

Directed Reading A

Section: Changes of State

ENERGY AND CHANGES OF STATE

- _____ 1. Which has the most energy?
- a. particles in steam
 - b. particles in liquid water
 - c. particles in ice
 - d. particles in freezing water
2. When a substance changes from one physical form to another, we say the substance has had a(n) _____
3. List the five changes of state.

MELTING: SOLID TO LIQUID

4. Could you use gallium to make jewelry? Why or why not?

5. The temperature at which a substance changes from solid to liquid is the _____ of the substance.
6. Melting is considered a(n) _____ change because energy is gained by the substance as it changes state.

FREEZING: LIQUID TO SOLID

7. A substance's _____ is the temperature at which it changes from a liquid to a solid.

Directed Reading A *continued*

8. What happens if energy is added or removed from a glass of ice water?

9. Freezing is considered a(n) _____ change because energy is removed from the substance.

EVAPORATION: LIQUID TO GAS

Match the correct definition with the correct term. Write the letter in the space provided.

- | | |
|--|-------------------|
| _____ 10. the change of a substance from a liquid to a gas | a. boiling point |
| _____ 11. the change of state from a liquid to a gas when the vapor pressure equals the atmospheric pressure | b. vapor pressure |
| _____ 12. the pressure inside the bubbles of a boiling liquid | c. evaporation |
| _____ 13. the temperature at which a liquid boils | d. boiling |
14. As you go higher above sea level, the _____ decreases and the _____ of a substance gets lower.

CONDENSATION: GAS TO LIQUID

15. The change of state from a gas to a liquid is _____.
16. At a given pressure, the condensation point for a substance is the same as its _____.
17. For a substance to change from a gas to a liquid, particles must _____.

Directed Reading A *continued*

SUBLIMATION: SOLID TO GAS

18. Solid carbon dioxide isn't ice. So why is it called "dry ice"?

19. The change of state from a solid to a gas is called _____

CHANGE OF TEMPERATURE VS. CHANGE OF STATE

20. The speed of the particles in a substance changes when the

_____ changes.

21. The temperature of a substance does not change before the

_____ is complete.