# Click-Clock

**NGSS GOALS**

<table>
<thead>
<tr>
<th>BRONZE</th>
<th>SILVER</th>
<th>GOLD</th>
<th>PLATINUM</th>
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### 1. Student work related to this Crosscutting Concept:

In this project, we built the long pendulum and described its motion compared to the smaller pendulums from the first part of the activity.

#### Scale, Proportion, and Quantity:

It is important to recognize how changes in scale, proportion, and quantity affect a system's structure and performance.

- We built the long pendulum.
- We described what we observed.
- We met Bronze.
- We compared our observations of the long pendulum with our observations of the smaller pendulums.
- We met Silver.
- We calculated ratios to compare the times of the long pendulum vs. the shorter pendulums.
- We met Gold.
- We compared the ratio of the pendulums lengths to the ratio of the pendulums times.

### 2. Student work related to this Practice:

In this project, we built a click-clock timer and made changes to the pendulum to see if we could make the click-clock go slower or faster.

#### Planning and Carrying Out Investigations:

Collect data about the performance of a proposed object under a range of conditions.

- We completed the construction of our click-clock timer.
- We changed the position and type of wheel on the pendulum.
- We met Bronze.
- We wrote down at least three predictions and measurements for different wheel positions and types.
- We met Silver.
- We used the provided tip to make the click-clock time one minute.
- We wrote down our measurements that were close to one minute.
- We met Gold.
- We proposed additional experiments to our teacher using the click-clock timer.
- We wrote down our measurements for at least one of those experiments.

### 3. Student work related to this Practice:

In this project, we labeled our favorite shock-o'clock timer design. We described how three important parts of our shock-o'clock worked.

#### Obtaining, Evaluating, and Communicating Information:

Integrate qualitative and/or quantitative information in written text with visual displays to clarify claims and findings.

- We labeled one important part of our shock-o'clock design.
- We met Bronze.
- We labeled two more important parts of our shock-o'clock design.
- We explained how one of important parts of our shock-o'clock works.
- We met Silver.
- We explained how all three important parts of our shock-o'clock work.
- We met Gold.
- We created and shared our diagram and explanation to classmates.
- We revised our work and made it more clear for our classmates to understand.

**Notes:**