

Readorium Alignment to Foss Kit: Earth Systems		
Readorium Books By Standard	Magazine Articles (A) and Science Alive Videos (V) By Standard	Teacher Resource Center Classroom Strategy Lessons (CL) with Articles (A) by Standard
<b>NGSS: 6-8-PS1.A. Matter and Its Interactions:</b> Develop models to describe the atomic composition of simple molecules and extended structures.		
<ul style="list-style-type: none"> <li>• Chemical and Physical Properties of Matter 1</li> <li>• Chemical and Physical Properties of Matter 2</li> </ul>	<ul style="list-style-type: none"> <li>• Matter Matters(A)</li> <li>• Crime Scene Science(A)</li> </ul>	<ul style="list-style-type: none"> <li>• Determining Importance (CL-3, A-2 Crystals)</li> </ul>
<b>NGSS: MS-PS2-2. Motion and Stability: Forces and Interactions:</b> Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.		
<ul style="list-style-type: none"> <li>• Newton's Laws</li> <li>• Scientists who Changed the World</li> <li>• Space Rocks!</li> </ul>	<ul style="list-style-type: none"> <li>• A Titanic Collision: The Science Behind the Sunken Ship (A)</li> </ul>	
<b>NGSS: MS-PS2-3. Motion and Stability: Forces and Interactions:</b> Ask questions about data to determine the factors that affect the strength of electric and magnetic forces		
<ul style="list-style-type: none"> <li>• Sea Floor Spreading</li> </ul>	<ul style="list-style-type: none"> <li>• The Many Uses of Submarines (A)</li> </ul>	
<b>NGSS: MS-PS2-5. Motion and Stability: Forces and Interactions:</b> Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.		
<ul style="list-style-type: none"> <li>• Sea Floor Spreading</li> <li>• Total Lunacy</li> <li>• Scientific Method</li> </ul>		
<b>NGSS: MS-ETS1-1. Engineering Design:</b> Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.		
<ul style="list-style-type: none"> <li>• Artificial Satellites</li> <li>• Character Traits of a Good Scientist</li> <li>• Learning from Natural Disasters</li> <li>• Pollution</li> </ul>	<ul style="list-style-type: none"> <li>• Inventor of the Toughest Stuff (A)</li> <li>• Antlers, Beaks, Geckos and Us (V)</li> <li>• Safe from Tsunamis (V)</li> <li>• An Amazing Teen Scientist (A)</li> </ul>	<ul style="list-style-type: none"> <li>• Context Clues (CL-3 A-1 Things That Go Boom!)</li> <li>• Determining Importance (CL-2, A-1. Dragonflies: Flying Aces)</li> </ul>
<b>NGSS: MS-ETS1-2. Engineering Design:</b> Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.		
<ul style="list-style-type: none"> <li>• Superstition or Science</li> </ul>	<ul style="list-style-type: none"> <li>• Things That Go BOOM!: The History and Chemistry of Explosives (A)</li> <li>• Crazy Careers in Science (A)</li> <li>• Space psychologist (A)</li> <li>• From Waste to Energy: Bacteria Gives a Boost(V)</li> <li>• Hydrogen Power(V)</li> <li>• Wave of Future- Green Gasoline (V)</li> <li>• Pig Poop &amp; Other Energy Sources (V)</li> <li>• Getting Ready for Earthquakes (V)</li> <li>• Chores Don't Have to be a Pain in the But...ler (V)</li> <li>• Musical Computer (V)</li> <li>• Robots of Your Dreams( V)</li> </ul>	<ul style="list-style-type: none"> <li>• Context Clues (CL-3 A-1 Things That Go Boom!)</li> </ul>

	<ul style="list-style-type: none"> <li>• Robots with Whiskers (V)</li> <li>• Sensible Sensors (V)</li> <li>• Signing Made Simple (V)</li> <li>• Smart Cars!(V)</li> <li>• The Ins and Outs of the Brain (V)</li> <li>• Strong &amp; Sensitive: Metal Foam (V)</li> <li>• Smart Helicopters (V)</li> <li>• X-Ray Vision: Beyond the Bones (V)</li> <li>• Picking Your Brain ( V)</li> <li>• The Creative Brain (V)</li> <li>• The Good, Bad, and Baby (V)</li> <li>• What Makes Us Tick (V)</li> <li>• Locked-in Syndrome: (V)</li> <li>• Nanoparticles: Tiny Glowing Cancer Killers (V)</li> <li>• Tongue Driven (V)</li> <li>• Vision for Blind People - Fact or Fiction(V)</li> <li>• Extreme Bacteria (V)</li> <li>• Lord of the Tree Rings (V)</li> <li>• Coral Corrosion (V)</li> <li>• Disappearing Frogs (V)</li> <li>• Earthworm Invasion (V)</li> <li>• ESP: A Lab in a Can (V)</li> <li>• Flowing Free (V)</li> <li>• Virtual Wildfires (V)</li> <li>• Women Powered Robots (V)</li> <li>• Wave of the Future: Clean Ocean Energy (V)</li> <li>• A Computer’s Best Friend(A)</li> </ul>	
<p><b>NGSS: MS-ETS1.3. Engineering Design:</b> Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.</p>		
<ul style="list-style-type: none"> <li>• Microscopes</li> <li>• Space Race</li> <li>• Superstition or Science</li> </ul>	<ul style="list-style-type: none"> <li>• Do Scientists Cheat? (A)</li> </ul>	
<p><b>NGSS: MS-ETS1.4. Engineering Design:</b> Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.</p>		
<ul style="list-style-type: none"> <li>• Microscopes</li> <li>• Space Race</li> <li>• Scientific Method</li> </ul>		<ul style="list-style-type: none"> <li>• Graphic Features (CL-2, A-1 High School Track)</li> </ul>