Name: _______________________________________

Atmosphere and Heat Transfer Web Quest

Directions: Click on the link above each set of questions to find the answers.

Layers of the Atmosphere

http://www.windows.ucar.edu/tour/link=/earth/Atmosphere/layers.html

1. Name the five layers of the atmosphere:
   a. ________________________________________
   b. ________________________________________
   c. ________________________________________
   d. ________________________________________
   e. ________________________________________ (some scientists consider this layer to be part of space)

2. Click on the words “atmosphere” and each layer of the atmosphere to fill in the blanks below:
   a. What are the two main gases found in the atmosphere?
      1. ________________________________________
      2. ________________________________________
   b. The troposphere is the ________________ region of the Earth's atmosphere and is where ______________________ occurs.
   c. The stratosphere contains the ________________ which absorbs _______________________. Look at the diagram: ______________________ and ______________________ can fly in the stratosphere.
   d. As you go higher in the mesosphere, the temperature becomes ________________. Scientists do not know much about the mesosphere, but they do know that ________________ burn up in this layer.
   e. The thermosphere contains a layer of charged particles called the ________________ which makes communication by ______________________ possible and is home to the ________________ (Northern Lights). This is the layer in which ______________________ fly.
   f. In the exosphere the atmosphere is very _______________ as it begins to fade into space.

http://earthguide.ucsd.edu/earthguide/diagrams/atmosphere/index.html

3. Look at the diagram and click “layer Names – Show It.” List the height span of each layer:
   a. Troposphere ________________________________________
   b. Stratosphere ________________________________________
   c. Mesosphere ________________________________________
   d. Thermosphere ________________________________________

4. Click “Temperatures – Show it”. What happens to the temperature in each layer (does it get hotter or colder)?
   a. Troposphere ________________________________________
   b. Stratosphere ________________________________________
   c. Mesosphere ________________________________________
   d. Thermosphere ________________________________________
5. Conduction is the transfer of heat between ____________________________.

6. Why does the hand need an oven mitt in order to pick up the pot from the stove?
   ____________________________________________________________________________________

7. List four good conductors and four poor conductors:

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<thead>
<tr>
<th>Good</th>
<th>Poor</th>
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<td>1.</td>
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8. Convection is the up and down movement of _________________ and _______________ caused by
   heat transfer.

9. What happens to the air as the stove heats it?
   ____________________________________________________________________________________

11. What happens to the air as it gets farther from the heat source?
   ____________________________________________________________________________________

12. List four examples of convection:
   1. ____________________________________________________________________________________
   2. ____________________________________________________________________________________
   3. ____________________________________________________________________________________
   4. ____________________________________________________________________________________

13. When __________________________________________ travel through space it is called radiation.

14. What happens to the temperature of the house as the sun’s radiant energy touches it?
   ____________________________________________________________________________________

15. List three examples of radiation:
   1. ____________________________________________________________________________________
   2. ____________________________________________________________________________________
   3. ____________________________________________________________________________________