

Runnemed School District Science Curriculum

Kindergarten to Eighth Grade

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Runnemed School District Science Curriculum

Runnemed School District Mission and Vision Statements

Our Mission

Our mission is to provide a successful educational experience for all children. To this end, we will ensure:

- Demonstratively effective instructional programs
- A safe, clean and healthy learning environment
- A motivated, committed and skilled staff
- Collaboration between school, parents and community
- Managerial and fiscal accountability

Our Vision

All students will experience learning as an enjoyable life long process and demonstrate the acquisition of appropriate knowledge, skills, character and civic responsibility to meet the challenge provided by our constantly changing global society.

Runnemed School District Science Curriculum

KINDERGARTEN

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
Sept – Nov	Human Body Your Senses – Seeing, Hearing, Smelling, Touching and Tasting Growing and Changing Being Healthy	Identify the Five Senses Identify Body Parts and how the body changes during growth Identify how hygiene and nutrition promote good health	5.1.P. A.1 5.1 P. D1 5.3 P. A1 5.3 P. B1 5.3. P. C1 5.3. P. D1 5.4 P. E1	Oral Discussions, Explorers’ Activity Wall chart and Activities, Teacher Observation of Classroom Discussions, Class Participation in Experiments		<ul style="list-style-type: none"> • Clap out and tap out unknown words • Allow to choose answers from a narrowed field • Incorporate letter cards for word building • Drill and practice letters, sounds and basic sight words • Use flashcards to practice new vocabulary or spelling words • Additional time for reading assignments • Reduction of paper/pencil tasks
Nov – Feb	Life Science Living and Nonliving Animals and Plants	Distinguish between living and non-living things Identify the Traits of Animals	5.1 P. A.1, 5.1 P. B1, 5.1 P. D1, 5.2 P. A1, 5.3. P. A1, 5.3 P. B1,	Oral Discussions, Big Book, Explorers’ Activity Wall chart and Activities		<ul style="list-style-type: none"> • Shortened assignments when needed • Visual demonstrations • Presentation of material in small steps • Instructions/directions given in different channels (written, spoken, demonstration)
Feb – April	Matter Physical Science Movement Sound, Heat and Light	Identify the Properties of Matter Identify the three forms of energy (sound, heat and light)	5.2 P. A1, 5.2. P. B1, 5.2 P. C1, 5.2 P. E1	Oral Discussions, Big Book, Explorers’ Activity Wall chart and Activities,		<ul style="list-style-type: none"> • Use multisensory materials – dough, chalk, wipe off cards, scented ink, stamps, paint, magnet letters, wiki sticks, etc. • Functional level materials-differentiate books, worksheets and tasks • Highlighted to improve writing skills for tracing
April - June	Earth Science	Describe and explore different ways objects move	5.1 P. A1 5.3 P. D1,	Teacher Observation of Classroom Discussions,		<ul style="list-style-type: none"> • Assistance with organization and planning

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KINDERGARTEN

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	Using Land and Water Earth and Sky Weather	Identify forms of land and water and how they're used for resources Identify the basic concepts of Earth Explain how the sky alerts us to changing weather	5.4 P. C1, 5.4 P. G1 5.2 P. C1, 5.4 P. E1, 5.4 P. F1	Class Participation in Experiments		of classwork and/or homework • One on one coaching when needed

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First Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
September -Mid November	A. Plants & Animals All Around Living Together	Distinguish between living & non-living things Describe the inter-relationships between plants & animals Describe habitats: forest, desert, rain forest, ocean Compare and contrast plants and animals Identify the function of plant parts Describe animal life cycles	5.1.4.D.4 5.2.2.A.1 5.3.2.A.1 5.3.2.C.1 5.1.4.A.2 5.1.4.A.3 5.1.4.B.2 5.1.4.B.4 5.3.2.A.1 5.3.4.A.1 5.3.2.B.1 5.3.2.B.2 5.3.2.C.1 5.3.2.D.1 5.3.2.D.2 5.3.2.E.1 5.3.2.E.2	Observations, Harcourt experiments, oral discussion	Harcourt chapter assessment Harcourt workbook pages Harcourt Performance tasks	<ul style="list-style-type: none"> • Clap out and tap out unknown words • Allow to choose answers from a narrowed field • Incorporate letter cards for word building • Drill and practice letters, sounds and basic sight words • Use flashcards to practice new vocabulary or spelling words • Additional time for reading assignments • Reduction of paper/pencil tasks • Shortened assignments when needed
Mid November - Mid January	About Our Earth	Explore rocks & soil Compare evidence of extinct & living animals Recognize the earths natural resources & uses Describe ways to take care of natural resources	5.1.4.D.4, 5.3.2.A.1, 5.3.2.D.1, 5.3.4.D.1, 5.3.2.E.1, 5.3.2.E.2, 5.4.4.C.1, 5.4.4.C.2, 5.4.2.G.2, 5.4.2.G.4	Observations, Harcourt experiments, oral discussion	Harcourt chapter assessment Harcourt workbook pages Harcourt Performance tasks	<ul style="list-style-type: none"> • Visual demonstrations • Presentation of material in small steps • Instructions/directions given in different channels (written, spoken, demonstration) • Use multisensory materials – dough, chalk, wipe off cards, scented ink, stamps, paint, magnet letters, wiki

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First Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
January- March	Weather, the Sky, and Seasons Matter & Energy	Describe & investigate ways to measure various kinds of weather Describe the sky and distinguish differences between the seasons Investigate and experiment with various forms of matter Experiment and describe sound	5.2.2.B.1, 5.2.4.B.1 5.4.2.F.1, 5.4.4.F.1	Observations, Harcourt experiments, oral discussion	Harcourt chapter assessment Harcourt workbook pages Harcourt Performance tasks	sticks, etc. <ul style="list-style-type: none"> • Functional level materials-differentiate books, worksheets and tasks • Highlighted to improve writing skills for tracing • Assistance with organization and planning of classwork and/or homework • One on one coaching when needed
March- June	Matter & Energy Forces	Continuation of unit from previous months Distinguish the difference between pushes and pulls Observe the behavior of magnets	5.2.2.E.1, 5.2.2.E.2, 5.2.2.E.3, 5.2.4.E.3, 5.2.4.E.4	Observations, Harcourt experiments, oral discussion	Harcourt chapter assessment Harcourt workbook pages Harcourt Performance tasks	

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Second Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
Sept. – Nov.	How Sunlight Shines on Earth Water in the Air Changes in Weather Temperature Outside	Students will measure weather conditions Students will define the water cycle Students will describe the causes of day, night, and the seasons	5.4.2.F.1 5.4.2.G.1 5.4.2.G.2 5.4.2.G.3 5.4.2.G.4	Vocabulary Teacher Observation of Classroom Discussions Student Participation in Experiments	Science notebook	<ul style="list-style-type: none"> • Use multisensory materials – dough, chalk, wipe off cards, scented ink, stamps, paint, magnet letters, wiki sticks, etc. • Functional level materials- differentiate books, worksheets and tasks • Highlighted to improve writing skills for tracing • Assistance with organization and planning of classwork and/or homework • One on one coaching when needed
Dec. – Feb.	Matter Solids Liquids Gases	Students will identify solids, liquids, and gases Students will explore water changes Students will discover mixture of matter	5.2.2.A.1 5.2.2.A.2 5.2.4.A.1 5.2.4.A.2 5.2.4.A.3 5.2.2.B.1	Vocabulary Teacher Observation of Classroom Discussions Student Participation in Experiments	Science notebook	
March - June	What Makes Sound	Students will define and create sounds	5.2.2.A.1 5.2.2.A.2	Vocabulary	Science notebook	

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Second Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	Different Sounds How Sound Travels Making Different Sounds		5.2.4.A.1 5.2.4.A.2 5.2.4.A.3 5.2.2.B.1	Teacher Observation of Classroom Discussions Student Participation in Experiments		

