

Map: **Science-Grade 4** Grade Level: **4**

District: **Island Trees**

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	Essential Questions	Content	Skills	Assessments	Standards/PIs	Resources/Notes
Unit 1	<p>What is an adaptation?</p> <p>How do animals adapt to their environment for survival?</p> <p>Why do animals need to find shelter?</p> <p>How do physical adaptations help animals survive?</p> <p>How do behavioral adaptations help animals survive?</p> <p><b>Guided Reading:</b> How can I use the skill of compare and contrast to identify the characteristics of a mammal while reading about <u>Designed For Living?</u></p> <p>What special features do plants have to survive in their environment?</p> <p>How do plants grow and protect themselves in diverse environments?</p> <p>How do plants respond to various environmental stimuli?</p> <p>How do humans use physical and behavioral adaptations for their survival?</p> <p>How can human adaptations allow for longer survival?</p> <p>How can humans pass information on from one generation to another?</p>	<p><b>The Living Environment:</b></p> <p>Living things are both similar to and different from each other and from nonliving things</p> <p>Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring</p> <p>Individual organisms and species change over time</p> <p>The continuity of life is sustained through reproduction and development</p> <p>Organisms maintain a dynamic equilibrium that sustains life</p> <p>Plants and animals depend on each other and their physical environment</p> <p><b>Animal, Plant, and Human Adaptations</b></p> <p><b>Animal Adaptations:</b></p> <p><i>Physical Adaptations</i></p> <p>Each animal has different structures that serve different functions in growth, survival,</p>	<p><i>Compare and contrast</i> living and nonliving things</p> <p><i>Define</i> adaptation and environment</p> <p><i>Differentiate</i> physical and behavioral adaptations</p> <p><i>Characterize</i> adaptations that help animals find or build shelter</p> <p><i>Identify</i> structural and behavioral adaptations that help animals protect themselves</p> <p><i>Describe</i> how animals hunt for or find food</p> <p><i>Compare and contrast</i> animal habitats</p> <p><i>Distinguish and explain</i> stimulus and response</p> <p><i>Identify</i> seasonal adaptations</p> <p><i>Illustrate and analyze</i> animal food chains and webs</p> <p><i>Describe</i> a food web as the relationship among several food chains</p> <p><i>Explain</i> what happens when one part of a food web is removed</p> <p><i>Review and recall</i> animal life cycles</p>		<p>MST4-K6-6B</p> <p>MST4-K1-1A</p> <p>MST4-K7-7A</p> <p>MST4-K7-7B</p> <p>MST4-K7-7B</p> <p>MST4-K8-8A</p> <p>MST4-K8-8B</p> <p>MST4-K9-9A</p> <p>MST4-K9-9B</p> <p>MST4-K10-10A</p> <p>MST4-K10-10B</p> <p>MST4-K10-10C</p> <p>MST4-K11-11A</p> <p>MST4-K11-11B</p> <p>MST4-K12-12A</p>	

	and reproduction	<b>Distinguish</b> and <b>categorize</b> carnivores, predators, and omnivores
	<i>Behavioral Adaptations</i>	<b>Differentiate</b> predators and prey
	Some animal behaviors are influenced by environmental conditions	<b>Explain</b> the <u>interdependence</u> among plants and animals
	Adaptations for <i>getting food</i>	<b>Identify</b> and <b>explain</b> how humans can have a positive or negative impact on an ecosystem
	Adaptations for <i>finding shelter</i>	<b>Identify</b> and <b>differentiate</b> producers, consumers, and decomposers
	Adaptations for <i>protection</i>	<b>Identify</b> plant adaptations
	<b>Vocabulary:</b>	
	<b>Animals</b>	<b>List</b> and <b>summarize</b> plant adaptations for making food
	<i>adapt</i>	
	<i>adaptations</i>	<b>Describe</b> plant adaptations for growth
	<i>behavior</i>	
	<i>burrow</i>	
	<i>camouflage</i>	<b>Recognize</b> and <b>describe</b> how plants have adaptations for protection
	<i>carnivore</i>	
	<i>characteristic</i>	
	<i>community</i>	<b>Explain</b> why certain plants can live and thrive in a particular environment
	<i>consumer</i>	
	<i>decomposer</i>	
	<i>ecology</i>	
	<i>ecosystem</i>	<b>Compare</b> the roles of various plant parts
	<i>environment</i>	
	<i>food chain</i>	
	<i>food web</i>	<b>Summarize</b> the adaptations of plant parts
	<i>habitat</i>	
	<i>herbivore</i>	<b>Describe</b> how the human body has adapted to help us survive
	<i>hibernation</i>	
	<i>instinct</i>	
	<i>interdependence</i>	<b>Compare</b> and <b>contrast</b> physical and behavioral adaptations
	<i>life cycle</i>	
	<i>life span</i>	
	<i>mammal</i>	<b>List</b> and <b>analyze</b> physical adaptations of

