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The Scientific Method

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What do you do when you have a question and don't know the answer? You might ask a parent or a teacher. You might look for the answer in a book or on the Internet. Sometimes you can't find an answer to your question. You might do an experiment and try to find the answer for yourself.

There are many questions that no one knows the answer to. A scientist's job is to find answers to those questions. Scientists use experiments to help them find the answers. They use the scientific method to help them design better experiments. The scientific method is made up of seven steps.



1. Make Observations. Look at the world around you. What interests you?

2. Ask Questions. What questions do you have about what you are looking at?

3. Form a Hypothesis. Choose one question that can be answered with a yes or a no. Make a guess about what you think the answer is.

4. Test Your Hypothesis. Design an experiment that will answer the question you are asking. Make sure it does not answer any other question.

5. Perform Experiments. Carry out your experiment. Record your results and any observations you make.

6. Gather Results. Look at all of your results together. What do they tell you?

7. Reach a Conclusion. Did your experiment prove your hypothesis or disprove it?

The scientific method helps to make sure that scientists find the correct answer to their questions. Scientists aren't the only ones who use the scientific method. Anyone can use it to answer a question or solve a problem.

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Questions

- 1. Name two ways that you might find the answer to a question.
- 2. A scientist's job is to _____
 - A. do math problems
 - B. wear goggles
 - C. answer questions
 - D. write books

Name ____



Date ___

- 3. The scientific method is made up of _____ steps.
 - A. five
 - B. ten
 - C. twelve
 - D. seven
- 4. Which of the following questions could be used to form a hypothesis?
 - A. How many different kinds of germs are on my hands?
 - B. Why is the sky blue?
 - C. Do cats sleep more than dogs?
 - D. all of the above
- 5. If you used the scientific method correctly, you will either prove or disprove your ______ after you perform your experiments and gather your results.
 - A. question
 - B. hypothesis
 - C. conclusion
 - D. observations
 - 6. Why do people use the scientific method?

Why do you think it is important that the experiment that a person designs only answers the question that they are asking? What would be wrong with the experiment answering many different questions?

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List the steps of the scientific method.
