.2.1	Examine absolutism through a comparison of the rules of Louis XIC, Tsar Peter the Great, and Tokugawa Ieyasu.
	DOC.SS.WD.2.2	Explain the rise and fall of the Olmec, Mayan, Aztec and Inca empires.
	DOC.SS.WD.2.3	Compare the culture of the Americas; including government, economy, religion, and the arts of the Mayans, Aztecs, and Incas.
3: The Age of Revolution and the Origins of Nationalism	DOC.SS.WD.3.1	Identify the causes and results of the revolutions in England, US, France, Haiti and Latin America.
	DOC.SS.WD.3.2	Explain Napoleon's rise to power, the role of geography in his defeat, and the consequences of France's defeat for Europe.
	DOC.SS.WD.3.3	Examine the interaction of China and Japan with westerners; include the Opium War, the Taiping Rebellion, and Commodore Perry.
4: The Industrial Age	DOC.SS.WD.4.1	Analyze the process and impact of industrialization in England, Germany, and Japan, movements for political reform, the writings of Adam Smith and Karl Marx, and urbanization and its impact on women.
	DOC.SS.WD.4.2	Compare and contrast the rise of the nation state in Germany under Otto von Bismarck and Japan under Emperor Meiji.
	DOC.SS.WD.4.3	Describe the reaction to foreign domination; include the Russo-Japanese War and Young Turks, and the Boxer Rebellion.
	DOC.SS.WD.4.4	Describe imperialism in Africa and Asia by comparing British policies in Africa, French policies in Indochina, and Japanese policies in Asia; include the influence of geography and natural resources.
5: The Growth of Nationalism	DOC.SS.WD.5.1	Explain the impact of English political institutions and attitudes on their Northern American colonies, and the American Revolution.
	DOC.SS.WD.5.2	Analyze the reasons for independence movements as exemplified by the French and Haitian revolutions and the 18 th century South American rebellions.
	DOC.SS.WD.5.3	Analyze the various movements for individual rights, including worldwide abolitionism, the end of slave trade movements in England and Latin America, the liberation of serfs in Russia, and the growing movement for women's rights.

	DOC.SS.WD.5.4	Analyze the successes and limitations of movements for national unity, including the unification of Germany and Italy and the American Civil War.
6: The Rise of Modern Asian Societies	DOC.SS.WD.6.1	Describe the reactions in Asian kingdoms to the Western ideas of nationalism including the Indian nationalist movement, the Meiji era in Japan, and the Manchu dynasty in China.
	DOC.SS.WD.6.2	Explain the roles of explorers and conquistadors; including Zheng He, Vasco da gama, Christopher Columbus, Ferdinand Magellan, James Cook, and Samuel de Champlain.
	DOC.SS.WD.6.3	Describe the policies of the Tokugawa and Qing rules; include how Oda Nobunaga laid the ground work for subsequent Tokugawa rulers and how Kangxi came to rule for such a long period in China.
	DOC.SS.WD.6.4	Analyze the impact of population growth and its impact on the social structure of Japan and China.
7: WWI and the Rise of Totalitarianism	DOC.SS.WD.7.1	Identify the causes of the war; include Balkan nationalism, entangling alliances, and militarism.
	DOC.SS.WD.7.2	Describe conditions on the war front for soldiers; including the battle of Verdun.
	DOC.SS.WD.7.3	Explain the major decisions made in the Versailles Treaty; include German reparations and the mandate system that replaced Ottoman control.
	DOC.SS.WD.7.4	Analyze the destabilization of Europe in the collapse of the great empires; include the Romanov and Hapsburg dynasties.
8: WWII and the End of the Old World Order	DOC.SS.WD. 8.1	Describe major conflicts and outcomes; include Pearl Harbor, El-Alamein, Stalingrad, D-Day, Guadalcanal, the Philippines, and the end of the war in Europe and Asia.
	DOC.SS.WD.8.2	Identify Nazi ideology, policies, and consequences that led to the Holocaust.
	DOC.SS.WD.8.3	Explain the military and diplomatic negotiations between the leaders of Great Britain, the Soviet Union and the United States from Teheran to Yalta and Postdam and the impact on the nations of Eastern Europe.
	DOC.SS.WD. 8.4	Explain allied Post-World War II policies; including formation of the United Nations, the Marshall Plan for Europe, and MacArthur's plan for Japan.
9: The Cold War	DOC.SS.WD.9.1	Analyze the revolutionary movements in India, China, and Ghana.
	DOC.SS.WD.9.2	Describe the formation of the state of Israel and the importance of geography in its development.
	DOC.SS.WD.9.3	Explain the arms race; include development of the hydrogen bomb and SALT.
	DOC.SS.WD.9.4	Compare and contrast the reforms of Khrushchev and Gorbachev.
	DOC.SS.WD.9.5	Analyze efforts in the pursuit of freedom; including anti-apartheid, Tiananmen Square, and the fall of the Berlin Wall.
10: A New World Order	DOC.SS.WD.10.1	Explain the impact of technological development and economic growth on the United States after the Cold War
	DOC.SS.US.10.2	Describe the baby boom, the impact of television on American

		culture and news coverage of the Civil Rights Movement.
	DOC.SS.US. 10.3	Explain how technology impacted American life; use of computer, air conditioning, and the scientific advancements such as the launch of Sputnik.

