

Science Laboratory Safety

Key Concepts

- Why is preparation important when carrying out scientific investigations in the lab and in the field?
- What should you do if an accident occurs?

Good preparation helps you stay safe when doing science activities in the laboratory. Preparing for a lab should begin the day before you will perform the lab. It is important to read through the procedure carefully and make sure you understand all the directions. Also, review the general safety guidelines in Appendix A of your textbook. The most important safety rule is simple: Always follow your teacher's instructions and the textbook directions exactly. Labs and activities in this textbook series include safety symbols. These symbols alert you to possible dangers in performing the lab and remind you to work carefully. The symbols are explained in Appendix A. When you have completed the lab, be sure to clean up the work area. Follow your teacher's instructions about proper disposal of wastes. Finally, be sure to wash your hands thoroughly after working in the laboratory.

Some investigations will be done in the "field." The field can be any outdoor area, such as a schoolyard, a forest, a park, or a beach. **Just as in the laboratory, good preparation helps you stay safe when doing science activities in the field.** There can be many potential safety hazards outdoors, including severe weather, traffic, wild animals, or poisonous plants. Advance planning may help you avoid some potential hazards. Whenever you do field work, always tell an adult where you will be. Never carry out a field investigation alone.

At some point, an accident may occur. **When any accident occurs, no matter how minor, notify your teacher immediately. Then, listen to your teacher's directions and carry them out quickly.** Make sure you know the location and proper use of all the emergency equipment in your lab room. Knowing safety and first aid procedures beforehand will prepare you to handle accidents properly.

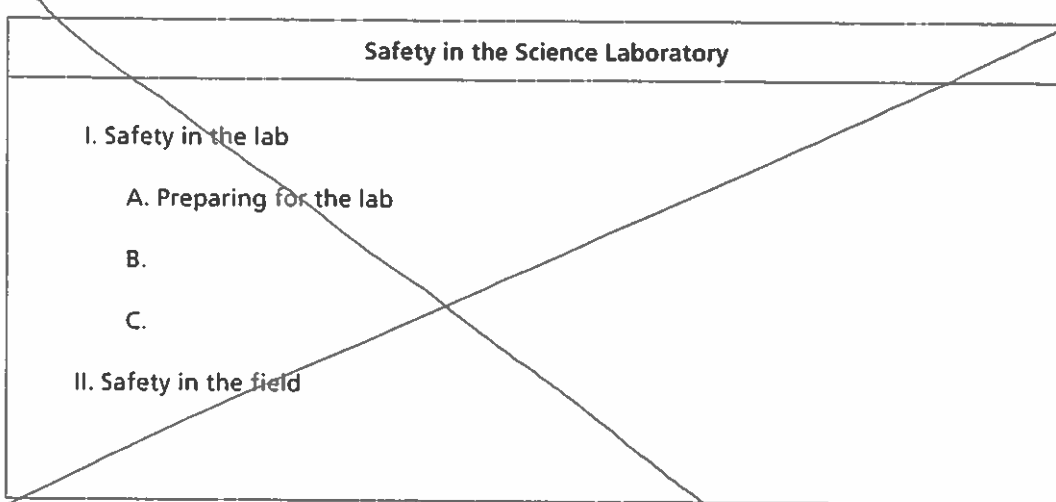
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Science Laboratory Safety (pp. 43–47)

This section explains why preparation is important when carrying out scientific investigations. It also describes what you should do if an accident occurs.

Use Target Reading Skills

As you read, make an outline about science safety that you can use for review. Use the red headings for the main ideas and the blue headings for supporting ideas.



Safety in the Lab (pp. 44–46)

1. Is the following sentence true or false? No amount of preparation can help you with safety when doing science activities in the laboratory. _____
2. Circle the letter of the time when preparing for a lab should begin.
 - a. 1 hour ahead of the lab
 - b. 10 minutes ahead of the lab
 - c. the morning of the lab
 - d. 1 day before doing the lab
3. In preparing for a lab, it is important to review the general safety guidelines, which can be found in _____ of your textbook.
4. What should you do if something is unclear to you about the lab before you begin?

