

Name: _____

Class Period: _____

Identifying Controls and Variables

Identify the following parts of the experiments shown below based on the scenarios described. For the experiments, not all will have a control group.

Experiment 1:

Mr. Whittaker thinks that a special juice will increase the productivity of workers. He creates two groups of 50 workers each and assigns each group the same task (in this case, they're supposed to staple a set of papers). Group A is given the special juice to drink while they work. Group B is not given the special juice. After an hour, Mr. Whittaker counts how many stacks of papers each group has made. Group A made 1,587 stacks, Group B made 2,113 stacks.

Control Group:

Independent Variable:

Dependent Variable:

Constants:

What should the conclusion be?

Experiment 2:

Eddie has seen commercials that claim Duracell batteries last longer than other brands. He sets up an experiment to test this statement. He purchases three new flashlights, 3 samples of batteries, and stopwatch. Then he tests the length of time each flashlight shines. Eddie learns that the flashlight with the Duracell batteries shines for 12 hours, the flashlight with Energizer batteries shines for 16 hours, and the flashlight with EverReady batteries shines for 10 hours.

Control Group:

Independent Variable:

Dependent Variable:

Constants:

What should the conclusion be?

Experiment 3:

Gary believes that orange juice will dissolve the soap scum on his shower walls and doors. He decides to test this hypothesis by spraying half of his shower with orange juice and the other half with plain water. After seven days, he notices that there has been no change in the soap scum in his shower.

Control Group:

Independent Variable:

Dependent Variable:

Constants:

What should the conclusion be?

Experiment 4:

Mary's houseplants have all died and she thinks the amount of water they received was the problem. She decided to use an experiment to determine the best amount of water to give her plants. She purchases 5 plants from her local nursery. She placed them all on a sunny window and labeled the amount of the water each would receive on the plant. 2 days for 2 months and recorded the data shown:

Plant A received 1 liter and grew 5 cm
Plant B received 2 liters grew 10 cm
Plant C received 3 liters and died
Plant D received 0.5 liters and grew 2 cm
Plant E received 0.33 liters and died

Control Group:

Independent Variable:

Dependent Variable:

Constants:

What should the conclusion be?

Experiment 5:

Dr. Andrews believes the drug AZT will cure AIDS. He takes 100 patients with AIDS and gives the drug to 50 of them (Group A). The other 50 receive a drug that looks like AZT but is really only a sugar pill (Group B). Both groups are told that they were getting a drug that would cure AIDS. After six months, 30 patients in Group A reported fewer symptoms and 10 people in Group B reported having fewer symptoms.

Control Group:

Independent Variable:

Dependent Variable:

Constants:

What should the conclusion be?