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| 3-PS2 Motion and Stability: Forces and Interactions | |
| https://www.nextgenscience.org/dci-arrangement/3-ps2-motion-and-stability-forces-and-interactions | |
| <p><i>The chart below makes one set of connections between the instruction outlined in this article and the NGSS. Other valid connections are likely; however, space restrictions prevent us from listing all possibilities. The materials, lessons, and activities outlined in the article are just one step toward reaching the performance expectations listed below.</i></p> | |
| Performance Expectation | |
| 3-PS2-2: Make observations and/or measurements of an object’s motion to provide evidence that a pattern can be used to predict future motion | |
| Science and Engineering Practices | |
| Planning and Carrying Out Investigations | Students develop design solutions to test in order to understand forces on a parachute or hovercraft |
| Developing and Using Models | Students developed multiple designs to fall slowly or hover |
| Constructing Explanations and Designing Solutions | Students develop conceptual models in the first three activities in order to improve a design solution for a new environment |
| Disciplinary Core Idea | |
| PS2.A: Forces and Motion. <ul style="list-style-type: none"> • Pushes and pulls can have different strengths and directions. • The patterns of an object’s motion in various situations can be observed and measured; future motion can be predicted from patterns of motion. | Students evaluate how a washer, parachute or hovercraft moves and implement changes to design to improve performance based on understanding of the different forces. Students predict behavior of various crafts built in the post activity based on patterns identified in the pre-activities. |
| Crosscutting Concept | |
| Cause and Effect | Students identify how the changes in design caused a different falling or hovering movement of their crafts. |

