





# Dragster

Name(s): \_\_\_\_\_

Date: \_\_\_\_\_

NGSS GOALS	 <b>BRONZE</b>	 <b>SILVER</b>	 <b>GOLD</b>	 <b>PLATINUM</b>
<b>1. Student work related to this Crosscutting Concept:</b> In this project, we drew and labeled our favorite dragster. We explained how the parts of our dragster and launcher system work together and how they work separately.				
<b>Systems and System Models:</b>  Systems may have sub-systems and be a part of a larger complex system. Use models to present systems and their interactions such as inputs, processes, and outputs.	<ul style="list-style-type: none"> <li>We drew and labeled the parts of our dragster.</li> </ul> <input data-bbox="533 966 572 1006" type="checkbox"/>	<ul style="list-style-type: none"> <li>We met Bronze.</li> <li>We labeled which parts of our dragster needed to work with the launcher and which parts did not.</li> </ul> <input data-bbox="807 966 847 1006" type="checkbox"/>	<ul style="list-style-type: none"> <li>We met Silver.</li> <li>We explained how our dragster was moved by the launcher.</li> <li>We explained how our dragster could move without the launcher.</li> </ul> <input data-bbox="1085 966 1125 1006" type="checkbox"/>	<ul style="list-style-type: none"> <li>We met Gold.</li> <li>We researched and shared an example system that was similar to our dragster.</li> </ul> <input data-bbox="1362 966 1402 1006" type="checkbox"/>
<b>2. Student work related to this Practice:</b> In this project, we investigated how the different wheels would affect how far our dragster travels.				
<b>Planning and Carrying Out Investigations:</b>  Collect data about the performance of a proposed object under a range of conditions	<ul style="list-style-type: none"> <li>We made predictions and measurements for at least two of the set-ups given on our Student Worksheet (among models A-C).</li> </ul> <input data-bbox="533 1340 572 1381" type="checkbox"/>	<ul style="list-style-type: none"> <li>We met Bronze.</li> <li>We made predictions and measurements for one more of the set-ups given on our Student Worksheet (among models A-C).</li> </ul> <input data-bbox="807 1340 847 1381" type="checkbox"/>	<ul style="list-style-type: none"> <li>We met Silver.</li> <li>We changed our dragster's gear ratio so it would travel further.</li> <li>We made predictions and measurements for all three set-ups shown on our Student Worksheet (among models D-F).</li> </ul> <input data-bbox="1085 1340 1125 1381" type="checkbox"/>	<ul style="list-style-type: none"> <li>We met Gold.</li> <li>We proposed and tested at least one more idea to make our dragster travel further.</li> </ul> <input data-bbox="1362 1340 1402 1381" type="checkbox"/>
<b>3. Student work related to this Practice:</b> In this project, we explained what happened as a result of changing the wheels on our dragster.				
<b>Constructing Explanations:</b>  Apply scientific ideas or principles to design an object, tool, process or system.	<ul style="list-style-type: none"> <li>We explained what happened when we changed our dragster's wheels.</li> <li>Our explanation was based on what we saw in our experiment.</li> </ul> <input data-bbox="533 1674 572 1715" type="checkbox"/>	<ul style="list-style-type: none"> <li>We met Bronze.</li> <li>We correctly used the ideas of mass and energy in our explanation.</li> <li>We correctly connected energy and distance traveled.</li> </ul> <input data-bbox="807 1674 847 1715" type="checkbox"/>	<ul style="list-style-type: none"> <li>We met Silver.</li> <li>We correctly explained why cars with bigger tires have more energy and travel further.</li> </ul> <input data-bbox="1085 1674 1125 1715" type="checkbox"/>	<ul style="list-style-type: none"> <li>We met Gold.</li> <li>We proposed new dragster design ideas based on our observations and explanations.</li> </ul> <input data-bbox="1362 1674 1402 1715" type="checkbox"/>
Notes:				