HIGH SCHOOL MATH CURRICULUM

ALGEBRA I CURRICULUM

Algebra I Unit Goals

Real number System	SWBAT apply properties and rules of operation to simplify and evaluate expressions.
Linear Equations and Inequalities	SWBAT apply the solutions of single variable multi-step equations and inequalities to real world situations.
Graphing linear functions and inequalities	SWBAT analyze the connection between the algebraic and graphical representation of linear equalities and inequalities.
Systems of linear equalities and inequalities	SWBAT apply algebraic and graphical solutions of systems of linear equations and inequalities to real world situations
Exponents and their Rules of Operation	SWBAT apply the rules of exponents to integral exponents.
Polynomial Operations	SWBAT apply binary operations to polynomial expressions.
Factoring polynomials	SWBAT apply the rules of factoring to polynomial expressions.
Radical Expressions	SWBAT apply the rules of simplification and binary operations to radicals and radical equations.
Quadratic Equations	SWBAT solve quadratic equations.

Algebra I Unit Standards

Unit	Standard	SWBAT
1 Real Number System	DOC.MATH.A1.1.1	Simplify and evaluate expression using order of operations, exponents, rational numbers, and integers
	DOC.MATH.A1.1.2	Solve real-world problems involving translating and evaluating expressions
2 Linear Equations and Inequalities	DOC.MATH.A1.2.1	Solve multistep linear equations with variables on one side
	DOC.MATH.A1.2.2	Solve multistep linear equations with variables on both sides
	DOC.MATH.A1.2.3	Solve multistep linear inequalities and graph solutions
	DOC.MATH.A1.2.4	Explain direct and inverse relationships through equations
	DOC.MATH.A1.2.5	Solve real-world problems using linear equations and inequalities of one or two variables
3 Graphing Linear Equations and Inequalities	DOC.MATH.A1.3.1	Write linear equations when provided with a graph, 2 points, or a slope and point
	DOC.MATH.A1.3.2	Identify features of functions (intercepts, intervals that are increasing, decreasing, positive, negative, and symmetries)
	DOC.MATH.A1.3.3	Graph linear equations in slope-intercept and point-slope form
	DOC.MATH.A1.3.4	Write linear equations from a given graph
	DOC.MATH.A1.3.5	Write and graph equations for vertical and horizontal lines
	DOC.MATH.A1.3.6	Determine the rate of change (slope) over a period of time
4 Systems of Linear Equations and Inequalities	DOC.MATH.A1.4.1	Solve a system of equations using substitution and elimination
	DOC.MATH.A1.4.2	Solve a system of equations by graphing

	DOC.MATH.A1.4.3	Solve a system of linear inequalities
	DOC.MATH.A1.4.4	Solve real-world problems utilizing system of equations and inequalities
5 Exponents	DOC.MATH.A1.5.1	Add, subtract, multiply and divide using the rules of exponents
	DOC.MATH.A1.5.2	Simplify numerical expressions with exponents
	DOC.MATH.A1.5.3	Evaluate expressions with negative exponents
	DOC.MATH.A1.5.4	Evaluate square roots of perfect squares and cube roots of perfect cubes
6 Polynomials	DOC.MATH.A1.6.1	Identify and explain the meaning of polynomial vocabulary (coefficients, factors, terms, expressions)
	DOC.MATH.A1.6.2	Add and subtract polynomials
	DOC.MATH.A1.6.3	Multiply binomials and polynomials
7 Factoring Polynomials	DOC.MATH.A1.7.1	Rewrite equivalent expression for binomials, trinomials, and polynomials
	DOC.MATH.A1.7.2	Factor polynomial expressions by grouping
	DOC.MATH.A1.7.3	Identify and solve for common factors
	DOC.MATH.A1.7.4	Solve equations using factoring
	DOC.MATH.A1.7.5	Factor quadratic expressions in all forms
8 Radical Expressions	DOC.MATH.A1.8.1	Simplify numerical and algebraic radical expressions including those with fractions
	DOC.MATH.A1.8.2	Add and subtract radical expressions
	DOC.MATH.A1.8.3	Multiply radical expressions
	DOC.MATH.A1.8.4	Translate between rational exponent and radical forms
9 Quadratic Equations	DOC.MATH.A1.9.1	Describe the characteristics of quadratic equations in comparison to linear equations
	DOC.MATH.A1.9.2	Solve quadratic equations by completing the square, taking square roots, factoring, and by the quadratic formula