	<p><i>migration</i></p> <p><i>mimicry</i></p> <p><i>offspring</i></p> <p><i>omnivore</i></p> <p><i>organism</i></p> <p><i>population</i></p> <p><i>predator</i></p> <p><i>producer</i></p> <p><i>prey</i></p> <p><i>producer</i></p> <p><i>protection</i></p> <p><i>response</i></p> <p><i>shelter</i></p> <p><i>stimulus</i></p> <p><i>symbiosis</i></p> <p><i>talons</i></p>	<p>humans</p> <p><b>Justify</b> how some human behaviors are learned while others are inherited</p> <p><b>Explain</b> the adaptations of human eyes</p> <p><b>Summarize</b> and <b>illustrate</b> how humans communicate</p> <p><b>Compare</b> and <b>contrast</b> written and oral language</p> <p><b>Outline</b> how information is passed on among humans</p> <p><b>Describe</b> human traits that are inherited</p> <p><b>Plant Adaptations:</b></p> <p><b>Explain</b> what differentiates one species from another</p>	
	<p>In order to survive in their environment, plants must be adapted to that environment</p> <p>Adaptations of <i>plant parts</i></p> <p><i>Growth</i> adaptations</p> <p>Plant adaptations for <i>protection</i></p> <p><b>Plants</b></p> <p><i>carbon dioxide</i></p> <p><i>conifer</i></p> <p><i>function/purpose</i></p> <p><i>gravitropism</i></p> <p><i>leaf</i></p> <p><i>phototropism</i></p> <p><i>purpose</i></p> <p><i>roots</i></p>		

		<p><i>stem</i></p> <p><i>tropism</i></p>			
		<p><b>Human Adaptations:</b></p>			
		<p>Peoples' bodies have adaptations such as upright posture and thumbs that help them survive.</p>			
		<p>Human binocular vision having both eyes on the front of the head, aids in depth perception.</p>			
		<p>True behavioral adaptations are inherited; learned behavior results from the physical adaptations of our brains.</p>			
		<p>Humans are the only known animals to have grammatical language.</p>			
		<p>Human communication may be oral, written, gestural, or electronic.</p>			
		<p><i>Physical adaptations</i></p>			
		<p><i>Behavioral adaptations</i></p>			
		<p><i>Learned and inherited behaviors</i></p>			
		<p><i>Human communication</i></p>			
		<p><b>Humans</b></p>			
		<p>communicate</p>			
		<p>inherited</p>			

		<p>offspring</p> <p>pelvis</p> <p>perspire</p> <p>reflex</p> <p>species</p> <p>spine</p> <p>thrive</p> <p>trait</p> <p>vision</p>			
Unit 2	<p>What are the main parts of a plant?</p> <p>How do the various parts of a plant help it survive?</p> <p>What are the functions of the various plant parts?</p> <p>How do the parts of a plant work together as a system?</p> <p>How do plants make their own food?</p> <p>How do plants reproduce?</p> <p>How do plants and animals depend on each other?</p> <p>Why are plants important to humans?</p> <p>How are plants used by humans?</p>	<p><b>The Living Environment:</b> Plant Parts, Functions, and Uses</p> <p>Plants require air, water, nutrients, and light in order to live and thrive</p> <p>Plants can transfer specific traits to their offspring when they reproduce</p> <p>Plants have different structures that serve different functions in growth, survival, and reproduction</p> <p>Each kind of plant goes through its own stages of growth and development</p> <p>Plants have life cycles</p> <p>Plants respond to changes in their environment</p> <p>Green plants are producers because they provide the basic food supply for themselves and animals</p> <p>Plants manufacture food by utilizing air, water, and</p>	<p><b>Identify and label</b> the parts of a plant</p> <p><b>Describe</b> the functions of a plant's parts</p> <p><b>Distinguish</b> monocots from dicots</p> <p><b>Compare and contrast</b> the roles that different plant parts serve</p> <p><b>Distinguish</b> green stems from woody stems</p> <p><b>Compare and contrast</b> fibrous root systems and taproot systems</p> <p><b>Identify and sequence</b> the conditions and resources necessary for photosynthesis to occur</p> <p><b>Explain</b> how seeds travel and <b>justify</b> why different plants' seeds are dispersed in different ways</p> <p><b>Analyze and explain</b> how the various functions of a plant work together as a system</p> <p><b>Recall and illustrate</b> the life cycle of a plant</p>	<p>MST4-K6-6B</p> <p>MST4-K8-8A</p> <p>MST4-K8-8B</p> <p>MST4-K9-9A</p> <p>MST4-K9-9B</p> <p>MST4-K10-10B</p> <p>MST4-K11-11A</p> <p>MST4-K11-11B</p> <p>MST4-K11-11B</p>	