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Third Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
Sept. – Oct.	Ecosystem Forest Ecosystem Desert Ecosystem Grassland Ecosystem Water Ecosystems	Recognize that living things have characteristics for surviving in different desert environments	5.1.4.C.1 5.1.4.D.1 5.1.4.D.2 5.3.4.C.1 5.3.4.C.2 5.3.4.E.2 5.1.4.A1 5.1.4.B.4	<ul style="list-style-type: none"> • Vocabulary • Science notebook • Teacher Observation of Classroom Discussions • Student Participation in Experiments • Teacher Observation of Classroom Discussions • Student Participation in Experiments 	forest ecosystem worksheets	<p>Group students in small flexible groups considering their abilities</p> <p>Text read to students by teacher</p> <p>Ask discussion questions on a variety of levels</p> <p>Leveled reading assigned during guided reading small groups</p> <p>Incorporate center stations with skills students are struggling with and need more practice</p> <p>Drill, repetition and practice</p> <p>Independent book selection based on individual needs and abilities</p>
		Define an ecosystem			Ecosystem Vocabulary	
		Observe and describe the habitats and organism within an ecosystem.			Science notebook	
		Recognize that organism with similar needs compete with each other for resources.			Diagram of the forest ecosystem	
		Define an Forest Ecosystem			Harcourt / teacher created Desert ecosystem worksheets	
		Identify some living things that make their home in forest ecosystems.			Diagram of the desert ecosystem	
Recognize that living things have characteristics for surviving in different forest environments.	Harcourt / teacher created Water ecosystem worksheets					
Identify some living things that make their homes in desert ecosystems.	Harcourt /Teacher Made Unit Test					
Identify some living things that make their homes in grasslands	Ecosystem project					

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Third Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>ecosystems.</p> <p>Recognize that living things have characteristics for surviving in different grassland environments.</p> <p>Identify the two main types of water ecosystems.</p> <p>Recognize that the energy most living things get from food originated with the sun.</p> <p>Show examples of living that live in each type of water ecosystem.</p> <p>Explain how living things in water ecosystems meet their needs in different ways.</p>				
Oct. – Dec.	Food Chains	Explain that all living things get	5.1.4.B.3 5.1.4.C.3	<ul style="list-style-type: none"> Vocabulary 	Harcourt / teacher created food webs	Group students in small flexible groups considering

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	Food webs	<p>energy from food.</p> <p>Identify characteristics of living things that help them get food.</p> <p>Recognize that animals depend on plants and other animals for energy.</p> <p>Identify a food chain as a model that shows the movement of food and energy through a community.</p> <p>Conclude that the individual organisms in a food web can be eaten by many other organisms.</p> <p>Recognize that more than one food chain exists in a community.</p> <p>Observe that some organisms in an ecosystem compete with each other for food.</p>	<p>5.1.4.D.1 5.1.4.C.1 5.1.4.C.3 5.1.4.D.1 5.1.4.D.2</p>	<ul style="list-style-type: none"> • Science notebook • Teacher <ul style="list-style-type: none"> Observation of Classroom Discussions • Student <ul style="list-style-type: none"> Participation in Experiments <p>Harcourt /Teacher Made Unit Test</p>	<p>worksheets</p> <p>Harcourt / teacher created food chains worksheets</p>	<p>their abilities</p> <p>Text read to students by teacher</p> <p>Ask discussion questions on a variety of levels</p> <p>Leveled reading assigned during guided reading small groups</p> <p>Incorporate center stations with skills students are struggling with and need more practice</p> <p>Drill, repetition and practice</p> <p>Independent book selection based on individual needs and abilities</p>
Dec. – Jan.	<p>A. Heat</p> <p>B. Temperature Measured</p>	<p>Compare tools for measuring temperature.</p>	<p>5.1.4.B.4, 5.2.4.C.1,</p>	<ul style="list-style-type: none"> • Vocabulary • Science notebook • Teacher 	<p>Harcourt / teacher created temperature</p>	<p>Ask discussion questions on a variety of levels</p> <p>Independent help based on</p>

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Third Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		Discuss how is temperature measured Discuss Heat and how it effects matter. A. Define Heat.	5.1.4.D.1, 5.1.4.A.2, 5.1.4.B.3 , 5.1.4.D.1, 5.2.4.A.3 , 5.4.4.F.1	Observation of Classroom Discussions • Student Participation in Experiments Harcourt /Teacher Made Unit Test	worksheets Harcourt / teacher created heat worksheets	individual needs and abilities Have students draw pictures in vocabulary notebooks and synonyms/antonyms to maximize knowledge of vocabulary words Provide drill, practice and repetition of definitions/sentences with words
Feb. - April	A. Light B. Light behavior inter-relationship between light and color	Explain the relationship between light and color. A. Define light. B. Discuss light behavior.	5.1.4.C.1 , 5.1.4.B.3 , 5.1.4.D.1, 5.2.4.C.1, 5.2.4.A.4	• Vocabulary • Science notebook • Teacher Observation of Classroom Discussions • Student Participation in Experiments Harcourt /Teacher Made Unit Test	Harcourt / teacher created inter-relationship between light and color worksheets Harcourt / teacher created Light behavior worksheets Harcourt / teacher created Light worksheets	Provide Graphic organizer of making inferences to use with literature
April - May	Forces Motion Work	Describe the relationship between work and force. Discuss what work is.	5.1.4.B.3 , 5.1.4.D.1, 5.2.4.E.2 ,5.2.4.E.4	• Vocabulary • Science notebook • Teacher Observation of	Harcourt / teacher created force worksheets	Group students in small flexible groups considering their abilities

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>Relate forces and motion.</p> <p>Explain how forces are measured.</p>	<p>5.2.4.C.1, 5.2.4.C.4 , 5.1.4.D.1</p>	<p>Classroom Discussions</p> <ul style="list-style-type: none"> • Student Participation in Experiments <p>Harcourt /Teacher Made Unit Test</p>	<p>Harcourt / teacher created motion worksheets</p>	<p>Text read to students by teacher</p> <p>Ask discussion questions on a variety of levels</p> <p>Incorporate center stations with skills students are struggling with and need more practice</p> <p>Drill, repetition and practice</p> <p>Independent book selection based on individual needs and abilities</p>
May - June	<p>Rocks Minerals fossils Forces that shape land</p>	<p>Describe and show that life has changed</p> <p>Recognize where most fossils are found</p> <p>Give examples of the different types of fossils.</p> <p>Describe how fossils form. Describe the sequence of events in the rock cycle that can change one type of rock into another.</p> <p>Describe the way people use rocks. Identify the three types of rocks</p>	<p>5.1.4.C.1 5.1.4.D.1 5.4.4.B.1 5.1.4.A.2 5.1.4.A.3 ,5.1.4.C.3 5.1.4.D.1 5.4.4.B.1 5.1.4.D.1 5.1.4.B.4 5.1.4.D.1 5.1.4.D.2</p>	<ul style="list-style-type: none"> • Vocabulary • Science notebook • Teacher Observation of Classroom Discussions • Student Participation in Experiments • Teacher Observation of Classroom Discussions • Student Participation in Experiments <p>Harcourt /Teacher Made</p>	<p>Harcourt / teacher created Rocks worksheets</p> <p>Harcourt / teacher created Minerals worksheets</p> <p>Science notebook</p> <p>Harcourt / teacher created Fossil worksheets</p>	

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>and how they form.</p> <p>Identify the solid and liquid portions of Earth's structure.</p> <p>Give examples of the uses of minerals and rocks</p> <p>Describe what minerals and rocks are.</p> <p>Define Landforms.</p> <p>Identify some of the forces that change earth's surface.</p> <p>Describe the ways different lands forms look.</p> <p>Recognize why landforms constantly change.</p>		Unit Test		

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Fourth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
September	<p><u>Scientific Inquiry</u></p> <p>Fundamental scientific concepts and principles and the links between them are more useful than discrete facts.</p> <p>Connections developed between fundamental concepts are used to explain, interpret, build, and refine explanations, models, and theories.</p> <p>Outcomes of investigations are used to build and refine questions, models, and explanations.</p> <p><u>Scientific Method:</u></p> <p>Building and refining models and explanations requires generation and evaluation of evidence.</p>	<p>Demonstrate understanding of the interrelationships among fundamental concepts in the physical, life, and earth systems sciences.</p> <p>Use Outcomes of investigations to build and refine questions, models, and explanations.</p> <p>Use scientific facts, measurements, observations, and patterns in nature to build and critique scientific arguments.</p> <p>Design and follow simple plans using systematic observations to explore questions and predictions.</p> <p>Measure, gather, evaluate, and share evidence using tools and technologies.</p> <p>Formulate explanations from evidence.</p>	<p>5.1.4.A.1</p> <p>5.1.4.A.2</p> <p>5.1.4.A.3</p> <p>5.1.4.B.1</p> <p>5.1.4.B.2</p> <p>5.1.4.B.4</p> <p>5.1.4.B.3</p> <p>5.1.4.C.1</p> <p>5.1.4.C.2</p>			

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Fourth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	Tools and technology are used to gather, analyze, and communicate results.	<p>Communicate and justify explanations with reasonable and logical arguments.</p> <p>Revise predictions or explanations on the basis of learning new information.</p> <p>Monitor and reflect on one's own knowledge regarding how ideas change over time.</p>				
October/ November	<u>Living Things</u>	Develop and use evidence-based criteria to determine if an unfamiliar object is living or	5.3.4.A.1			

