

Name _____

Biology
Scientific Method/Experimental Design Worksheet

Definitions: Define the following words and concepts related to the scientific method.

1. Hypothesis: _____
2. Independent Variable: _____
3. Dependent Variable: _____
4. Control Group: _____
5. Experimental Group: _____
6. Constants/Controlled Variables: _____
7. Trials: _____

Practice: Write a hypothesis for each of the statements and identify the variables, control group, and experimental group.

1. Cigarette smoking increases the risk of lung cancer.

Hypothesis: If _____, then _____
Independent Variable: _____ Dependent Variable: _____
Control Group: _____ Experimental Group: _____

2. Eating breakfast increases performance in school.

Hypothesis: If _____, then _____
Independent Variable: _____ Dependent Variable: _____
Control Group: _____ Experimental Group: _____

3. Hummingbirds are attracted to the color red.

Hypothesis: If _____, then _____
Independent Variable: _____ Dependent Variable: _____

Control Group: _____ Experimental Group: _____

4. Bats locate food using sound waves.

Hypothesis: If _____, then _____
Independent Variable: _____ Dependent Variable: _____
Control Group: _____ Experimental Group: _____

5. iBook batteries last for 5 hours.

Hypothesis: If _____, then _____
Independent Variable: _____ Dependent Variable: _____
Control Group: _____ Experimental Group: _____

6. Lowering salt intake reduces blood pressure.

Hypothesis: If _____, then _____
Independent Variable: _____ Dependent Variable: _____
Control Group: _____ Experimental Group: _____

7. The deer population decreases in the winter due to the lack of food.

Hypothesis: If _____, then _____
Independent Variable: _____ Dependent Variable: _____
Control Group: _____ Experimental Group: _____

8. Students who study perform better in school.

Hypothesis: If _____, then _____
Independent Variable: _____ Dependent Variable: _____
Control Group: _____ Experimental Group: _____

9. People who restrict calories lose weight.

Hypothesis: If _____, then _____
Independent Variable: _____ Dependent Variable: _____
Control gr. _____ exp gr. _____