

Grade: 6th

Topic: Measuring Time

Title: *Building a 30 Second Water Clock*

Objective:

- 1.) The student will build a 30 second water clock.
- 2.) The student will identify the variables that contribute to the speed that the clock sinks.
- 3.) The student will complete science notebook entries.

Standards:

- 6.1.2** - Give examples of different ways scientists investigate natural phenomena and identify processes all scientists use, such as collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations, in order to make sense of the evidence.
- 6.1.3** - Recognize and explain that hypotheses are valuable, even if they turn out not to be true, if they lead to fruitful investigations.
- 6.5.6** - Predict the frequency of the occurrence of future events based on data.

Materials: (for every two students)

- 1 plastic flex tank with water
- 1- 10 cm sq. aluminum foil
- 3 - brass washers (9 mm)

(for entire class)

- one clock with second hand

Activity:

1. Pair students.
2. Students fill plastic tank and gather needed materials.
3. Students should predict how to construct a clock and which variables will affect its sinking time. (Record in science notebook)
4. Allow students time to experiment their various hypotheses while constructing a 30 second clock.
5. While experimenting, students will write down their observations and any diagrams in their science notebooks.
6. Students will write their conclusions, using their data, as to the best method that they found to make a 30 second clock.

Adapted from "Measuring Time" Lesson 7, p. 67 STC

Assessment:0-4 Scale

- 4 – Exceptional
- 3 – Expected
- 2 – Developing
- 1 – Beginning
- 0 – Non-existent

Criteria:

- 1.) Successfully constructed a 30 sec. timer. _____
- 2.) Identified variables that effect sinking time. _____
- 3.) Properly completed science notebooks. _____
- 4.) Cooperate with partner and remain on task. + _____

TOTAL _____

$$\begin{array}{ccc} \boxed{} & \div 4 = & \boxed{} \\ \text{TOTAL} & & \text{FINAL} \\ & & \text{SCORE} \end{array}$$