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# Fourth Grade Science

Curriculum Guide

Dunmore School District

Dunmore, PA



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Curriculum Guide**

**Fourth Grade Science**

**Prerequisite:**

- Completion of Third Grade

**Course Description:**

The Fourth Grade Science course is designed to provide students with an understanding of fourth grade science concepts as they pertain to the Pennsylvania State Core Standards. The course content gives students an introduction into various disciplines such as Physical, Life, and Earth Science. Students will delve deeper into these areas to further explore topics that include but are not limited to interaction between objects, electricity, magnetism, light, heat, sound, natural disasters, cells, systems, Earth's resources, erosion, rock formation, landforms, water environments, weather, conservation, waves, digital information, and living organisms.

**Special Education:**

After a student has been evaluated and found to be eligible for specially designed instruction under one of the 13 disability categories, an individualized education plan will be developed to help the student succeed through a more intense intervention program. Special Education is the practice of educating students in a way that addresses their individual differences and needs. The purpose of special education is to provide equal access to education for children ages birth through 21 by providing specialized services that will lead to school success in general education. Our goal for each student is for him/her to be educated in his/her least restrictive environment with additional supports by way of specially designed instruction. After all interventions in the general education setting have been exhausted and the student is still not making progress, students can receive direct instruction in a special education classroom. Direct instruction provides more intense intervention and replacement instruction in order to minimize skill deficits. In our special education classrooms, students will have access to the standards-based general education curriculum, as well as using various research-based intervention programs. Resources and activities will be adjusted based on individual student needs. Suggested time found within the curriculum will be adjusted as needed per individual student's needs.

Special Education Strategies can be located in the IEP Enhancements table located in Appendix: A at the end of this document.

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Year-at-a-glance

<b>Subject: Fourth Grade Science</b>	<b>Grade Level: 4</b>	<b>Date Completed: 4/3/2019</b>
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**1<sup>st</sup> Quarter**

Topic	Resources	Standards
Matter	Approved Textbook <i>Science</i> , Chapter 11: Lessons 1-4	3.1.10.B, 3.1.10.C, 3.4.10.A, S11.C.1.1
Heat	Approved Textbook <i>Science</i> , Chapter 12: Lessons 1-2	3.4.4.B, 3.4.4.C, S4.A.1.1.1, S4.C.1.1.1, S4.A.1.1.2, S4.C.2.1.1, S4.C.2.1.2, S4.C.2.1.3, S4.C.2.1.4
Electricity and Magnetism	Approved Textbook <i>Science</i> , Chapter 13: Lessons 1-5	3.4.4.B, 3.4.4.C, S4.A.1.1.1, S4.A.1.1.2, S4.C.2.1.1, S4.C.2.1.2, S4.C.2.1.3, S4.C.2.1.4, S4.C.3.1.1, S4.C.3.1.2, S4.C.3.1.3

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**2<sup>nd</sup> Quarter**

Topic	Resources	Standards
Sound and Light	Approved Textbook <i>Science</i> , Chapter 14: Lessons 1-4 1-4	3.4.4.B, 3.4.4.C, S4.A.1.1.1, S4.A.1.1.2, S4.C.2.1.1, S4.C.2.1.2, S4.C.2.1.3, S4.C.2.1.4, S4.A.2.1.1, S4.A.2.1.2, S4.A.2.1.3, S4.A.2.1.4, S4.C.3.1.1, S4.C.3.1.2, S4.C.3.1.3
Plants and Animals and their Ecosystems	Approved Textbook <i>Science</i> , Chapters 1-4	3.3.4.C, S4.B.1.1.1, S4.B.1.1.2, S4.B.1.1.3, S4.B.1.1.4, S4.B.1.1.5
Renewable and Nonrenewable Resources	Approved Textbook <i>Science</i> , Chapter 10: Lesson 2 1-4	3.4.4.B, S4.A.1.1.1, S4.A.1.1.2, S4.A.2.1.1, S4.A.2.1.2, S4.A.2.1.3, S4.A.2.1.4, S4.C.2.1.1, S4.C.2.1.2, S4.C.2.1.3, S4.C.2.1.4,

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**3<sup>rd</sup> Quarter**

Topic	Resources	Standards
Water Cycle	Approved Textbook <i>Science</i> , Chapter 6: Lessons 1-4	3.1.7.A, S4.C.3.1.1, S4.C.3.1.2, S4.C.3.1.3
Sun, Moon, and Earth	Approved Textbook <i>Science</i> , Chapter 17: Lessons 1-2	3.1.7.A, 3.4.4.D, S4.C.3.1.1, S4.C.3.1.2, S4.C.3.1.3, S.5.D.3.1.1
Motion	Approved Textbook <i>Science</i> , Chapter 15: Lessons 1-3	3.1.7.A, 3.4.4.B, 3.4.4.C, 3.8.4.A, S4.A.1.1.1, S4.A.1.1.2, S4.A.2.1.1, S4.A.2.1.2, S4.A.2.1.3, S4.A.2.1.4, S4.C.3.1.1, S4.C.3.1.2, S4.C.3.1.3

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**4<sup>th</sup> Quarter**

Topic	Resources	Standards
Natural Disasters		3.4.4.B, S4.A.1.1.1, S4.A.1.1.2, S4.A.2.1.1, S4.A.2.1.2, S4.A.2.1.3, S4.A.2.1.4
Digital Information	Approved Textbook <i>Science</i> , Chapter 19	3.4.4.B, S4.A.1.1.1, S4.A.1.1.2, S4.A.2.1.1, S4.A.2.1.2, S4.A.2.1.3, S4.A.2.1.4
Landforms		3.5.4.A, 3.5.4.B, S4.D.1.1.1, S4.D.1.1.2, S4.D.1.1.3, S4.D.1.2.1, S4.D.1.2.2, S4.D.1.2.3, S4.D.1.3.1, S4.D.1.3.2, S4.D.1.3.3, S4.D.1.3.4
Bodies of Water		3.5.4.B, S4.D.1.2.1, S4.D.1.2.2, S4.D.1.2.3
Review of Selected 4 <sup>th</sup> Grade Skills		

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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Matter:</b> Matter can be understood in terms of the types of atoms present and the interactions both between and within atoms.</p>	<p><b>Anchor Descriptor:</b> <b>S11.C.1.1</b> Explain that matter is made of particles called atoms and that atoms are composed of even smaller particles (e.g., protons, neutrons, electrons)</p> <p><b>PA Academic Standards:</b> <b>3.1.10.B</b> Describe concepts of models as a way to predict and understand science and technology.</p> <ul style="list-style-type: none"> <li>Distinguish between different types of models and modeling techniques and apply their appropriate use in specific applications (e.g., kinetic gas theory, DNA).</li> <li>Examine the advantages of using models to demonstrate processes and outcomes (e.g., blue print analysis, structural stability).</li> <li>Apply mathematical models to science and technology.</li> </ul> <p><b>3.1.10.C</b> Apply patterns as repeated processes or recurring elements in science and technology.</p> <ul style="list-style-type: none"> <li>Examine and describe</li> </ul>	<p><b>Eligible Content:</b> <b>S11.C.1.1</b> Explain the relationship between the structure and properties of matter.</p> <hr/> <p><b>Essential Knowledge/Skills:</b> <b>Each atom has a charged substructure consisting of a nucleus, which is made of protons and neutrons, surrounded by electrons.</b></p> <p>The periodic table orders elements in increasing number of protons and places those with similar chemical properties in columns.</p> <p><b>Vocabulary:</b> solid liquid gas mass volume density mixtures solutions solute solvent</p>	<p><b>Approved Textbook and Workbook Science, Chapter 11: Lessons 1-4</b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>19 days</p>