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Fourth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>nonliving.</p> <p>Develop and use evidence-based criteria to determine if an unfamiliar object is living or nonliving.</p> <p>Develop and use evidence-based criteria to determine if an unfamiliar object is living or nonliving.</p> <p>Compare and contrast structures that have similar functions in various organisms, and explain how those functions may be carried out by structures that have different physical appearances.</p> <p>Identify sources of energy(food) in a variety of settings: a farm, zoo, ocean, forest.</p>	<p>5.3.4.A.1</p> <p>5.3.4.A.2</p> <p>5.3.4.B.1</p>			
December - January	<p><u>Life Cycles</u></p> <p><u>Ecosystems</u></p>	Plants and animals have life cycles, they begin life, develop into adults, reproduce and eventually die. The	<p>5.3.4.D.1</p> <p>5.3.4.C.1</p> <p>5.3.4.C.2</p> <p>5.3.4.E.1</p>			

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Fourth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>characteristics of each stage of life vary by species</p> <p>compare the physical characteristics of the different stages of the life cycle of an individual organism, and compare the characteristics of life stages among species.</p> <p>Predict the biotic and abiotic characteristics of an unfamiliar organism's habitat.</p> <p>Model an adaptation to a species that would increase its chances of survival, should the environment become wetter, dryer, warmer, or colder over time.</p>				
February March	<p><u>Body Systems</u></p> <p>Essential functions of the human body are carried out by</p>	<p>Describe the interactions of the body systems involved in carrying out the everyday life activities.</p> <p>Plan and carry out an</p>	<p>5.3.4.A.3</p> <p>5.2.4.A.3</p> <p>5.2.4.A.2</p> <p>5.2.4.A.1</p>			

Runnemed School District Science Curriculum

Fourth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	specialized systems: <ul style="list-style-type: none"> • Digestive • Circulatory • Repertory • Nervous • Skeletal • Muscular • Reproductive <u>Matter</u>	investigation to distinguish solid, liquids and gases. Determine the weight and volume of common objects using appropriate tools. Identify objects that are composed of a single substance and those that are composed of more than one substance using simple tools found in the classroom.				
April May	<u>Water Cycles</u>	Model how the properties of water can change as water moves through the water cycle. Trace a path of drop of water might follow through the water cycle. Evaluate similar populations in an ecosystem with regard to their ability to thrive and grow.	5.4.4.G.3 5.4.4.G.4 5.3.4.E.1			
June	<u>Plants as Producers</u>	Describe the sources of the reactants of photosynthesis and trace the pathway to the products. Model an adaptation to a	5.3.4.E.1 5.3.6.B.1			

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Fourth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		species that would increase its chances of survival, should the environment become wetter, dryer or colder over time.				

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Fifth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
September	<p><u>Scientific Inquiry:</u></p> <p><u>Scientific Method:</u></p>	<p>Demonstrate understanding of the interrelationships among fundamental concepts in the physical, life, and Earth systems sciences.</p> <p>Use outcomes of investigation to build and refine questions, models, and explanations</p> <p>Use scientific facts, measurements, and observations and patterns in nature to build and critique scientific arguments.</p> <p>Design and follow simple plans using systematic observations to explore questions and predictions.</p> <p>Measure, gather, evaluate, and share evidence using tools and technologies.</p> <p>: Formulate explanations from evidence. Communicate and justify</p>	<p>5.1.4.A.1 5.1.4.A.2 5.1.4.A.3 5.1.4.B.1 5.1.4.B.2 5.1.4.B.3 5.1.4.B.4 5.1.4.D.4 5.1.4.D.3 5.1.4.D.2 5.1.4.D.1 5.1.4.C.2 5.1.4.C.3 5.1.4.C.1</p>	<p><u>Monthly Assessments:</u></p> <p><u>Formative Assessments:</u></p> <ul style="list-style-type: none"> -Homework -Cooperative Learning Activities -EXIT slips - KWL chart - Weekly quizzes -Self-evaluation <p><u>Summative Assessments:</u></p> <ul style="list-style-type: none"> -Test based on standards - Trimester Projects- (one per trimester, due at the end of each trimester) 		

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Fifth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>explanations with reasonable and logical arguments.</p> <p>Monitor and reflect on one's own knowledge regarding how ideas change over time.</p> <p>Revise predictions or explanations on the basis of learning new information.</p> <p>Present evidence to interpret and/or predict cause-and – effect outcomes of investigation.</p> <p>Work collaborate to pose, refine, and evaluate questions, investigations, models, and theories.</p> <p>Demonstrate how to safely use tools, instruments and supplies.</p> <p>Handle and treat organisms humanely, responsibly and ethically.</p>				
OCTOBER	Gravity	Investigate, construct, an generalize rules for the effect	5.2.6.E.4	<u>Monthly Assessments:</u>		Group students in small flexible groups considering

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Fifth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>that force of gravity has on balls of different sizes and weights.</p> <p>Investigate, construct, an generalize rules for the effect that force of gravity has on balls of different sizes and weights.</p>		<p><u>Formative Assessments:</u></p> <ul style="list-style-type: none"> -Homework -Cooperative Learning Activities -EXIT slips - KWL chart - Weekly quizzes -Self-evaluation <p><u>Summative Assessments:</u></p> <ul style="list-style-type: none"> -Test based on standards - Trimester Projects- (one per trimester, due at the end of each trimester) 		<p>their abilities</p> <p>Text read to students by teacher</p> <p>Ask discussion questions on a variety of levels</p> <p>Incorporate center stations with skills students are struggling with and need more practice</p> <p>Drill, repetition and practice</p> <p>Independent book selection based on individual needs and abilities</p>
November	<u>Moon, Astronomy, Earth, Sun and its Energy:</u>	Formulate a general description of the daily motion of the Sun across the sky based on shadow observations.	<u>5.4.6.A.1</u> <u>5.4.6.A.1</u> <u>5.4.4.E.1</u>	<p><u>Monthly Assessments:</u></p> <p><u>Formative Assessments:</u></p> <ul style="list-style-type: none"> -Homework 		

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Fifth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>Explain how shadows could be used to tell the time of day.</p> <p>Formulate a general description of the daily motion of the Sun across the sky based on shadow observations.</p> <p>Explain how shadows could be used to tell the time of day.</p> <p>Identify patterns of the Moon's appearance and make predictions about its future appearance based observational data.</p> <p>Generate a model with explanatory value that explains both why objects roll down ramps as well as why the Moon orbits the Earth.</p> <p>Analyze and evaluate evidence in the form of data tables and photographs to categorize and relate solar system objects (e.g., planets, dwarf planets, moons, asteroids, and comets).</p> <p>Develop a general set of rules to predict temperature changes of Earth materials, such as water, soil, and sand when placed in the Sun and in the shade.</p>	<p><u>5.4.6.A.4</u></p> <p><u>5.4.6.A.3</u></p> <p><u>5.4.6.A.2</u></p>	<p>-Cooperative Learning Activities</p> <p>-EXIT slips</p> <p>- KWL chart</p> <p>- Weekly quizzes</p> <p>-Self-evaluation</p> <p><u>Summative Assessments:</u></p> <p>-Test based on standards</p> <p>- Trimester Projects- (one per trimester, due at the end of each trimester)</p>		