	energy from the sun		
		<i><b>Explain</b></i> why plants are producers and how they can affect a food chain or web	
	<b><u>Plant Parts</u></b>		
	Leaves	<i><b>List</b></i> and <i><b>describe</b></i> how plants are used by humans	
	Stems		
	Roots	<i><b>Identify</b></i> which plant parts are used by humans	
	<b><u>Plant Functions</u></b>		
	Leaves		
	Stems		
	Roots		
	<b><u>Human Use of Plants</u></b>		
	Food and nutrition		
	Clothing		
	Medicine		
	Other products		
	<b>Vocabulary</b>		
	<b>Plants</b>		
	absorb		
	blade		
	carbon dioxide		
	chlorophyll		
	cone		
	conifer		
	cutting		
	dicot		
	disperse		

		embryo				
		fibrous root				
		fertilization				
		flower				
		function				
		fibrous root				
		germination				
		leaf				
		monocot				
		node				
		nutrient				
		oxygen				
		petal				
		petiole				
		phloem				
		photosynthesis				
		pistil				
		pollen				
		pollination				
		purpose				
		root hair				
		runner				
		reproduction				
		scattered				
		seed				
		seed coat				
		seed dispersal				
		stamen				
		structure				
		taproot				
		transfer				
		tuber				
		vein				
		xylem				

<p>Units</p>	<p>What is buoyancy?</p> <p>Why do some objects float on the surface of a liquid while others sink?</p> <p>How can the properties of matter be altered in order to achieve buoyancy?</p> <p>Why are some objects more dense than others and how does this affect buoyancy?</p> <p>How does displacement help to create a state of buoyancy?</p> <p>Why are objects more buoyant in salt water than fresh water?</p> <p>How does capacity affect the buoyancy of a container?</p>	<p><b>The Physical Setting:</b></p> <p>Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity.</p> <p>Physical Properties of Matter</p> <p><b>Inquiry, Analysis, and Design:</b></p> <p><b>Buoyancy</b></p> <p><b>Scientific Inquiry</b></p> <p>predict</p> <p>hypothesize</p> <p>analyze</p> <p>observe</p> <p>summarize</p> <p>synthesize</p> <p>conclude</p> <p><b>Engineering Design</b></p> <p>Create, revise, and apply models</p> <p><b>Vocabulary:</b></p> <p><b>Buoyancy</b></p> <p>buoyancy</p> <p>capacity</p>	<p><i>Describe</i> the concept of buoyancy</p> <p><i>Distinguish</i> between sink and float</p> <p><i>Explain</i> how the properties of matter affect buoyancy</p> <p><i>Identify and compare</i> properties of matter and <i>recognize</i> how they affect buoyancy</p> <p><i>Design and Construct</i> a vessel which will be buoyant and can hold cargo</p> <p><i>Analyze and list</i> the properties of a good clay boat</p> <p><i>Compare and contrast</i> the capacity of vessels in relation to their properties</p> <p><i>Analyze</i> data by <i>creating</i> tables and graphs looking for patterns of change</p> <p><i>Measure</i> quantities such as size and weight</p> <p><i>Design</i> solutions to problems involving a familiar and real context</p> <p><i>Investigate</i> related science concepts to inform a solution</p> <p><i>Apply</i> mathematics to model, quantify, measure, and compute</p>		<p>MST4-K3-3A</p> <p>MST4-K3-3B</p> <p>MST4-K4-4A</p> <p>MST4-K4-4B</p> <p>MST4-K6-6B</p>	
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		cargo			
		centimeter			
		change-chemical/physical			
		characteristic			
		chemical change/physical change			
		classify			
		density			
		displacement			
		evaporate			
		float			
		hypothesis			
		gas			
		gram			
		interaction			
		kilogram			
		liter			
		mass			
		matter			
		states of matter-solid/liquid/gas			
		milliliter			
		neutral buoyancy			
		object			
		observe			
		prediction			
		property			
		observe			
		property			
		record data			
		sink			
		submerge			
		temperature-Celsius/Fahrenheit			
		thermometer			
		unit of measure			
		volume			
		water level			
		weight			



