

Name: _____ Date _____



Using The Scientific Method

<http://homepage.mac.com/cohora/ext/scimeth.html>

Directions: Use the links in this web activity to learn about the Scientific Method.

1. What is the scientific method? _____

2. Why do scientists use the scientific method? _____

3. Write the 5 steps of the scientific method in order.

4. State the Problem - Why is it important to clearly state the problem? _____

What is a Problem? _____

Read the example of a problem. Write your own original example of a problem. (You will use this problem through out this activity.) An abundance of ideas.

The next step in the scientific method is - _____

5. The act of noting and recording something with instruments is called

Consider the examples of observations for the paper towels for the absorption experiment..

For the problem you gave question in 4, write two observations you can measure and record.

Think about it - name the measuring tools you will need for the observtions you listed.

The next step in the scientific method is - _____

6. In the scientific method, when you make an educated guess as to what the outcome might be you are ..

What words can you help form a hypothesis? _____

Form a hypothesis for your example in question 4. _____

7. Scientists test their hypothesis by _____

Make a checkmark next to the correct answer(s):

Scientists must be careful in their testing because

Equipment costs a lot and they must not break it.

They can make an experiment that favors their hypothesis.

If their hypothesis is incorrect, they have failed.

The Procedure is an explanation of how you will conduct the experiment to test your hypothesis.

What are the key things to include in the procedure?

8. During the experiment the scientist collects data. What are data? _____

What data could you collect for the hypothesis you formed in question 6? _____

9. The things that have an effect on the experiment are called variables.

For the paper towel experiment described earlier

The independent variable is - _____

The dependent variable is - _____

For the paper towel experiment described earlier cont ...

The controlled variables are - _____

In the paper towel experiment - which of these is not a variable?

Temperature of the water

Color of the paper towel

Size of the container holding the water.

Age of the scientist

10. How can you organize an experiment's data? _____

11. In the Conclusion, the scientist _____

What are the two conclusions that can be formed for any experiment?

12. True or False - Only scientists use the scientific method.

Extra:

Test yourself using this online quiz Enter your score here: _____

Create a graph - explore this outstanding site to become a skilled chart maker

Explore one of the demonstrations of the scientific method being used.

"Did you learn that from a book or did you observe it yourself?" Maria Mitchell