

Map: Science - Grade 2 - E. Colucci & T. O'Loughlin Type: Consensus Grade Level: 2 School Year: 2008-2009

Author: Island Trees District District/Building: Island Trees/Island Trees High School

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This map copied from: Science - Grade 2 - E. Colucci & T. O'Loughlin by Emily Colucci

	Essential Questions	Content	Skills	Assessments	Standards/PIs	Resources/Notes
Unit 1	<p>How can you identify sources and uses of light?</p> <p>How can seeing your shadow help you to understand how the sun works?</p> <p>How can understanding how your eyes and ears work help keep them safe?</p> <p>How can listening to a song help us to understand the differences in sound?</p> <p>How can I compare and contrast wetland plants using <a href="#">Wetland Plants?</a></p> <p>How can I use the skill of sequencing when describing the life cycle of a bean plant using <a href="#">From Bean to Bean Plant?</a></p> <p>How can I use context clues to define new vocabulary words about flowers using <a href="#">Flowers?</a></p> <p>How can I find a main idea and supporting details about the importance of plants to people using <a href="#">Plants and Us?</a></p> <p>How can I apply new vocabulary to describe the parts of a sunflower using <a href="#">From Seed to Sunflower?</a></p> <p>How can I use sequencing to describe the life cycle of an apple using <a href="#">From Seed to Apple?</a></p>	<p><a href="#">Where Light Comes From</a></p> <ul style="list-style-type: none"> <li>* Natural Lights</li> <li>* Artificial Lights</li> </ul> <p><a href="#">Shadows</a></p> <ul style="list-style-type: none"> <li>* Using a Flashlight</li> <li>* Rays From the Sun</li> <li>* Afternoon Sunlight</li> <li>* Morning Sunlight</li> </ul> <p><a href="#">Reflections</a></p> <ul style="list-style-type: none"> <li>* Different Reflectors</li> <li>* Surfaces</li> <li>* Safety</li> <li>* Reflection of Light</li> </ul> <p><a href="#">Eye</a></p> <ul style="list-style-type: none"> <li>* Parts of the Eye</li> <li>* Keeping the Eye Safe</li> <li>* Light</li> </ul> <p><a href="#">Sound</a></p> <ul style="list-style-type: none"> <li>* Parts of the Ear</li> <li>* Keeping the Ear Safe</li> <li>* Sounds</li> <li>* Singing Songs</li> <li>* Listening</li> <li>* Vibration</li> <li>* Loudness</li> <li>* Pitch</li> </ul> <p><b>Vocabulary:</b></p> <ul style="list-style-type: none"> <li>sun</li> <li>bright</li> <li>heat</li> <li>light</li> <li>shadow</li> <li>reflect</li> </ul>	<p>Recognize that you need light to see things.</p> <p>Identify sources and uses of natural and artificial light.</p> <p>Compare and contrast natural and artificial light.</p> <p>Describe how shadows are formed.</p> <p>Demonstrate how light is reflected.</p> <p>Describe how we see and how we can keep our eyes safe.</p> <p>Define the parts of an eye.</p> <p>Define sound as a vibration that can be heard.</p> <p>Identify differences in the pitch of sounds.</p> <p>Discuss differences in the loudness of sounds.</p> <p>Categorize high and low sounds made by objects, instruments, and people.</p> <p>Categorize loud and soft sounds made by objects, instruments, and people.</p> <p>Summarize how our ears work, and how to keep them safe.</p>		<p>MST4-K7-7A</p> <p>MST4-K10-10C</p> <p>MST4-K12-12A</p>	

