<table>
<thead>
<tr>
<th>Lesson</th>
<th>Next Generation Science Standard*</th>
<th>STEM Abilities</th>
<th>Life Skill</th>
<th>Success Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Blast Off with a Paper Rocket</td>
<td>MS-PS2-2. 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.</td>
<td>Build/construct, Collect data, Communicate/demonstrate, Compare/contrast, Develop solutions, Draw/design, Interpret/analyze/reason, Measure, Model/graph/use numbers, Plan investigations, Problem solve, State a problem, Use tools</td>
<td>Mastering technology, working with numbers</td>
<td>Makes a simple paper rocket, records distance, and calculates average, median, and mode</td>
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<td>2. Rocket Redesign</td>
<td>MS-PS2-2. 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.</td>
<td>Collaborate, Communicate/demonstrate, Draw/design, Evaluate, Interpret/analyze/reason, Measure, Observe, Plan investigations, Problem solve, Redesign, State a problem</td>
<td>Mastering technology, thinking critically, working with numbers</td>
<td>Improves paper rocket design</td>
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<td>3. On the Launch Pad</td>
<td>3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.</td>
<td>Categorize/order/classify, Collaborate, Collect data, Communicate/demonstrate, Evaluate, Interpret/analyze/reason, Observe, Question</td>
<td>Understanding systems, reasoning, thinking critically</td>
<td>Demonstrates and identifies objects in motion and identifies whether forces are “pushes” or “pulls.”</td>
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<td>4. Getting Off the Ground</td>
<td>MS-PS2-4. Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depending on the masses of interacting objects.</td>
<td>Collaborate, Collect data, Communicate/demonstrate, Evaluate, Hypothesize, Infer, Interpret/analyze/reason, Measure, Model/graph/use numbers, Plan investigations, Summarize, Use tools</td>
<td>Understanding systems, reasoning, thinking critically, working with numbers</td>
<td>Identifies forces to move objects of different sizes and mass</td>
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<td>Understanding systems, reasoning, thinking critically, working as a team</td>
<td>Solving problems, practicing creativity, using scientific methods</td>
<td>Designs, builds, tests, and improves upon a balloon rocket</td>
<td>Processing information, managing resources, planning and organizing</td>
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<td>Builds and tests a balloon rocket</td>
<td>Designs, builds, tests, and improves upon a pinwheel rocket</td>
<td>Designs, builds, tests, and improves upon a balloon rocket</td>
<td>Builds a 2-liter bottle rocket</td>
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<td></td>
<td>Collaborate</td>
<td>Communicate</td>
<td>Communicate/demonstrate</td>
<td>Build/construct</td>
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<td></td>
<td>Design solutions</td>
<td>Develop solutions</td>
<td>Evaluate</td>
<td>Communicate/demonstrate</td>
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<td></td>
<td>Draw/design</td>
<td>Evaluate</td>
<td>Interpret/analyze/reason</td>
<td>Evaluate</td>
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<td>Interpret/analyze/reason</td>
<td>Observe</td>
<td>Invent/implement solutions</td>
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<td>Plan investigations</td>
<td>Optimize</td>
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<td>State a problem</td>
<td>Predict</td>
<td>Predict</td>
<td>Use tools</td>
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<td>Use Tools</td>
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</table>

* The activities in *Rockets Away!* support the learning goals for the performance expectations cited, sometimes as described in the performance expectation itself but oftentimes by laying the groundwork for learning with reinforcement of the related science and engineering practices, disciplinary core ideas, and crosscutting concepts. The Next Generation Science Standards are available in their entirety at [nextgenscience.org](http://nextgenscience.org).