ALGEBRA II

Algebra II Unit Goals

Expressions, equations and inequalities	SWBAT apply the techniques of solving linear equations and inequalities to real world situations.
Linear Functions, Inequalities and Their Graphs	SWBAT model and graph linear equations and inequalities.
Linear systems and Matrices	SWBAT solve systems of inequalities graphically and systems of equations graphically and algebraically including the use of matrices.
Polynomial Operations	SWBAT apply the rules of exponents, binary operations and composition to simplify polynomial functions.
Factoring	SWBAT apply the rules of factoring to rewrite polynomial expressions.
Quadratic Functions - Solving and Graphing	SWBAT apply the techniques of solving and graphing quadratic equations to real world situations.
Rational Expressions and Equations	SWBAT apply the rules of simplification and binary operations to rational expressions and equations.
Radical Operations, Equations, and Rational Exponents	SWBAT apply the rules of simplification and binary operations to radical expressions and equations.
Complex Numbers	SWBAT apply the definition of an imaginary number as well as the rules of simplification and binary operations to Complex Numbers.

Algebra II Unit Standards

Unit	Standard	SWBAT
1 Expressions, Equations, and Inequalities	DOC.MATH.A2.1.1	Create and solve one-step and two-step equations
	DOC.MATH.A2.1.2	Create and solve one-step and two-step inequalities
	DOC.MATH.A2.1.3	Apply equations and inequalities to real-world problems
2 Linear Functions, Inequalities, and Graph	DOC.MATH.A2.2.1	Write, solve, and graph linear equations
	DOC.MATH.A2.2.2	Write, solve, and graph linear inequalities
	DOC.MATH.A2.2.3	Interpret graphical data to write equations or inequalities
3 Linear Systems and Matrices	DOC.MATH.A2.3.1	Solve a system of equations graphically
	DOC.MATH.A2.3.2	Solve a system of equations algebraically through substitution and elimination
	DOC.MATH.A2.3.3	Solve and graph systems of inequalities
	DOC.MATH.A2.3.4	Perform matrix operations (addition, subtraction, multiplication, and scalar multiplication)
4 Polynomial Operations	DOC.MATH.A2.4.1	Interpret polynomial vocabulary (coefficient, factor, term, expressions) and use in real world problems
	DOC.MATH.A2.4.2	Add and subtract polynomials
	DOC.MATH.A2.4.3	Multiply binomials and polynomials
	DOC.MATH.A2.4.4	Divide polynomials using long division and synthetic division

5 Factoring	DOC.MATH.A2.5.1	Analyze the structure of polynomials to rewrite equivalent expressions
	DOC.MATH.A2.5.2	Factor quadratic expressions with leading coefficients
	DOC.MATH.A2.5.3	Factor perfect squares and perfect cubes
6 Quadratic Functions (Solving and Graphing)	DOC.MATH.A2.6.1	Solve quadratic equations by factoring and by using the Quadratic Formula
	DOC.MATH.A2.6.2	Solve quadratic equations by completing the square
	DOC.MATH.A2.6.3	Determine the zeros of quadratic functions using the zero-product property
	DOC.MATH.A2.6.4	Graph quadratic functions
7 Rational Expressions and Equations	DOC.MATH.A2.7.1	Simplify rational expressions
	DOC.MATH.A2.7.2	Add and subtract rational expressions with like and unlike denominators
	DOC.MATH.A2.7.3	Multiply and divide rational expressions with like and unlike denominators
	DOC.MATH.A2.7.4	Solve rational equations involving real-world problems
8 Radical Operations, Equations, and Rational Exponents	DOC.MATH.A2.8.1	Solve square root and cube root equations
	DOC.MATH.A2.8.2	Add and subtract radical expressions
	DOC.MATH.A2.8.3	Multiply and divide radical expressions
	DOC.MATH.A2.8.4	Simplify expressions involving rational exponents
9 Complex Numbers	DOC.MATH.A2.9.1	Identify and simplify imaginary and complex numbers
	DOC.MATH.A2.9.2	Simplify complex number expressions using addition, subtraction, multiplication, and division
	DOC.MATH.A2.9.3	Solve quadratic equations with complex solutions

GEOMETRY

Geometry Unit Goals

Foundation - Definitions and Notations	SWBAT apply the definitions and properties of basic figures in order to sketch and denote the figures.
Deductive Reasoning	SWBAT apply definitions, properties, theorems, and postulates to make conjectures and prove relationships.
Triangles	SWBAT apply the properties of triangles in order to classify them and solve problems related to their sides, angles, perimeters, and areas
Congruence	SWBAT apply congruence relationships to proofs, problems, reflections, and symmetry.
Parallel and Perpendicular Lines	SWBAT apply the properties of parallel and perpendicular lines to problems and proofs.
Quadrilaterals and Other Polygons	SWBAT apply the properties of special quadrilaterals to problems involving their sides, angles, perimeters and areas.
Similarity	SWBAT apply the properties of similarity in proofs as well as in problems using ratio and proportion.
Right Triangles and Right Triangle Trig	SWBAT apply the Pythagorean Theorem, formulae for special right triangles and Right Triangle Trig to find missing parts of right triangles.
Circles	SWBAT apply the line, segment, angle and arc relationships of circles as well as find their perimeters and areas.
Surface area and volume	SWBAT apply the formulae to find the surface area and volume of three dimensional right solids.