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Fifth Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
December- January	<u>Weather and Clouds</u> <u>Fossils, Rocks, and Minerals:</u>	Identify patterns in data collected from basic weather instruments.	<u>5.4.4.F.1</u> <u>5.4.4.G.1</u> <u>5.4.4.G.2</u> <u>5.4.4.F.1</u> 5.4.6.B.1 5.4.6.B2 5.4.6.C.1 5.4.6.B.3-4 5.4.6.C.2 5.4.6.C.2	<u>Monthly Assessments:</u> <u>Formative Assessments:</u> -Homework -Cooperative Learning Activities -EXIT slips - KWL chart - Weekly quizzes -Self-evaluation <u>Summative Assessments:</u> -Test based on standards - Trimester Projects- (one per trimester, due at the end of each trimester)		
		Explain how clouds form. Observe daily cloud patterns, types of precipitation, and temperature, and categorize the clouds by the conditions that form precipitation.				
		I identify patterns in data collected from basic weather instruments. Use data gathered from observations of fossils to argue whether a given fossil is terrestrial or marine in origin.				
		Create a model to represent how soil is formed. Categorize unknown samples as either rocks or minerals.				
FEBRUAR Y	<u>Heat</u>	Predict and explain what happens when a common substance, such as shortening or candle wax, is heated to melting and the cooled to a	<u>5.2.4.A.4</u> <u>5.2.4.B.1</u>	<u>Monthly Assessments:</u> <u>Formative Assessments:</u> -Homework -Cooperative Learning		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>solid.</p> <p>Categorize objects based on the ability to absorb or reflect light and conduct heat or electricity.</p>		<p>Activities</p> <ul style="list-style-type: none"> -EXIT slips - KWL chart - Weekly quizzes -Self-evaluation <p><u>Summative Assessments:</u></p> <ul style="list-style-type: none"> -Test based on standards - Trimester Projects- (one per trimester, due at the end of each trimester) 		
MARCH	<u>Motion:</u>	<p><u>5.2.6.E.1:</u> Demonstrate through modeling that motion is a change in position over a period of time.</p> <p><u>5.2.6.E.2:</u> Identify the force that starts something moving or changes its speed or direction of motion.</p>		<p><u>Monthly Assessments:</u></p> <p><u>Formative Assessments:</u></p> <ul style="list-style-type: none"> -Homework -Cooperative Learning Activities -EXIT slips - KWL chart - Weekly quizzes -Self-evaluation <p><u>Summative Assessments:</u></p> <ul style="list-style-type: none"> -Test based on standards - Trimester Projects- (one per trimester, due at 		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
				the end of each trimester)		
APRIL	<u>Magnets:</u>	<p>5.2.6.E.3: Investigate and categorize materials based on their interactions with magnets</p> <p>5.2.4.E.3: Investigate and categorize materials based on their interactions with magnets..</p>		<p>Monthly Assessments:</p> <p><u>Formative Assessments:</u></p> <ul style="list-style-type: none"> -Homework -Cooperative Learning Activities -EXIT slips - KWL chart - Weekly quizzes -Self-evaluation <p><u>Summative Assessments:</u></p> <ul style="list-style-type: none"> -Test based on standards - Trimester Projects- (one per trimester, due at the end of each trimester) 		
MAY/JUNE	<u>Light and Electricity</u>	<p>Compare various forms of energy as observed in everyday life and describe their applications.</p> <p>Compare the flow or hear through metals and nonmetals by taking and analyzing measurements.</p> <p>Compare the flow or hear through metals and nonmetals by taking and analyzing measurements.</p>	<p>5.2.6.C.1-3</p> <p>5.2.6.C.3</p> <p>5.2.6.C.2</p> <p>5.2.6.C.2</p> <p>5.2.4.C.2</p>	<p>Monthly Assessments:</p> <p><u>Formative Assessments:</u></p> <ul style="list-style-type: none"> -Homework -Cooperative Learning Activities -EXIT slips - KWL chart - Weekly quizzes -Self-evaluation 		<p>Ask discussion questions on a variety of levels</p> <p>Have students draw pictures in vocabulary notebooks and synonyms/antonyms to maximize knowledge of vocabulary words</p> <p>Provide drill, practice and</p>

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>Compare the flow or heat through metals and nonmetals by taking and analyzing measurements.</p> <p>Draw and label diagrams showing several ways that energy can be transferred from one place to another.</p> <p>Illustrate and explain what happened with light traveling from air into water.</p> <p>Repair an electrical circuit by completing a closed loop that includes that includes wires, a battery (or batteries), and at least one other electrical component to produce observable change.</p>	<p>5.2.6.D.1</p> <p>5.2.6.C.4</p>	<p><u>Summative Assessments:</u></p> <p>-Test based on standards</p> <p>- Trimester Projects- (one per trimester, due at the end of each trimester)</p>		<p>repetition of definitions/sentences with words</p> <p>Provide Graphic organizer of making inferences to use with literature</p>

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
September	<p>Science Practices</p> <p>Science makes use of knowledge and models based on experimental evidence. Science is revised and refined through observation, experimentation, collaboration and communication.</p>	<p>Describe an “observation box” in detail using the technique of observation.</p> <p>Generate questions using the “if, then, because” statement to solve scientific lab based problems.</p> <p>Gather data in the form of charts, tables and graphs using graph paper and Microsoft Excel.</p> <p>Revise and support a hypothesis based on experimental data by writing and revising a lab report conclusion.</p> <p>Communicate the results of an experiment to classmates in the group and to the whole class.</p> <p>Use scientific tools such as triple beam balances as part of scientific inquiry.</p> <p>Use all living and non-living specimens appropriately</p> <p>Measure the volume of an object using the water displacement</p>	<p>5.1.8.A.3, 5.1.8.B.1, 5.1.8.B.4, 5.1.8.C.1-3 5.1.8.B.3 5.1.8.A.1 5.1.8.A.2 5.1.8.B.2, 5.1.8.D.3 5.1.8.D.1-2 5.1.8.D.4</p>	<p>Lab Practicum:</p> <ol style="list-style-type: none"> Design and conduct experiments using the steps of the scientific method to solve problems. Revise and expand experiments by manipulating a different or additional variable. <p>Project:</p> <ol style="list-style-type: none"> Complete a field note journal based on observations of various topics. Research the life of a scientist and report on how he or she used the scientific method. <p>Standard Assessment:</p> <ol style="list-style-type: none"> Weekly quizzes using “Exam View Pro” Chapter/Unit tests using 		<p>Peer response / Think-Pair-Shares Peer editing, feedback , etc. Interactive notes on Smartboard or flipcharts – save charts to review and extend understandings Provide reference sheets for units of study / writing skills Organization of binder for easy access to information / reference Utilize cooperative learning activities and ability grouping for / centers / workshops to review and extend understandings Timeframe / pacing calendar of due dates for long term projects Supplemental visuals around the room for easy reference to relevant topics (persuasive techniques, sensory word</p>

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>method.</p> <p>Calculate the density of an object using its measured mass and volume.</p> <p>Identify an unknown substance using one or more property such as density, boiling point or melting point.</p>		<p>“Exam View Pro”</p> <p>Teacher Generated Assessment:</p> <p>Current event journal responses based on examples of the scientific method being used in everyday life.</p>		<p>lists, etc.)</p> <p>Work area clear and quiet</p> <p>Choice of options (for writing topics, formats for select activities, etc.)</p> <p>Teach, discuss, and use rubrics and checklists – whole class, self-evaluation, and peer evaluation</p>
October	<p>Earth Systems</p> <p>Scientists use weather maps and conditions in the atmosphere such as temperature, pressure and humidity to study weather and climate. Climate may vary from place to place depending on conditions in the atmosphere and proximity to water or land.</p>	<p>Monitor the local weather and look for patterns between pressure, temperature and humidity.</p> <p>Research and compare the climates of two different areas.</p> <p>. Examine and create a weather map based on a particular area of the world.</p> <p>Model the layers of the atmosphere and their specific properties.</p> <p>Research and model how the climate of a coastal town is different than the climate of an</p>	<p>5.4.6.F.1</p> <p>5.4.6.F.2</p> <p>5.4.8.F</p> <p>5.4.8.C.3</p> <p>5.4.8.F.2</p> <p>5.4.8.F.3</p>	<p>Lab Practicum:</p> <p>1. Design and conduct experiments to show how water is transferred into and out of the atmosphere.</p> <p>Projects:</p> <p>1. Design a weather map based on a particular climate.</p> <p>2. Analyze and graph data of different climates around the world</p>		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>inland town..</p> <p>Research and model how water is transferred into and out of the atmosphere in a particular area of the world.</p>		<p>Standard Assessment:</p> <ol style="list-style-type: none"> 1. Weekly quizzes using "Exam View Pro" 2. Chapter/Unit tests using "Exam View Pro" <p>Teacher Generated Assessment:</p> <ol style="list-style-type: none"> 1. Journal response: What would happen if water could not be transferred into and out of the atmosphere? 		
November-December	<p>Earth Systems</p> <p>The uneven heating of the Earth by the sun causes climate differences. There</p>	<p>Give examples of the various methods of heat transfer.</p> <p>Use models to represent</p>	<p>5.4.6.E. 1</p> <p>5.4.6.E. 1</p>	<p>Lab Practicum:</p> <ol style="list-style-type: none"> 1. Design and conduct experiments to model the 		<p>Provide a variety of reference and writing materials (thesaurus, spelling dictionaries, etc.)</p>