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	<p>recurring patterns that form the basis of biological classification, chemical periodicity, geological order and astronomical order.</p> <ul style="list-style-type: none"> <li>• Examine and describe stationary physical patterns.</li> <li>• Examine and describe physical patterns in motion.</li> </ul> <p><b>3.4.10.A</b> Explain concepts about the structure and properties of matter.</p> <ul style="list-style-type: none"> <li>• Know that atoms are composed of even smaller sub-atomic structures whose properties are measurable.</li> <li>• Explain the repeating pattern of chemical properties by using the repeating patterns of atomic structure within the periodic table.</li> <li>• Predict the behavior of gases through the use of Boyle’s, Charles’ or the ideal gas law, in everyday situations.</li> <li>• Describe phases of matter according to the Kinetic Molecular Theory.</li> <li>• Explain the formation of compounds and their resulting properties using bonding theories (ionic and covalent).</li> </ul>	<p>solubility physical change chemical change phase change elements periodic table</p>			
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	<ul style="list-style-type: none"><li>• Recognize formulas for simple inorganic compounds.</li><li>• Describe various types of chemical reactions by applying the laws of conservation of mass and energy.</li><li>• Apply knowledge of mixtures to appropriate separation techniques.</li><li>• Understand that carbon can form several types of compounds.</li></ul>				
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Heat:</b> Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<p><b>Anchor Descriptor:</b>  <b>S4.A.1.1</b> Identify and explain the application of scientific, environmental, or technological knowledge to possible solutions to problems.   <b>S4.C.1.1</b> Describe observable physical properties of matter.   <b>S4.C.2.1</b> Recognize basic energy types and sources, or describe how energy can be changed from one form to another.</p> <p><b>PA Academic Standards: Science</b>  <b>3.4.4B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> <li>• Describe static electricity in terms of attraction, repulsion and sparks.</li> <li>• Apply knowledge of the basic electrical circuits to design and construction simple</li> </ul>	<p><b>Eligible Content:</b>  <b>S4.A.1.1.1</b> Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).   <b>S4.C.1.1.1</b> Use physical properties [e.g., mass, shape, size, volume, color, texture, magnetism, state (i.e., solid, liquid, and gas), conductivity (i.e., electrical and heat)] to describe matter.   <b>S4.C.1.1.2</b> Categorize/group objects using physical characteristics.   <b>S4.C.2.1.1</b> Identify energy forms, energy transfer, and energy examples (e.g., light, heat, electrical).   <b>S4.C.2.1.2</b> Describe the flow of energy through an object or system (e.g., feeling radiant heat from a light bulb, eating food to get energy, using a</p>	<p><b>Approved Textbook and Workbook <i>Science</i>, Chapter 12: Lessons 1-2</b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p><b>Teacher prepared tests, quizzes, etc.</b></p>	<p><b>9 days</b></p>

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	<p>direct current circuits.</p> <ul style="list-style-type: none"> <li>• Classify materials as conductors and nonconductors.</li> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</li> </ul>	<p>battery to light a bulb or run a fan).</p> <p><b>S4.C.2.1.3</b> Recognize or illustrate simple direct current series and parallel circuits composed of batteries, light bulbs (or other common loads), wire, and on/off switches.</p> <p><b>S4.C.2.1.4</b> Identify characteristics of sound (e.g., pitch, loudness, reflection).</p> <hr/> <p><b>Essential Knowledge/Skills:</b> <b>Materials that allow electricity to flow are conductors; those that do not are insulators.</b></p> <p>Investigate and describe conductors and insulators.</p> <p><b>The faster a given object is moving, the more energy it possesses.</b></p> <p>Use evidence to construct an explanation for the relationship between speed, energy and motion.</p> <p><b>Energy can be moved from</b></p>			
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**place to place by moving objects or through sound, light, or electric currents.**

Carry out investigations to provide evidence that energy is transferred from place to place by sound, light, heat, electric currents, interacting magnets, and moving or colliding objects.

**Energy is present whenever there are moving objects, sound, light, or heat.**

Construct an explanation for the relationship between energy and motion.

**When objects collide, energy can be transferred from one object to another, thereby changing their motion. In such collisions, some energy is typically also transferred to the surrounding air. As a result, the air gets heated and sound is produced.**

Construct an investigation to demonstrate the relationship between energy and motion.

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		<p><b>Vocabulary:</b> thermal energy heat temperature conduction convection radiation convection current insulators conductors</p>			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Electricity and Magnetism:</b> Interactions between any two objects can cause changes in one or both.</p>	<p><b>Anchor Descriptor:</b> <b>S4.C.2.1</b> Recognize basic energy types and sources, or describe how energy can be changed from one form to another.</p> <p><b>PA Academic Standards: Science 3.4.4.B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> <li>• Describe static electricity in terms of attraction, repulsion and sparks.</li> <li>• Apply knowledge of the basic electrical circuits to design and construction simple direct current circuits.</li> <li>• Classify materials as conductors and nonconductors.</li> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of</li> </ul>	<p><b>Eligible Content:</b> <b>S4.C.2.1.1</b> Identify energy forms, energy transfer, and energy examples (e.g., light, heat, electrical).</p> <p><b>S4.C.2.1.2</b> Describe the flow of energy through an object or system (e.g., feeling radiant heat from a light bulb, eating food to get energy, using a battery to light a bulb or run a fan).</p> <p><b>S4.C.2.1.3</b> Recognize or illustrate simple direct current series and parallel circuits composed of batteries, light bulbs (or other common loads), wire, and on/off switches.</p> <p><b>S4.C.2.1.4</b> Identify characteristics of sound (e.g., pitch, loudness, reflection).</p> <hr/> <p><b>Essential Knowledge/Skills:</b> <b>Electrical circuits require a complete loop through which an electrical current can pass.</b></p>	<p><b>Approved Textbook and Workbook <i>Science</i>, Chapter 13: Lessons 1-2</b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>4 days</p>

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	<p>light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</p>	<p>Construct serial and parallel circuits and describe the path of electrons in the circuit.</p> <p><b>An open circuit is an incomplete electric pathway; a closed circuit is a complete pathway.</b></p> <p>Demonstrate and explain open and closed circuits utilizing switches.</p> <p><b>Vocabulary:</b> Static Electricity Electric Current Parallel Circuit Series Circuit Open Circuit Closed Circuit</p>			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Electricity and Magnetism:</b> Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<p><b>Anchor Descriptor:</b>  <b>S4.A.1.1</b> Identify and explain the application of scientific, environmental, or technological knowledge to possible solutions to problems.  <b>S4.C.2.1</b> Recognize basic energy types and sources, or describe how energy can be changed from one form to another.  <b>S4.C.3.1</b> Identify and describe different types of force and motion resulting from these forces, or the effect of the interaction between force and motion.</p> <p><b>PA Academic Standards: Science</b>  <b>3.4.4.B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> <li>• Describe static electricity in terms of attraction,</li> </ul>	<p><b>Eligible Content:</b>  <b>S4.A.1.1.1</b> Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).  <b>S4.A.1.1.2</b> Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment.  <b>S4.C.2.1.1</b> Identify energy forms, energy transfer, and energy examples (e.g., light, heat, electrical).  <b>S4.C.2.1.2</b> Describe the flow of energy through an object or system (e.g., feeling radiant heat from a light bulb, eating food to get energy, using a</p>	<p><b>Approved Textbook and Workbook <i>Science</i>, Chapter 13: Lessons 1-2</b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p><b>Teacher prepared tests, quizzes, etc.</b></p>	<p><b>4 days</b></p>



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	<p>repulsion and sparks.</p> <ul style="list-style-type: none"> <li>• Apply knowledge of the basic electrical circuits to design and construction simple direct current circuits.</li> <li>• Classify materials as conductors and nonconductors.</li> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</li> </ul> <p><b>3.4.4.C</b> Observe and describe different types of force and motion.</p> <ul style="list-style-type: none"> <li>• Identify characteristics of sound (pitch, loudness and echoes)</li> <li>• Recognize forces that attract or repel other objects and demonstrate them.</li> <li>• Describe various types of motions.</li> <li>• Compare the relative movement of objects and describe types of motion that are evident.</li> <li>• Describe the position of an</li> </ul>	<p>battery to light a bulb or run a fan).</p> <p><b>S4.C.2.1.3</b> Recognize or illustrate simple direct current series and parallel circuits composed of batteries, light bulbs (or other common loads), wire, and on/off switches.</p> <p><b>S4.C.2.1.4</b> Identify characteristics of sound (e.g. pitch, loudness, reflection).</p> <p><b>S4.C.3.1.1</b> Describe changes in motion caused by forces (e.g., magnetic, pushes or pulls, gravity, friction).</p> <p><b>S4.C.3.1.2</b> Compare the relative movement of objects or describe types of motion that are evident (e.g., bouncing ball, moving in a straight line, back and forth, merry-go-round).</p> <p><b>S4.C.3.1.3</b> Describe the position of an object by locating it relative to another object or a stationary background (e.g., geographic direction, left, up).</p>			
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	<p>object by locating it relative to another object or the background (e.g., geographic direction, left, up).</p>	<hr/> <p><b>Essential Knowledge/Skills:</b>  <b>Energy can be moved from place to place by moving objects or through sound, light, or electric currents.</b></p> <p>Obtain and communicate information for how technology allows humans to concentrate, transport, and store energy for practical use.</p> <p><b>Energy can be moved from place to place by moving objects or through sound, light, or electric currents.</b></p> <p>Design and construct a device that converts energy from one form to another using given design criteria.</p> <p><b>Energy can be moved from place to place by moving objects or through sound, light, or electric currents.</b></p> <p>Design and test a solution to a problem that utilizes the transfer of electric energy in the solution using given design constraints.</p>			
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**Energy can be moved from place to place by moving objects or through sound, light, or electric currents.**

Carry out investigations to provide evidence that energy is transferred from place to place by sound, light, heat, electric currents, interacting magnets, and moving or colliding objects.

