

Textbook How To

Focusing on the Scientific Method

Name: _____

Class Period: _____

Answers can be found using the orange Physical Science Textbook

Using the Contents Area

In the Contents area of your textbook, the units are outlined for easy reference. Contents can be found at the beginning of your textbook.

1. According to the Contents area, what section would you turn to, to learn about the Scientific Method? _____ This section begins on what page? _____

2. According to your Contents area, which unit is about Heat? _____ If you wanted to find out more about freezing point in this unit, which section would you find it in?

3. In what unit would you find information about Magnets? _____ On what page could you find information about electromagnets? _____

Using the Appendices, Glossary, and Index

The Appendices, Glossary, and Index can all be found at the back of your textbook after general information units.

4. Which of the Appendices discusses Safety in the Science Classroom? _____ Which page can you find this Appendix on? _____

5. According to the Safety in the Science Classroom Appendix, what three things are recommended under the Cleanup section?

- 1.
- 2.
- 3.

6. What page does the Glossary section of your textbook begin? _____

7. Use the Glossary to define the following words that relate to the Scientific Method:

- Data:
- Hypothesis:
- Scientific Method:

8. On what page does the Index begin? _____

9. According to the index, on what page could you find information hypothesizing? _____ On what page could you find information on photography? _____

Individual Units

Individual Units are generally one page with a follow-up page containing questions for you to answer.

10. Flip to the section about the Scientific Method. What page does this unit start on? _____

11. Using the information in this section, fill in the blank for the step of the Scientific Method.

- **Identify and _____ the problem:** Scientists often state a problem as a question. They do this after making observations of a certain situation.
- **Gather Information:** Scientists read and _____ with one another. In this way, they learn about work that has already been done. They can use this information to help them design their experiment.
- **State a _____:** Scientists state clearly a hypothesis, which is a suggested _____ to a problem. Their hypothesis is typically a prediction made as an "If...Then..." statement.
- **_____ an experiment:** To test their hypothesis, scientist design an experiment.
- **Make Observations and Record _____:** During an experiment, scientists make careful observations. The information that they get is their data. Scientists also keep careful records of the data.
- **Organize and Analyze Data:** Scientists _____ their data. Scientists often use graphs, _____, tables, and diagrams to organize data. Then the data can be _____, or studied.
- **_____ a Conclusion:** A conclusion is a summary that explains data. It state whether or not the data _____ the hypothesis. It answers the question stated in the problem.

12. On the follow-up page of the Scientific Method section, there are five Check questions. Write down and answer each of those questions below:

1. Q.
A.

2. Q.
A.

3. Q.
A.

4. Q.
A.

5. Q.
A.