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	<p>are various local and global wind belts and ocean currents found on Earth resulting from the sun's energy. Conduction, convection and radiation are methods of heat transfer from the sun.</p> <p>Natural processes such as earthquakes, erosion and deposition can affect the ecosystems in the areas that they occur. The Earth's natural magnetic field also affects living things. Humans can preserve and improve the health of ecosystems by understanding global events and the effects they have on ecosystems.</p>	<p>conduction, convection and radiation.</p> <p>Research the various wind belts found locally and globally on Earth.</p> <p>Research the various ocean currents found locally and globally on Earth</p> <p>Make connections between energy from the sun, ocean currents and global winds</p> <p>Model how the energy from an earthquake can affect an ecosystem.</p> <p>Research how countries located in the Pacific Ring of Fire are affected by earthquakes.</p> <p>Use a satellite map to identify areas affected by erosion and deposition.</p> <p>Research recent studies into the understanding of how animals use the earth's magnetic field for orientation and navigation</p>	<p>5.4.6.G.1</p> <p>5.4.6.G.1</p> <p>5.4.6.D.1</p> <p>5.4.6.D.1</p> <p>5.4.6.D. 2</p> <p>5.4.6.G.3</p> <p>5.4.6.G.2</p> <p>5.4.6.D.3</p>	<p>effects of directed radiation on ice.</p> <p>Projects:</p> <p>1. Research climates in similar latitudes and show how ocean currents account for differences in temperature.</p> <p>3. Map the various wind belts found throughout the world..</p> <p>Standard Assessment:</p> <p>1. Weekly quizzes using "Exam View Pro"</p> <p>2. Chapter/Unit tests using "Exam View Pro"</p> <p>Teacher Generated Assessment:</p> <p>1. Journal response: What would happen if there was no wind on Earth? What would happen if there were no ocean currents on Earth?</p>		<p>Small group and individualized instruction as needed</p> <p>Monitor "accountable talk" about writing</p> <p>Use various sized writing paper / lines to best suit student's writing needs (skip lines for editing, etc.)</p> <p>Audio learners benefit from saying words and reviewing definitions aloud</p> <p>Visual learners benefit from writing words as practice</p> <p>Modified vocabulary/crafting techniques to know may be provided to those students who need them</p>

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
		<p>Compare and contrast ecosystems from different locations of the world as they are affected by different global conditions and events.</p> <p>Describe ways in which humans can preserve and improve the health of ecosystems throughout the world when they are affected by natural and human disasters.</p>				
January February	<p>Physical Science</p> <p>Light travels as a wave and may be transferred through conduction, convection or radiation. Light can also be reflected and refracted. Light can be broken down into the visible and invisible spectra. Light energy from the sun is the cause of winds, ocean currents and storms on Earth.</p> <p>Electricity can flow through an electrical circuit depending on whether the</p>	<p>Design an investigation to show the flow of electricity.</p> <p>Gather and analyze data from experiments involving magnetic forces.</p> <p>Calculate data from experiments involving batteries and motors to measure and predict current flow.</p> <p>Evaluate the outcome of experiments involving energy transfer using electricity.</p> <p>Compare evidence of human technology rising from the knowledge of electricity.</p> <p>. Give examples of the various methods of light interacting with</p>	<p>5.2.6.D.1</p> <p>5.2.6.D.1</p> <p>5.2.6.C.2</p> <p>5.2.6.C.3</p> <p>5.2.6.C.1</p> <p>5.2.8.C. 1</p> <p>5.2.8.C. 2</p> <p>5.2.6.D.1</p>	<p>Lab Practicum:</p> <p>1. Design and conduct experiments to model the effects of erosion and deposition.</p> <p>Projects:</p> <p>1. Research an animal that uses the Earth’s magnetic field.</p> <p>3. Map and label the countries and ecosystems in the Pacific Ring of Fire. Develop an emergency plan to help animals and people affected by earthquakes in</p>		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	arrangement is in series or parallel. A closed loop circuit includes wires, batteries, and at least one other electrical component to produce observable change.	<p>objects on Earth.</p> <p>Identify evidence of weather events affected by the sun's energy.</p> <p>Design an experiment to predict and test the paths of reflected and refracted light.</p> <p>Use models to represent conduction, convection and radiation.</p> <p>Compare the visible spectrum versus the invisible spectrum.</p> <p>Research the methods by which light can be separated into the visible spectrum.</p>		<p>these areas.</p> <p>Standard Assessment:</p> <ol style="list-style-type: none"> Weekly quizzes using "Exam View Pro" Chapter/Unit tests using "Exam View Pro" <p>Teacher Generated Assessment:</p> <ol style="list-style-type: none"> Journal response: What would happen if there was no magnetic field on Earth? <p>Lab Practicum:</p> <ol style="list-style-type: none"> Design and conduct experiments to model reflected and refracted sunlight. <p>Projects:</p> <ol style="list-style-type: none"> Research how the invisible spectrum is used to benefit humans.. Analyze and graph data 		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
				<p>of different wavelengths of the visible spectrum..</p> <p>Standard Assessment:</p> <ol style="list-style-type: none"> Weekly quizzes using “Exam View Pro” Chapter/Unit tests using “Exam View Pro” <p>Teacher Generated Assessment:</p> <ol style="list-style-type: none"> Journal response: What would happen if light could not travel as a wave? 		
March	<p>5.3 Life Science Content Statement</p> <p>Our bodies are made up of various organs and organ systems that have specific structures and functions. Our cells are made up of various organelles that have specific structures</p>	<p>Compare different organ systems and how they help our bodies to function.</p> <p>Analyze data from experiments involving using a microscope.</p> <p>Design an experiment to</p>	<p>5.3.6.A.1</p> <p>5.3.6.A.2</p>	<p>Lab Practicum:</p> <ol style="list-style-type: none"> Design and conduct experiments to study cells using the microscope. <p>Projects:</p> <ol style="list-style-type: none"> Research how the 		<p>Provide a variety of reference and writing materials (thesaurus, spelling dictionaries, etc.)</p> <p>Small group and individualized instruction as needed</p>

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	and functions. Plant and animal cells have some different organelles. All living things must have cells and more advanced living things have tissues, organs and organ systems.	compare plant and animal cells. Describe the importance of each organelle of the body. Model organelles found in plant and animal cells.		microscope is used to benefit humans. 2. Compare and contrast plant and animal cells. 3. Compare and contrast different body systems. Standard Assessment: 1. Weekly quizzes using “Exam View Pro” 2. Chapter/Unit tests using “Exam View Pro” Teacher Generated Assessment: 1. Journal response: What would happen if our circulatory system shut down? What about the other systems?		Frequent read alouds of examples of “great” writing following traits / annotate typed texts Audio learners benefit from saying words and reviewing definitions aloud Visual learners benefit from writing words as practice Modified vocabulary/crafting techniques to know may be provided to those students who need them
April	Life Science During sexual reproduction, genetic information from both parents contributes to the traits of an offspring.	Design an investigation to analyze observable human traits in the class using a survey. Explain the necessity of reproduction and variation for the survival of a species. Use	5.3.6.D.3 5.3.6.D.2 5.3.6.D.1 5.3.6.E.1	Projects: 1. Analyze family photos to determine the presence of variation among family members. Standard Assessment: 1.		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	These traits may or may not benefit the offspring in its particular environment. Environmental conditions can determine if a particular trait is beneficial or not.	<p>examples from experimental models and real life examples.</p> <p>Predict the outcome and effects of genetic mutations using the virtual fly lab or similar online simulations.</p> <p>Demonstrate an example of how a specific environmental condition caused the extinction or survival of a members of a species with different traits (Black Pepper Moth)</p>		<p>Weekly quizzes using “Exam View Pro”</p> <p>2. Chapter/Unit tests using “Exam View Pro”</p> <p>Teacher Generated Assessment:</p> <p>1. 8th grade genetic traits survey</p> <p>Lab Practicum:</p> <p>1. Design and conduct experiments to observe the process of photosynthesis</p>		
May	<p>Life Science</p> <p>Photosynthesis is the most important natural process in the success of most ecosystems. Plants use water, carbon dioxide and sunlight to make oxygen and sugar. Human events, pollution, and competition from other plants and animals may affect a plant’s survival and ability</p>	<p>Design an experiment to analyze data from depriving a plant of carbon dioxide.</p> <p>Model the anatomy of a plant cell where photosynthesis occurs.</p> <p>Identify evidence of photosynthesis such as oxygen</p>	<p>5.3.6.B.1</p> <p>5.3.6.B.1</p> <p>5.3.6.B.1</p> <p>5.3.6.C.1</p> <p>5.3.6.B.1</p> <p>5.3.6.C.2</p>	<p>Projects:</p> <p>1. Research how a plant cell performs the process of photosynthesis.</p> <p>2. Research examples of competition among plants.</p> <p>Standard Assessment:</p>		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	to photosynthesize.	<p>gas.</p> <p>Reflect on the importance of the sun’s energy in earth’s ecosystems.</p> <p>Compare and contrast different plant pigments.</p> <p>Research how humans have impacted the success or demise of various plant species.</p> <p>Compare and contrast abiotic and biotic factors in an ecosystem.</p> <p>Research examples of how competition among plants and animals affects the process of photosynthesis in an ecosystem.</p>	<p>5.3.6.C.3</p> <p>5.3.6.C.2</p> <p>5.3.6.C.3</p>	<p>1. Weekly quizzes using “Exam View Pro”</p> <p>2. Chapter/Unit tests using “Exam View Pro”</p> <p>Teacher Generated Assessment:</p> <p>1. Journal response: What would happen if plants stopped going through the process of photosynthesis? Lab Practicum:</p> <p>1. Design and conduct experiments to observe the products and reactants of respiration.</p>		
June	<p>Life Science</p> <p>Cellular respiration is the process by which consumers break down and release energy from food. All energy gained by consumers can be traced back to producers and their conversion of solar energy into sugar through the process of photosynthesis. Energy flows from the sun</p>	<p>Show how energy flows through a community by producing a food web.</p> <p>Use evidence to show that oxygen and sugar are required to produce carbon dioxide and energy through cellular respiration.</p> <p>Show how all food energy originates from the sun.</p>	<p>5.3..8.B.1</p> <p>5.3.6.B.2</p> <p>5.3.6.B.2</p> <p>5.3.6.B.2</p>	<p>Projects:</p> <p>1. Research how an animal cell performs the process of respiration.</p> <p>2. Construct a food web to model energy flow in a community.</p> <p>Standard Assessment:</p>		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	to producers and then to consumers. Food webs can be used to show this energy flow.	Compare and contrast consumers with producers and decomposers.		1. Weekly quizzes using “Exam View Pro” 2. Chapter/Unit tests using “Exam View Pro” Teacher Generated Assessment: 1. Journal response: What would happen if humans increased in population and plants decreased in population?		

