Task #1 – Lever
Summative

Standards:

- Use observed evidence to construct or support a scientific explanation.
- Explain why simple machines make work easier.
- Identify and model simple machines in students’ current context.
- Explain how the six simple machines function.

Task:

Construct three levers: one with the fulcrum in the middle, and two others with different length effort arms. Place a load on one end of each and use the lever to lift it.

Guiding Questions

1. Identify the load and the effort.
2. Of all the levers, which was the easiest to move?
3. What changed in the experiment? What stayed the same?
4. What conclusion can we create about a lever?
5. How does a lever make work easier?

Writing/Verbal Prompt

A 300 pound football player wants to play on the see-saw with you. Where would you put the see-saw’s fulcrum so you can easily lift him?
**Task #1 – Lever**  
**Summative**

**Rubric:**

<table>
<thead>
<tr>
<th></th>
<th>Machinist 5 points</th>
<th>Apprentice 3 points</th>
<th>Tinkerer 0 points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Understanding</strong></td>
<td>Student uses vocabulary words to make connections between how the simple machine works and how it affects the effort</td>
<td>Student makes connections between how the simple machine works and how it affects the effort</td>
<td>Student does not connect how a simple machine works to how it affects the effort</td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td>Student creates three functioning levers</td>
<td>x</td>
<td>Student does not create functioning levers</td>
</tr>
<tr>
<td><strong>Evidence to support scientific claim in explanation</strong></td>
<td>Student refers to several observations from experiment to support claims</td>
<td>Student refers to one observation from experiment to support claims</td>
<td>Student does not refer to experiment to support claims</td>
</tr>
</tbody>
</table>