

Readorium Alignment to FOSS Kit: Astronomy		
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><b>NGSS: MS-ESS1-1: Motion and Stability: Forces and Interactions: Forces and Motion:</b> For any pair of interacting objects, the force exerted by the first object on the second object is equal in strength to the force that the second object exerts on the first, but in the opposite direction (Newton’s third law). (MS-PS2-1)</p> <p>The motion of an object is determined by the sum of the forces acting on it; if the total force on the object is not zero, its motion will change. The greater the mass of the object, the greater the force needed to achieve the same change in motion. For any given object, a larger force causes a larger change in motion. (MS-PS2-2)</p> <p>All positions of objects and the directions of forces and motions must be described in an arbitrarily chosen reference frame and arbitrarily chosen units of size. In order to share information with other people, these choices must also be shared. (MS-PS2-2)</p>		
<ul style="list-style-type: none"> <li>• Total Lunacy</li> <li>• Earth in Motion</li> <li>• Inner and Outer Planets</li> </ul>	<ul style="list-style-type: none"> <li>• The Surface and Eclipses of the Moon (A)</li> </ul>	
<p><b>NGSS: MS-ESS1-2: Motion and Stability: Forces and Interactions: Forces and Motion:</b> Gravitational forces are always attractive. There is a gravitational force between any two masses, but it is very small except when one or both of the objects have large mass-e.g., Earth and the sun. (MS-PS2-4)</p> <p>Forces that act at a distance (electric and magnetic) can be explained by fields that extend through space and can be mapped by their effect on a test object (a ball, a charged object, or a magnet, respectively). (MS-PS2-5)</p>		
<ul style="list-style-type: none"> <li>• Total Lunacy</li> <li>• Lives of Stars</li> <li>• Space Rocks!</li> </ul>	<ul style="list-style-type: none"> <li>• Space Junk: Are We Trashing our Solar System? (A)</li> <li>• The Deep Mystery of Black Holes (A)</li> <li>• Sparkling Sunspots(V)</li> <li>• Gaps in the Galaxies(V)</li> </ul>	
<p><b>NGSS: MS-ESS1-3: Engineering Design: Defining and Delimiting an Engineering Problem:</b> The more precisely a design task’s criteria and constraints can be defined, the more likely it is that the designed solution will be successful. Specification of constraints includes consideration of scientific principles and other relevant knowledge that is likely to limit possible solutions. (MS-ETS1-4) (secondary to MS-PS-3-3)</p>		
<ul style="list-style-type: none"> <li>• Inner and Outer Planets</li> </ul>	<ul style="list-style-type: none"> <li>• Let’s Save Our Planet! (A)</li> </ul>	<ul style="list-style-type: none"> <li>• Context Clues (CL-2, A-2, The Search for Life on Mars)</li> </ul>