	Essential Questions	Content	Skills	Assessments	Standards/PIs	Resources/Notes
Unit 4	<b>Static Electricity</b>	<b>The Physical Setting:</b>	<i>List and describe</i> safe practices when studying electricity		MST1-K1-1A	
	How do objects become electrically charged?	Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity	<i>Create</i> a K-W-L chart		MST1-K2-1A	
	How do positive and negative charges differ?			MST1-K4-2A		
	Why does lightning form?			MST1-K4-2B		
	<b>Matter</b>			MST1-K4-2C		
	How does matter become charged?	Energy exists in many forms, and when these forms change, energy is conserved	<i>Identify</i> the terminals on a bulb and battery		MST4-K3-3A	
	What is matter?			MST4-K3-3B		
	What are some examples of matter?			MST4-K4-4A		
	How can the different states of matter be changed?			MST4-K4-4B		
	<b>Current Electricity</b>	Energy and matter interact through forces that result in changes in motion	<i>Formulate and test</i> predictions about simple circuits			
	What is current electricity?			<i>Light</i> a bulb four different ways using a battery, bulb, and wire		
	How is current electricity different from static electricity?					
	How can you move charges?					
	What are conductors and insulators?	<i>Construct and modify</i> simple circuits				
	How do conductors and insulators differ?	<b>Electricity and Magnetism</b>	<i>Label</i> the parts of a bulb			
	Why are metals used in devices designed to carry electric current?	<b>Scientific Inquiry:</b>				
	Why is rubber or plastic used as an insulator?	Predict		<i>Trace</i> the path of electricity through the bulb		
	How is a series circuit different from a parallel circuit?					
	How do the parts of a circuit form a system?	Hypothesize				
	How is electricity used?	Observe	<i>Light</i> two bulbs using battery holders, bulb holders, and switches			
Where does electricity come from?						
How is electricity transported?	Summarize					
<b>Magnetism</b>	Synthesize	<i>Construct</i> electrical circuits to <i>demonstrate</i> polarity of batteries				
How are magnets different from other materials?						
Why do some objects attract to magnets while others repel?	Analyze					
How are magnets used in your home?	Conclude					
How are magnets used to make electricity?						
What is attracted to magnets?		<i>Describe</i> the				

<p><b>Guided Reading:</b></p> <p>How do I teach the skill of recalling facts and details about electrical circuits and history while reading <a href="#">Switch It On?</a></p> <p>How can I use the skill of classification to complete a concept map that shows the different forms of energy, while reading the book <a href="#">Energy - Many Different Forms?</a> (Green Level)</p> <p>How can I use the skill of classification to identify the six common forms of energy while reading about <a href="#">Energy - Changing Forms?</a> (Orange Level)</p> <p>How can I use the skill of classification to recognize renewable vs. non-renewable energy sources in conjunction with conservation, while reading the book <a href="#">Energy: Sources of Energy?</a> (Purple Level)</p>	<p><b>Vocabulary</b></p> <p><b>Electricity</b></p> <p>acid</p> <p>base</p> <p>base terminal</p> <p>battery</p> <p>battery holder</p> <p>bulb</p> <p>bulb holder</p> <p>chemical energy</p> <p>circuit</p> <p>circuit breaker</p> <p>closed circuit</p> <p>conduct</p> <p>conductor</p> <p>electrical energy</p> <p>electrical circuit</p> <p>electrician</p> <p>electricity</p> <p>energy</p> <p>energy transfer</p> <p>energy transformation</p> <p>fahnestock clip</p> <p>filament</p> <p>fuse</p> <p>gauge</p> <p>insulator</p> <p>interaction</p> <p>negative terminal</p> <p>nonconductor</p> <p>open circuit</p> <p>parallel circuit</p> <p>polarity</p> <p>positive terminal</p> <p>potential energy</p> <p>regulator</p> <p>resistance</p> <p>rheostat</p>	<p>three states of matter</p> <p><b>Compare</b> and <b>contrast</b> the properties of solids, liquids, and gases</p> <p><b>Differentiate</b> physical and chemical change in states of matter</p> <p><b>Describe</b> how matter can be changed</p> <p><b>Identify</b> and <b>list</b> the properties of each of the three states of matter</p> <p><b>Examine</b> and <b>summarize</b> the properties of various objects</p> <p><b>Test</b> various objects to see if they are magnetic</p> <p><b>Compare</b> and <b>contrast</b> the properties of objects which are and aren't magnetic</p>			
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		salt			
		schematic			
		series circuit			
		short circuit			
		solution			
		static electricity			
		support wires			
		surge			
		switch			
		symbol			
		system			
		terminal			
		tester			
		volt			
		wiring diagram			
		<b>Magnetism</b>			
		attract			
		electromagnet			
		generator			
		magnet			
		magnetic field			
		magnetic north pole			
		magnetic south pole			
		magnetic pole			
		magnetism			
		permanent magnet			
		temporary magnetic pole			

