**SAND TIMER**

**OBJECTIVE:**

Campers are given the task to make a sand timer that goes for 30 seconds.

**TERMS TO GO OVER:**

 Time Seconds

**PRE LAB MATERIALS**

* Tape
* Two Bottles (per group)
* Card Stock
* Hole Punch
* Scissors

**PRE LAB PROCEDURE**

Use the bottle neck to trace a circle onto the card stock so it is the exact circumference of the opening. Cut it out and use a standard hole punch to punch a hole in the middle of the card stock circle.

Tape the circle over the opening of one of the bottles using scotch tape, but don’t cover the hole you punched in the card stock.

**LAB MATERIALS (per group):**

* Stop Watch
* 1 lb Sand
* Balancing Scale
* Two small pop bottles (pre-prepared)
* Funnel
* Tape (to secure the two bottles together)

**GROUP LEADER/VOLUNTEER/TLC ROLE**

Assist the campers in using tools such as the stop watch and balancing scales. When the campers are putting their timers together, help them secure the two bottles with tape.

**LAB PROCEDURE**

Show the students an example of two timers: one timer with far too much sand, and one timer with an inadequate amount of sand. This is to provide the JBs with a visual as to how much sand is necessary to create their timer.

After the demonstration is given, students then get into their groups (no more than four students per group) and begin experimenting. Have the students keep track of how many grams of sand they put into and take out of the timer.

To assemble the timer: pour the sand into the bottle without the cardstock using the strainer. Tape the two bottles together neck-to-neck. Because the cardstock does not allow for the sand to come out quickly, encourage the campers to time their sand timers twice for ‘more accurate results.’

To test the timer: campers weigh out various masses of sand to put into their timers, add the same, and each take turns using the timer to time. The campers’ goal is to come within three seconds of their goal while being as accurate as possible. Once the campers’ timers are ready, the Head Instructor and the Camp Counselors will test the timers in front of the class.