Geometry Unit Standards

Unit	Standard	SWBAT
1 Foundations	DOC.MATH.GEO.1.1	Describe basic geometry terms (point, line, plan, ray, angle)
	DOC.MATH.GEO.1.2	Compare parallel and perpendicular lines
	DOC.MATH.GEO.1.3	Locate and calculate the midpoint of a line segment on a coordinate plane using the mid-point formula
	DOC.MATH.GEO.1.4	Use the distance formula to calculate the distance between two points on a coordinate plane
	DOC.MATH.GEO.1.5	Use bisectors and trisectors to divide angles and segments
	DOC.MATH.GEO.1.6	Compare angles and their relationships including complementary, supplementary, and vertical angles
2 Deductive Reasoning	DOC.MATH.GEO.2.1	Compare and contrast inductive and deductive reasoning
	DOC.MATH.GEO.2.2	Use inductive and deductive reasoning to solve real world problems
3 Triangles	DOC.MATH.GEO.3.1	Classify triangles based on their properties (Right, Isosceles, and Equilateral)
	DOC.MATH.GEO.3.2	Calculate missing angles of a triangle using triangle sum theorem
	DOC.MATH.GEO.3.3	Calculate the area and perimeter of triangles

	DOC.MATH.GEO.3.4	Solve real-world problems using calculations and measurements of triangles
4 Congruence	DOC.MATH.GEO.4.1	Identify congruent figures
	DOC.MATH.GEO.4.2	Prove two triangles are congruent using triangle theorems (SSS, SAS, ASA, AAS, HL)
	DOC.MATH.GEO.4.3	Explain and use CPCTC when identifying and proving parts of congruent triangles congruent
5 Parallel and Perpendicular Lines	DOC.MATH.GEO.5.1	Convert between linear equations and graphs of parallel lines
	DOC.MATH.GEO.5.2	Convert between linear equations and graphs of perpendicular lines
	DOC.MATH.GEO.5.3	Construct and identify angles formed by transversals (alternate interior, alternate exterior, interior, exterior, corresponding, and consecutive)
	DOC.MATH.GEO.5.4	Compare and calculate slopes of parallel and perpendicular lines
6 Quadrilaterals and Polygons	DOC.MATH.GEO.6.1	Identify and apply properties of parallelograms and special quadrilaterals
	DOC.MATH.GEO.6.2	Calculate the area and perimeter of special quadrilaterals
	DOC.MATH.GEO.6.3	Apply interior and exterior angle formulas to find angle measures or angle sums for convex polygons
7 Similarity	DOC.MATH.GEO.6.4	Use ratios and proportions to determine similarity
	DOC.MATH.GEO.7.2	Prove triangles are similar based on triangle theorems and use triangle proportionality theorem
	DOC.MATH.GEO.7.3	Apply properties of similar figures to justify relationships in real world context
	DOC.MATH.GEO.7.4	Calculate basic probability, permutations, and combinations using given data
8 Right Triangles	DOC.MATH.GEO.8.1	Solve right triangles using the Pythagorean theorem
	DOC.MATH.GEO.8.2	Identify and use the converse of the Pythagorean theorem
	DOC.MATH.GEO.8.3	Use trigonometric ratios to find missing side lengths or angle measurements
	DOC.MATH.GEO.8.4	Solve real-world problems using right triangle trigonometry
9 Circles	DOC.MATH.GEO.9.1	Explain and use circle vocabulary including area, diameter, radius, circumference, arc, tangent line, secant line, and segments
	DOC.MATH.GEO.9.2	Identify and calculate the measures of angles related to circles
	DOC.MATH.GEO.9.3	Construct a tangent line to a circle
	DOC.MATH.GEO.9.4	Determine the length of an arc and the area of a sector in a circle
10 Surface Area and Volume	DOC.MATH.GEO.10.1	Calculate the volume of a cylinder, pyramid, cone, right prisms, and spheres
	DOC.MATH.GEO.10.2	Calculate the surface area of a cylinder, pyramid, cone, right prisms, and spheres
	DOC.MATH.GEO.10.3	Solve real-world problems using volume and surface area of 3-D figures

HIGH SCHOOL SCIENCE CURRICULUM

Biology

Biology Unit Goals

Biological Inquiry	SWBAT prioritize inquiry and investigative skills that aid in creating and conducting of biological experiments.
Introduction to Biochemistry	SWBAT construct models and explanations that examine the relationship between basic chemical properties and living things.
Cell Structure, Function, and Mechanisms	SWBAT evaluate how the mechanisms of cell structures have been adapted to their function and overall goal of maintaining homeostasis in living things.
Energy Transfer in living things	SWBAT create a schematic that differentiates the energy transfer in photosynthesis and cellular respiration.
Cell Cycle and DNA	SWBAT illustrate the role of DNA structure in replication in cell duplication as well as the growth and development of living things.
Protein Synthesis and Meiosis	SWBAT summarize the relationships between DNA, RNA and protein synthesis resulting in the genetic variation through meiosis.
Genetics Mendelian and Beyond (Genes, heredity and genetic engineering)	SWBAT defend their predictions of distribution and variation of "inherited traits based on the knowledge of DNA and meiosis.
Evolution and Natural Selection	SWBAT critique an argument based on evidence that adaptations result from natural selection, environmental influences and human interference.