<p>Unit 15</p>	<p>How can foods be grouped?</p> <p>How can food choices affect your health?</p> <p>Why do humans need a variety of nutrients for maintaining their health?</p> <p>How does the human body digest food?</p> <p>How do food choices affect our health?</p> <p>Why do some foods have more nutritional value than others?</p> <p>Why is exercise important for good health?</p> <p><b>Guided Reading:</b></p> <p>How can nutritional facts of various foods be compared and contrasted in <b>Food, Energy, and You?</b></p>	<p><b>The Living Environment:</b></p> <p><b>Nutrition:</b></p> <p>Nutrients in Food</p> <p>Balanced Diet</p> <p>The Food Pyramid</p> <p>Vitamins and Minerals</p> <p>Carbohydrates</p> <p><b>Human Growth and Development:</b></p> <p>Nutrients are needed for growth and repair</p> <p>Different nutrients, vitamins, and minerals facilitate the healthy growth and function of various body parts</p> <p>Food Choices Affect Personal Health</p> <p>Exercise is essential to maintain optimum health</p> <p><b>The Human Digestive System:</b></p> <p>Food as building blocks</p> <p>The process of digestion</p>	<p>List three different kinds of nutrients</p> <p>Identify the role of the major nutrients</p> <p>Create and label the Food Pyramid</p> <p>Categorize types of foods according to their nutritional value</p> <p>Plan healthful meals and snacks for one week</p> <p>Identify the main sources of carbohydrates</p> <p>List and explain the role of vitamins and minerals</p> <p>Summarize the advantages of a balanced diet</p> <p>Recognize that food choices affect personal health</p> <p>Describe the role of the human digestive system</p> <p>Outline how digestion occurs in the human body</p> <p>Illustrate and label the parts of</p>		<p>MST4-K6-6B</p> <p>MST4-K9-9B</p> <p>MST4-K10-10C</p>	
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		<p>Parts of the human digestive system</p> <p>Maintenance of a healthy digestive system</p> <p><b>Vocabulary</b></p> <p><b>Nutrition</b></p> <p>balanced diet</p> <p>building blocks</p> <p>carbohydrate</p> <p>cell</p> <p>digestive system</p> <p>excretory system</p> <p>fat</p> <p>food pyramid</p> <p>harmful substance</p> <p>kidneys</p> <p>large intestine</p> <p>mineral</p> <p>nutrient</p> <p>protein</p> <p>small intestine</p> <p>starch</p> <p>sugar</p> <p>urea</p> <p>villi</p> <p>vitamin</p>	the human digestive system		
Unit 6	<p><b>Minerals</b></p> <p>How do minerals form?</p> <p>How can minerals be identified based on their properties?</p> <p>How are minerals used by humans?</p> <p><b>Rocks</b></p> <p>How can rocks be classified?</p> <p>How do igneous rocks form?</p>	<p><b>The Physical Setting:</b></p> <p>Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land</p> <p>Matter is made of particles whose</p>	<p><i>Explain</i> how minerals form</p> <p><i>Relate</i> properties of minerals to ways minerals are identified</p> <p><i>Illustrate</i> various uses for minerals</p>		<p>MST4-K1-1A</p> <p>MST4-K2-2A</p> <p>MST4-K3-3A</p> <p>MST4-K3-3B</p> <p>MST4-K4-4A</p> <p>MST4-K4-4B</p> <p>MST4-K6-6A</p> <p>MST4-K11-11B</p> <p>MST4-K12-12A</p>

