

# Heat and Temperature Webquest



## Introduction:

Heat is created in different forms. Exploring the production of heat is important in understanding the transfer of heat to and from different objects.

## Task:

Find examples of, conduction, convection, and radiation.

## Process:

1. Click on the link below. On the right side, under the "green" box labeled "simulations" click on the **Kinetic energy and temperature** link. Read the text, operate the animations, and answer the questions for #1 on your worksheet.

[http://www.classzone.com/books/ml\\_science\\_physical/page\\_build.cfm?id=resour\\_ch4&u=1](http://www.classzone.com/books/ml_science_physical/page_build.cfm?id=resour_ch4&u=1)

2. Go back to this website:

[http://www.classzone.com/books/ml\\_science\\_physical/page\\_build.cfm?id=resour\\_ch4&u=1](http://www.classzone.com/books/ml_science_physical/page_build.cfm?id=resour_ch4&u=1)

3. Now click on the "**Conduction, Convection, or Radiation**" link under the same "green" box labeled "simulations."

4. Once you've finished dragging the pictures to the correct boxes, draw a picture for one example on the table on #2 on your worksheet.

[http://www.classzone.com/books/ml\\_science\\_physical/page\\_build.cfm?id=resour\\_ch4&u=1](http://www.classzone.com/books/ml_science_physical/page_build.cfm?id=resour_ch4&u=1)

5. Now go back to the website above and click on the link marked "**Solar Cells**", under the "green" box heading *Visualizations*..

6. Play the movie.

7. Which heat transfer method is used to capture the sun's energy?



8. Take a look at the link below to look at these "bite - sized" conduction, convection, and radiation animations.

[http://www.wisc-online.com/objects/index\\_tj.asp?objid=SC304](http://www.wisc-online.com/objects/index_tj.asp?objid=SC304)

9. Answer the questions below:

In what three ways can heat be transferred?

True or False: Heat is always transferred from a warm object to a cooler one.

Give your own example of the following:

Conduction-

Convection-

Radiation-

**Resources:**

[http://www.classzone.com/books/ml\\_science\\_physical/page\\_build.cfm?id=resour\\_ch4&u=1](http://www.classzone.com/books/ml_science_physical/page_build.cfm?id=resour_ch4&u=1)

[http://www.wisc-online.com/objects/index\\_tj.asp?objid=SCE304](http://www.wisc-online.com/objects/index_tj.asp?objid=SCE304)

**Evaluation:** You will share your answers with a partner before turning them in to me. Decide if you or your partner needs to look back at the websites to correct any answers.

**Conclusion:** Please share with others the form of heat you found to be the most interesting to learn about.

Created by Hilary Tatum, November 2009

Name \_\_\_\_\_

Date \_\_\_\_\_

Heat and Temperature Worksheet

1. What happens to the speed of the particles if the temperature goes up?

What happens to the speed of the particles if the size of the object gets bigger?

What do you have to do to give the particles of the matter the most kinetic energy?

2.

Conduction	Convection	Radiation