

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

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

Hour: \_\_\_\_\_

## Experimental Variables Worksheet

For the following experiments, define the (IV) independent variable, (DV) dependent variable, and (CG), control group. If the control variable is not given, suggest a possible controlled variable.

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

IV \_\_\_\_\_

DV \_\_\_\_\_

CG \_\_\_\_\_

2) Pea plant clones are giving different amounts of water for a three-week period. First pea plant receives 400 milliliters. The second pea plant receives 200 milliliters. The third pea plant receives 100 milliliters. The fourth pea plant does not receive any extra water; the plant only receives natural ways of receiving water. The height of the pea plant is recorded daily.

IV \_\_\_\_\_

DV \_\_\_\_\_

CG \_\_\_\_\_

3) 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 \_\_\_\_\_

CG \_\_\_\_\_

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

IV \_\_\_\_\_

DV \_\_\_\_\_

CG \_\_\_\_\_

5) One tank of gold fish is feed once a day, a second tank twice a day, and a third tank four times a day during a six week study. The fish's body fat is recorded.

IV \_\_\_\_\_

DV \_\_\_\_\_

CG \_\_\_\_\_

6) Tulips flowers are counted when grown in experimental types of climates.

IV \_\_\_\_\_

DV \_\_\_\_\_

CG \_\_\_\_\_

7) You give three different concentrations of salt water to sunflower plant clones. After a two-week period, the height is measured.

IV \_\_\_\_\_

DV \_\_\_\_\_

CG \_\_\_\_\_

8) 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 the clothes into the air. You throw clothes from half of the room into the closet and the other half of the room straight up. After 30 minutes of "cleaning", the floor of the room is now visible.

IV \_\_\_\_\_

DV \_\_\_\_\_

CG \_\_\_\_\_

9) What would you do to make the experiment in question 8 better?

Name: KEY

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

**TOTAL POINTS**  
**+ 25 pts**

## Experimental Variables Worksheet

For the following experiments, define the (IV) independent variable, (DV) dependent variable, and (CG), control group. If the control variable is not given, suggest a possible controlled variable.

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

IV Different breeds of rose bushes

DV Number of flowers

CG None cited – Answers may vary.

2) Pea plant clones are giving different amounts of water for a three-week period. First pea plant receives 400 milliliters. The second pea plant receives 200 milliliters. The third pea plant receives 100 milliliters. The fourth pea plant does not receive any extra water; the plant only receives natural ways of receiving water. The height of the pea plant is recorded daily.

IV Pea Plant clones

DV Height of pea plants

CG Fourth pea plant (natural ways of recv'ing water).

3) 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 Lemonade juice & water

DV Amount of strange green slime

CG Water.

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

IV 3 redwood trees @ different humidities & 1 tree outside

DV Height of the tree

CG Tree left outside to normal conditions.

**+ 12 pts**

5) One tank of gold fish is feed once a day, a second tank twice a day, and a third tank four times a day during a six week study. The fish's body fat is recorded.

IV Fish in different tanks (T1 once, T2 twice, T3 four times)

DV Fish's body fat

CG None cited – Answers may vary.

6) Tulips flowers are counted when grown in experimental types of climates.

IV Different experimental types of climates

DV Number of tulip flowers

CG None cited – Answers may vary.

7) You give three different concentrations of salt water to sunflower plant clones. After a two-week period, the height is measured.

IV Different concentrations of salt water

DV Height of sunflower plant clones

CG None cited – Answers may vary.

8) 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 the clothes into the air. You throw clothes from half of the room into the closet and the other half of the room straight up. After 30 minutes of "cleaning", the floor of the room is now visible.

IV Throwing clothes in closet & throwing up in air

DV Amount of clothes on floor

CG None cited – Answers may vary.

9) What would you do to make the experiment in question 8 better?

**Answers may vary. 1pt**

**+ 13 pts**