**Energy can be moved from place to place by moving objects or through sound, light, or electric currents.**

Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electrical currents.

**Vocabulary:**  
Static Electricity  
Electric Current  
Parallel Circuit  
Series Circuit  
Open Circuit  
Closed Circuit

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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Electricity and Magnetism:</b> Interactions between any two objects can cause changes in one or both.</p>	<p><b>Anchor Descriptor:</b> <b>S4.C.3.1</b> Identify and describe different types of force and motion resulting from these forces, or the effect of the interaction between force and motion.</p> <p><b>PA Academic Standards: Science</b> <b>3.4.4.C</b> Observe and describe different types of force and motion.</p> <ul style="list-style-type: none"> <li>• Identify characteristics of sound (pitch, loudness and echoes)</li> <li>• Recognize forces that attract or repel other objects and demonstrate them.</li> <li>• Describe various types of motions.</li> <li>• Compare the relative movement of objects and describe types of motion that are evident.</li> <li>• Describe the position of an object by locating it relative to another object or the background (e.g., geographic direction, left, up).</li> </ul>	<p><b>Eligible Content:</b> <b>S4.C.3.1.1</b> Describe changes in motion caused by forces (e.g., magnetic, pushes or pulls, gravity, friction).</p> <p><b>S4.C.3.1.2</b> Compare the relative movement of objects or describe types of motion that are evident (e.g., bouncing ball, moving in a straight line, back and forth, merry-go-round).</p> <p><b>S4.C.3.1.3</b> Describe the position of an object by locating it relative to another object or a stationary background (e.g., geographic direction, left, up).</p> <hr/> <p><b>Essential Knowledge/Skills:</b> <b>When objects touch or collide, they push on one another and can change motion or shape. Magnets create a magnetic field that can exert an attracting or repelling force on other objects that can affect</b></p>	<p><b>Approved Textbook and Workbook <i>Science</i>, Chapter 13: Lessons 3-5</b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>4 days</p>

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**motion.**

Investigate the forces between two or more magnets to identify patterns.

**Magnets create a magnetic field that can exert an attracting or repelling force on other objects that can affect motion.**

Investigate the push-and-pull forces between objects not in contact with one another.

**When objects touch or collide, they push on one another and can change motion or shape. Magnets create a magnetic field that can exert an attracting or repelling force on other objects that can affect motion.**

Design and refine solutions to a problem by using magnets to move objects not in contact with one another.

**Vocabulary:**

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		Magnets Magnetism Magnetic Poles Compasses Electromagnets Generators Strength of Magnets Attract Repel			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Electricity and Magnetism:</b> Interactions between any two objects can cause changes in one or both.</p>	<p><b>Anchor Descriptor:</b> <b>S4.C.2.1</b> Recognize basic energy types and sources, or describe how energy can be changed from one form to another.</p> <p><b>PA Academic Standards: Science</b> <b>3.4.4.B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> <li>• Describe static electricity in terms of attraction, repulsion and sparks.</li> <li>• Apply knowledge of the basic electrical circuits to design and construction simple direct current circuits.</li> <li>• Classify materials as conductors and nonconductors.</li> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of</li> </ul>	<p><b>Eligible Content:</b> <b>S4.C.2.1.1</b> Identify energy forms, energy transfer, and energy examples (e.g., light, heat, electrical).</p> <p><b>S4.C.2.1.2</b> Describe the flow of energy through an object or system (e.g., feeling radiant heat from a light bulb, eating food to get energy, using a battery to light a bulb or run a fan).</p> <p><b>S4.C.2.1.3</b> Recognize or illustrate simple direct current series and parallel circuits composed of batteries, light bulbs (or other common loads), wire, and on/off switches.</p> <p><b>S4.C.2.1.4</b> Identify characteristics of sound (e.g., pitch, loudness, reflection).</p> <hr/> <p><b>Essential Knowledge/Skills:</b> <b>A core of iron or steel becomes an electromagnet when electricity flows</b></p>	<p><b>Approved Textbook and Workbook <i>Science</i>, Chapter 13: Lessons 3-5</b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>4 days</p>

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	<p>light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</p> <p><b>3.4.7.C</b> Relate energy sources and transfers to heat and temperature.</p> <ul style="list-style-type: none"> <li>• Identify and describe sound changes in moving objects.</li> <li>• Know that the sun is a major source of energy that emits wavelengths of visible light, infrared and ultraviolet radiation.</li> <li>• Explain the conversion of one form of energy to another by applying knowledge of each form of energy.</li> <li>• Explain the parts and functions in an electrical circuit.</li> </ul>	<p><b>through a coil of insulated wire surrounding it.</b></p> <p>Construct an electromagnet and plan an investigation to determine how one can make the electromagnet stronger or weaker.</p> <p><b>Electromagnetic forces can be attractive or repulsive, and their sizes depend on the magnitudes of the charges, currents, or magnetic strengths involved and on the distances between the interacting objects.</b></p> <p>Plan and carry out an investigation to determine factors that affect the strength of electric and magnetic forces.</p> <p><b>Vocabulary:</b> Magnets Magnetism Magnetic Poles Compasses Electromagnets Generators Strength of Magnets</p>			
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		Attract Repel			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Electricity and Magnetism:</b> Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<p><b>Anchor Descriptor:</b> <b>S4.A.1.1</b> Identify and explain the application of scientific, environmental, or technological knowledge to possible solutions to problems.</p> <p><b>S4.A.2.1</b> Apply skills necessary to conduct an experiment or design a solution to solve a problem.</p> <p><b>PA Academic Standards: Science</b> <b>3.4.4.B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> <li>• Describe static electricity in terms of attraction, repulsion and sparks.</li> <li>• Apply knowledge of the basic electrical circuits to design and construction simple direct current circuits.</li> <li>• Classify materials as conductors and nonconductors.</li> </ul>	<p><b>Eligible Content:</b> <b>S4.A.1.1.1</b> Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).</p> <p><b>S4.A.1.1.2</b> Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment.</p> <p><b>S4.A.2.1.1</b> Generate questions about objects, organisms, or events that can be answered through scientific investigations.</p> <p><b>S4.A.2.1.2</b> Design and describe an investigation (a fair test) to test one variable.</p>	<p><b>Approved Textbook and Workbook <i>Science</i>, Chapter 13: Lessons 3-5</b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>4 days</p>

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	<ul style="list-style-type: none"> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</li> </ul> <p><b>3.4.4.C</b> Observe and describe different types of force and motion.</p> <ul style="list-style-type: none"> <li>• Identify characteristics of sound (pitch, loudness and echoes)</li> <li>• Recognize forces that attract or repel other objects and demonstrate them.</li> <li>• Describe various types of motions.</li> <li>• Compare the relative movement of objects and describe types of motion that are evident.</li> <li>• Describe the position of an object by locating it relative to another object or the background (e.g., geographic direction, left, up).</li> </ul>	<p>Observe a natural phenomenon (e.g., weather changes, length of daylight/night, movement of shadows, animal migrations, growth of plants), record observations, and then make a prediction based on those observations.</p> <p><b>S4.A.2.1.4</b> State a conclusion that is consistent with the information/data.</p> <hr/> <p><b>Essential Knowledge/Skills:</b>  <b>Magnets can exert forces on other magnets or on materials, causing energy transfer between them (e.g., leading to changes in motion) even when the objects are not touching.</b></p> <p>Demonstrate the energy transfer between two objects using a magnet and another object.</p> <p><b>Vocabulary:</b>  Magnets  Magnetism</p>			
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		Magnetic Poles Compasses Electromagnets Generators Strength of Magnets Attract Repel			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Sound and Light:</b> Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<p><b>Anchor Descriptors:</b></p> <p><b>S4.A.1.1</b> Identify and explain the application of scientific, environmental, or technological knowledge to possible solutions to problems.</p> <p><b>S4.C.2.1</b> Recognize basic energy types and sources, or describe how energy can be changed from one form to another.</p> <p><b>S4.C.3.1</b> Identify and describe different types of force and motion resulting from these forces, or the effect of the interaction between force and motion.</p> <p><b>PA Academic Standards: Science</b> <b>3.4.4.B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> </ul>	<p><b>Eligible Content:</b></p> <p><b>S4.A.1.1.1</b> Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).</p> <p><b>S4.A.1.1.2</b> Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment.</p> <p><b>S4.C.2.1.1</b> Identify energy forms, energy transfer, and energy examples (e.g., light, heat, electrical).</p> <p><b>S4.C.2.1.2</b> Describe the flow of energy through an object or system (e.g., feeling radiant</p>	<p><b>Approved Textbook and Workbook <i>Science</i>, Chapter 14: Lessons 1-4</b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p><b>Teacher prepared tests, quizzes, etc.</b></p>	<p><b>19 days</b></p>

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	<ul style="list-style-type: none"> <li>• Describe static electricity in terms of attraction, repulsion and sparks.</li> <li>• Apply knowledge of the basic electrical circuits to design and construction simple direct current circuits.</li> <li>• Classify materials as conductors and nonconductors.</li> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</li> </ul> <p><b>3.4.4.C</b> Observe and describe different types of force and motion.</p> <ul style="list-style-type: none"> <li>• Identify characteristics of sound (pitch, loudness and echoes)</li> <li>• Recognize forces that attract or repel other objects and demonstrate them.</li> <li>• Describe various types of motions.</li> <li>• Compare the relative movement of objects and describe types of motion</li> </ul>	<p>heat from a light bulb, eating food to get energy, using a battery to light a bulb or run a fan).</p> <p><b>S4.C.2.1.3</b> Recognize or illustrate simple direct current series and parallel circuits composed of batteries, light bulbs (or other common loads), wire, and on/off switches.</p> <p><b>S4.C.2.1.4</b> Identify characteristics of sound (e.g., pitch, loudness, reflection).</p> <p><b>S4.C.3.1.1</b> Describe changes in motion caused by forces (e.g., magnetic, pushes or pulls, gravity, friction).</p> <p><b>S4.C.3.1.2</b> Compare the relative movement of objects or describe types of motion that are evident (e.g., bouncing ball, moving in a straight line, back and forth, merry-go-round).</p> <p><b>S4.C.3.1.3</b> Describe the position of an object by locating it relative to another object or a stationary</p>			
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	<p>that are evident.</p> <ul style="list-style-type: none"> <li>Describe the position of an object by locating it relative to another object or the background (e.g., geographic direction, left, up).</li> </ul>	<p>background (e.g., geographic direction, left, up).</p> <hr/> <p><b>Essential Knowledge/Skills:</b>  <b>Energy can be moved from place to place by moving objects or through sound, light, or electric currents.</b></p> <p>Carry out investigations to provide evidence that energy is transferred from place to place by sound, light, heat, electric currents, interacting magnets, and moving or colliding objects.</p> <p><b>Energy can be moved from place to place by moving objects or through sound, light, or electric currents.</b></p> <p>Obtain and communicate information for how technology allows humans to concentrate, transport, and store energy for practical use.</p> <p><b>Energy can be moved from place to place by moving</b></p>			
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**objects or through sound, light, or electric currents.**

Design and construct a device that converts energy from one form to another using given design criteria.

**Energy can be moved from place to place by moving objects or through sound, light, or electric currents.**

Design and test a solution to a problem that utilizes the transfer of electric energy in the solution using given design constraints.

**Energy and fuels that humans use are derived from natural sources, and their use affects the environment in multiple ways. Some resources are renewable over time, and others are not.**

Develop a model using examples to explain differences between



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renewable and non-renewable sources of energy.

**Energy can be moved from place to place by moving objects or through sound, light, or electric currents.**

Carry out investigations to provide evidence that energy is transferred from place to place by sound, light, heat, electric currents, interacting magnets, and moving or colliding objects.

**Energy can be moved from place to place by moving objects or through sound, light, or electric currents.**

Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electrical currents.

**Energy is present whenever there are moving objects, sound, light, or heat.**

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Construct an explanation for the relationship between energy and motion.

**When objects collide, energy can be transferred from one object to another, thereby changing their motion. In such collisions, some energy is typically also transferred to the surrounding air. As a result, the air gets heated and sound is produced.**

Construct an investigation to demonstrate the relationship between energy and motion.

**Vocabulary:**

sound  
transverse waves  
longitudinal waves  
compression  
frequency  
wave length  
echoes  
loudness  
pitch  
percussion/wind/piano  
light  
sources of light  
shadows

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		visible/invisible waves reflection refraction absorption translucent transparent opaque convex lenses concave lenses			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Sound and Light:</b> Waves are a repeating pattern of motion that transfers energy from place to place without overall displacement of matter.</p>	<p><b>Anchor Descriptor:</b> <b>S4.A.1.1</b> Identify and explain the application of scientific, environmental, or technological knowledge to possible solutions to problems.</p> <p><b>S4.A.2.1</b> Apply skills necessary to conduct an experiment or design a solution to solve a problem.</p> <p><b>PA Academic Standards: Science</b> <b>3.4.4.B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> <li>• Describe static electricity in terms of attraction, repulsion and sparks.</li> <li>• Apply knowledge of the basic electrical circuits to design and construction simple direct current circuits.</li> <li>• Classify materials as conductors and nonconductors.</li> </ul>	<p><b>Eligible Content:</b> <b>S4.A.1.1.1</b> Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).</p> <p><b>S4.A.1.1.2</b> Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment.</p> <p><b>S4.A.2.1.1</b> Generate questions about objects, organisms, or events that can be answered through scientific investigations.</p> <p><b>S4.A.2.1.2</b> Design and describe an investigation (a fair test) to test one variable.</p> <p><b>S4.A.2.1.3</b> Observe a natural</p>	<p><b>Approved Textbook and Workbook <i>Science</i>, Chapter 14: Lessons 1-4</b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>19 days</p>

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	<ul style="list-style-type: none"> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</li> </ul> <p><b>3.8.4.A</b> Know that people select, create and use science and technology and that they are limited by social and physical restraints.</p> <ul style="list-style-type: none"> <li>• Identify and describe positive and negative impacts that influence or result from new tools and techniques.</li> <li>• Identify how physical technology (e.g., construction, manufacturing, transportation), informational technology and biotechnology are used to meet human needs.</li> <li>• Describe how scientific discoveries and technological advancements are related.</li> <li>• Identify interrelationships</li> </ul>	<p>phenomenon (e.g., weather changes, length of daylight/night, movement of shadows, animal migrations, growth of plants), record observations, and then make a prediction based on those observations.</p> <p><b>S4.A.2.1.4</b> State a conclusion that is consistent with the information/data.</p> <hr/> <p><b>Essential Knowledge/Skills:</b>  <b>Waves are regular patterns of motion, and can be made in water by disturbing the surface. When waves move across the surface of deep water, the water goes up and down in place; it does not move horizontally.</b></p> <p>Identify the patterns of waves by observing their motion in water.</p> <p><b>Waves are regular patterns of motion, and can be made in water by disturbing the surface. When waves move</b></p>			
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	<p>among technology, people and their world.</p> <ul style="list-style-type: none"> <li>• Apply the technological design process to solve a simple problem.</li> </ul> <p><b>3.1.4.B</b> Know models as useful simplifications of objects or processes.</p> <ul style="list-style-type: none"> <li>• Identify different types of models.</li> <li>• Identify and apply models as tools for prediction and insight.</li> <li>• Apply appropriate simple modeling tools and techniques.</li> <li>• Identify theories that serve as models (e.g., molecules).</li> </ul>	<p><b>across the surface of deep water, the water goes up and down in place; it does not move horizontally.</b></p> <p>Provide evidence that waves transfer energy to objects as a wave passes.</p> <p><b>Waves, which are regular patterns of motion, can be made in water by disturbing the surface. When waves move across the surface of deep water, the water goes up and down in place; it does not move in the direction of the wave—observe, for example, a bobbing cork or seabird—except when the water meets the beach.</b></p> <p>Plan data collection methods and make observations to provide evidence that waves transfer energy to objects.</p> <p><b>Waves of the same type can differ in amplitude (height of the wave) and wavelength</b></p>			
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**(spacing between wave peaks).**

Use a model to describe the amplitude and wavelength of waves.

**An object can be seen when light reflected from its surface enters the eyes.**

Investigate and provide evidence that the color people see depends on the color of the available light sources as well as the properties of the surface of the object reflecting the light.

**The color people see depends on the color of the available light sources as well as the properties of the surface.**

Investigate and provide evidence that the color people see depends on the color of the available light sources as well as the properties of the surface of the object reflecting the light.