5. What is the most important safety rule when performing a lab?






6. Is the following sentence true or false? You should never try anything on your own in the lab without asking your teacher first. _____

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Science Laboratory Safety (continued)

7. Circle the letter of each sentence that is true about safety symbols.
- a. They identify safety equipment that you should use.
 - b. They alert you to possible dangers in doing the lab.
 - c. They give you specific instructions about each lab in the book.
 - d. They remind you to work carefully.

Match the symbol with its meaning by writing the correct letter beside each symbol.

- | | | |
|---------|---|-----------------------|
| ___ 8. |  | a. Sharp Object |
| ___ 9. |  | b. Corrosive Chemical |
| ___ 10. |  | c. Physical Safety |
| ___ 11. |  | d. Breakage |
| ___ 12. |  | e. Disposal |

13. When you have completed a lab, you should _____ your work area.

14. How should lab wastes be disposed of?

15. Is the following sentence true or false? You should wash your hands after working in the laboratory even if you don't think they're dirty. _____

Safety in the Field (p. 46)

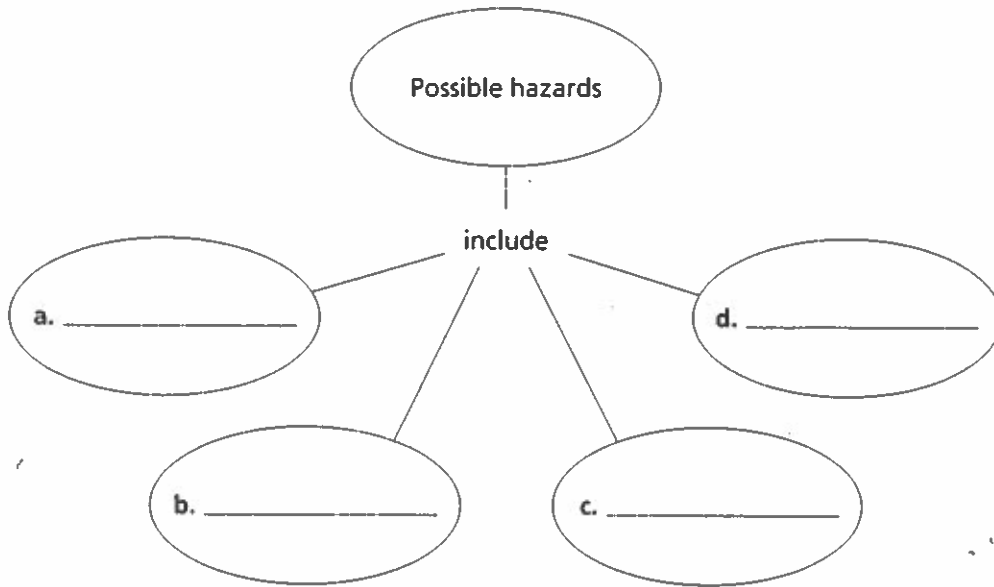
16. Circle the letter of each place that a science investigation might be done in the field.

- a. schoolyard
- b. classroom
- c. forest
- d. park

17. Is the following sentence true or false? Good preparation helps you stay safe when doing science investigations in the field. _____

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18. Complete the concept map below to show some hazards you might encounter when doing an investigation in the field.



19. Circle the letter of each sentence that you should do whenever you do field work.

- a. Work alone as much as possible.
- b. Dress appropriately for any conditions you will encounter.
- c. Tell an adult where you will be.
- d. Ask an adult or classmate to accompany you.

In Case of an Accident (p. 47)

20. What should you do immediately whenever an accident occurs?

21. Circle the letter of what to do if you spill something on your skin while doing a lab.

- a. Cover the skin with a clean dressing.
- b. Wash your hands.
- c. Flush the skin with large amounts of water.
- d. Do nothing unless the skin blisters.