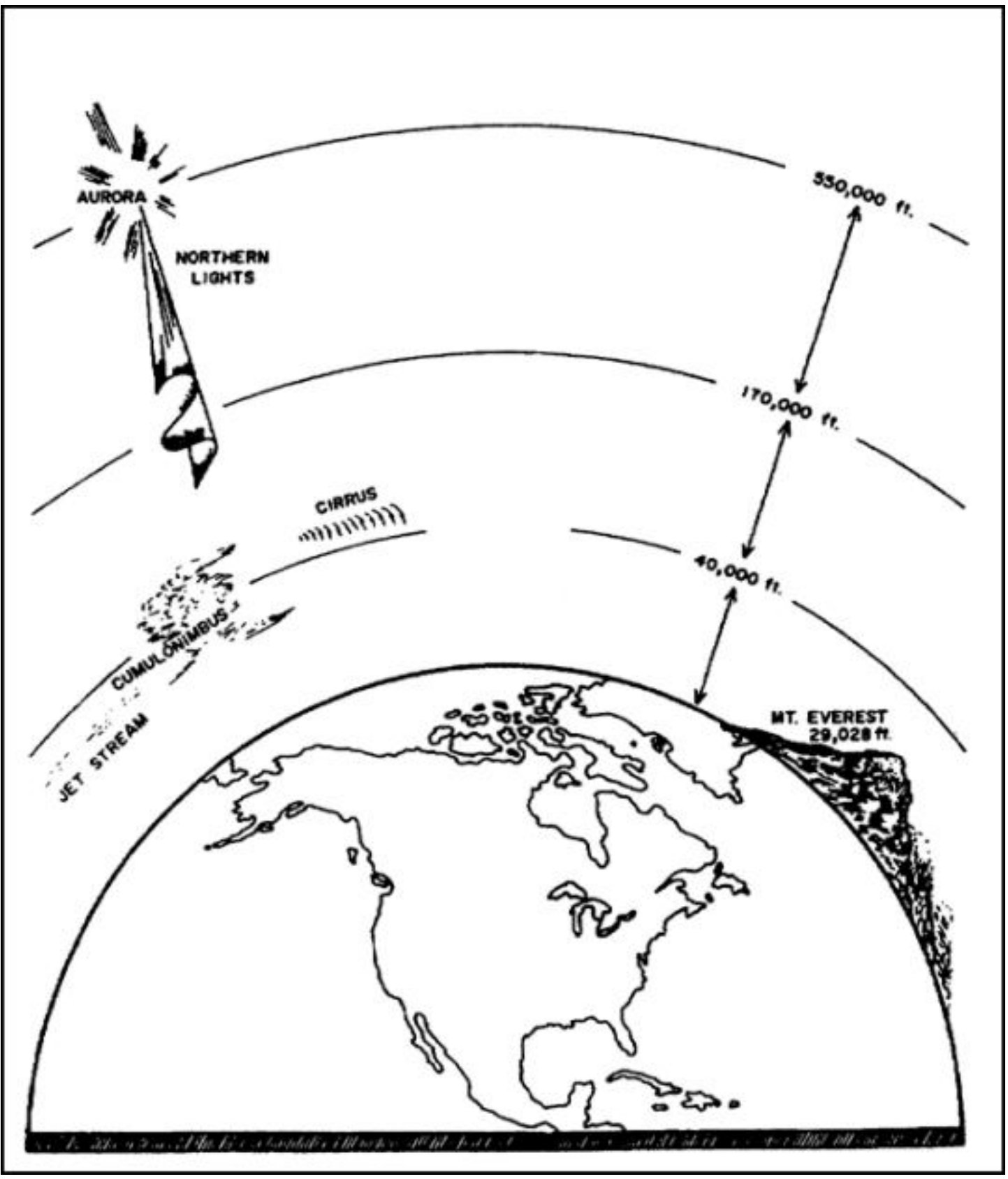
Layers of the Atmosphere Activity

Name_____ Block_____

DIRECTIONS: Paste the labels for each layer of the atmosphere on the diagram. Add the pictures at the correct altitude. Use red and blue to color the temperature of each layer. Put an **X** where you live.


AURORA
NORTHERN LIGHTS
550,000 ft.
170,000 ft.
CIRRUS
40,000 ft.
CUMULONIMBUS
JET STREAM
MT. EVEREST
29,028 ft.

80 km

50 km

12 km

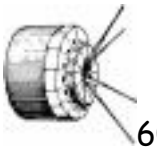
9 km

coldest layer

hottest layer

11 km

6 km 3 km 20 km <1 km 400 km 80 km



surface

600 km

Troposphere Tropopause Stratosphere Stratopause Mesosphere Mesopause

Thermosphere Thermopause Exosphere Ozonosphere Ionosphere

11 km

coldest layer

hottest layer

6 km 3 km 20 km

600 km <1 km

surface

400 km 80 km

Troposphere Tropopause Stratosphere Stratopause Mesosphere Mesopause

Thermosphere Thermopause Exosphere

Questions:

1. List the four main layers(*) of the atmosphere and calculate their thicknesses:

_____ _____

_____ _____

_____ _____

_____ _____

2. Which of the four main layers is the thickest? _____

The thinnest? _____

3. The four main layers(*) of the atmosphere are separated by thinner layers called "**Pauses**." Describe the change that occurs in the pattern of atmospheric temperatures at the "**Pauses**."

_____ 4.

At what elevation does the coldest temperature occur?_____ What

name is given to this point in the atmosphere? _____ What is the

temperature of this region? _____

5. At what elevation does the hottest temperature occur?

What name is given to this point in the atmosphere? _____

What is the temperature of this region? _____

6. Why are clouds generally observed to form only in the troposphere?

_____

_____

Teacher Note:

Project this image and have the students add to the first page. They could use red for increasing temperature, blue for decreasing temperature, and another color (green? orange?) for the Pauses. This will help answers some of the questions. I taught my students that the lines went diagonally left & up - straight up - diagonally right & up - straight up - diagonally left & up - straight up - diagonally right & up-up-up. Have them trace this in the air. You do it with them, backwards, of course, so they see you doing it correctly from their perspective.