

Name _____

The Scientific Method

Bill wanted a pet. He couldn't decide whether to get a dog or a cat. Read the paragraph below to learn how Bill followed the steps in the scientific method to make his decision.

Bill decided to get a pet. He wanted to know whether a cat or a dog would be a better pet for him. Bill read several books on dogs and cats to learn more about them. He decided that perhaps a dog would be a better pet for him. He called a friend who had a cat and a dog. He asked if he could borrow each of the pets for a week. During week 1, Bill borrowed the cat. During week 2, he borrowed the dog. At the end of the second week, Bill made a list of the pros and cons of having each type of pet. When he examined the lists, he decided that a dog was the pet for him.

The steps in the scientific method are listed below. Below each step, write an explanation of how Bill performed that step.

1. STATE THE QUESTION

2. COLLECT INFORMATION

3. FORM A HYPOTHESIS

4. EXPERIMENT

5. RECORD AND STUDY DATA

6. DRAW A CONCLUSION

CHOOSE THE RIGHT CAPTION

Below are six figures and six captions. Each caption matches one of the figures. Choose the caption that best describes each figure. Write the correct caption on the line provided.

Choose from these captions:

Identify the problem

Make careful observations

Gather information

Record the data

State a hypothesis

Analyze the data

Test the hypothesis

State a conclusion



Figure A

1. _____

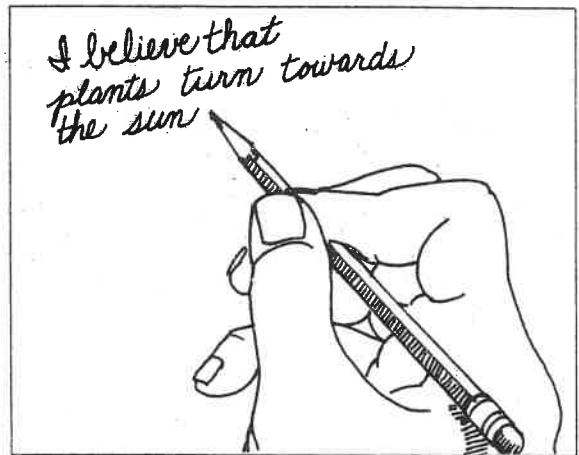


Figure B

2. _____



Figure C

3. _____



Figure D

4. _____

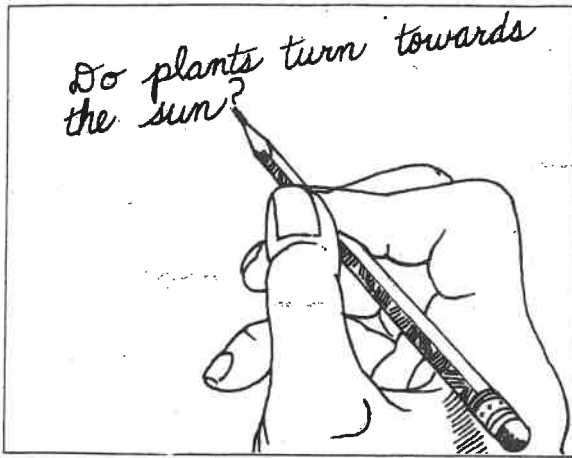


Figure E

5. _____

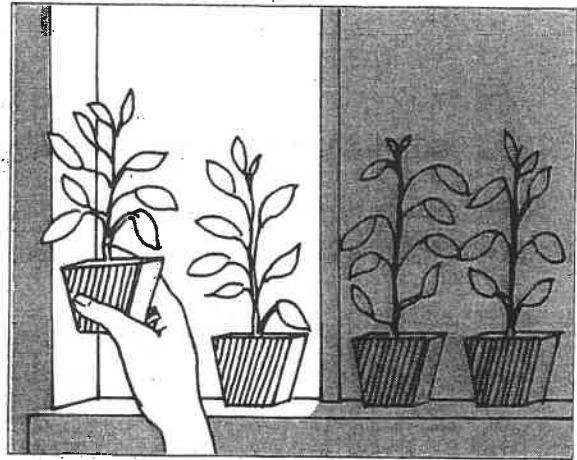


Figure F

6. _____

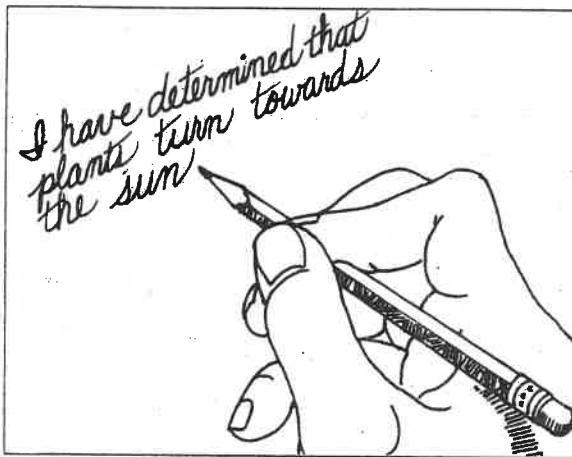


Figure G

7. _____

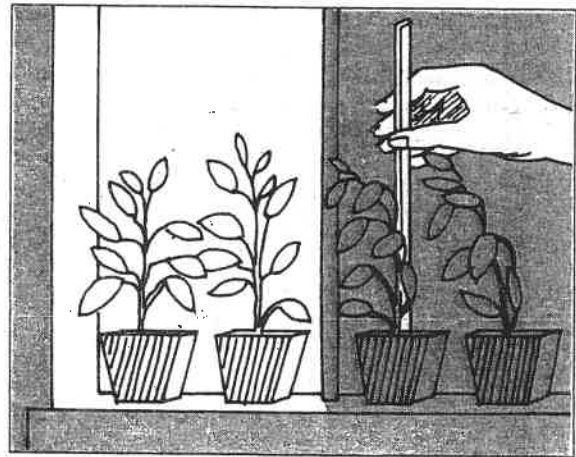


Figure H

8. _____

MATCHING

Match each term in Column A with its description in Column B. Write the correct letter in the space provided.

Column A

- _____ 1. analyze
- _____ 2. scientific method.
- _____ 3. conclusion
- _____ 4. hypothesis
- _____ 5. experiment

Column B

- a) explains the data
- b) suggested solution
- c) test the hypothesis
- d) guide for solving problems
- e) figure out the meaning

SCIENTIFIC METHOD

Name _____

Put the following steps of the scientific method in the proper order.

- _____ Research the problem.
- _____ Observe and record.
- _____ Make a hypothesis.
- _____ Identify the problem.
- _____ Arrive at a conclusion.
- _____ Test the hypothesis.



Match the following terms with the correct definition.

- _____ 1. hypothesis
- _____ 2. control
- _____ 3. variable
- _____ 4. experiment
- _____ 5. conclusion
- _____ 6. theory
- _____ 7. data

- a) organized process used to test a hypothesis
- b) an educated guess about the solution to a problem
- c) observations and measurements recorded during an experiment
- d) a judgment based on the results of an experiment
- e) a logical explanation for events that occur in nature
- f) used to show that the result of an experiment is really due to the condition being tested
- g) factor that changes in an experiment

