

**Forces in Fluids** ▪ *Reading/Notetaking Guide*

**Pressure** (pp. 416–422)

*This section explains what pressure depends on and what causes pressure in fluids. It also describes how pressure changes with altitude and depth.*

**Use Target Reading Skills**

*Before you read the section, preview Figure 5 on pressure variations. Write two questions you have about the figure in the graphic organizer. As you read the section, look for the answers to your questions, and record them in the graphic organizer. Remember to look for the answers to your questions in the text and the figure captions.*

**Pressure Variations**

Q. Why does pressure change with elevation and depth?
A.
Q.
A.

**What Is Pressure?** (pp. 416–417)

1. What do snowshoes do that makes it easier for the person wearing them to travel in deep snow?

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2. Is the following sentence true or false? Force and pressure are the same thing. \_\_\_\_\_

3. What is pressure equal to?

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4. Circle the letter of the term that is an SI unit of pressure.
  - a. newton
  - b. liter
  - c. weight
  - d. pascal
5. Circle the letters of the *two* answers below that are equal to each other.
  - a. 1 Pa
  - b. 1 N/cm<sup>2</sup>
  - c. 1 N/m<sup>2</sup>
  - d. 1 N
6. Is the following sentence true or false? You can produce a lower pressure by decreasing the area a force acts on. \_\_\_\_\_

**Fluid Pressure** (pp. 418–419)

7. A substance that can easily flow is a(n) \_\_\_\_\_.
8. Circle the letter of each of the following that is a fluid.
  - a. helium gas
  - b. liquid water
  - c. ice
  - d. air
9. Describe how molecules move in fluids.

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10. What causes the pressure exerted by a fluid?

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11. The pressure exerted by a fluid is the total force exerted by the fluid divided by the \_\_\_\_\_ over which the force is exerted.

12. What is another term for air pressure? \_\_\_\_\_

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**Pressure** (*continued*)

13. What causes air pressure?

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14. Is the following sentence true or false? In a fluid that is not moving, pressure at a given point is exerted equally in all directions.

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**Variations in Fluid Pressure** (pp. 420–422)

15. Is the following sentence true or false? Air pressure increases as elevation increases. \_\_\_\_\_

16. Why is air pressure lower at a higher elevation than at a lower elevation?

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17. Is the following sentence true or false? Water pressure increases as depth increases. \_\_\_\_\_

18. What instrument can be used to measure atmospheric pressure?

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