## Heat Transfer Webquest

Name:

What is heat? You can't hold it or keep it locked up. It is energy. Heat transfers from hot objects to cooler objects in 3 major ways. They are radiation, conduction and convection. In this webquest, you will investigate the 3 types of heat transfer. Then answer the questions in complete sentences.

## Tork #1: http://d3tt741pwxqwm0.cloudfront.net/WGBH/conv16/conv16-int-thermalenergy/index.html#/

## Thermal Energy 1. What is the energy of motion known as? 2. Thermal energy depends on what two things? A.\_\_\_\_\_ В. \_\_\_\_\_ 3. What is heat a measure of? Conduction 4. What is conduction? 5. Describe how the heat transfers when the burner is lit. Convection 6. What is convection? 7. When you light the stove, what happens to the water? **Radiation** 8. What is radiation? 9. Describe what is happening to the hot pot (that is no longer on the stove). The Sun Warms Earth 10. Describe conduction on Earth. 11. Describe convection on Earth. 12. Describe radiation on Earth. Around a Campfire 13. Describe conduction around a campfire. 14. Describe convection around a campfire. 15. Describe radiation around a campfire. ----- Skip "Staying cool on a hot day"------Solar Energy in Your Home 16. Describe conduction in your home. 17. Describe convection in your home. 18. Describe radiation in your home.

**Tork 2**: Look at the following websites for ideas on how heat transfer is seen in our everyday lives. <u>http://www.lowes.com/cd\_Understand+Heat+Transfer+and+Insulation\_974680410</u>

After you read this article, list 5 ways in which you can protect your home from heat escaping or too much coming in.

19.

20.

- 21.
- 22.

23.

**Tork 5**: Use this website to visit this interactive home. Explain one way to save energy in each of the places below. <u>http://www.energystar.gov/index.cfm?fuseaction=popuptool.atHome</u>

- 24.- Attic
- 25. Bedroom
- 26. Bathroom
- 27. Office
- 28. Living Room
- 29. Kitchen
- 30. Dining Room
- 31. Basement
- 32. A/C Unit (under porch)

33. Car

**Tark 4**: Using the following website, complete the table below.

http://www.glencoe.com/sites/common\_assets/science/virtual\_labs/PS06/PS06.html

Insulation Material	Outside Temp	Inside Temps	12am	2am	4am	6am	8am	10am	l 2pm	2pm	4pm	6pm	8pm	10pm
Sawdust														
Fiberglass														
Brick														
Soil														
Popcorn														
Feathers		1												