<p>How do sedimentary rocks form?</p>	<p>properties determine the observable characteristics of matter and its reactivity</p>	<p><b>Observe and identify</b> properties of minerals using appropriate tools</p>
<p>How do metamorphic rocks form?</p>	<p>properties</p>	<p><b>Compare and contrast</b> the properties of various minerals</p>
<p><b>The Rock Cycle</b></p>	<p><b>Minerals</b></p>	<p><b>Identify</b> igneous rocks and <b>describe</b> how they are formed</p>
<p>How do rocks form layers?</p>	<p>Properties</p>	<p><b>List</b> examples of sedimentary rocks and <b>explain</b> the processes that form these rocks</p>
<p>What is the rock cycle?</p>	<p>Ores</p>	<p><b>Compare and contrast</b> chemical, physical, and biological weathering</p>
<p>How do rocks change?</p>	<p>Uses</p>	<p><b>Relate</b> the processes involved in the rock cycle to changes that occur in the rocks</p>
<p><b>Guided Reading:</b></p>	<p><b>Rocks</b></p>	<p><b>Review:</b></p>
<p>How can I use the skill of sequence to describe the phases of the water cycle and its impact on our daily lives, while reading <a href="#">Water In Our World?</a></p>	<p>Igneous</p>	<p><b>Weather , the Water Cycle, and Erosion</b></p>
<p>How can problem-solving skills be applied to graph and chart interpretation while reading <a href="#">Water In Our World?</a></p>	<p>Sedimentary</p>	<p><b>Vocabulary:</b></p>
<p>How can I use the skill of compare and contrast to describe how volcanoes and earthquakes form, while reading the book <a href="#">Volcanoes and Earthquakes: Sudden Changes?</a> (Green Level)</p>	<p>Metamorphic</p>	<p><b>Rocks and Minerals</b></p>
<p>How can I use the skill of compare and contrast to show the effects of natural disasters to our earth and living organisms, while reading the book <a href="#">Volcanoes and Earthquakes: Different Types?</a> (Orange Level)</p>	<p><b>The Rock Cycle</b></p>	
<p>How can I use the skill of summarizing to identify how scientists group rocks, while reading the book <a href="#">Earth's Changing Surface: The Rock Cycle?</a> (Green Level)</p>	<p>Chemical Weathering</p>	
<p>How can I use the skill of summarizing to describe how various types of rocks are formed, while reading the book <a href="#">Earth's Changing Surface: Rocks and Minerals?</a> (Orange Level)</p>	<p>Physical Weathering</p>	
<p>How can I use the skill of summarizing to describe the importance of fossils in the rock cycle, while reading the book <a href="#">Earth's Changing Surface: Fossils and History?</a> (Purple Level)</p>	<p>Biological Weathering</p>	



	Essential Questions	Content	Skills	Assessments	Standards/PIS	Resources/Notes
Unit 7	<p>How and why do simple machines make work easier?</p> <p>How do humans use simple machines?</p> <p>How can variables be changed to create a greater force?</p> <p>How does the velocity and mass of an object affect its force?</p> <p>How does gravity affect life on earth?</p> <p>How can scientists measure the mass, size, or volume of matter?</p> <p>Why do experiments have constants and variables?</p> <p>Why do we use standard units of measurement?</p> <p>How can data be organized?</p> <p>How do chart, tables, and graphs help us draw conclusions and analyze the results of an experiment?</p> <p>How can trials be used when conducting an experiment?</p>	<p><b>Review Unit: New York State Assessment</b></p> <p><b>The Physical Setting:</b></p> <p>Forces and Motion</p> <p>Simple Machines</p> <p>The Solar System</p> <p>Forms of Energy</p> <p><b>Inquiry, Analysis, and Design</b></p> <p>Measurement and mathematical reasoning</p> <p>Conducting An Experiment</p> <p>The Scientific Method</p> <p>Data Collection and Analysis</p> <p>Interpreting Charts and Graphs</p> <p>Creating Models</p> <p><b>Vocabulary:</b></p> <p>asteroid</p> <p>astronomy</p> <p>axis</p> <p>balance</p> <p>comet</p> <p>constant</p> <p>classify</p> <p>force</p> <p>friction</p> <p>gravity</p> <p>hypothesis</p> <p>incline plane</p>	<p><b>Identify</b> constants and variables in an experiment</p> <p><b>Explain</b> how changing variables can affect the outcome of an experiment</p> <p><b>Observe, collect, and record</b> data</p> <p><b>Identify and label</b> simple machines</p> <p><b>Explain</b> how simple machines can make work easier</p> <p><b>Identify</b> and describe basic forms of energy</p> <p><b>Describe</b> how energy can be transformed</p> <p><b>Discuss</b> why we have different seasons</p> <p><b>Explain</b> the difference between the revolution and rotation of the Earth</p> <p><b>Make predictions</b> based on observed and collected data</p> <p><b>Analyze</b> data and <b>draw</b> conclusions after conducting an experiment</p> <p><b>Interpret</b> various charts and graphs</p> <p><b>Outline</b> the Scientific Method</p> <p><b>Measure</b> the customary and metric length, width, and height of a container</p> <p><b>Measure</b> the volume of a container</p>		<p>MST1-K1-1A</p> <p>MST1-K2-1A</p> <p>MST1-K4-2A</p> <p>MST1-K4-2B</p> <p>MST1-K4-2C</p> <p>MST1-K5-2A</p> <p>MST1-K5-2B</p> <p>MST1-K5-2C</p> <p>MST1-K6-2A</p> <p>MST1-K6-2C</p>	

