

Readorium Alignment to FOSS Kit: Weather and Climate		
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
<p>NGSS: MS-ESS2.C: Earth's Systems: The Roles of Water in Earth's Surface Processes: Water continually cycles among land, ocean, and atmosphere via transpiration, evaporation, condensation and crystallization, and precipitation, as well as downhill flows on land. (MS-ESS2-4)</p> <p>The complex patterns of the changes and the movement of water in the atmosphere, determined by winds, landforms, and ocean temperatures and currents, are major determinants of local weather patterns. (MSESS2- 5)</p> <p>Global movements of water and its changes in form are propelled by sunlight and gravity. (MS-ESS2-4)</p> <p>Variations in density due to variations in temperature and salinity drive a global pattern of interconnected ocean currents. (MS-ESS2-6)</p>		
<ul style="list-style-type: none"> Continental Drift Earthquakes Mountains Plate Tectonics Sea Floor Spreading 	<ul style="list-style-type: none"> Getting DNA Out of Ancient Fossils 	
<p>NGSS: MS-ESS1-2: Earth's Systems: Weather and Climate: Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns. (MS-ESS2-6)</p> <p>Because these patterns are so complex, weather can only be predicted probabilistically. (MS-ESS2-5)</p> <p>The ocean exerts a major influence on weather and climate by absorbing energy from the sun, releasing it over time, and globally redistributing it through ocean currents. (MS-ESS2-6)</p>		
<ul style="list-style-type: none"> Weather Form Mountains and Deserts Desert Biomes Earth in Motion Life in the Tundra Rainforests Pollution 	<ul style="list-style-type: none"> Global Temperatures (A) Chilling Facts about a Burning Issue: Climate Change Quiz- Pt. 1 Chilling Facts about a Burning Issue: Climate Change Quiz- Pt. 2 It's Too Hot! (A) 	
<p>NGSS: MS-PS1-1. Matter and Its Interactions: Develop models to describe the automatic composition of simple molecules and extended structures.</p>		
<ul style="list-style-type: none"> Chemical and Physical Properties of Matter 1 Chemical and Physical Properties of Matter 2 	<ul style="list-style-type: none"> Matter Matters(A) Crime Scene Science(A) 	<ul style="list-style-type: none"> Determining Importance (CL-3, A-2 Crystals)
<p>NGSS: MS-PS2-2. Motion and Stability: Forces and Interactions: 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.</p>		
<ul style="list-style-type: none"> Newton's Laws Scientists who Changed the World Space Rocks! 	<ul style="list-style-type: none"> A Titanic Collision: The Science Behind the Sunken Ship (A) 	<ul style="list-style-type: none">
<p>NGSS: MS-PS2-3. Motion and Stability: Forces and Interactions: Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.</p>		
<ul style="list-style-type: none"> Sea Floor Spreading 	<ul style="list-style-type: none"> The Many Uses of Submarines (A) 	<ul style="list-style-type: none">
<p>NGSS: MS-PS3-1. Energy: Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.</p>		
<ul style="list-style-type: none"> Lights Sound Action 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">

<ul style="list-style-type: none"> • Sports Physics • Newton's Laws 		
<p>NGSS: MS-PS3-2. Energy: Develop a model to describe that when the arrangements of objects interacting at a distance changes, different amounts of potential energy are stored in the system.</p>		
<ul style="list-style-type: none"> • Sports Physics 	<ul style="list-style-type: none"> • Weapons Older than Dirt: The History of Some of the World's Most Ancient Weapons (A) • Things That Go BOOM!: The History and Chemistry of Explosives (A) 	
<p>NGSS: MS-PS3-5. Energy: Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.</p>		
<ul style="list-style-type: none"> • Lights Sound Action • Sports Physics 	<ul style="list-style-type: none"> • Weapons Older than Dirt: The History of Some of the World's Most Ancient Weapons (A) • Machines of Ancient War: The Physics and History of Siege Engines (A) 	
<p>NGSS: MS-ETS1-1. Engineering Design: 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.</p>		
<ul style="list-style-type: none"> • Artificial Satellites • Character Traits of a Good Scientist • Learning from Natural Disasters • Pollution 	<ul style="list-style-type: none"> • Inventor of the Toughest Stuff (A) • Antlers, Beaks, Geckos and Us (V) • Safe from Tsunamis (V) • An Amazing Teen Scientist (A) 	<ul style="list-style-type: none"> • Context Clues (CL-3 A-1 Things That Go Boom!) • Determining Importance (CL-2, A-1. Dragonflies: Flying Aces)
<p>NGSS: MS-ETS1-3. Engineering Design: 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"> • Microscopes • Space Race • Superstition or Science 		<ul style="list-style-type: none"> • Creating Sensory Images (CL-1, A-2 Kitchen Chemistry) • Determining Importance (CL-3, A-2 Crystals)
<p>NGSS: MS-ETS1-4. Engineering Design: 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"> • Microscopes • Space Race • Scientific Method 		<ul style="list-style-type: none"> • Graphic Features (CL-2, A-1 High School Track)