		<p>pupil</p> <p>iris</p> <p>retina</p> <p>lens</p> <p>vibrate</p> <p>pitch</p> <p>loud</p> <p>eardrum</p> <p>ear canal</p> <p>outer ear</p>			
Unit 2	<p>How do all your body parts work together?</p> <p>Why is it important to keep your body healthy and how can you do this?</p> <p>Why is it important to eat healthy foods?</p> <p>How can I draw conclusions on how to maintain a healthy body using <a href="#">Healthy Body: Body Systems?</a></p> <p>How can I use context clues to define and apply new vocabulary about the parts of a cell using <a href="#">Cells?</a></p>	<p><u>The Heart</u></p> <p>*exercise</p> <p>* feeling your pulse</p> <p><u>The Lungs</u></p> <p>*breathing</p> <p>*inhale (oxygen) and exhale (carbon dioxide)</p> <p>*lungs increase and decrease in size</p> <p><u>The Heart and the Lungs</u></p> <p>*the heart and lungs work together</p> <p><u>Digestion</u></p> <p>*chewing</p> <p>*breakdown of particles</p> <p>*organ sequence during digestion</p> <p><u>The Brain</u></p> <p>*moving body parts by thinking</p> <p>*senses send signals</p> <p><u>Food Helps the Body Grow</u></p> <p>*Nutritious Foods</p> <p>*Food Groups</p> <p><b>Vocabulary</b></p> <p>exercise</p> <p>heart</p> <p>organ</p> <p>pulse</p> <p>lungs</p>	<p>Explain that the heart pumps blood through the body.</p> <p>Describe how the lungs help people breathe.</p> <p>Discuss how the heart and lungs work together.</p> <p>Illustrate how the esophagus, stomach, and small intestines work.</p> <p>Describe how the brain works.</p> <p>Identify foods that help the body grow.</p> <p>Name the five food groups.</p> <p>Classify different foods into food groups and explain how each helps your body to grow.</p> <p>Describe the importance of regular exercise and adequate rest.</p>	<p>HPEFACS1-K1-1C</p> <p>HPEFACS1-K1-1B</p> <p>MST4-K9-9B</p> <p>MST4-K10-10C</p>	

		oxygen digestion small intestines stomach esophagus brain			
Unit 3	<p>How can fossils help you to understand living things from the past?</p> <p>How can fossils help you identify the characteristics of dinosaurs?</p> <p>Why is it important to hold an awareness about endangered species?</p> <p>How can I categorize insects using factual information from <a href="#">Insect Families?</a></p> <p>How can I use sequencing skills to explain the 9 stages in the life cycle of a butterfly using <a href="#">From Caterpillar to Butterfly?</a></p> <p>How can I use sequencing to explain the life cycle of a spider using <a href="#">From Egg to Spider?</a></p> <p>How can I use new vocabulary words to label the stages in the life cycle of a chicken using <a href="#">From Egg to Chicken?</a></p> <p>How can I compare and contrast animals referred to as "creepy creatures" using <a href="#">Creepy Creatures?</a></p>	<p><u>Fossil Forms</u></p> <ul style="list-style-type: none"> <li>*leaf print</li> <li>*foot print</li> <li>*bones</li> <li>*petrified tree</li> <li>*insect in amber</li> </ul> <p><u>Fossil Ages and Digging</u></p> <ul style="list-style-type: none"> <li>*Fossil Layers</li> <li>*Fossil Tools</li> </ul> <p><u>Dinosaurs</u></p> <ul style="list-style-type: none"> <li>*characteristics</li> <li>*names of dinosaurs</li> <li>*environment</li> <li>*extinction</li> </ul> <p><u>Endangered Living Species</u></p> <p><b>Vocabulary:</b></p> <ul style="list-style-type: none"> <li>fossil</li> <li>paleontologist</li> <li>dinosaur</li> <li>characteristics</li> <li>meat-eater</li> <li>plant-eater</li> <li>habitat</li> <li>extinct</li> <li>endangered</li> <li>species</li> <li>natural</li> <li>recycle</li> </ul>	<p>Describe what a fossil looks like.</p> <p>Distinguish between a plant and an animal fossil.</p> <p>Tell how a fossil is formed.</p> <p>Identify the different tools used for uncovering fossils.</p> <p>Define a paleontologist.</p> <p>Sketch layers of rocks and arrange fossils from oldest to newest.</p> <p>Differentiate between a meat-eating dinosaur and a plant-eating dinosaur.</p> <p>Describe characteristics of different dinosaurs.</p> <p>Communicate reasons for dinosaur extinction.</p> <p>Identify causes of endangerment and endangered species.</p> <p>Determine ways to prevent the extinction of living things.</p>	<p><b>MST4-K6-6B</b></p> <p><b>MST4-K8-8B</b></p> <p><b>MST4-K11-11A</b></p> <p><b>MST4-K12-12A</b></p>	

