

Name: _____

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Science 7

Scientific Method
(NOTES)

Aim: I can identify parts of an experiment.

Do Now:

Notes:

How do scientists create experiments?

- All experiments are designed to be controlled.
- Controlled experiments contain two groups:
 1. Control Group
 2. Experimental Group

Experimental Group

- Is the group of subjects that are being tested on.
- This group does receive the variable.

Control Group

- Is the group of subjects that is used to compare to.
- This group does not receive the variable.
- Constant - things that remain the same in an experiment.

Variable

- The factor that could cause a change in the subjects.
- Two Types of Variables:
 1. Independent Variable
(Manipulated Variable): the one that is changed by the scientist. The factor that the scientist has changed in order to test the hypothesis (on purpose). The cause.
 2. Dependent Variable
(Responding Variable): the responding variable. The result of what the scientist changed. It is the effect of what happened in the experiment.



Myth Busters Experiments

Experiment #1: Does adding dimples to a car increase its gas mileage?

Identify the *Independent Variable*: (Circle One)

- A. The Dimple Car
- B. The Normal Car
- C. Dimples or Not

Identify the *Dependent Variable*: (Circle One)

- A. The number of dimples
- B. The gas mileage
- C. The speed

Constants: Same speed, same type of car, same distance
(Stayed the same) Same track

Experiment #2: Are elephants afraid of mice?

Identify the *Independent Variable*: (Circle One)

- A. Whether or not there was a mouse
- B. The dung with the mouse
- C. The elephants reaction

Identify the *Dependent Variable*: (Circle One)

- A. The number of times the experiment was repeated
- B. The elephants reaction
- C. The number of elephants scared

Constants: Elephant, mouse, dung, position, release time
(Stayed the same)