**Vocabulary:**

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		sound transverse waves longitudinal waves compression frequency wave length echoes loudness pitch percussion/wind/piano light sources of light shadows visible/invisible waves reflection refraction absorption translucent transparent opaque convex lenses concave lenses			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Plants and Animals:</b> All organisms are made of cells and can be characterized by common aspects of their structure and functioning.</p>	<p><b>Anchor Descriptor:</b> <b>S4.B.1.1</b> Identify and describe similarities and differences between living things and their life processes.</p> <p><b>PA Academic Standards: Science</b> <b>3.3.4.C</b> Know that characteristics are inherited and, thus, offspring closely resemble their parents.</p> <ul style="list-style-type: none"> <li>• Identify characteristics for animal and plant survival in different climates.</li> <li>• Identify physical characteristics that appear in both parents and offspring and differ between families, strains or species.</li> </ul>	<p><b>Eligible Content:</b> <b>S4.B.1.1.1</b> Identify life processes of living things (e.g., growth, digestion, respiration).</p> <p><b>S4.B.1.1.2</b> Compare similar functions of external characteristics of organisms (e.g., anatomical characteristics: appendages, type of covering, body segments).</p> <p><b>S4.B.1.1.3</b> Describe basic needs of plants and animals (e.g., air, water, food).</p> <p><b>S4.B.1.1.4</b> Describe how different parts of a living thing work together to provide what the organism needs (e.g., parts of plants: roots, stems, leaves).</p> <p><b>S4.B.1.1.5</b> Describe the life cycles of different organisms (e.g., moth, grasshopper, frog, seed-producing plant).</p> <hr/> <p><b>Essential Knowledge/Skills:</b> <b>Plants and animals have</b></p>	<p><b>Approved Textbook and Workbook <i>Science, Chapters 1-4</i></b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>15 days</p>

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		<p><b>internal and external structures that serve various functions to survive.</b></p> <p>Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</p> <p><b>Vocabulary:</b>          cells          plants vs. animal cells          kingdoms          genus          species          vascular vs. nonvascular plants          flowers          cones          seeds          spores          vertebrate          life cycles          adaptations          photosynthesis          chloroplasts          leaves          stems          roots          plant reproduction          life cycle of plants          ecosystems          herbivores</p>			
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		carnivores omnivores decomposers food chains food webs			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Renewable and Nonrenewable Resources:</b> Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<p><b>Anchor Descriptor:</b>  <b>S4.A.1.1</b> Identify and explain the application of scientific, environmental, or technological knowledge to possible solutions to problems.  <b>S4.A.2.1</b> Apply skills necessary to conduct an experiment or design a solution to solve a problem  <b>S4.C.2.1</b> Recognize basic energy types and sources, or describe how energy can be changed from one form to another.</p> <p><b>PA Academic Standards: Science</b>  <b>3.4.4.B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> <li>• Describe static electricity in terms of attraction, repulsion and sparks.</li> <li>• Apply knowledge of the basic electrical circuits to design</li> </ul>	<p><b>Eligible Content:</b>  <b>S4.A.1.1.1</b> Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).  <b>S4.A.1.1.2</b> Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment.  <b>S4.A.2.1.1</b> Generate questions about objects, organisms, or events that can be answered through scientific investigations.  <b>S4.A.2.1.2</b> Design and describe an investigation (a fair test) to test one variable.  <b>S4.A.2.1.3</b> Observe a natural</p>	<p><b>Approved Textbook and Workbook <i>Science, Chapter 10</i></b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>4 days</p>

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	<p>and construction simple direct current circuits.</p> <ul style="list-style-type: none"> <li>• Classify materials as conductors and nonconductors.</li> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</li> </ul>	<p>phenomenon (e.g., weather changes, length of daylight/night, movement of shadows, animal migrations, growth of plants), record observations, and then make a prediction based on those observations.</p> <p><b>S4.A.2.1.4</b> State a conclusion that is consistent with the information/data.</p> <p><b>S4.C.2.1.1</b> Identify energy forms, energy transfer, and energy examples (e.g., light, heat, electrical).</p> <p><b>S4.C.2.1.2</b> Describe the flow of energy through an object or system (e.g., feeling radiant heat from a light bulb, eating food to get energy, using a battery to light a bulb or run a fan).</p> <p><b>S4.C.2.1.3</b> Recognize or illustrate simple direct current series and parallel circuits composed of batteries, light bulbs (or other common loads), wire, and on/off switches.</p>			
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**S4.C.2.1.4** Identify characteristics of sound (e.g., pitch, loudness, reflection).

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**Essential Knowledge/Skills:**  
Energy and fuels that humans use are derived from natural sources, and their use affects the environment in multiple ways. Some resources are renewable over time, and others are not.

Develop a model using examples to explain differences between renewable and non-renewable sources of energy.

**Vocabulary:**  
renewable  
nonrenewable  
fossil fuels  
ore/petroleum  
recycling  
conservation

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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Water Cycle/ Sun, Moon, and Earth:</b> Interactions between any two objects can cause changes in one or both.</p>	<p><b>Anchor Descriptor:</b> <b>S4.C.3.1</b> Identify and describe different types of force and motion resulting from these forces, or the effect of the interaction between force and motion.</p> <p><b>PA Academic Standards: Science</b> <b>3.1.7.A</b> Explain the parts of a simple system and their relationship to each other.</p> <ul style="list-style-type: none"> <li>• Describe a system as a group of related parts that work together to achieve a desired result (e.g., digestive system).</li> <li>• Explain the importance of order in a system.</li> <li>• Distinguish between system inputs, system processes and system outputs.</li> <li>• Distinguish between open loop and closed loop systems.</li> <li>• Apply systems analysis to solve problems.</li> </ul>	<p><b>Eligible Content:</b> <b>S4.C.3.1.1</b> Describe changes in motion caused by forces (e.g., magnetic, pushes or pulls, gravity, friction).</p> <p><b>S4.C.3.1.2</b> Compare the relative movement of objects or describe types of motion that are evident (e.g., bouncing ball, moving in a straight line, back and forth, merry-go-round).</p> <p><b>S4.C.3.1.3</b> Describe the position of an object by locating it relative to another object or a stationary background (e.g., geographic direction, left, up).</p> <hr/> <p><b>Essential Knowledge/Skills:</b> <b>A system can appear to be unchanging when processes within the system are going on at opposite but equal rates (e.g., water behind a dam is at a constant height because water is flowing in at the same rate that water is flowing out).</b></p>	<p><b>Approved Textbook and Workbook <i>Science</i>, Chapters 6 and 17</b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>15 days</p>

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Construct an explanation using data why an object subjected to multiple pushes and pulls might stay in one place or move.

**Vocabulary:**  
water cycle  
systems  
push  
pull  
recycled water



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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Sun, Moon, and Earth:</b> The universe is composed of a variety of different objects, which are organized into systems each of, which develops according to accepted physical processes and laws.</p>	<p><b>Anchor Descriptor:</b> <b>S.5.D.3.1</b> Explain the relationships between objects in our solar system.</p> <p><b>PA Academic Standards: Science 3.4.4.D</b> Describe the composition and structure of the universe and the earth’s place in it.</p> <ul style="list-style-type: none"> <li>• Recognize earth’s place in the solar system.</li> <li>• Explain and illustrate the causes of seasonal changes.</li> <li>• Identify planets in our solar system and their general characteristics.</li> <li>• Describe the solar system motions and use them to explain time (e.g., days, seasons), major lunar phases and eclipses.</li> </ul>	<p><b>Eligible Content:</b> <b>S.5.D.3.1.1</b> Describe the patterns of Earth’s rotation and revolution in relation to the Sun and Moon (i.e., solar eclipse, phases of the Moon, and time).</p> <hr/> <p><b>Essential Knowledge/Skills:</b> <b>The orbits of Earth around the sun and of the moon around Earth, together with rotation of Earth about an axis between its north and South poles, cause observable patterns (e.g., day and night, length and direction of shadows, different positions of sun, moon, and stars).</b></p> <p>Represent data in graphical displays to reveal patterns of daily changes in the length and direction of shadows, day and night, and seasonal appearance of stars in the sky.</p> <p><b>Vocabulary:</b> rotation</p>	<p><b>Approved Textbook and Workbook <i>Science, Chapter 17</i></b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p><b>10 days</b></p>