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Seventh Grade

Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
September	I. Classroom Expectations A. Classroom Procedures B. Classroom and Lab Safety C. The Scientific Method	A. Evaluate and model classroom procedures. B. Demonstrate lab safety and precautions C. Pose questions to solve scientific problems. C. Communicate the results of an experiment to classmates C. Reflect on and support a hypothesis based on experimental data.	5.1.8.A.1 5.1.8.A.2 5.1.8.A.3 5.1.8.B.1 5.1.8.B.2 5.1.8.B.3 5.1.8.B.4 5.1.8.C.1 5.1.8.C.2 5.1.8.C.3	Students model appropriate classroom procedures Lab Safety contract signed. Lab Safety and classroom procedure quiz Design and conduct experiments using the steps of the scientific method Revise and expand experiments by manipulating a different or additional variable A - C: Reading Outline Worksheets Online Chapter Review Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion		
October	Interdependence A. Symbiotic	A. Model the effect of positive and negative changes	5.3.6.C.1 5.3.6.C.2	Foldable : Symbiosis Classify examples of		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	<p>Interactions among organisms of different species can be classified as:</p> <ul style="list-style-type: none"> *producer/consumer *predator /prey * parasite/host *scavenger/prey *decomposer/prey 	in population size on symbiotic pairing	5.3.6.C.3 5.3.8.C.1	<p>different symbiotic relationships</p> <p>Microscope Activity: Ticks and parasites</p> <p>A. Reading Outline Worksheets Online Chapter Review Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion</p>		
November	<p>Interdependence</p> <p>A. All organisms cause change in their ecosystems</p> <p>B. The carrying capacity of an ecosystem depends on the abiotic and biotic resources available</p> <p>C. Human activities have changed the carrying capacity of many ecosystems</p>	<p>A. Describe how one population of organisms may affect other organisms in an ecosystem</p> <p>B. Predict the impact that altering biotic and abiotic factors has on an ecosystem</p> <p>C. Explain the impact of meeting human needs and wants on local and global environments</p>	5.3.6.C.1 5.3.6.C.2 5.3.6.C.3 5.3.8.C.1	<p>Picture prompts of ecosystems</p> <p>Foldable Abiotic and Biotic</p> <p>Carrying capacity lab</p> <p>Graph data on carrying capacity</p> <p>The Lorax</p> <p>The “Extinction” game A - C: Reading Outline Worksheets Online Chapter Review</p>		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
				Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion		
December	<p>Properties of Matter</p> <p>A. All matter is made of atoms. Elements are made from only one type of atom</p> <p>B. Each state of matter has unique properties.</p> <p>C. Objects have properties such as mass and volume and these can be determined using appropriate tools.</p> <p>D. The density of an object can be determined from its volume and mass.</p> <p>E. Substances may be acids or bases</p>	<p>A. Explain that all matter is made of atoms, and give example of common elements</p> <p>B. Use kinetic molecular model to predict how solids, liquids and gases would behave under various physical circumstances</p> <p>C. Determine the volume and density of common objects; using metric rulers and water displacement method and balances.</p> <p>D. Use volume and mass to determine an object's density</p> <p>E. Determine the relative acidity and reactivity of common acids.</p>	<p>5.2.6.A.1</p> <p>5.2.6.A.2</p> <p>5.2.8.A.1</p> <p>5.2.8.A.2</p> <p>5.2.8.A.3</p> <p>5.2.8.A.4</p> <p>5.2.8.A.5</p> <p>5.2.8.A.6</p> <p>5.2.8.A.7</p>	<p>Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion</p> <p>A. Foldable: Matter vocab</p> <p>B. Model states of matter</p> <p>C. Volume measurement labs, including water displacement</p> <p>D. Density labs</p> <p>E. Acid/ base labs: Litmus indicator. Student designed investigations.</p> <p>A - E: Reading Outline Worksheets</p> <p>Online Chapter Review</p> <p>Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion</p>		
January	<p>A. All substances are composed of one or more of approximately 100 elements.</p>	<p>A. Explain that all matter is made of atoms and give examples of common elements</p>	<p>5.2.6.A.1</p> <p>5.2.6.A.2</p> <p>5.2.8.A.1</p> <p>5.2.8.A.2</p>	<p>A. Use a periodic table to identify properties of elements</p>		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	<p>B. The Periodic Table organizes elements with similar properties.</p> <p>C. Substances are classified according to their physical and chemical properties</p>	<p>B. Identify unknown substances based on their physical and chemical properties</p> <p>C. Determine whether something is a metal or a nonmetal through student designed investigations</p>	<p>5.2.8.A.3 5.2.8.A.4 5.2.8.A.5 5.2.8.A.6 5.2.8.A.7</p>	<p>A. Periodic Table Bingo</p> <p>B. Element baby book</p> <p>c. Is it a metal? Lab investigations</p> <p>A - C: Reading Outline Worksheets Online Chapter Review Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion</p>		
February	<p>Rock Cycle and Soil Formation</p> <p>A. Identify and describe the three major groups of rocks: Igneous, Sedimentary and Metamorphic Rock</p> <p>B. Describe the rock cycle and the role of plate tectonics in the rock cycle.</p> <p>C. Weathering and erosion affect Earth's surface</p> <p>D. Soil is a mixture of rock particles, minerals, decayed organic</p>	<p>A. Defining of terms, Review of Terms</p> <p>A. List the characteristics used to identify rocks</p> <p>A. Describe the conditions in Earth that cause metamorphic rocks to form.</p> <p>A. Explain how sedimentary rocks form from sediments.</p> <p>A. Recognize magma and lava as the materials cool to form igneous rocks.</p> <p>B. Describe the rock cycle and some changes that a rock could undergo.</p> <p>C. Identify the causes of mechanical and chemical</p>	<p>5.4.6.C.1 5.4.6.C.2 5.4.6.C.3 5.4.8.C.1 5.4.8.C.1 5.4.8.C.1</p>	<p>A. Completed Foldable and Vocabulary Quiz</p> <p>A. View/identify various igneous rock samples.</p> <p>A. View/identify various metamorphic rock samples</p> <p>A. View /identify various sedimentary rock samples.</p> <p>B. Student Created Rock Cycle Diagram</p> <p>C. Predict and Conclude which antacid will dissolve faster in water(intact or ground up</p>		<p>Peer response / Think-Pair-Shares</p> <p>Peer editing, feedback , etc.</p> <p>Interactive notes on Smartboard or flipcharts – save charts to review and extend understandings</p> <p>Provide reference sheets for units of study / writing skills</p> <p>Organization of binder for easy access to information / reference</p> <p>Utilize cooperative learning activities and</p>

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	material, water and air. Soil forms as rock is broken down by weathering and mixes with other materials on the surface.	weathering D. Describe the components of soil and explain how it forms		tablet) D. Create a compost in a bottle activity A - D: Reading Outline Worksheets Online Chapter Review Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion		ability grouping for / centers / workshops to review and extend understandings
March	Fossils A. Sedimentary Rock layers can be used to develop a geologic time line	A. Interpret a representation of a rock layer sequence to establish oldest to youngest layers, geologic events and changing life forms	5.4.6.B.1 5.4.6.B.2 5.4.6.B.3 5.4.6.B.4 5.4.8.B.1 5.4.8.B.2	A. Rock layer evaluation B. Fossil lab A - B: Reading Outline Worksheets Online Chapter Review		Timeframe / pacing calendar of due dates for long term projects Supplemental visuals around the room for easy