Biology Unit Standards

Unit	Standard	SWBAT
1 Biological Inquiry	DOC.SCI.BIO.1.	Correctly use and read scientific equipment including a scale, graduated cylinder, thermometer and beaker
		Correctly use and convert metric measurements
		Create a specific hypothesis and identify variables for a scientific problem
		Prepare a formal lab report
2 Introduction to Biochemistry	DOC.SCI.BIO.2.1	Illustrate the components of an atom
	DOC.SCI.BIO.2.2	Explain the different types of bonding including ionic, covalent, and hydrogen bonds
	DOC.SCI.BIO.2.3	Identify the differences between organic and inorganic compounds
	DOC.SCI.BIO.2.4	Explain the function of organic and inorganic compounds in organisms
3 Cell Structure, Function and Mechanics	DOC.SCI.BIO.3.1	Compare and contrast the structures of prokaryotes and eukaryotes.
	DOC.SCI.BIO.3.2	Identify the organelles and their functions in both plant and animal cells
	DOC.SCI.BIO.3.3	Relate the function of cells with organism's homeostasis
4 Energy Transfer in Living	DOC.SCI.BIO.4.1	State the properties of water and explain how its structure

Things		contributes to its unique characteristics that support life on Earth.
	DOC.SCI.BIO.4.2	Explain the mechanisms of passive and active transport including diffusion, osmosis, endocytosis and exocytosis
	DOC.SCI.BIO.4.3	Describe photosynthesis and how the process converts light energy to chemical energy
	DOC.SCI.BIO.4.4	Describe cellular respiration and how the process provides energy for organisms
	DOC.SCI.BIO.4.5	Compare and contrast photosynthesis and cellular respiration
5 Cell Cycle and DNA	DOC.SCI.BIO.5.1	State the cell cycle.
	DOC.SCI.BIO.5.2	Compare and contrast asexual and sexual reproduction in unicellular and multicellular organisms
	DOC.SCI.BIO.5.3	Explain the sequence of events in mitosis and cytokinesis
	DOC.SCI.BIO.5.4	Model the structure of DNA and describe DNA replication
6 Protein Synthesis and Meiosis	DOC.SCI.BIO.6.1	Explain the <i>Gene to Protein</i> sequence mechanisms of transcription and translation.
	DOC.SCI.BIO.6.2	Identify the role of RNA in protein synthesis
	DOC.SCI.BIO.6.3	Explain the sequence of events in meiosis and how it relates to sexual reproduction
	DOC.SCI.BIO.6.4	Contrast the events, outcomes and purposes of mitosis and meiosis
7 Genetics	DOC.SCI.BIO.7.1	Describe Mendel's contribution to genetics
	DOC.SCI.BIO.7.2	Use a monohybrid and dihybrid cross
	DOC.SCI.BIO.7.3	Explain the laws of dominance, segregation, and independent assortment
	DOC.SCI.BIO.7.4	Use probability to predict offspring combinations
	DOC.SCI.BIO.7.5	Identify incomplete, codominance and polygenic traits
8 Evolution and Natural Selection	DOC.SCI.BIO.8.1	Describe the influence of Darwin and other scientists on the theories of evolution.
	DOC.SCI.BIO.8.2	Explain the natural selection and artificial selection and relate the role of the environment
	DOC.SCI.BIO.8.3	Analyze the evidence that supports the theory of change over time
	DOC.SCI.BIO.8.4	Interpret the relationship between changes in population with genetic diversity

Chemistry

Chemistry Unit Goals

Fundamentals of Chemistry	SWBAT classify matter by its physical and chemical properties.
Structure of Atoms	SWBAT use the periodic table and the modern concept of the structure of the nucleus to explain the structure of atoms and ions.
Periodic Trends	SWBAT understand the physical and chemical properties of an atom based on its location on the periodic table.
Bonding	SWBAT understand the bonding that occurs in compounds in terms of bond type, strength, and properties.
Chemical Equations	SWBAT analyze chemical reactions in terms of products formed and chemical quantities.
Phases of Matter	SWBAT understand and illustrate the relationship among pressure, temperature, volume, and phase.
Aqueous Solutions	SWBAT understand aqueous solutions and the effect of acids and bases.
Organic Chemistry	SWBAT describe carbon bonding as the key to the diversity of organic compounds, while being able to name organic compounds and functional groups.

