



**Read Pages 40 and 41**

What is the definition of thermal energy?


What three factors determine an objects thermal energy?


What is the definition of heat?


At what point does heat stop transferring?


What unit of measure is used for heat?


**Read Page 42 and 43**

What direction does heat travel?

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What are the three different methods that heat is transferred?

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What is convection?


Explain what a convection current is.


What is an example of convection?

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What is radiation?


What is an example of radiation?

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What is conduction?


What is an example of conduction?

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**Read Page 44 and 45**

Where are the following forms of heat transfer occurring on the beach? Provide one example of each.

Conduction	
Convection	
Radiation	

**Watch the video "Energy Transfer in Earth's Atmosphere"**

Copy the chart from the video.

Radiation	Conduction	Convection
Picture:	Picture	Picture
Definition	Definition	Definition

Copy the diagram in the video that shows how heat is transferred in the atmosphere.

**Watch the video "How Does The Climate System Work"**

1. The Earth's climate system is driven by the way energy from the \_\_\_\_\_ moves in and out of the atmosphere, and the way heat moves around the \_\_\_\_\_ and the \_\_\_\_\_.
2. Energy from the \_\_\_\_\_ is the main driver for our climate system.
3. What role do greenhouse gases play in the creation of climate and weather?

4. The sun's energy is distributed \_\_\_\_\_ across the globe.
5. There is more heat near the \_\_\_\_\_ than the \_\_\_\_\_.
6. To balance this uneven heating the climate system moves heat from the equator to the poles through the \_\_\_\_\_, and the \_\_\_\_\_.

7. How is heat moved around the atmosphere?


8. What system helps distribute heat in the oceans?


9. How do ocean currents impact climate?


### **Heat Transfer Poster**

You will now make a poster using a sheet of printer paper that demonstrates your knowledge of heat transfer. The following is the criteria for your poster. You may use additional resources to find examples of the three forms of heat transfer, or use the examples from your notes.

#### **Step One**

1. Appropriately title your poster

#### **Step Two**

2. Draw an example of conduction (10 points)
3. Provide the definition of conduction (10 points)
4. Explain how your drawing shows conduction. (10 points)
  
5. Draw an example of convection. (10 points)
6. Provide a definition of convection. (10 points)
7. Explain how your drawing shows convection. (10 points)
  
8. Draw an example of radiation. (10 points)
9. Provide a definition of radiation. (10 points)
10. Explain how your drawing shows radiation. (10 points)

#### **Step Three (Advanced)**

11. Provide a written explanation or a drawn diagram of how heat transfer relates to climate and weather. (10 points)