



Weather



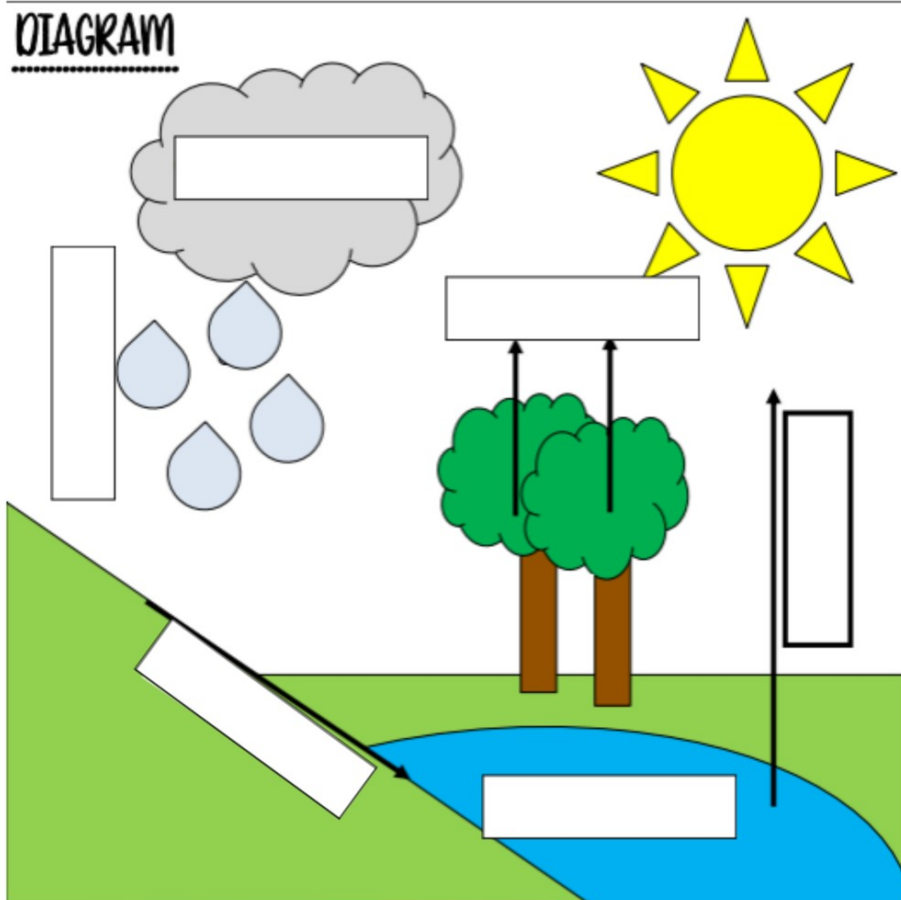
Atmosphere is the layer of air that surrounds Earth.

Weather is the state of the atmosphere at a given time in a particular place.

Meteorologists are scientists who predict and report the weather

Air Pressure is the weight of the air pressing down on the Earth, the ocean and on the air below causes air pressure.





Label the diagram to the left with the words below.

condensation

transpiration

evaporation

run-off

collection

precipitation

How does a lake contribute to the water cycle?

A rectangular box containing a red horizontal line and a green horizontal line, representing a student's answer.

Earth's Atmosphere

The atmosphere is made up of a mixture of gases. These gases are mostly nitrogen and oxygen that surround the earth and covers it like a blanket. Without the atmosphere, we would not be able to have life on our planet. These important gases protect us by blocking out dangerous rays from the sun. This helps keep Earth at the perfect temperature for plants and animals. There are five layers to earth's atmosphere - the troposphere, the stratosphere, the mesosphere, the thermosphere, and the exosphere. The further you go away from the earth, the thinner the air becomes.

The troposphere is the lowest layer. This is the layer of the atmosphere where weather occurs. Rain, snow, and wind are all produced in the troposphere.

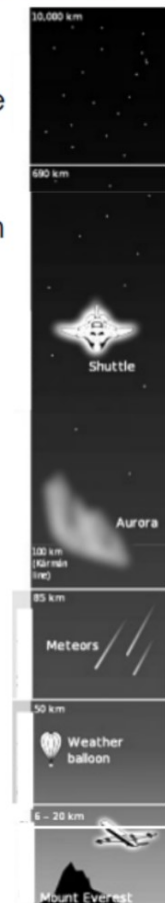
Above the troposphere lies Earth's stratosphere. Towards the bottom of the stratosphere, it can be very cold at around -70 degrees Fahrenheit, but as you go higher, the temperature increases to about 32 degrees Fahrenheit. The reason it is warmer towards the top of the stratosphere is because it is heated by the sun's ultraviolet rays. The ozone layer is found in the stratosphere. The ozone is gas that protects us from the UV rays and other solar radiation.

The mesosphere is the next layer of the atmosphere. It reaches the coldest temperature of around -130 degrees Fahrenheit. This layer is where many meteors disintegrate while entering the atmosphere.

The thermosphere is the fourth layer of the earth's atmosphere and also the hottest. It is so hot because the air is very thin and doesn't absorb a lot of solar radiation. It can get as hot as 3,600 degrees Fahrenheit!

Starting at about 310 miles above earth is the exosphere. There are many gas molecules that escape into space. These gases scatter different wavelengths of light. Blue light is scattered very well by the gases in our atmosphere. This is why the sky looks blue!

[World's Most Asked Questions: Why is the Sky Blue? \(youtube.com\)](https://www.youtube.com/watch?v=7j8v8v8v8v8)



1. List the layers of the earth from lowest to highest:

Troposphere stratosphere mesosphere thermosphere exosphere

2. Why is life able to survive on Earth? _____

3. The _____ you go away from the earth, the _____ the

Write an interesting fact for the following layers.

MESOSPHERE	
TROPOSPHERE	
STRATOSPHERE	