2.6 Alignments with Next Generation Science Standards

<table>
<thead>
<tr>
<th>Middle School</th>
<th>Space Teams Correlation with Next Generation Science Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Sciences</td>
<td>Middle School Life Sciences and Physical Science Domain Energy</td>
</tr>
<tr>
<td>Earth and Space Science</td>
<td>Middle School Earth and Space Science Domain Space Systems</td>
</tr>
<tr>
<td>Matter and Energy</td>
<td>Middle School Matter and Energy in Chemical and Physical Systems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High School</th>
<th>Space Teams Correlation with Next Generation Science Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth and Space Science</td>
<td>High School Earth and Space Sciences Sciences Domain Human and Sustainability</td>
</tr>
<tr>
<td>Physical Science Domain</td>
<td>High School Physical Science Domain Energy</td>
</tr>
<tr>
<td>Forces and Interactions</td>
<td>High School Physical Science Domain Forces and Interactions</td>
</tr>
</tbody>
</table>

- HSS-PS1-1
- HSS-PS1-2
- HSS-PS1-3
- HSS-PS1-4
- HSS-PS2-1
- HSS-PS2-2
- HSS-PS2-3
- HSS-PS2-4
- HSS-PS3-1
- HSS-PS3-2
- HSS-PS3-3
- HSS-PS3-4
- HSS-PS4-1
- HSS-PS4-2
- HSS-PS4-3
- HSS-PS4-4
- HSS-PS5-1
- HSS-PS5-2
- HSS-PS5-3
- HSS-PS5-4
- HSS-PS6-1
- HSS-PS6-2
- HSS-PS6-3
- HSS-PS6-4

- ESS1-1
- ESS1-2
- ESS1-3
- ESS1-4
- ESS2-1
- ESS2-2
- ESS2-3
- ESS2-4
- ESS3-1
- ESS3-2
- ESS3-3
- ESS3-4
- ESS4-1
- ESS4-2
- ESS4-3
- ESS4-4
- ESS5-1
- ESS5-2
- ESS5-3
- ESS5-4
- ESS6-1
- ESS6-2
- ESS6-3
- ESS6-4

- ENG1-1
- ENG1-2
- ENG1-3
- ENG1-4
- ENG2-1
- ENG2-2
- ENG2-3
- ENG2-4
- ENG3-1
- ENG3-2
- ENG3-3
- ENG3-4
- ENG4-1
- ENG4-2
- ENG4-3
- ENG4-4
- ENG5-1
- ENG5-2
- ENG5-3
- ENG5-4
- ENG6-1
- ENG6-2
- ENG6-3
- ENG6-4

- ETS1-1
- ETS1-2
- ETS1-3
- ETS1-4
- ETS2-1
- ETS2-2
- ETS2-3
- ETS2-4
- ETS3-1
- ETS3-2
- ETS3-3
- ETS3-4
- ETS4-1
- ETS4-2
- ETS4-3
- ETS4-4
- ETS5-1
- ETS5-2
- ETS5-3
- ETS5-4
- ETS6-1
- ETS6-2
- ETS6-3
- ETS6-4

- 9-12 Spaceteam Competency Standards
- HS-PS1-1
- HS-PS1-2
- HS-PS1-3
- HS-PS1-4
- HS-PS2-1
- HS-PS2-2
- HS-PS2-3
- HS-PS2-4
- HS-PS3-1
- HS-PS3-2
- HS-PS3-3
- HS-PS3-4
- HS-PS4-1
- HS-PS4-2
- HS-PS4-3
- HS-PS4-4
- HS-PS5-1
- HS-PS5-2
- HS-PS5-3
- HS-PS5-4
- HS-PS6-1
- HS-PS6-2
- HS-PS6-3
- HS-PS6-4