<p>How can I use sequencing to explain the life cycle of a dog using <u>From Puppy to Dog?</u></p>					
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	Essential Questions	Content	Skills	Assessments	Standards/PIs	Resources/Notes	
Unit 4	<p>Why do we need the sun on earth?</p> <p>How would you describe the movement of the earth?</p> <p>Why does the moon appear to change shape?</p> <p>How can I state facts from a non-fiction text to illustrate the concept of energy using <a href="#">Energy: Kinetic Energy and Potential Energy?</a></p> <p>How can I distinguish between facts and opinions about gravity using <a href="#">What Goes Up Must Come Down?</a></p> <p>How can I categorize items based on the three states of matter using <a href="#">Matter All Around?</a></p> <p>How can I make predictions about the 4 major types of weather using <a href="#">Weather: Atmosphere and Temperature?</a></p> <p>How can I visualize life on the 5 levels of a mountain using <a href="#">Life on the Tallest Mountains?</a></p> <p>How can I describe the setting of a nature trail using <a href="#">Along the Nature Trail?</a></p>	<p><a href="#">The Sun Lights and Heats The Earth</a></p> <p>*daytime/nighttime</p> <p>*shadows</p> <p>*energy</p> <p>*temperature</p> <p><a href="#">Size of the Sun and Earth</a></p> <p><a href="#">The Sun is a Star</a></p> <p>*distance from Earth</p> <p>*seen during the day</p> <p><a href="#">Day and Night</a></p> <p>*sunrise/sunset</p> <p>*rotation</p> <p>*length of a day</p> <p><a href="#">Moving around the Sun</a></p> <p>*revolution</p> <p>*length of a year</p> <p>*change of seasons</p> <p><a href="#">Surface of the Moon</a></p> <p>*moon description</p> <p>*no life</p> <p><a href="#">Changing Moon</a></p> <p>*travels around Earth</p> <p>*new moon</p> <p>*first Quarter</p> <p>*full Moon</p> <p>*third Quarter</p> <p><a href="#">Solar System</a></p> <p>*planets</p> <p>*order from the sun</p> <p><b>Vocabulary:</b></p> <p>bright</p> <p>sun</p> <p>gases</p> <p>star</p> <p>rise</p> <p>set</p>	<p>Explain how the sun lights the earth.</p> <p>Describe how blocked light causes a shadow.</p> <p>Explain how light from the sun heats the earth.</p> <p>Tell that the sun is much larger than the earth, but appears smaller because of the distance.</p> <p>Explain how the sun is a star that we can see during the day.</p> <p>Define the length of a complete rotation.</p> <p>Define the length of a complete revolution.</p> <p>Differentiate between rotation and revolution.</p> <p>Construct the moon's surface.</p> <p>Tell that the moon reflects the sun's light.</p> <p>Illustrate the four phases of the moon.</p> <p>Name the planets in order from the sun.</p>			<p>MST4-K1-1A</p> <p>MST4-K1-1A</p>	

		rotate				
		revolution				
		crater				
		reflect				
		phase				
		planet				
		Mercury				
		Venus				
		Earth				
		Jupiter				
		Saturn				
		Uranus				
		Neptune				

#### Key to Standards used in this Map

**HPEFACS1-K1-1B** [1 occurrence] - HPEFACS Standard 1 - Key Idea 1 [Health Education] - Performance Indicator 1B - possess basic knowledge and skills which support positive health choices and behaviors. [Elementary]

**HPEFACS1-K1-1C** [1 occurrence] - HPEFACS Standard 1 - Key Idea 1 [Health Education] - Performance Indicator 1C - understand how behaviors such as food selection, exercise, and rest affect growth and development. [Elementary]

**MST4-K1-1A** [1 occurrence] - 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-K1-1A** [1 occurrence] - MST Standard 4 - Key Idea 1 [Physical Setting i] - Performance Indicator 1A - explain daily, monthly, and seasonal changes on earth. [Intermediate]

**MST4-K6-6B** [1 occurrence] - 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-K8-8B** [1 occurrence] - 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-K9-9B** [1 occurrence] - 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-K10-10C** [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** [1 occurrence] - 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-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]