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		revolve orbit shadows day and night Earth's axis and seasons Sun, moon, and earth Phases of the moon Solar eclipses Stars and patterns			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Motion:</b> Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<p><b>Anchor Descriptor:</b>  <b>S4.A.1.1</b> Identify and explain the application of scientific, environmental, or technological knowledge to possible solutions to problems.   <b>S4.A.2.1</b> Apply skills necessary to conduct an experiment or design a solution to solve a problem.   <b>S4.C.3.1</b> Identify and describe different types of force and motion resulting from these forces, or the effect of the interaction between force and motion.</p> <p><b>PA Academic Standards: Science</b>   <b>3.1.7.A</b> Explain the parts of a simple system and their relationship to each other.</p> <ul style="list-style-type: none"> <li>• Describe a system as a group of related parts that work together to achieve a desired result (e.g., digestive system).</li> <li>• Explain the importance of order in a system.</li> <li>• Distinguish between system</li> </ul>	<p><b>Eligible Content:</b>  <b>S4.A.1.1.1</b> Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).   <b>S4.A.1.1.2</b> Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment.   <b>S4.A.2.1.1</b> Generate questions about objects, organisms, or events that can be answered through scientific investigations.   <b>S4.A.2.1.2</b> Design and describe an investigation (a fair test) to test one variable.  <b>S4.A.2.1.3</b> Observe a natural</p>	<p><b>Approved Textbook and Workbook <i>Science, Chapter 15</i></b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>15 days</p>

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	<p>inputs, system processes and system outputs.</p> <ul style="list-style-type: none"> <li>• Distinguish between open loop and closed loop systems.</li> <li>• Apply systems analysis to solve problems.</li> </ul> <p><b>3.4.4.B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> <li>• Describe static electricity in terms of attraction, repulsion and sparks.</li> <li>• Apply knowledge of the basic electrical circuits to design and construction simple direct current circuits.</li> <li>• Classify materials as conductors and nonconductors.</li> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</li> </ul>	<p>phenomenon (e.g., weather changes, length of daylight/night, movement of shadows, animal migrations, growth of plants), record observations, and then make a prediction based on those observations.</p> <p><b>S4.A.2.1.4</b> State a conclusion that is consistent with the information/data.</p> <p><b>S4.C.3.1.1</b> Describe changes in motion caused by forces (e.g., magnetic, pushes or pulls, gravity, friction).</p> <p><b>S4.C.3.1.2</b> Compare the relative movement of objects or describe types of motion that are evident (e.g., bouncing ball, moving in a straight line, back and forth, merry-go-round).</p> <p><b>S4.C.3.1.3</b> Describe the position of an object by locating it relative to another object or a stationary background (e.g., geographic direction, left, up).</p>			
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	<p><b>3.4.4.C</b> Observe and describe different types of force and motion.</p> <ul style="list-style-type: none"> <li>• Identify characteristics of sound (pitch, loudness and echoes)</li> <li>• Recognize forces that attract or repel other objects and demonstrate them.</li> <li>• Describe various types of motions.</li> <li>• Compare the relative movement of objects and describe types of motion that are evident.</li> <li>• Describe the position of an object by locating it relative to another object or the background (e.g., geographic direction, left, up).</li> </ul> <p><b>3.8.4.A</b> Know that people select, create and use science and technology and that they are limited by social and physical restraints.</p> <ul style="list-style-type: none"> <li>• Identify and describe positive and negative impacts that influence or result from new tools and techniques.</li> <li>• Identify how physical technology (e.g., construction, manufacturing, transportation), informational</li> </ul>	<p><b>Essential Knowledge/Skills:</b> <b>When objects collide, the contact forces transfer energy so as to change the motion of each object.</b></p> <p>Ask questions and predict outcomes about the changes in energy that occur when objects collide.</p> <p><b>The expression “produce energy” typically refers to the conversion of stored energy into a desired form for practical use. It is important to be able to concentrate energy so that it is available for use where and when it is needed (e.g., batteries).</b></p> <p>Obtain and communicate information explaining how technology allows humans to concentrate, transport, and store energy for practical use.</p> <p><b>Vocabulary:</b> motion relative motion</p>			
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	<p>technology and biotechnology are used to meet human needs.</p> <ul style="list-style-type: none"> <li>• Describe how scientific discoveries and technological advancements are related.</li> <li>• Identify interrelationships among technology, people and their world.</li> <li>• Apply the technological design process to solve a simple problem.</li> </ul>	<p>frame of reference speed velocity force friction gravity measuring force work potential energy kinetic energy changing energy</p>			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Natural Disasters:</b> Waves are a repeating pattern of motion that transfers energy from place to place without overall displacement of matter.</p>	<p><b>Anchor Descriptor:</b> <b>S4.A.1.1</b> Identify and explain the application of scientific, environmental, or technological knowledge to possible solutions to problems.</p> <p><b>S4.A.2.1</b> Apply skills necessary to conduct an experiment or design a solution to solve a problem.</p> <p><b>PA Academic Standards: Science</b> <b>3.4.4.B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> <li>• Describe static electricity in terms of attraction, repulsion and sparks.</li> <li>• Apply knowledge of the basic electrical circuits to design and construction simple direct current circuits.</li> <li>• Classify materials as conductors and nonconductors.</li> </ul>	<p><b>Eligible Content:</b> <b>S4.A.1.1.1</b> Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).</p> <p><b>S4.A.1.1.2</b> Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment.</p> <p><b>S4.A.2.1.1</b> Generate questions about objects, organisms, or events that can be answered through scientific investigations.</p> <p><b>S4.A.2.1.2</b> Design and describe an investigation (a fair test) to test one variable.</p> <p><b>S4.A.2.1.3</b> Observe a natural</p>	<p><b>Online Resources</b> <b>Teacher created lessons/manipulatives</b></p>	<p><b>Teacher prepared tests, quizzes, etc.</b></p>	<p><b>2 days</b></p>

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	<ul style="list-style-type: none"> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</li> </ul>	<p>phenomenon (e.g., weather changes, length of daylight/night, movement of shadows, animal migrations, growth of plants), record observations, and then make a prediction based on those observations.</p> <p><b>S4.A.2.1.4</b> State a conclusion that is consistent with the information/data.</p> <hr/> <p><b>Essential Knowledge/Skills:</b>  <b>Earthquakes cause seismic waves, which are waves of motion in the Earth’s crust.</b></p> <p>Describe how similar seismic waves are to other types of waves.</p> <p><b>Vocabulary:</b>  waves  earthquakes  seismic waves</p>			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Digital Information:</b> Waves are a repeating pattern of motion that transfers energy from place to place without overall displacement of matter.</p>	<p><b>Anchor Descriptor:</b> <b>S4.A.1.1</b> Identify and explain the application of scientific, environmental, or technological knowledge to possible solutions to problems.</p> <p><b>S4.A.2.1</b> Apply skills necessary to conduct an experiment or design a solution to solve a problem.</p> <p><b>PA Academic Standards: Science</b> <b>3.4.4.B</b> Know basic energy types, sources and conversions.</p> <ul style="list-style-type: none"> <li>• Identify energy forms and examples (e.g., sunlight, heat, stored, motion).</li> <li>• Know the concept of the flow of energy by measuring flow through an object or system.</li> <li>• Describe static electricity in terms of attraction, repulsion and sparks.</li> <li>• Apply knowledge of the basic electrical circuits to design and construction simple direct current circuits.</li> <li>• Classify materials as conductors and nonconductors.</li> </ul>	<p><b>Eligible Content:</b> <b>S4.A.1.1.1</b> Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).</p> <p><b>S4.A.1.1.2</b> Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment.</p> <p><b>S4.A.2.1.1</b> Generate questions about objects, organisms, or events that can be answered through scientific investigations.</p> <p><b>S4.A.2.1.2</b> Design and describe an investigation (a fair test) to test one variable.</p>	<p><b>Approved Textbook and Workbook <i>Science, Chapter 19</i></b></p> <p>Worksheets Discovery Education Videos Manipulatives Kahoot</p> <p><b>Online Resources</b> <b>Teacher created lessons/manipulatives</b></p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>2 days</p>

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	<ul style="list-style-type: none"> <li>• Know and demonstrate the basic properties of heat by producing it in a variety of ways.</li> <li>• Know the characteristics of light (e.g., reflection, refraction, absorption) and use them to produce heat, color or a virtual image.</li> </ul>	<p><b>S4.A.2.1.3</b> Observe a natural phenomenon (e.g., weather changes, length of daylight/night, movement of shadows, animal migrations, growth of plants), record observations, and then make a prediction based on those observations.</p> <p><b>S4.A.2.1.4</b> State a conclusion that is consistent with the information/data.</p> <hr/> <p><b>Essential Knowledge/Skills:</b>  <b>Digitized information (e.g., the pixels of a picture) can be stored for future recovery or transmitted over long distances without significant degradation. High-tech devices, such as computers or cell phones, can receive and decode information—convert it from digitized form to voice—and vice versa.</b></p> <p>Obtain and communicate information about modern devices that are used to transmit and receive digital</p>			
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information.

