

Name: \_\_\_\_\_

## Atmosphere and Heat Transfer Web Quest

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

### Layers of the Atmosphere

<https://scied.ucar.edu/atmosphere-layers>



1. Name the five layers of the atmosphere:

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_ (some scientist consider this layer to be part of space)

2. Click on the words "Earth's 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 \_\_\_\_\_



## Heat Transfer

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

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:

<u>Good</u>	<u>Poor</u>
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

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. \_\_\_\_\_