

Forces in Fluids ▪ *Reading/Notetaking Guide*

Bernoulli's Principle (pp. 437–441)

This section explains how the pressure of a fluid is related to the motion of the fluid.

Use Target Reading Skills

As you read about Bernoulli's principle, complete the graphic organizer to show the sequence of events that happens to the smoke when you light a fire in a fireplace.

The fire burns the wood and produces smoke.
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Bernoulli's Principle *(continued)*

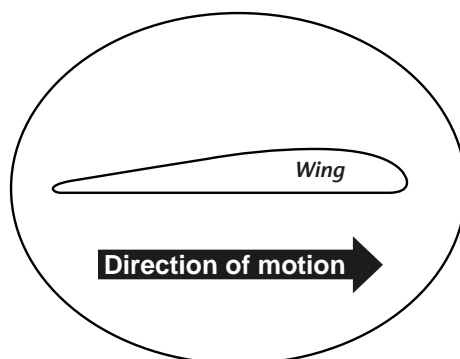
Pressure and Moving Fluids (p. 438)

1. Is the following sentence true or false? The faster a fluid moves, the more pressure the fluid exerts. _____
2. What does Bernoulli's principle state?

3. Is the following sentence true or false? A faster-moving fluid exerts less pressure than a slower-moving fluid. _____
4. Explain why a sheet of tissue paper rises when you blow air above the tissue paper.

Applying Bernoulli's Principle (pp. 439–441)

5. Is the following sentence true or false? Objects can be designed so that their shapes cause air to move at different speeds above and below them. _____
6. If the air moves faster above an object, does pressure push the object upward or downward? _____
7. If the air moves faster below an object, does pressure push the object upward or downward? _____
8. On the illustration of a wing below, draw arrows that show the path of air above and below the wing.



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9. Air that moves over the top of an airplane wing travels faster than air that moves along the bottom of the wing. As a result, the air moving over the top exerts less _____ than the air moving along the bottom.

10. What is lift?

11. In what way is an airplane wing shaped like a bird's wing?

12. How do differences in air pressure help smoke to rise up a chimney?

13. When you squeeze the rubber bulb of a perfume atomizer, how do you change the air pressure at the top of the tube?

14. Is the following sentence true or false? An atomizer works because moving air at the top of the tube increases the air pressure inside the flask. _____

