

Name: _____

THE WEATHER

Weather:

The Earth is surrounded by an ocean of air called the *atmosphere*. The Earth's gravity keeps the atmosphere from drifting off into space.

The layer of the air closest to earth is called the *troposphere*. The troposphere is only about 6 miles thick, but it contains 4/5 (80%) of all the air in our atmosphere. The atmosphere extends out beyond the troposphere for another 100 miles, but the air gets thinner and thinner the farther out you go.

It is the *air in the troposphere* (the 6-mile thick layer of air closest to earth) that makes the rain, snow, clouds, frost, wind and everything else that we call the 'weather'.

Weather and Climate:

Weather is nothing but the condition of the air at one particular time and place. 'A hot summer day' and 'a stormy winter night' are both examples of weather.

Weather should not be confused with climate. **Climate** is the *usual* weather in an area—how the weather behaves *most* of the time. A desert with little rainfall or a hot tropical rain forest describe an area's climate—they tell what weather conditions are usually like in an area over a long period of time, not just on one particular day.

Changing Weather:

Weather doesn't just stay in one place. It moves, and changes from hour to hour or day to day. Why is this?

The sun heats the earth unevenly. Places near the equator (the Tropics) get lots of heat, so the air there is warm. Places near the North and South Pole get little heat, so the air there is cold.

Air in the troposphere tends to move from places that are cold (Polar Regions) to places that are warm (the Tropics). The moving air creates winds. These winds are what bring about changes in the weather.

1. What is the ocean of air that surrounds the earth called?

What keeps it from drifting off into space?

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2. What makes the '*weather*'?

3. What is the troposphere?

How thick is it?

How much of the air in earth's atmosphere does it contain?

4. What is weather?

Give two examples of weather:

5. What is climate?

Give two examples of climate:

6. What causes the weather to change?