Heat and Temperature Webquest

http://www.classzone.com/books/ml_science_physical/page_build.cfm?id=resour_ch4&u=1

Use the link above. 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 that follow.

1. Which two factors affect the average kinetic energy of the particles of any type of matter?

2. What happens to the speed of the particles if the temperature is increased?

3. What happens to the speed of the particles if the size of the particle is increased?

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

Go back to the main site from above:

http://www.classzone.com/books/ml_science_physical/page_build.cfm?id=resour_ch4&u=1

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

5. Once you've finished dragging the pictures to the correct boxes, fill out the following table.

Conduction	Convection	Radiation

Now click on the link marked **"Solar Cells"**, under the "green" box heading *Simulations.*

Play the movie.

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

Take a look at these "bite – sized" conduction, convection and radiation animations:

http://www.bbc.co.uk/bitesize/standard/physics/energy_matters/heat_in_the_home/revision/1/

http://www.wisc-online.com/Objects/ViewObject.aspx?ID=SCE304

7. In what three ways can heat be transferred?

8. Explain the transfer of heat energy between objects.

9. Give your own example of the following:

Conduction--

Convection--

Radiation---

Use the power point at this website to answer questions 10-17:

http://www.scuc.txed.net/webpages/pparris/files/Temperature%20and%20Heat%202.pdf

10. Define the following terms:

Heat--

Temperature--

11. What are the three temperature scales and what are the conversion formulas between them?

12. What does thermodynamics mean?

13. What is absolute zero?

14. Describe the First Law of Thermodynamics?

15. What is the Second Law of Thermodynamics?

16. What is Third Law of Law of Thermodynamics?

17. What is the *specific heat capacity?*

http://www.classzone.com/books/ml_science_physical/page_build.cfm?id=resour_ch4&u=1

From this site, click on the *Temperature Scales and Absolute Zero* link

Click on the **JavaScript temperature converter** link.

18. Type in your body temperature in Fahrenheit degrees. What is your body temperature in Celsius? _____

19. Type in the current room temperature. What is this temperature in Celsius? _____

20. Type in the freezing and boiling temperatures for water in Fahrenheit. What are these temperatures in Celsius? Freezing _____ Boiling _____.