Name: _____ Date: _____

Identifying Variables Worksheet

Directions: For the following experiments identify the three variables for each experiment, the Independent Variable, the Dependent Variable and the Control Variable.

1) Different rose bushes are grown in a greenhouse for two months. The number of flowers on each bush is counted at the end of the experiment.

   a. Independent Variable different rose bushes

   b. Dependent Variable the number of flowers

   c. Control Variable location (in the greenhouse); length of time (2 months)

2) You water three sunflower plants with salt water. Each plant receives a different concentration of salt solutions. A fourth plant receives pure water. After a two-week period, the height is measured. The fourth plant is the negative control

   a. Independent Variable concentration of salt solution

   b. Dependent Variable height of plant

   c. Control Variable environmental factors such as temperature,the volume of water provided and the lenght of experiment (2 weeks)

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.

   a. Independent Variable humidity level

   b. Dependent Variable height of tree

   c. Control Variable location and length of experiment

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

The 4th pea plantis a negative control

   a. Independent Variable amount (volume) of water

   b. Dependent Variable height of pea plant

   c. Control Variable environmental factors such as temperature; length of experiment (3 weeks)

5) One tank of gold fish is fed the normal amount of food once a day, a second tank is fed twice a day, and a third tank four times a day during a six week study. The fish's weight is recorded daily.

a. Independent Variable the frequency of feeding

b. Dependent Variable weight of fish

c. Control Variable environmental factors such as oxygen availabililty,temperature; length of experiment

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 spraying equal amounts 3 times a day, there is no change in the appearance of the green slime on either side of the shower.

a. Independent Variable presence of lemonade juice

b. Dependent Variable appearance of the green slime

c. Control Variable the frequency of spraying; the amount of liquid sprayed

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 the clothes into the air. You throw clothes from a 1/3 of the room into the closet and a second 1/3 of the room straight up in the air. 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.~~

~~a. Independent Variable~~

~~b. Dependent Variable~~

~~c. Control Variable~~

8) You want to test which size of soccer (football) ball is easiest to juggle with your feet. You test a size 3, size 4 and a size 5 ball. You count the seconds the ball stays in the air for each of the trials. You allow yourself to use both of your feet, knees, and head to juggle the ball.

a. Independent Variable size of football

b. Dependent Variable length of time that the ball stays in the iar

c. Control Variable type of ball (football); the way of juggling