**Vocabulary:**

decode  
digitized  
information  
encode  
pixels  
transmit

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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Landforms:</b> The Earth is a complex and dynamic set of interconnected systems (e.g. geosphere, hydrosphere, atmosphere, biosphere) that interact over a wide range of temporal and spatial scales.</p>	<p><b>Anchor Descriptor:</b> <b>S4.D.1.1</b> Describe basic landforms in Pennsylvania. <b>S4.D.1.2</b> Identify the types and uses of Earth’s resources. <b>S4.D.1.3</b> Describe Earth’s different sources of water or describe changes in the form of water. <b>PA Academic Standards: Science</b> <b>3.5.4.A</b> Know basic landforms and earth history.</p> <ul style="list-style-type: none"> <li>• Describe earth processes (e.g., rusting, weathering, erosion) that have affected selected physical features in students’ neighborhoods.</li> <li>• Identify various earth structures (e.g., mountains, faults, drainage basins) through the use of models.</li> <li>• Identify the composition of soil as weathered rock and decomposed organic remains.</li> <li>• Describe fossils and the type of environment they lived in (e.g., tropical, aquatic, desert).</li> </ul>	<p><b>Eligible Content:</b> <b>S4.D.1.1.1</b> Describe how prominent Earth features in Pennsylvania (e.g., mountains, valleys, caves, sinkholes, lakes, rivers) were formed. <b>S4.D.1.1.2</b> Identify various Earth structures (e.g., mountains, watersheds, peninsulas, lakes, rivers, valleys) through the use of models. <b>S4.D.1.1.3</b> Describe the composition of soil as weathered rock and decomposed organic remains. <b>S4.D.1.2.1</b> Identify products and by-products of plants and animals for human use (e.g., food, clothing, building materials, paper products). <b>S4.D.1.2.2</b> Identify the types and uses of Earth materials for renewable, nonrenewable, and reusable products (e.g., human-made products: concrete, paper, plastics,</p>	<p><b>Online Resources</b> <b>Teacher created lessons/manipulatives</b></p>	<p><b>Teacher prepared tests, quizzes, etc.</b></p>	<p><b>9 days</b></p>

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	<p><b>3.5.4.B</b> Know types and uses of earth materials.</p> <ul style="list-style-type: none"> <li>Identify uses of various earth materials (e.g., buildings, highways, fuels, growing plants).</li> <li>Identify and sort earth materials according to a classification key (e.g., soil/rock type).</li> </ul> <p><b>3.5.4.D</b> Recognize the earth's different water resources.</p> <ul style="list-style-type: none"> <li>Know that approximately three-fourths of the earth is covered by water.</li> <li>identify and describe types of fresh and salt-water bodies.</li> <li>Identify examples of water in the form of solid, liquid and gas on or near the surface of the earth.</li> <li>Explain and illustrate evaporation and condensation.</li> <li>Recognize other resources available from water (e.g., energy, transportation, minerals, food).</li> </ul> <p><b>3.1.4.A</b> Know that natural and human-made objects are made up of parts.</p>	<p>fabrics).</p> <p><b>S4.D.1.2.3</b> Recognize ways that humans benefit from the use of water resources (e.g., agriculture, energy, recreation).</p> <p><b>S4.D.1.3.1</b> Describe types of freshwater and saltwater bodies (e.g., lakes, rivers, wetlands, oceans).</p> <p><b>S4.D.1.3.2</b> Explain how water goes through phase changes (i.e., evaporation, condensation, freezing, and melting).</p> <p><b>S4.D.1.3.3</b> Describe or compare lentic systems (i.e., ponds, lakes, and bays) and lotic systems (i.e., streams, creeks, and rivers).</p> <p><b>S4.D.1.3.4</b> Explain the role and relationship of a watershed or a wetland on water sources (e.g., water storage, groundwater recharge, water filtration, water source, water cycle).</p>			
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	<ul style="list-style-type: none"> <li>• Identify and describe what parts make up a system.</li> <li>• Identify system parts that are natural and human-made (e.g., ball point pen, simple electrical circuits, plant anatomy).</li> <li>• Describe the purpose of analyzing systems.</li> <li>• Know that technologies include physical technology systems (e.g., construction, manufacturing, transportation), informational systems and biochemical-related systems.</li> </ul> <p><b>3.1.4.B</b> Know models as useful simplifications of objects or processes.</p> <ul style="list-style-type: none"> <li>• Identify different types of models.</li> <li>• Identify and apply models as tools for prediction and insight.</li> <li>• Apply appropriate simple modeling tools and techniques.</li> <li>• Identify theories that serve as models (e.g., molecules).</li> </ul>	<p><b>Essential Knowledge/Skills:</b>  <b>Local, regional, and global patterns of rock formations reveal changes over time due to earth forces, such as earthquakes. The presence and location of certain fossil types indicate the order in which rock layers were formed.</b></p> <p>Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.</p> <p><b>Rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, living organisms and gravity break rocks, soils, and sediments into smaller particles and move them around.</b></p> <p>Make observations and measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or</p>			
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		<p>vegetation (heating cooling, volume of water, speed of wind, deposition, slope, angles, etc.).</p> <p><b>Living things affect the physical characteristics of their regions.</b></p> <p>Make observations and document how living things affect the physical characteristics in different regions.</p> <p><b>The locations of mountain ranges, deep ocean trenches, ocean floor structures, earthquakes, and volcanoes occur in patterns.</b></p> <p>Analyze and interpret data from maps to describe patterns of Earth's features.</p> <p><b>The locations of mountain ranges, deep ocean trenches, ocean floor structures, earthquakes, and volcanoes occur in patterns.</b></p> <p>Analyze and interpret data from maps to describe Earth's features (e.g., mountains,</p>			
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		<p>valleys, caves, sinkholes, lakes, rivers, peninsulas, lentic/lotic water systems, etc.).</p> <p><b>Water occurs underground, above ground, and in the atmosphere.</b></p> <p>Identify various types of water environments in Pennsylvania.</p> <p><b>Many types of rocks and minerals are formed from the remains of organisms or are altered by their activities.</b></p> <p>Use fossils as evidence to infer that some rocks were formed from the remains of once living organisms.</p> <p><b>The presence and location of certain fossil types indicate the order in which rock layers were formed.</b></p> <p>Use evidence from patterns in rock formations and fossils in rock layers to support the explanation for a change in landforms and environments over time.</p> <p><b>Vocabulary:</b> Pennsylvania-</p>			
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		landforms/bodies of water fossils rock formations deposition erosion vegetation weathering biology earthquake geographic geologic hazards mountain range plate tectonics trench volcano lakes lentic lotic ponds rivers streams watersheds landform mineral rock layers			
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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
<p><b>Bodies of Water:</b> The Earth's processes affect and are affected by human activities.</p>	<p><b>Anchor Descriptor:</b> <b>S4.D.1.2</b> Identify the types and uses of Earth's resources.</p> <p><b>PA Academic Standards: Science</b> <b>4.2.4.B</b> Describe the characteristics of different types of wetlands.</p>	<p><b>Eligible Content:</b> <b>S4.D.1.2.1</b> Identify products and by-products of plants and animals for human use (e.g., food, clothing, building materials, paper products).  <b>S4.D.1.2.2</b> Identify the types and uses of Earth materials for renewable, nonrenewable, and reusable products (e.g., human-made products: concrete, paper, plastics, fabrics).  <b>S4.D.1.2.3</b> Recognize ways that humans benefit from the use of water resources (e.g., agriculture, energy, recreation).</p> <hr/> <p><b>Essential Knowledge/Skills:</b> <b>Energy that humans use is derived from multiple natural sources and their use affects the environment in many ways.</b></p> <p>Research multiple sources to describe ways that energy and</p>	<p><b>Online Resources</b> <b>Teacher created lessons/manipulatives</b></p>	<p><b>Teacher prepared tests, quizzes, etc.</b></p>	<p><b>4 days</b></p>

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fuels are derived from natural resources and their impact.

**A variety of hazards result from natural processes (e.g., earthquakes, tsunamis, etc.). Humans cannot eliminate the hazards, but can take steps to reduce the impact.**

Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.

