
LABORATORY SKILLS 2

Identifying Laboratory Equipment

Pre-Lab Discussion

Scientists use a variety of tools to explore the world around them. Tools are very important in the advancement of science. The type of tools scientists use depends on the problems they are trying to solve. A scientist may use something as simple as a metric ruler to measure the length of a leaf. At another time, the same scientist may use a complex computer to analyze large amounts of data concerning hundreds of leaves.

In this investigation, you will identify pieces of laboratory equipment likely to be found in a biology laboratory. You will also learn the function of each piece of laboratory equipment.

Problem

What are the names and functions of some of the pieces of laboratory equipment found in a typical biology laboratory?

Materials (per group)

Equipment shown in this activity (for inspection and demonstration)

Safety

Handle all glassware carefully. Be careful when handling sharp instruments. Always handle the microscope with extreme care. You are responsible for its proper care and use. Use caution when handling glass slides as they can break easily and cut you. Note all safety alert symbols next to the steps in the Procedure and review the meanings of each symbol by referring to the symbol guide on page 10.

Procedure

Part A. Identifying Laboratory Equipment

1. Look at the drawings of the laboratory equipment. In Observations, write the letter of the drawing next to the name that correctly identifies it.

Part B. Identifying the Function of Certain Types of Laboratory Equipment



1. Carefully inspect the different types of laboratory equipment that have been set out by your teacher.
2. In Observations, identify the function of each piece of laboratory equipment.

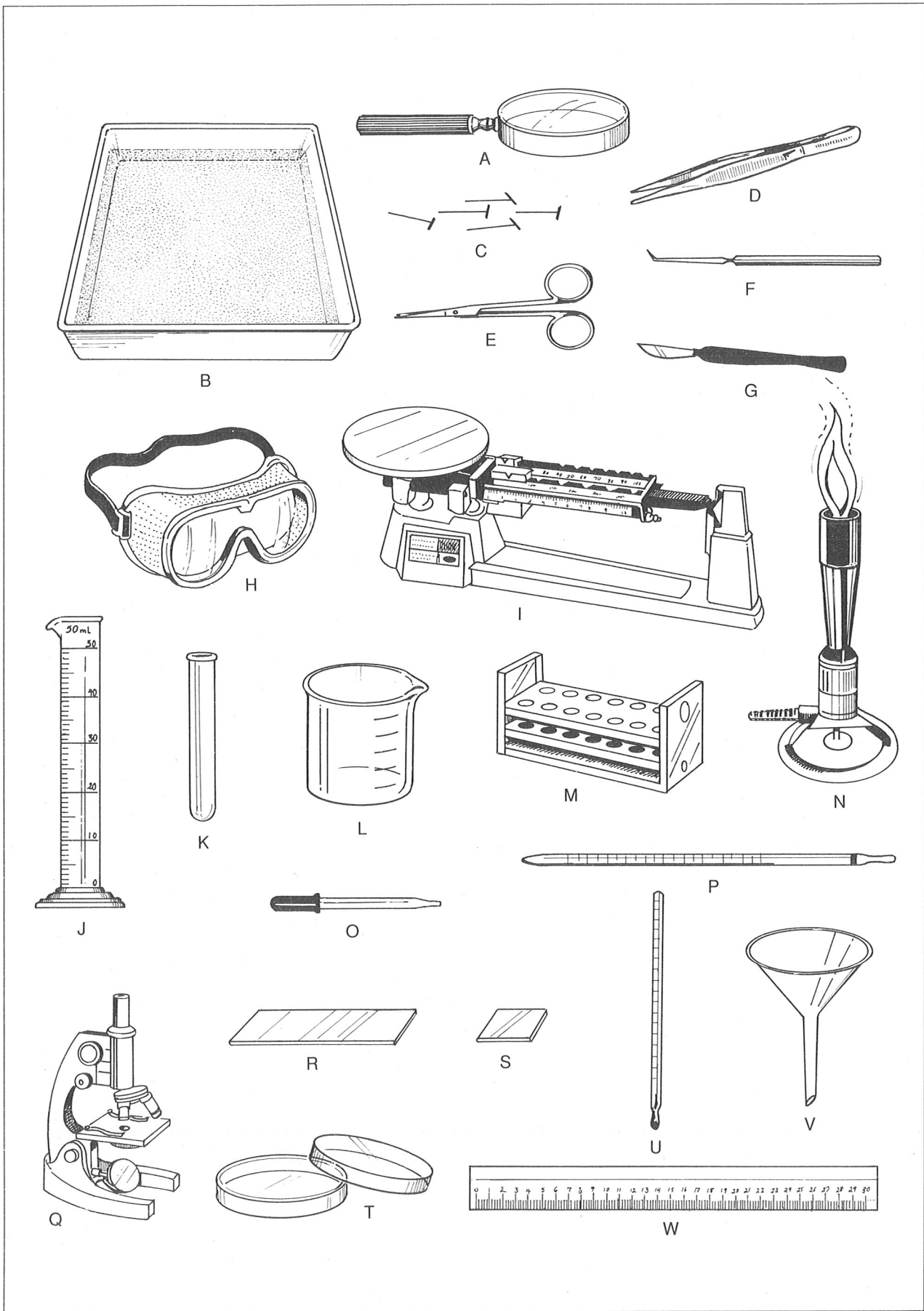


Figure 1

Observations

Part A. Identifying Laboratory Equipment

- | | |
|------------------------------|-------------------------------|
| _____ 1. beaker | _____ 13. glass slide |
| _____ 2. Bunsen burner | _____ 14. petri dish |
| _____ 3. coverslip | _____ 15. pipette |
| _____ 4. dissecting pins | _____ 16. probe |
| _____ 5. dissecting scissors | _____ 17. metric ruler |
| _____ 6. dissecting tray | _____ 18. safety goggles |
| _____ 7. medicine dropper | _____ 19. scalpel |
| _____ 8. forceps | _____ 20. test tube |
| _____ 9. funnel | _____ 21. test tube rack |
| _____ 10. graduated cylinder | _____ 22. thermometer |
| _____ 11. hand lens | _____ 23. triple-beam balance |
| _____ 12. microscope | |

Part B. Identifying the Function of Certain Types of Laboratory Equipment

1. beaker _____
2. Bunsen burner _____
3. coverslip _____
4. dissecting pins _____
5. dissecting scissors _____
6. dissecting tray _____
7. medicine dropper _____
8. forceps _____
9. funnel _____
10. graduated cylinder _____
11. hand lens _____
12. microscope _____
13. glass slide _____
14. petri dish _____
15. pipette _____
16. probe _____
17. metric ruler _____

- 18. safety goggles _____
- 19. scalpel _____
- 20. test tube _____
- 21. test tube rack _____
- 22. thermometer _____
- 23. triple-beam balance _____

Analysis and Conclusions

1. Which laboratory tools can be used to magnify small objects so they can be seen more easily?

2. Which laboratory tools are useful when looking at the internal organs of an earthworm?

Critical Thinking and Application

1. What tool or tools would you use to make each of the following measurements?

- a. amount of milk in a small glass _____
- b. length of a sheet of paper _____
- c. temperature of a swimming pool _____
- d. mass of a baseball _____

2. How do laboratory tools improve the observations made by a scientist?

Going Further

Examine other types of laboratory equipment that you will be using in the biology laboratory. Try to determine the function of each piece of equipment.