

STUDY GUIDE

Nature of Science Quiz Date: _____

We will have a quiz on this topic. To be successful you should be able to . . .

1. Write a testable hypothesis in the correct "If . . . , then . . ." format.
2. Identify the independent and dependent variables in an experiment (remember, the independent variable is what is being changed or controlled, and the dependent variable is the factor that is being measured or observed).
3. Form a conclusion by stating whether or not the results of an experiment support the hypothesis.
4. Understand the difference between an observation and an inference.
5. Make observations and inferences from a picture.

Use the following resources to study:

- ✓ Your digital interactive notebook.
- ✓ Any practice sheets you received in class.
- ✓ Your Nature of science quiz flash cards.

Nature of Science Quiz Flash Cards

Write your answers in the right column.

Cut out on the dotted line, and fold the answers back. Use these flash cards to quiz yourself.

1. What is a hypothesis?
2. What are TWO words a hypothesis MUST have?

3. Joe noticed that that his favorite shirt wasn't as clean as it used to be. His friend, Lisa, told him that he should try using Platt's Super Clean Detergent, a new brand of detergent. Joe WONDERED IF THE NEW DETERGENT WOULD MAKE HIS SHIRT CLEANER, so he decided to do an experiment to see if it worked.
What was Joe's hypothesis?

4. In Joe's experiment, what is the independent variable (remember, this is the variable he is changing or controlling)?

5. In Joe's experiment, what is the dependent variable (remember, this is the variable he is measuring or observing)?

6. Ms. Carpenter noticed that her new puppy slept all night when she took her for a long walk after dinner, and she only slept for four hours when she took her for a short walk. Ms. Carpenter WONDERED IF THE LENGTH OF THE WALK was affecting how her puppy slept, so she decided to do an experiment to test it out.

What was Ms. Carpenter's hypothesis?

7. In Ms. Carpenter's experiment, what was the independent variable (what was she changing or controlling?)

8. In Ms. Carpenter's experiment, what was the dependent variable (what is she measuring or observing?)

9. Write two OBSERVATIONS about the picture.



10. Write two INFERENCES about the picture.