Chemistry Unit Standards

Unit	Standard	SWBAT
1 Fundamentals of Chemistry	DOC.SCI.CHM.1.1	SWBAT describe the three states of matter.
	DOC.SCI.CHM.1.2	SWBAT use scientific measurement and convert between different units of measurement.
	DOC.SCI.CHM.1.3	SWBAT differentiate between a substance and a mixture, element and compound, and a homogeneous and heterogeneous mixture.
	DOC.SCI.CHM.1.4	SWBAT identify elements on the periodic table and read and element's square.
	DOC.SCI.CHM.1.5	SWBAT distinguish between physical and chemical properties and changes of matter (including density calculations).
	DOC.SCI.CHM.1.6	Identify a chemical reaction and how it demonstrates the Law of Conservation of mass.
2 Structure of Atoms	DOC.SCI.CHM.2.1	SWBAT explain Dalton's atomic theory.
	DOC.SCI.CHM.2.2	SWBAT differentiate the various atomic models including their limitations.
	DOC.SCI.CHM.2.3	SWBAT describe how the quantum mechanical atomic model explains atomic emission spectra.
	DOC.SCI.CHM.2.4	SWBAT differentiate between the subatomic particles of an atom and determine how they work together to support the structure and function of an atom.
	DOC.SCI.CHM.2.5	SWBAT explain how ions, isotopes, and elements differ from each other.
3 Periodic Trends	DOC.SCI.CHM.3.1	SWBAT explain how elements are organized in a periodic table, including the broad classes of elements.

	DOC.SCI.CHM.3.2	SWBAT distinguish elements based on their electron configuration.
	DOC.SCI.CHM.3.3	SWBAT explain how ions are formed and relate the formation of ions to their location on the periodic table.
	DOC.SCI.CHM.3.4	SWBAT Explain how the periodic law can be used to predict the physical and chemical properties of elements
	DOC.SCI.CHM.3.5	SWBAT justify the periodic trends for atoms with regard to atomic/ionic size, ionization energies, and electronegativity.
4 Bonding	DOC.SCI.CHM.4.1	SWBAT determine the type of bond and chemical formulas formed between atoms.
	DOC.SCI.CHM.4.2	SWBAT Use the periodic table to predict how elements and compounds will react with each other.
	DOC.SCI.CHM.4.3	SWBAT qualitatively compare the relative strengths of ionic and covalent bonds.
	DOC.SCI.CHM.4.4	SWBAT compare inter- and intra- molecular forces.
	DOC.SCI.CHM.4.5	SWBAT determine the name and formula for compounds using the IUPAC naming system.
5 Chemical Equations	DOC.SCI.CHM.5.1	SWBAT apply the law of conservation of matter to various chemical reactions (synthesis, decomposition, single replacement, double replacement, and combustion).
	DOC.SCI.CHM.5.2	SWBAT analyze stoichiometry relationships in chemical reactions (limiting reagents, excess reagents, and percent yield).
	DOC.SCI.CHM.5.3	SWBAT calculate the composition of a substance (empirical formula, molecular formula, and percent composition).
6 Phases of Matter	DOC.SCI.CHM.6.1	SWBAT interpret the assumptions of the kinetic theory as it applies to gases, liquids, solids, and that changes of state.
	DOC.SCI.CHM.6.2	SWBAT describe the equilibrium conditions of a phase change and how they are represented in a phase diagram.
	DOC.SCI.CHM.6.3	SWBAT explain qualitatively and quantitatively the relationships among pressure, volume, temperature, and quantity of gas.
7 Aqueous Solutions	DOC.SCI.CHM.7.1	SWBAT distinguish between solvent and solute.
	DOC.SCI.CHM.7.2	SWBAT describe what happens during a solution process.
	DOC.SCI.CHM.7.3	SWBAT solve problems involving the molarity of a solution.
	DOC.SCI.CHM.7.4	SWBAT compare and contrast the chemical and physical properties acids and bases.
	DOC.SCI.CHM.7.5	SWBAT describe how $[H^+]$ and $[OH^-]$ are related in an aqueous solution.
	DOC.SCI.CHM.7.6	SWBAT convert between $[H^+]$ or $[OH^-]$ and pH values.
	DOC.SCI.CHM.7.7	SWBAT determine whether a substance is a strong acid or weak acid.
8 Organic Chemistry	DOC..SCI.CHM.8.1	SWBAT discuss the importance of carbon bonding in creating the diversity of organic compounds.
	DOC.SCI.CHM.8.2	SWBAT name and distinguish between alkanes, alkenes, and alkynes.
	DOC.SCI.CHM.8.3	SWBAT identify compounds based on its functional group and explain the relationship between the properties and structures of these compounds.

