

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Science 7

Scientific Method

Aim: I can identify parts of an experiment.

Do Now:

Qualitative - blue hat, he is green  
Quantitative - 3 bags, 1 eye

Notes:

How do scientists create experiments?

- All experiments are designed to be controlled.
- Controlled experiments contain two groups:
  - Experimental Group
  - Control 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 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:
  - 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.
  - Dependent Variable (Responding Variable): the responding variable. The result of what the scientist changed. It is the effect of what happened in the experiment.

<b>INDEPENDENT VARIABLE</b>
 What I CHANGE 
<b>DEPENDENT VARIABLE</b>
What I OBSERVE 
<b>CONTROLLED VARIABLE</b>
What I KEEP THE SAME

**Identifying the Variable:**

Students of different ages were given the same jigsaw puzzle to put together. They were timed to see how long it took to finish the puzzle.

The Independent Variable: Different ages of students

The Dependent Variable: The time it took them to complete the task