		lever				
		mechanical energy				
		orbit				
		planet				
		pulley				
		ramp				
		recycle				
		reflect				
		revolution				
		rotation				
		solar system				
		sort				
		sound energy				
		variable				
		wedge				
		wheel and axle				

**Key to Standards used in this Map**

**MST1-K1-1A** [2 occurrences] - MST Standard 1 - Key Idea 1 [Mathematical Analysis i] - Performance Indicator 1A - use special mathematical notation and symbolism to communicate in mathematics and to compare and describe quantities, express relationships, and relate mathematics to their immediate environments. [Elementary]

**MST1-K2-1A** [2 occurrences] - MST Standard 1 - Key Idea 2 [Mathematical Analysis ii] - Performance Indicator 1A - use simple logical reasoning to develop conclusions, recognizing that patterns and relationships present in the environment assist them in reaching these conclusions. [Elementary]

**MST1-K4-2A** [2 occurrences] - MST Standard 1 - Key Idea 4 [Scientific Inquiry i] - Performance Indicator 2A - ask why' questions in attempts to seek greater understanding concerning objects and events they have observed and heard about. [Elementary]

**MST1-K4-2B** [2 occurrences] - MST Standard 1 - Key Idea 4 [Scientific Inquiry i] - Performance Indicator 2B - question the explanations they hear from others and read about, seeking clarification and comparing them with their own observations and understandings. [Elementary]

**MST1-K4-2C** [2 occurrences] - MST Standard 1 - Key Idea 4 [Scientific Inquiry i] - Performance Indicator 2C - develop relationships among observations to construct descriptions of objects and events and to form their own tentative explanations of what they have observed. [Elementary]

**MST1-K5-2A** [1 occurrence] - MST Standard 1 - Key Idea 5 [Scientific Inquiry ii] - Performance Indicator 2A - develop written plans for exploring phenomena or for evaluating explanations guided by questions or proposed explanations they have helped formulate. [Elementary]

**MST1-K5-2B** [1 occurrence] - MST Standard 1 - Key Idea 5 [Scientific Inquiry ii] - Performance Indicator 2B - share their research plans with others and revise them based on their suggestions. [Elementary]

**MST1-K5-2C** [1 occurrence] - MST Standard 1 - Key Idea 5 [Scientific Inquiry ii] - Performance Indicator 2C - carry out their plans for exploring phenomena through direct observation and through the use of simple instruments that permit measurements of quantities (e.g., length, mass, volume, temperature, and time). [Elementary]

**MST1-K6-2A** [1 occurrence] - MST Standard 1 - Key Idea 6 [Scientific Inquiry iii] - Performance Indicator 2A - organize observations and measurements of objects and events through classification and the preparation of simple charts and tables. [Elementary]

**MST1-K6-2C** [1 occurrence] - MST Standard 1 - Key Idea 6 [Scientific Inquiry iii] - Performance Indicator 2C - share their findings with others and actively seek their interpretations and ideas. [Elementary]

**MST4-K1-1A** [2 occurrences] - MST Standard 4 - Key Idea 1 [Physical Setting i] - Performance Indicator 1A - describe patterns of daily, monthly, and seasonal changes in their environment. [Elementary]