Physics

Physics Unit Goals

What is Physics and its mathematical tools and its role in STEM?	SWBAT explain the role of Physics in science and technology and construct solutions to Physics problems through applied mathematical principles and the interpretation of graphical and statistical information.
How can we quantify and describe the characteristics of linear motion?	SWBAT apply the concepts of vector and scalar quantities to explain the Laws of Kinematics in Linear motion
What are forces and how do they interact?	SWBAT create a conceptual model of forces and their relationship to motion.
How are vectors used in Kinematics?	SWBAT implement vectors as a model for analyzing problems in complex motion.
What are the characteristics of periodic and circular motion?	SWBAT apply the laws of classical physics to explain characteristics of circular and periodic motion.
What is gravity and its role in the universe?	SWBAT compose mathematical and conceptual models of the nature of gravity.
What is momentum and impulse and why are they used in Physics?	SWBAT integrate the concepts of momentum and impulse and their role in Kinematics.
How are work, power and energy related and what is their role in simple machines?	SWBAT formulate explanations for how simple machines work in terms of work, power and energy
How are thermodynamics used in physics?	SWBAT integrate the laws of thermodynamics into the concepts of motion and energy in the universe.
How is the Kinetic Molecular Theory used to describe the world around us?	SWBAT discuss the properties of each state of matter including fluidics, hydraulics and density
What are waves and how do they interact with matter?	SWBAT integrate characteristics of waves and their role in the universe into the laws of classical physics.
What is the human role in global warming	SWBAT compose and communicate their own scientifically based opinion on the causes, threats and solutions on the issue of humans and their role in Climate Change.

Physics Unit Standards

Unit 1 Introduction to Scientific Tools	DOC.SCI.PHY.1.1	Define Physics, scientific process, peer review process, mass, weight, volume, energy and work
	DOC.SCI.PHY.1.2	Design a laboratory investigation using the scientific process
	DOC.SCI.PHY.1.3	Review the scientific studies that appear in the media for valid use of the peer review process and the scientific process
	DOC.SCI.PHY.1.4	Design an investigation using scientific method, and discuss the difference between a hypothesis and a theory and the difference between experimental and theoretical physics
	DOC.SCI.PHY.1.5	Use the fundamental units of the SI system the meaning of SI prefixes from “nano” to “giga” and use conversions
	DOC.SCI.PHY.1.1	Determine the accuracy and precision of scientific instruments
	DOC.SCI.PHY.1.1	Use scientific notation and significant figures correctly in mathematical operations

	DOC.SCI.PHY.1.1	Effectively interpret and construct both graphs and tables to analyze scientific data
Unit 2 Motion	DOC.SCI.PHY.2.1	Explain the difference between scalar and vector quantities
	DOC.SCI.PHY.2.2	Solve motion problems for average velocity, displacement, average speed and distance
	DOC.SCI.PHY.2.3	Construct and interpret position time and velocity time graphs
Unit 3 Acceleration	DOC.SCI.PHY.3.1	Define average and instantaneous acceleration
	DOC.SCI.PHY.3.2	Solve problems for the instantaneous and average acceleration of objects using Newton's equations.
	DOC.SCI.PHY.3.3	Solve problems that involve acceleration due to gravity.
	DOC.SCI.PHY.3.4	Solve problems for projectile motion using vectors and the acceleration equations.
Unit 4 Forces	DOC.SCI.PHY.4.1	Define: force, equilibrium, equilibrant, mass, weight, net force, applied force, friction, normal force, coefficient of friction
	DOC.SCI.PHY.4.2	List in order of strength and describe the four fundamental forces of the universe
	DOC.SCI.PHY.4.3	Explain Newton's three laws of motion
	DOC.SCI.PHY.4.4	Explain terminal velocity and how it happens
	DOC.SCI.PHY.4.5	Use a free body diagram to solve problems involving forces
	DOC.SCI.PHY.4.6	Solve problems that involve forces and acceleration
	DOC.SCI.PHY.4.7	Solve problems that involve applied, frictional and net forces
Unit 5 Vectors and Motion in Two Dimensions	DOC.SCI.PHY.5.1	Solve problems that add parallel perpendicular and non-perpendicular vectors
	DOC.SCI.PHY.5.2	Solve problems that find the forces acting on an object on an incline
	DOC.SCI.PHY.5.3	Solve problems for motion in two dimensions using acceleration and motion equations
	DOC.SCI.PHY.5.4	Solve problems for projectile motion using vectors and the acceleration equations.
Unit 6 Gravity	DOC.SCI.PHY.6.1	Describe the Copernican Model of the solar system
	DOC.SCI.PHY.6.2	Explain Kepler's Laws and Newton's Law of Universal Gravitation
	DOC.SCI.PHY.6.3	Explain the inverse square law
	DOC.SCI.PHY.6.4	Using Kepler's Laws and Newton's gravitation equations solve problems for circular motion and gravitational forces
	DOC.SCI.PHY.6.5	Explain Einstein's Theory of gravity as a distortion in space time
Unit 7 Periodic Motion	DOC.SCI.PHY.7.1	Define circular motion, angular velocity, linear (tangential) velocity, period, frequency, centripetal force and centripetal acceleration
	DOC.SCI.PHY.7.2	Using the mathematical relationships between the above quantities solve circular motion problems
	DOC.SCI.PHY.7.3	Describe torque and the variables that affect it
	DOC.SCI.PHY.7.4	Name the forces and describe how they interact to create periodic motion in a pendulum and mass on a spring.
	DOC.SCI.PHY.7.5	Know how pendulum length and mass affect the motion of a pendulum
	DOC.SCI.PHY.7.6	Use mathematical relationships to solve problems involving the motion of a pendulum.
Unit 8 Momentum	DOC.SCI.PHY.8.1	Define momentum, impulse, impulse – momentum theorem, system, closed system, isolated system, Law of Conservation of Momentum, angular momentum, angular inertia

