

COMMENTS: Convection is the transfer of heat by the movement of liquids and gases. The hot-air furnace is a common application of heat transfer by convection. Heated gases rise in chimneys by convection. Warm liquids are lighter than equal volumes that are cooler. Hence, cooler portions sink and push up the lighter, warmer material. Unequal heating is responsible for this rising and sinking movement. Currents of liquids and gases that are set up by this unequal heating are called convection currents.

A Underline the correct answers.

1. Convection is heat transfer by the movement of (a. liquids b. gases).
2. Heat (a. moves b. circulates) by convection.
3. Hot air is (a. lighter b. heavier c. dustier) than cold air.
4. Heated liquids (a. rise b. sink c. do not move at all).
5. Most homes are heated by (a. solar energy b. convection c. conduction).
6. Convection is caused by (a. unequal heating b. hot water c. inertia).
7. Air has (a. temperatures b. currents).
8. Hot air furnaces heat by (a. convection b. logs c. hot water).

B True or False

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| <u> </u> T | 1. Convection is a form of heat transfer. |
| <u> </u> | 2. Cold air does not move at all. |
| <u> </u> | 3. Convection sets up currents of liquids or gases. |
| <u> </u> | 4. Insulation and convection are the same thing. |
| <u> </u> | 5. Heated gases rise in chimneys by convection. |
| <u> </u> | 6. Ocean currents are affected by unequal heating. |
| <u> </u> | 7. Gases make better heat conductors than solids. |
| <u> </u> | 8. Energy has no effect on temperatures. |

C Place an X by each word that could tell about convection.

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| 1. heat X | 16. transfer |
| 2. air | 17. slam |
| 3. pop | 18. motion |
| 4. movement | 19. shuffle |
| 5. quick | 20. current |
| 6. slime | 21. sink |
| 7. rise | 22. forget |
| 8. want | 23. liquids |
| 9. gases | 24. willing |
| 10. complete | 25. unequal |
| 11. furnace | 26. snow |
| 12. ice | 27. heavier |
| 13. lighter | 28. look |
| 14. done | 29. cold |
| 15. hot | 30. say |