**MST4-K2-2A** [1 occurrence] - MST Standard 4 - Key Idea 2 [Physical Setting ii] - Performance Indicator 2A - describe the relationships among air, water, and land on Earth. [Elementary]

**MST4-K3-3A** [3 occurrences] - MST Standard 4 - Key Idea 3 [Physical Setting iii] - Performance Indicator 3A - observe and describe properties of materials using appropriate tools. [Elementary]

**MST4-K3-3B** [3 occurrences] - MST Standard 4 - Key Idea 3 [Physical Setting iii] - Performance Indicator 3B - describe chemical and physical changes, including changes in states of matter. [Elementary]

**MST4-K4-4A** [3 occurrences] - MST Standard 4 - Key Idea 4 [Physical Setting iv] - Performance Indicator 4A - describe a variety of forms of energy (e.g., heat, chemical, light) and the changes that occur in objects when they interact with those forms of energy. [Elementary]

**MST4-K4-4B** [3 occurrences] - MST Standard 4 - Key Idea 4 [Physical Setting iv] - Performance Indicator 4B - observe the way one form of energy can be transformed into another form of energy present in common situations (e.g., mechanical to heat energy, mechanical to electrical energy, chemical to heat energy). [Elementary]

**MST4-K6-6A** [1 occurrence] - MST Standard 4 - Key Idea 6 [The Living Environment i] - Performance Indicator 6A - describe the characteristics of and variations between living and nonliving things. [Elementary]

**MST4-K6-6B** [4 occurrences] - MST Standard 4 - Key Idea 6 [The Living Environment i] - Performance Indicator 6B - describe the life processes common to all living things. [Elementary]

**MST4-K7-7A** [1 occurrence] - MST Standard 4 - Key Idea 7 [The Living Environment ii] - Performance Indicator 7A - recognize that traits of living things are both inherited and acquired or learned. [Elementary]

**MST4-K7-7B** [2 occurrences] - MST Standard 4 - Key Idea 7 [The Living Environment ii] - Performance Indicator 7B - recognize that for humans and other living things there is genetic continuity between generations. [Elementary]

**MST4-K8-8A** [2 occurrences] - MST Standard 4 - Key Idea 8 [The Living Environment iii] - Performance Indicator 8A - describe how the structures of plants and animals complement the environment of the plant or animal. [Elementary]

**MST4-K8-8B** [2 occurrences] - MST Standard 4 - Key Idea 8 [The Living Environment iii] - Performance Indicator 8B - observe that differences within a species may give individuals an advantage in surviving and reproducing. [Elementary]

**MST4-K9-9A** [2 occurrences] - MST Standard 4 - Key Idea 9 [The Living Environment iv] - Performance Indicator 9A - describe the major stages in the life cycles of selected plants and animals. [Elementary]

**MST4-K9-9B** [3 occurrences] - MST Standard 4 - Key Idea 9 [The Living Environment iv] - Performance Indicator 9B - describe evidence of growth, repair, and maintenance, such as nails, hair, and bone, and the healing of cuts and bruises. [Elementary]

**MST4-K10-10A** [1 occurrence] - MST Standard 4 - Key Idea 10 [The Living Environment v] - Performance Indicator 10A - describe basic life functions of common living specimens (guppy, mealworm, gerbil). [Elementary]

**MST4-K10-10B** [2 occurrences] - MST Standard 4 - Key Idea 10 [The Living Environment v] - Performance Indicator 10B - describe some survival behaviors of common living specimens. [Elementary]

**MST4-K10-10C** [2 occurrences] - MST Standard 4 - Key Idea 10 [The Living Environment v] - Performance Indicator 10C - describe the factors that help promote good health and growth in humans. [Elementary]

**MST4-K11-11A** [2 occurrences] - MST Standard 4 - Key Idea 11 [The Living Environment vi] - Performance Indicator 11A - describe how plants and animals, including humans, depend upon each other and the nonliving environment. [Elementary]

**MST4-K11-11B** [4 occurrences] - MST Standard 4 - Key Idea 11 [The Living Environment vi] - Performance Indicator 11B - describe the relationship of the sun as an energy source for living and nonliving cycles. [Elementary]

**MST4-K12-12A** [2 occurrences] - MST Standard 4 - Key Idea 12 [The Living Environment vii] - Performance Indicator 12A - identify ways in which humans have changed their environment and the effects of those changes. [Elementary]