**Vocabulary:**

dams  
fissile  
fossil fuels  
natural resources  
solar  
earthquake  
natural hazard  
tsunami  
volcanic eruptions  
weather

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General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
Review of Selected 4 <sup>th</sup> Grade Skills					18 days

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**Appendix: A**

**IEP Enhancements**

<b>General Topic:</b>	<b>Specially Designed Instruction:</b>	<b>Additional Vocabulary:</b>	<b>Assessments/Suggested Time:</b>
<p><b>Matter:</b></p> <p>Matter can be understood in terms of the types of atoms present and the interactions both between and within atoms.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Milligram</li> <li>• Gram</li> <li>• Kilogram</li> <li>• Millimeter</li> <li>• Centimeter</li> <li>• Decimeter</li> <li>• Meter</li> <li>• Decameter</li> <li>• Hectometer</li> <li>• Kilometer</li> <li>• Atoms</li> <li>• Nucleus</li> <li>• Protons</li> <li>• Neutrons</li> <li>• Electrons</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 19 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District  
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Heat:</b></p> <p>Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Thermograph</li> <li>• Thermometer</li> <li>• Convection</li> <li>• Celsius</li> <li>• Fahrenheit</li> <li>• Energy</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 9 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District  
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Electricity and Magnetism:</b></p> <p>Interactions between any two objects can cause changes in one or both.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Resistance</li> <li>• Electromagnet</li> <li>• Magnetism</li> <li>• Magnetic Field</li> <li>• Positive Charge</li> <li>• Negative Charge</li> <li>• Electric Field</li> <li>• Resistance</li> <li>• Electrons</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 4 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District  
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Electricity and Magnetism:</b></p> <p>Interactions of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Resistance</li> <li>• Electromagnet</li> <li>• Magnetism</li> <li>• Magnetic Field</li> <li>• Positive Charge</li> <li>• Negative Charge</li> <li>• Electric Field</li> <li>• Resistance</li> <li>• Electrons</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 4 days as specified in the curriculum with additional time as needed per individual student</p>



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Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Electricity and Magnetism:</b></p> <p>Interactions between two objects can cause changes in one or both.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Magnetic Field</li> <li>• North Pole</li> <li>• South Pole</li> <li>• Electrical Energy</li> <li>• Wind Power</li> <li>• Hydroelectric Power</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 4 days as specified in the curriculum with additional time as needed per individual student</p>

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Curriculum Guide**

<b>General Topic:</b>	<b>Specially Designed Instruction:</b>	<b>Additional Vocabulary:</b>	<b>Assessments/Suggested Time:</b>
<p><b>Electricity and Magnetism:</b></p> <p>Interactions between any two objects can cause changes in one or both.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Magnetic Field</li> <li>• North Pole</li> <li>• South Pole</li> <li>• Electrical Energy</li> <li>• Wind Power</li> <li>• Hydroelectric Power</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 19 days as specified in the curriculum with additional time as needed per individual student</p>

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Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Electricity and Magnetism:</b></p> <p>Interactions of objects and systems of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Magnetic Field</li> <li>• North Pole</li> <li>• South Pole</li> <li>• Electrical Energy</li> <li>• Wind Power</li> <li>• Hydroelectric Power</li> <li>• Exert</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 4 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District  
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Sound and Light:</b></p> <p>Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Particles</li> <li>• Sound Wave</li> <li>• Solid</li> <li>• Liquid</li> <li>• Gas</li> <li>• Bioluminescence</li> <li>• Electromagnetic Spectrum</li> <li>• Violet Light</li> <li>• Laser</li> <li>• Optical Fibers</li> <li>• Current</li> <li>• Renewable Resources</li> <li>• Non-renewable Resources</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 19 days as specified in the curriculum with additional time as needed per individual student</p>

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General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Sound and Light:</b></p> <p>Waves are a repeating pattern of motion that transfer energy from place to place without overall displacement of matter.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Waves</li> <li>• Particles</li> <li>• Sound Wave</li> <li>• Solid</li> <li>• Liquid</li> <li>• Gas</li> <li>• Bioluminescence</li> <li>• Electromagnetic Spectrum</li> <li>• Violet Light</li> <li>• Laser</li> <li>• Optical Fibers</li> <li>• Current</li> <li>• Renewable Resources</li> <li>• Non-renewable Resources</li> <li>• Amplitude</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 19 days as specified in the curriculum with additional time as needed per individual student</p>

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Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Plants and Animals:</b></p> <p>All organisms are made of cells and can be characterized by common aspects of their structure and functioning.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Microscope</li> <li>• Virus</li> <li>• Cell Wall</li> <li>• Kingdom</li> <li>• Scientific Name</li> <li>• Phylum</li> <li>• Class</li> <li>• Order</li> <li>• Family</li> <li>• Moss</li> <li>• Hornworts</li> <li>• Liverworts</li> <li>• Seeds</li> <li>• Cones</li> <li>• Spores</li> <li>• Reptiles</li> <li>• Arthropods</li> <li>• Mollusks</li> <li>• Trait</li> <li>• Adaptations</li> <li>• Migration</li> <li>• Hibernation</li> <li>• Multi-celled Organisms</li> <li>• Fibrous Roots</li> <li>• Taproots</li> <li>• Runners</li> <li>• System</li> <li>• Desert</li> <li>• Grassland</li> <li>• Tundra</li> <li>• Forest</li> <li>• Tropical Rainforest</li> <li>• Ecosystem</li> <li>• Community</li> <li>• Population</li> <li>• Habitats</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 15 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District  
Curriculum Guide**

<b>General Topic:</b>	<b>Specially Designed Instruction:</b>	<b>Additional Vocabulary:</b>	<b>Assessments/Suggested Time:</b>
<p><b>Renewable and Nonrenewable Resources:</b></p> <p>Interactions of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Natural Resources</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 4 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District  
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Water Cycle/Sun, Moon and Earth:</b></p> <p>Interactions between any two objects can cause changes in one or both.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Clouds</li> <li>• Cirrus</li> <li>• Altostratus</li> <li>• Cumulus</li> <li>• Cumulonimbus</li> <li>• Stratus</li> <li>• Gravity</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 15 days as specified in the curriculum with additional time as needed per individual student</p>



**Dunmore School District  
Curriculum Guide**

<b>General Topic:</b>	<b>Specially Designed Instruction:</b>	<b>Additional Vocabulary:</b>	<b>Assessments/Suggested Time:</b>
<p><b>Sun, Moon and Earth:</b></p> <p>The universe is composed of a variety of different objects, which are organized into systems of each of, which develops according to accepted physical processes and laws.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>		<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 10 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District  
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Motion:</b></p> <p>Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Energy</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 15 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District  
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Natural Disasters:</b></p> <p>Waves of a repeating pattern of motion that transfer energy from place to place without overall displacement of matter.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>		<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 2 days as specified in the curriculum with additional time as needed per individual student.</p>

**Dunmore School District  
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Digital Information:</b></p> <p>Waves are a repeating pattern of motion that transfers energy from place to place without overall displacement of matter.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>	<ul style="list-style-type: none"> <li>• Transportation Systems</li> </ul>	<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 2 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District  
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<b>General Topic:</b>	<b>Specially Designed Instruction:</b>	<b>Additional Vocabulary:</b>	<b>Assessments/Suggested Time:</b>
<p><b>Landforms:</b></p> <p>The Earth is a complex and dynamic set of interconnected systems (e.g. geosphere, hydrosphere, atmosphere, biosphere) that interact over a wide range of temporal and spatial scales.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>		<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 9 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District  
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p><b>Bodies of Water</b></p> <p>The Earth's processes affect and are affected by human activities.</p>	<ul style="list-style-type: none"> <li>• Preferential Seating</li> <li>• Use of Computer (When Available)</li> <li>• Interactive Online Videos</li> <li>• Visual Aids</li> <li>• Anchor Charts</li> <li>• Breaking tasks down into more manageable increments</li> <li>• Breaking down directions with one directive given at a time</li> <li>• Frequent breaks to maintain focus</li> <li>• Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> <li>• Extra time to complete assignments</li> <li>• Additional textbook sent home</li> <li>• Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material</li> <li>• Directions read aloud.</li> <li>• Colored overlay for reading</li> <li>• Guided Reading Strip</li> <li>• Larger Font</li> <li>• Small group reteach</li> <li>• One-on-One Instruction</li> <li>• Graphic Organizer</li> <li>• Copy of notes provided</li> <li>• Audio recordings of text</li> <li>• Mark texts with highlighter</li> <li>• Extended Wait time after asking a question</li> <li>• Moby Max</li> <li>• Adapted Notes</li> <li>• Metric Units of Length Chart</li> <li>• Periodic Table</li> <li>• Alternative Grading</li> </ul>		<p><b>Assessments:</b></p> <ul style="list-style-type: none"> <li>• Extended time to complete</li> <li>• Elimination of 1-2 Answer Choices</li> <li>• Questions &amp; Answer Choices read aloud</li> <li>• Use of highlighter to highlight important details</li> <li>• Frequent breaks to maintain focus</li> <li>• Provide Study Guides</li> <li>• Change testing location</li> <li>• Chunking tests into more manageable sections</li> <li>• Modified Assessments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined</li> </ul> <p><b>Suggested Time:</b> 4 days as specified in the curriculum with additional time as needed per individual student.</p>
<p>Review of Selected 4<sup>th</sup> Grade Skills</p>	<p>As listed above</p>		