

## Exploring the Scientific Method

### Objective(s): -

1. Design and conduct an experiment using the steps of the scientific method.

### Instruction: -

1. Students are to design an experiment for each of the topics shown below.
  - a. Before the start of experimentation, students are to submit experimental design to instructor for approval before moving forward.
  - b. Students may use the guide provided for assistance.
2. Students are to complete lab report write ups for each of the three experiments and submit them to instructor via Google Docs and turnitin.com.
  - a. Please see information on how to complete lab report write up on course website.
  - b. In the conclusion, students should mention consumer testing, claims they seen on commercials, and possible experimental designs for claims seen on television.
3. Instructor, and/or peers, will conduct assessment of reports via instructor created rubric.

#### **1. Oreo Cookie Challenge**

- a. How much stuffing do Double-Stuff Oreos actually have when compared to regular oreos?
- b. Equipment: Scale, Beaker, Rulers, \*Oreos and Double Stuff Oreos
- c. **No eating of experiment items**

#### **2. Bounty Paper Towels**

- a. How more effective are bounty paper towels when compared to other brands?
- b. Equipment: Beaker, Graduated Cylinder, Scale, Rules, Water, Two or more types of towels
  - i. Dissecting trays or pans might help for catching water.

#### **3. Candy & Surface Area**

- a. How does surface area of a candy affect how quickly it dissolves in water?
- b. Equipment: smarties/M&M's or sweet tarts (or any sugary dissolvable candy that can be cut into smaller portions), water, ruler, scale, \*scalpel or blade, timer

## **Assessment**

Students will be assessed by instructor and/or peers via instructor created rubric.

Now that students have a feel for consumer testing, ask them to evaluate claims they see on commercials, possibly design and conduct an experiment to test those claims.

