

Name: _____
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Conceptual Physics: _____
Date: _____

Unit V
Energy
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Video: Exploring Heat

Objective: To understand heat and its importance to life.

Directions: Answer the following questions as you watch the video.

1. Hot air _____ so that the balloon can be lifted up.
2. The balloon goes up because there is _____ air in the balloon than outside of it.
3. In the nuclear power plant, nuclear energy heats _____ to make steam.
4. What is the most important source of heat on earth? _____
5. The heat energy from the Sun keeps the _____ cycle operating.
6. What is the purpose of the "Water Cycle"? _____
7. Temperature is used to measure how _____ or how _____ an object is. _____ is energy.
8. Which of the three beakers contains the greatest amount of heat energy? _____
9. All matter is made up of atoms and molecules that are in _____ motion.
10. The fluid in a thermometer expands because the molecules are moving _____.
11. Temperature measures the average _____ energy of a substance.
12. All atomic and molecular activity stops at absolute _____ on the Kelvin scale.
13. There are no negative numbers on the _____ scale.
14. Heat energy is measured in _____ which is the amount of heat needed to raise one gram of water one degree Celsius.
15. A calorimeter is used to _____ Calories.
16. Another unit used to measure heat energy is the British Thermal Unit or _____.
17. When most objects are heated they _____.
18. Most objects contract when they are _____.
19. Bridges have expansion joints to allow them to _____ or contract.

20. When ice changes to water it changes _____ or _____.
21. Heat _____ from one place to another in one of three ways: conduction, convection, and radiation.
22. In _____ heat travels from one point to another because of conduction.
23. _____ conduct heat very well.
24. _____ is often used as the handles for frying pans because it is a poor conductor of heat.
25. Convection is the way heat is transferred in _____ and gases.
26. Heated water at the bottom of the pot becomes _____ dense and rises to the top of the pot.
27. Particles of _____ must be present for conduction or convection to work.
28. Heat from the sun travels through the emptiness of space as _____ or waves of energy.
29. Heat moves from _____ areas to _____ areas?
30. We use insulators to _____ down the movement of heat from inside the house.
31. Eskimos built winter igloos from snow because it is a good _____.
32. A thermos bottle is a good example of a device that is designed to slow down all 3 types of heat _____.
33. _____ is an energy form that all living things depend upon.
34. The food we eat is used to provide _____ to our bodies.

Video Quiz

Use the terms A. **conduction**, B. **convection** or C. **radiation** to answer questions 1 – 5.

1. The spoon is too hot to touch after sitting in the hot soup. _____
2. The moon's surface becomes hot. _____
3. Your feet hurt after walking barefoot across the beach. _____
4. Bacon cooks in the frying pan. _____
5. The room becomes warm when the furnace is turned on. _____
6. Sidewalks are built with spaces between each section. Why? _____