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	B. Fossils provide evidence of how life and environmental conditions have changed	B. Investigate models of fossils and how they are used in scientific study		Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion		reference to relevant topics (persuasive techniques, sensory word lists, etc.) Work area clear and quiet Choice of options (for writing topics, formats for select activities etc.)
April	Layers of the Earth- Volcanoes A. The Earth's surface, atmosphere and life have changed immensely throughout time and will continue to change B. Earth has a magnetic field that is detachable at the surface with a compass	A. Model the interactions between layers of the Earth A. Present evidence to support arguments for the theory of plate motion A. Locate areas that are being created (deposition) and destroyed (erosion) using maps and satellite images. B. Explain how geomagnetic north and geographic north are at different locations	5.4.6.D.1 5.4.6.D.2 5.4.6.D.3 5.4.8.D.1 5.4.8.D.2 5.4.8.D.3	A. Create a model of Earth's layers A. Foldable Volcanoes and Earthquakes A. Create clay models of tectonic plates B. Compass lab A - B: Reading Outline Worksheets Online Chapter Review Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion		
May	Water A. The Sun drives convection within the atmosphere and oceans, producing winds, ocean currents and the water cycles	A. Explain how energy from the Sun is transferred in global winds, ocean circulation and the water cycle A. Illustrate global winds and surface currents through the creation of a world map of	5.4.8.E.1 5.4.6.G.1 5.4.8.F.1 5.4.8.F.2	A. Create models of the water cycle A. Create a map of global winds and currents. A. Reading Outline Worksheets Online Chapter Review		

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		global winds and currents that explains the relationship between the two factors.		Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion		
June	<p>Environmental Issues</p> <p>Global climate is affected by human activities, such as the burning of fossil fuels</p> <p>Personal activities impact the local and global environment</p>	Investigate local or global problems by defining the problem, researching the possible causative factors and evaluating that possible solutions	<p>5.4.6.G.2</p> <p>5.4.6.G.3</p> <p>5.4.8.G.1</p> <p>5.4.8.G.2</p>	<p>A. Environmental research project</p> <p>A - D: Reading Outline Worksheets</p> <p>Online Chapter Review</p> <p>Chapter Test: M/C, Fill in the Blank, Short Answer, Diagram Completion</p>		

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September	<p>Science Practices Content Statement</p> <p>Science makes use of knowledge and models based on experimental evidence. Science is revised and refined through observation, experimentation, collaboration and communication.</p>	<p>Describe an “observation box” in detail using the technique of observation.</p> <p>Generate questions using the “if, then, because” statement to solve scientific lab based problems.</p> <p>Gather data in the form of charts, tables and graphs using graph paper and Microsoft Excel.</p> <p>Revise and support a hypothesis based on experimental data by writing and revising a lab report conclusion.</p> <p>Communicate the results of an experiment to classmates in the group and to the whole class.</p> <p>Use scientific tools such as triple beam balances as part of scientific inquiry.</p> <p>Use all living and non-living specimens appropriately</p>	<p>5.1.8.A.3, 5.1.8.B.1, 5.1.8.B.4, 5.1.8.C.1-3 5.1.8.B.3</p> <p>5.1.8.A.1</p> <p>5.1.8.A.2 5.1.8.D.1-2 5.1.8.B.2, 5.1.8.D.3 5.1.8.D.4</p>	<p>Lab Practicum:</p> <ol style="list-style-type: none"> Design and conduct experiments using the steps of the scientific method to solve problems. Revise and expand experiments by manipulating a different or additional variable. <p>Project:</p> <ol style="list-style-type: none"> Complete a field note journal based on observations of various topics. Research the life of a scientist and report on how he or she used the scientific method <p>Standard Assessment:</p> <ol style="list-style-type: none"> Weekly quizzes using “Exam View Pro” Chapter/Unit tests using 		<p>Multisensory “Hands-On” activities / informal assessments / manipulatives Modify format as needed Simple – to – Complex formats Small, sequential steps Frequent review sessions / repetition Use of clues / hints Use of webs / diagrams Concrete examples Extra practice</p>

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				<p>“Exam View Pro”</p> <p>Teacher Generated Assessment:</p> <p>Current event journal responses based on examples of the scientific method being used in everyday life</p>		
October	<p>Life Science Content Statement</p> <p>Cells are specialized to perform specific roles in order to keep the body functioning. Tissues, organs and systems are composed of cells that grow, reproduce and differentiate.</p>	<p>Compare characteristics of the systems of the body.</p> <p>Design investigations to determine the needs of various living things.</p> <p>Predict the effects on the body if various systems were to stop functioning.</p> <p>Identify evidence of systems of the body working together.</p> <p>Reflect on what is necessary for our bodies to have so many different systems.</p> <p>Model the stages of cell division.</p> <p>Compare and contrast cell division and cancer.</p>	<p>5.3.8.A.1</p> <p>5.3.8.A.1</p> <p>5.3.8.A.1</p> <p>5.3.8.A.1</p> <p>5.3.8.A.1</p> <p>5.3.8.A.2</p> <p>5.3.8.A.2</p>	<p>Lab Practicum:</p> <p>1. Design and conduct experiments to observe the needs of various living things.</p> <p>Projects:</p> <p>1. Research how specialized cells form, grow and repair themselves.</p> <p>Standard Assessment:</p> <p>1. Weekly quizzes using “Exam View Pro”</p> <p>2. Chapter/Unit tests using “Exam View Pro”</p> <p>Teacher Generated</p>		

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				Assessment: 1. Journal response: What would happen if stem cell technology became a common practice to treat a variety of diseases?		
November	Life Science Content Statement Natural Selection is a process that enables organisms to adapt to their environment. Over time, adaptations may result in the evolution of a species	Design and investigations to analyze the outcome of human impact on the natural selection of a species. Compare evidence of human impact on the natural selection of a species. Analyze how a branching tree shows evolutionary change over time. Present how a branching tree might change over time based on environmental and human factors.	5.3.8.E.1 5.3.8.E.1 5.3.8.E.2 5.3.8.E.2	Lab Practicum: 1. Design and conduct experiments to show the process of how a fossil forms. 2. Design and conduct experiments to model the process of natural selection. Projects: 1. Complete a branching tree of a specific group of mammals. 2. Research the impact of human pollution on the natural selection of the English pepper moth. Standard Assessment: 1. Weekly quizzes using “Exam View Pro”		Review directions / student restate information Provide notes / outlines Supplemental visuals Monitor time-on-task Frequent positive feedback Encourage participation (provide built-in expected opportunities) Extended time HW load may need to be adjusted Testing accommodations based on individual needs and abilities

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				2. Chapter/Unit tests using “Exam View Pro” Teacher Generated Assessment: 1. Journal responses to Darwin’s controversial ideas.		
December	Physical Science Content Statement When elements react, new substances can form. Knowledge of the periodic table of elements can help to predict and identify the products that will form when reactants combine.	Explain various sources of evidence for the model of the atom. Analyze the periodic table of elements to identify patterns and trends. Design investigations to observe and describe various phase changes of matter. Evaluate a substance using its density as an indicator.	5.2.8.A.2, 5.2.8.A.4 5.2.8.A.1 5.2.8.A.3 5.2.8.A.5	Lab Practicum: 1. Organize and graph data to prove whether or not a phase change has occurred. 2. Identify and analyze various elements based on their physical properties. Project: 1. Create an element cereal box project 2. Research the scientists involved in creating the atomic theory. Standard Assessment:		

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				1. Weekly quizzes using “Exam View Pro” 2. Chapter/Unit tests using “Exam View Pro” Teacher Generated Assessment: 1. Essay: Is too much scientific knowledge a good thing or a bad thing (in the light of the WWII Atomic bomb droppings)		
January	<p>Physical Science Content Statement</p> <p>Mass is conserved during a chemical reaction. The number of atoms before and after a reaction remains the same. The properties of the reactants may be different than the properties of the products.</p>	<p>Design investigations to provide evidence that the mass of the reactants is the same as the mass of the products during a chemical reaction in a closed system.</p> <p>Determine if a substance is a metal or a non-metal using the properties of metals.</p> <p>Compare and describe what happens when acids and bases react.</p> <p>Design an experiment to identify how the physical and chemical</p>	<p>5.2.8.A.6</p> <p>5.2.8.B.1</p> <p>5.2.8.A.7</p> <p>5.2.8.B.2</p>	<p>Lab Practicum: 1. Make observations to determine if a chemical reaction has occurred.</p> <p>2. Use litmus paper to test the acidity of various substances.</p> <p>3. Measure the mass of reactants and products in a closed system during a chemical reaction.</p> <p>Project: 1. Compare and contrast an open system and</p>		