	DOC.SCI.PHY.8.2	Solve problems for impulse and momentum using the conservation of momentum and Newton's third law
	DOC.SCI.PHY.8.3	Solve problems involving one and two-dimensional collisions between objects and the conservation of momentum
	DOC.SCI.PHY.8.4	Solve problems for angular momentum that demonstrate the conservation of angular momentum
Unit 9 Work, Power and Energy in Simple Machines	DOC.SCI.PHY.9.1	Define energy, work, power, Calorie, calorie, horsepower, machine, Law of Conservation of Energy
	DOC.SCI.PHY.9.2	Solve problems for work power and energy that use SI units as well as Calories, calories and horsepower.
	DOC.SCI.PHY.9.3	Name the five simple machines and show how they change the combination of work and force between the output and the input
	DOC.SCI.PHY.9.4	Solve simple machine problems for IMA, MA, efficiency, work lost and force lost
	DOC.SCI.PHY.9.5	Explain the two things the equation $E = mc^2$ tells us
Unit 10 Kinetic and Potential Energy	DOC.SCI.PHY.10.1	Define potential energy, gravitational potential energy, kinetic energy, elastic collisions and inelastic collisions.
	DOC.SCI.PHY.10.2	Solve problems that demonstrate the relationship between KE and PE in a falling object and in a rolling object
	DOC.SCI.PHY.10.3	Solve problems for momentum and KE in elastic and inelastic collisions.
Unit 11 Thermal Energy	DOC.SCI.PHY.11.1	Define thermal energy, temperature, heat, thermal equilibrium, specific heat, heat of fusion, heat of vaporization, entropy, first law of thermodynamics, second law of thermodynamics
	DOC.SCI.PHY.11.2	Explain the three ways heat can be transferred between objects
	DOC.SCI.PHY.11.3	Explain the mechanics of thermal expansion
	DOC.SCI.PHY.11.4	Use the heat equation to solve problems involving the transfer of thermal energy between objects
	DOC.SCI.PHY.11.5	Use the final temperature equation to determine the final temperature of mixtures in various problems
	DOC.SCI.PHY.11.6	Explain the thermal principles of a heat engine and its major disadvantage
	DOC.SCI.PHY.11.7	Read and Interpret heat curve graphs for various substances and use it solve phase change problems
Unit 12 States of Matter	DOC.SCI.PHY.12.1	Define density, fluid, ideal fluid, plasma, hydrostatics, hydrodynamics, hydraulics, crystalline lattice, amorphous solids, elastic limit
	DOC.SCI.PHY.12.2	Using the Kinetic Theory of Matter describe the nature of solids, liquids and gases
	DOC.SCI.PHY.12.3	Using the principles of Archimedes and Pascal solve problems for buoyant force in fluids and pressure in a closed liquid system.
	DOC.SCI.PHY.12.4	Solve problems in physics that use density
	DOC.SCI.PHY.12.5	Explain Bernoulli's Principle and its real-world applications
	DOC.SCI.PHY.12.6	Define adhesion and surface tension and how they determine some of the physical characteristics of a liquid
Unit 13 Waves	DOC.SCI.PHY.13.1	Define wave, period, amplitude, wavelength, phase, frequency, Hertz, equilibrium (in waves), wave pulse, travelling wave
	DOC.SCI.PHY.13.2	Explain how waves are an example of periodic motion but not simple harmonic motion

	DOC.SCI.PHY.13.3	Explain the differences between mechanical and electromagnetic (em) waves
	DOC.SCI.PHY.13.4	List and describe the types of mechanical waves
	DOC.SCI.PHY.13.5	Explain the Principle of Superposition between waves and how it can create constructive and destructive interference
	DOC.SCI.PHY.13.6	Describe the characteristics of a Standing Wave and how a standing wave can be created; include resonance, standing waves, node and antinode
	DOC.SCI.PHY.13.7	Explain the law of reflection: In the context of waves crossing the boundary between two mediums explain what happens using the following terms: incident wave, transmitted wave, reflected wave, normal, angle of incidence, angle of reflection
	DOC.SCI.PHY.13.8	Explain the relationship between the change in density at the boundary between two media and the phase of the reflected wave in relation to the incident wave
	DOC.SCI.PHY.13.9	Explain the principles of refraction and diffraction including how each of the following changes during refraction: amplitude, wavelength, frequency, direction and energy

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