

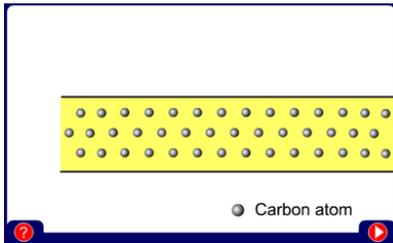
Name _____ Period _____ Date _____

Heat Transfer Notes: Conduction, Convection, Radiation

Heat always moves from a _____ place to a _____ place.

If a cup of coffee and a red popsicle were left on the table in this room what would happen to them? Why? _____

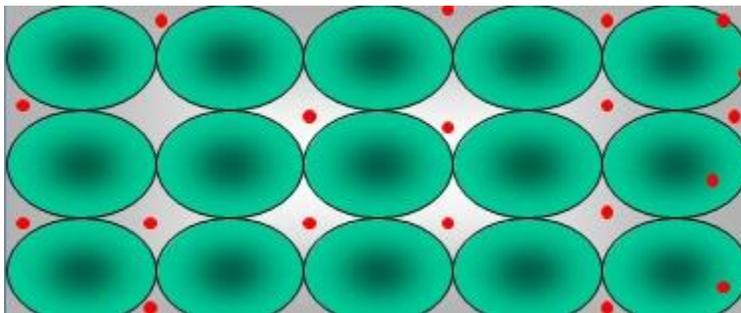
Heat transfers in three ways: _____, _____, and _____.



When you heat a metal strip at one end, the heat _____ to the other end.

When vibrations make the adjacent particles vibrate, heat passes along a strip of heated metal.

We call this? _____



Metals are different!!!

The outer e _____ of metal atoms drift, and are free to move.

Insulators do not conduct heat as well as metals! Two insulators are: _____ and _____.

What happens to the particles in a liquid or a gas when you heat them?

The particles _____ and become _____ dense.

Cooler, more d _____, fluids sink through w _____, less dense fluids.

In effect, warmer liquids and gases r_____ up.

Cooler liquids and gases s_____.

How does heat energy get from the Sun to the Earth?

There are no particles between the Sun and the Earth so it CANNOT travel by conduction or by convection. **We call this?** _____

Circle one!!!

Radiation travels in straight lines

True/False

Radiation can travel through a vacuum

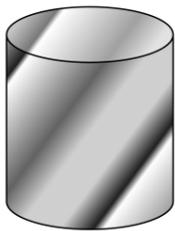
True/False

Radiation requires particles to travel

True/False

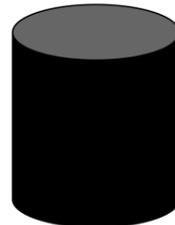
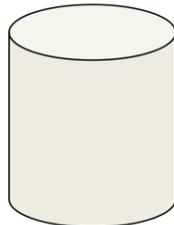
Radiation travels at the speed of light

True/False



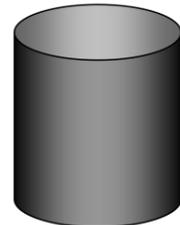
Shiny metal

Dull metal



Dull black

Shiny black

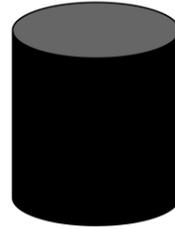
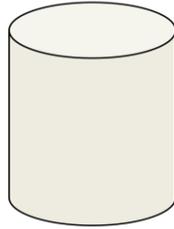


The _____ container would be the warmest after ten minutes because its shiny surface reflects heat _____ back into the container so less is lost. The _____ container would be the coolest because it is the best at _____ heat radiation.



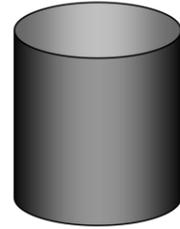
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Shiny black



The _____ container would be the warmest after ten minutes because its surface absorbs heat _____ the best. The _____ container would be the coolest because it is the poorest at _____ heat radiation.

Name _____ Period _____ Date _____

Convection Questions!!!!

Why does hot air rise and cold air sink?



Why are boilers placed beneath hot water tanks in people's homes?

Radiation Questions!!!!

Why do you think houses are painted white in hot countries?

Why are shiny foil blankets wrapped around marathon runners at the end of a race?