- ENG1-1
- ENG1-2
- ENG1-3
- ENG1-4
- ENG2-1
- ENG2-2
- ENG2-3
- ENG2-4
- ENG3-1
- ENG3-2
- ENG3-3
- ENG3-4
- ENG4-1
- ENG4-2
- ENG4-3
- ENG4-4
- ENG5-1
- ENG5-2
- ENG5-3
- ENG5-4
- ENG6-1
- ENG6-2
- ENG6-3
- ENG6-4
<table>
<thead>
<tr>
<th>Performance Objective</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Applicable NGSS Performance Objectives (Abbreviated Descriptions)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MS-PS2-2</strong></td>
<td>Change in an object's motion depends on the sum of the forces on the object and the mass of the object.</td>
</tr>
<tr>
<td><strong>MS-PS3-4</strong></td>
<td>Gravitational interactions are attractive and depend on the masses of interacting objects.</td>
</tr>
<tr>
<td><strong>MS-PS3-1</strong></td>
<td>Relationships of kinetic energy to the mass of an object and to the speed of an object.</td>
</tr>
<tr>
<td><strong>MS-PS3-2</strong></td>
<td>Arrangement of objects interacting at a distance changes potential energy stored in the system.</td>
</tr>
<tr>
<td><strong>MS-PS3-5</strong></td>
<td>When the kinetic energy of an object changes, energy is transferred to or from the object.</td>
</tr>
<tr>
<td><strong>MS-LS2-3</strong></td>
<td>Cycling of matter and flow of energy among living and nonliving parts of an ecosystem.</td>
</tr>
<tr>
<td><strong>MS-ESS1-1</strong></td>
<td>The Earth-sun-moon system describes the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.</td>
</tr>
<tr>
<td><strong>MS-ESS1-2</strong></td>
<td>Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.</td>
</tr>
<tr>
<td><strong>MS-ESS1-3</strong></td>
<td>Analyze and interpret data to determine scale properties of objects in the solar system.</td>
</tr>
<tr>
<td><strong>MS-ETS1-1</strong></td>
<td>Design a problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts.</td>
</tr>
<tr>
<td><strong>MS-ETS1-2</strong></td>
<td>Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.</td>
</tr>
<tr>
<td><strong>MS-ETS1-3</strong></td>
<td>Determine similarities and differences among several design solutions to achieve a better solution to meet the criteria for success.</td>
</tr>
<tr>
<td><strong>MS-ETS1-4</strong></td>
<td>Iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.</td>
</tr>
<tr>
<td><strong>HS-PS2-1</strong></td>
<td>Newton's second law of motion - the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.</td>
</tr>
<tr>
<td><strong>HS-PS2-2</strong></td>
<td>Total momentum of a system of objects is conserved when there is no net force on the system.</td>
</tr>
<tr>
<td><strong>HS-PS2-4</strong></td>
<td>Newton's Law of Gravitation and Coulomb's Law describe and predict the gravitational and electrostatic forces between objects.</td>
</tr>
<tr>
<td><strong>HS-PS3-2</strong></td>
<td>Energy at the macroscopic scale can be accounted for as a combination of the motions of particles and the relative position of particles (objects).</td>
</tr>
<tr>
<td><strong>HS-PS3-3</strong></td>
<td>Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.</td>
</tr>
<tr>
<td><strong>HS-ESS1-1</strong></td>
<td>The sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation.</td>
</tr>
<tr>
<td><strong>HS-ESS1-4</strong></td>
<td>Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.</td>
</tr>
<tr>
<td><strong>HS-ESS2-4</strong></td>
<td>Variations in the flow of energy into and out of Earth's systems result in changes in climate.</td>
</tr>
<tr>
<td><strong>HS-ESS3-2</strong></td>
<td>Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.</td>
</tr>
<tr>
<td><strong>HS-ESS3-3</strong></td>
<td>Simulate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.</td>
</tr>
<tr>
<td><strong>HS-ETS1-1</strong></td>
<td>Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions.</td>
</tr>
<tr>
<td><strong>HS-ETS1-2</strong></td>
<td>Solve a complex problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</td>
</tr>
<tr>
<td><strong>HS-ETS1-3</strong></td>
<td>Solve a complex problem based on prioritized criteria and trade-offs that account for a range of constraints.</td>
</tr>
<tr>
<td><strong>HS-ETS1-4</strong></td>
<td>Simulate proposed solutions to a complex real-world problem with numerous criteria and constraints.</td>
</tr>
</tbody>
</table>