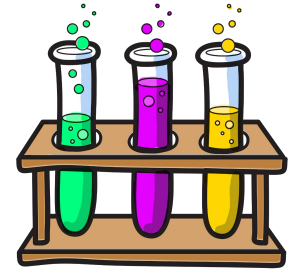


# SCIENTIFIC METHOD

Have you ever had a question about the world around you? Ever wondered why the sky is blue? Why the grass is green? Scientists ask questions all the time. Then, they follow steps to find the answer! This method for finding answers to science questions is called the **scientific method**.



The first step of the scientific method is to make an observation. To observe something is to look at it and realize something. For example, you may be looking out the window and notice that all the grass on the playground is green. In the winter, you may notice that the grass turns brown. You have just made an observation.

The second step is to ask a question. What do you want to find out? Maybe your question is "why does the grass change from green to brown in the winter?" Your question should be something you do not already know the answer to.

The third step is to form a **hypothesis**. A hypothesis is like an educated guess. What do you think the answer to your question is? You may want to do some research about your question before you come up with your hypothesis. A hypothesis is usually an "if... then" statement. For example, your hypothesis might be: "if there is less sunlight, then the grass turns brown," or "if the air is colder, then the grass turns brown."

The fourth step is to test your hypothesis. This is the fun part! To test a hypothesis, scientists conduct experiments. Coming up with an experiment can be tricky. What can you do to find the answer to your question? Maybe you will grow grass in different environments, changing the levels of light and the temperature. You could observe the grass and take notes, recording whether or not the grass turns brown.

The fifth and final step is to analyze your data and draw a **conclusion**. Let's say that looking back through your notes, you notice that the grasses that were kept cold turned brown while the grasses that were kept warm stayed green. You may come to the conclusion that grass turns brown in the winter because of the colder temperatures. Once your hypothesis has been proven, it becomes a **theory**.

Name: \_\_\_\_\_

Score: \_\_\_\_\_

# SCIENTIFIC METHOD

- 1.) What is the scientific method?
  - A. a school for scientists
  - B. a way to find answers to questions
  - C. a type of science experiment
  - D. a question about the world
- 2.) What is the first step of the scientific method?
  - A. draw a conclusion
  - B. form a hypothesis
  - C. ask a question
  - D. make an observation
- 3.) What is an observation?
  - A. a question
  - B. a conclusion
  - C. something you notice
  - D. a guess
- 4.) You should choose a science question that you already know the answer to.
  - A. true
  - B. false
- 5.) What is a hypothesis?
  - A. a question
  - B. a theory
  - C. a conclusion
  - D. an educated guess
- 6.) You may want to do some research before you come up with your hypothesis.
  - A. true
  - B. false
- 7.) Which of the following is an "if... then" statement?
  - A. it breaks when I drop it
  - B. if I drop it, then it breaks
  - C. it will break when it is dropped
  - D. if dropped, it might break
- 8.) What is the fourth step in the scientific method?
  - A. draw a conclusion
  - B. form a hypothesis
  - C. conduct an experiment
  - D. ask a question
- 9.) Which word has a similar meaning to the word conclusion?
  - A. answer
  - B. question
  - C. guess
  - D. problem
- 10.) What is the difference between a hypothesis and a theory?
  - A. they are the same thing
  - B. a hypothesis is true and a theory is not
  - C. a theory is proven and a hypothesis is not
  - D. a theory is a question and a hypothesis is an answer.