

Conduction, Convection, or Radiation

Objective: Students will know how to separate the different types of thermal energy.

Matching: Use these definitions to help you with the rest of the worksheet.

_____ Radiation	A. Heat transfer from a heat source through a solid.
_____ convection	B. Infrared heat waves like in the Electromagnetic spectrum.
_____ Conduction	C. Heated gas or liquid particles rise.

Label each example with the appropriate type of heat transfer: **radiation, convection, or conduction.**

Explain why you think so for each example (**hint:** use the definitions above to help you).

1. _____ Heat we feel from the sun.
 - a. Why? _____
2. _____ The heat you feel when you touch a hot stove.
 - a. Why? _____
3. _____ Heat you feel when you put your hands above a fire.
 - a. Why? _____
4. _____ My spoon is hot after leaving it on the pot that was on the stove.
 - a. Why? _____
5. _____ This is responsible for making macaroni rise and fall in a pot on the stove.
 - a. Why? _____
6. _____ The heat my snake feels from the heat lamp above him.
 - a. Why? _____
7. _____ Transfer of heat by the actual movement of the warmed matter (i.e. gas or liquid).
 - a. Why? _____

8. _____ The reason heating vents are usually placed on the floor of a home.

a. Why? _____

9. _____ Insulation is used to prevent this type of heat transfer.

a. Why? _____

10. _____ This type of heat transfer is trapped by green houses.

a. Why? _____

11. _____ Why the dog lays down next to the wood stove.

a. Why? _____

12. _____ Why the cat sits on a stove above the stove.

a. Why? _____

13. _____ Why the kettle on the stove gets hot.

a. Why? _____

14. _____ Why you use a pot holder when getting the cookie sheet out of the oven.

a. Why? _____

15. _____ Heat you feel when you sit next to a campfire.

a. Why? _____

16. _____ Heat you feel from your electric blanket.

a. Why? _____

17. _____ Give two examples each not given above or in the lesson

Examples of Heat Transfers From Your Life		
Conduction	Convection	Radiation

18. Draw an example of each type of heat transfer: **convection, conduction, and radiation listed in 17.**