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		properties of the reactants and the products differ during a chemical reaction.		<p>a closed system.</p> <p>2. Research different chemical reactions used to develop various everyday products.</p> <p>Standard Assessment: 1. Weekly quizzes using “Exam View Pro”</p> <p>2. Chapter/Unit tests using “Exam View Pro”</p> <p>Teacher Generated Assessment: Journal response: what would be the effect of not having chemical reactions?</p>		
February	<p>Physical Science Content Statement</p> <p>Motion occurs when an object changes position. According to Newton, objects remain in motion unless acted upon by an</p>	<p>Design an investigation to describe some examples of objects in motion.</p> <p>Gather and analyze data from experiments involving speed, velocity and acceleration.</p> <p>Reflect on the importance of</p>	<p>5.2.8.E.1</p> <p>5.2.8.E.1</p> <p>5.2.8.E.1</p> <p>5.2.8.E.2</p>	<p>Lab Practicum:</p> <p>1. Design and conduct experiments to measure the speed and acceleration of various objects.</p>		

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Month	Content	Skills	Standards	Assessments	Materials	Accommodations/ Modifications
	outside force. Speed is determined by how far an object travels in a certain amount of time.	<p>measuring speed in the case of various methods of transportation.</p> <p>Calculate data from experiments involving time, distance and changes in speed.</p> <p>Evaluate the outcome of experiments with different initial and final speeds.</p> <p>Compare evidence of human technology rising from the knowledge of speed and acceleration</p> <p>Experiment to determine the forces that cause objects in motion to either remain in motion or stop,</p>	<p>5.2.8.E.1</p> <p>5.2.8.E.1</p> <p>5.2.8.E.1</p>	<p>Projects:</p> <p>2. Research the life and accomplishments of Isaac Newton.</p> <p>3. Analyze graphs of speed versus time and distance versus time.</p> <p>Standard Assessment:</p> <p>1. Weekly quizzes using “Exam View Pro”</p> <p>2. Chapter/Unit tests using “Exam View Pro”</p> <p>Teacher Generated Assessment:</p> <p>1. Journal response to the importance of knowing about acceleration and deceleration when driving a car.</p>		
March	<p>Physical Science Content Statement</p> <p>Forces have magnitude and direction. Forces can be added. The net force is the sum of all forces acting on an object Forces can also</p>	<p>Design an investigation to describe some examples of balanced and unbalanced forces.</p> <p>Gather and analyze data from experiments involving balanced and unbalanced forces.</p>	<p>5.2.8.E.2</p> <p>5.2.8.E.2</p> <p>5.2.8.E.2</p> <p>5.2.8.E.2</p>	<p>Lab Practicum:</p> <p>1. Design and conduct experiments to model the forces of friction and gravity on speed and acceleration.</p> <p>Projects:</p>		

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	balance each other out.	<p>Reflect on the importance of using seat belts when riding in an automobile.</p> <p>Calculate data from experiments involving gravity and friction.</p> <p>Evaluate the outcome of balanced and unbalanced forces interacting.</p> <p>Compare evidence of human technology rising from the knowledge of gravity and forces in outer space.</p>	5.2.8.E.2	<p>1. Complete a timeline of the invention and use of rockets and satellites.</p> <p>2. Analyze pictures and models of balanced and unbalanced forces.</p> <p>Standard Assessment:</p> <p>1. Weekly quizzes using “Exam View Pro”</p> <p>2. Chapter/Unit tests using “Exam View Pro”</p> <p>Teacher Generated Assessment:</p> <p>1. Journal response to the importance of understanding gravity and acceleration in developing satellite technologies.</p>		
April	<p>Physical Science Content Statement</p> <p>Energy can be transferred from one form to another but it can never be created or destroyed. Energy can be transferred through potential and kinetic</p>	<p>Compare some sources of energy.</p> <p>Analyze data from experiments involving potential and kinetic energy.</p> <p>Design an experiment to test the outcome of an object converting</p>	<p>5.2.8.D.1</p> <p>5.2.8.D.1</p> <p>5.2.8.D.1</p> <p>5.2.8.D.2</p> <p>5.2.8.D.2</p>	<p>Lab Practicum: 1. Design and conduct experiments to show the conversion of potential energy to kinetic energy.</p> <p>2. Design and conduct experiments to show how batteries store and release</p>		<p>Review directions / student restate information</p> <p>Provide notes / outlines</p> <p>Supplemental visuals</p> <p>Monitor time-on-task</p> <p>Frequent positive feedback</p> <p>Encourage participation</p>

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	energy, nuclear reactions, and the process of photosynthesis.	<p>potential energy to kinetic energy.</p> <p>Design an experiment to identify evidence of conservation of energy in a chemical reaction.</p> <p>Describe the importance of the sun's energy for humans.</p> <p>Research the positive and negative effects of nuclear energy.</p>	5.2.8.D.2	<p>energy through a circuit.</p> <p>Projects: 1. Design a model car that can move down a ramp using potential and kinetic energy.</p> <p>2. Research and present the ways how humans are dependent on energy from the sun.</p> <p>Standard Assessment: 1. Weekly quizzes using "Exam View Pro" 2. Chapter/Unit tests using "Exam View Pro"</p> <p>Teacher Generated Assessment: 1. Journal response: What would our world be like without batteries?</p>		<p>(provide built-in expected opportunities)</p> <p>Extended time</p> <p>HW load may need to be adjusted</p> <p>Testing accommodations based on individual needs and abilities</p>
May	<p>Earth Systems Science Content Statement</p> <p>The positions of the Earth, Moon and Sun cause the cycles of the moon and tide cycles on Earth. The Earth's tilt, its revolution around the sun and rotation cause the seasons to</p>	<p>Use evidence to describe the effect of the moon on Earth's tides.</p> <p>Compare and contrast a solar eclipse with a lunar eclipse.</p> <p>Identify evidence of gravitational force between two</p>	<p>5.4.8.A.1</p> <p>5.4.8.A.2</p>	<p>Lab Practicum:</p> <p>1. Design and conduct experiments to model the rotation of the Earth and its orbit around the sun.</p> <p>2. Design and conduct experiments to model the gravitational forces exerted between objects of different</p>		

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	change on Earth.	<p>planets.</p> <p>Design an experiment to analyze data from the sun's position relative to the Earth at different times of the year.</p> <p>Model the rotation of a planet in an orbital cycle.</p> <p>Reflect on the importance of the sun's radiation in determining the seasons.</p>		<p>size.</p> <p>Projects:</p> <ol style="list-style-type: none"> 1. Design a model of how the moon changes phases and how this affects the Earth.. 2. Research how the angle of the sun and amount of radiation striking Earth affects the season cycle. 3. Analyze and graph data on the sun's position relative to moon can cause an eclipse. <p>Standard Assessment:</p> <ol style="list-style-type: none"> 1. Weekly quizzes using "Exam View Pro" 2. Chapter/Unit tests using "Exam View Pro" <p>Teacher Generated Assessment:</p> <ol style="list-style-type: none"> 1. Journal response: What would happen if the moon stopped rotating around the Earth? 		
June	<p>Earth Systems Science Content Statement</p> <p>Gravity is a force that</p>	Compare characteristics in orbits of the inner planets and the outer	<p>5.4.8.A.3</p> <p>5.4.8.A.4</p>	<p>Lab Practicum:</p> <ol style="list-style-type: none"> 1. Design and conduct experiments to model Kepler's 		

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	<p>increases with the size of a celestial body. Large planets that are closer to us have more gravitational attraction to us than small planets that are farther away. The motion of objects in space is determined by gravitational forces.</p>	<p>planets.</p> <p>Design models to show the different gravitational attractions exerted by our solar system's planets.</p> <p>Predict the potential effects of comets, meteors and asteroids on the Earth.</p> <p>Compare the orbits of planets with the orbits of comets and meteors.</p>		<p>laws.</p> <p>2. Design and conduct experiments to show how a satellite uses the Earth's gravity.</p> <p>Projects: 1. Compare and contrast the different celestial bodies in the solar system and their orbits around the sun.</p> <p>2. Research and present the effects that comets, asteroids and meteors have on the solar system.</p> <p>Standard Assessment: 1. Weekly quizzes using "Exam View Pro"</p> <p>2. Chapter/Unit tests using "Exam View Pro"</p> <p>Teacher Generated Assessment: 1. Journal response: How does the orbit of a comet compare with the orbit of a planet?</p>		