

Name: _____
Date: _____ Class Period: _____

Experimental Variables Worksheet

Directions: Determine the Independent Variables (IV), Dependent Variables (DV), Constants, and Controls from the following science experiments.

- **Independent Variable (IV):** What the experimenter changes during the experiment.
- **Dependent Variable (DV):** What the experimenter measures.
- **Constants:** Things that are kept the same.
- **Control:** Thing to compare against to see if Independent Variable has any effect.

- 1) The number of flowers on different breeds of bushes in a greenhouse is recorded every week for two months.

IV:
DV:
Constants:
Control: this one's tough - perhaps one of the breeds is the "standard"

- 2) You give four sunflowers different watering with either pure water or different concentrations of salt solutions. After a two-week period, the height is measured.

IV:
DV:
Constants:
Control:

- 3) Three redwood trees are kept at different humidity levels inside a greenhouse for 12 weeks. One tree is left outside in normal conditions. Height of the tree is measured once a week.

IV:
DV:
Constants:
Control:

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- 4) Pea plant clones are given different amounts of water for a three-week period. First pea plant receives 400 milliliters. Second pea plant receives 200 milliliters. Third pea plant receives 100 milliliters. Fourth pea plant does not receive any extra water; the plant only receives natural ways of receiving water. The height of the pea plants is recorded daily.

IV:
DV:
Constants:
Control:

- 5) One tank of goldfish is fed the normal amount of food, which is once a day; a second tank is fed twice a day; and a third tank is fed four times a day during a six-week study. The fishes' body fat is recorded daily.

IV:
DV:
Constants:
Control:

- 6) You decide to clean the bathroom. You notice that the shower is covered in a strange green slime. You decide to try to get rid of this slime by adding lemonade juice. You spray half of the shower with lemonade juice and spray the other half of the shower with water. After 3 days of "treatment", there is no change in the appearance of the green slime on either side of the shower.

IV:
DV:
Constants:
Control:

- 7) You decide to clean your bedroom. You notice that your floor is covered with clothes. You decide to try to get rid of the clothes by throwing them into the air. You throw clothes from 1/3 of the room into the closet and 1/3 of the room straight up into the air, and the last 1/3 of the room you leave the clothes on the floor. After 30 minutes of "cleaning", the floor of the room is now visible.

IV:
DV:
Constants:
Control: