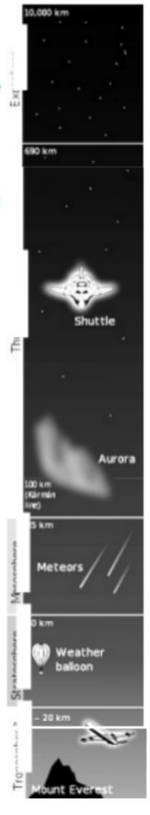
Earth's Atmosphere

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)

1. List the layers of the earth from lowest to highest:
troposphere, the stratosphere, the mesosphere, the thermosphere the exosphere

2. Why is life able to survive on Earth? _____
The ozone gas that is found in the stratosphere protects us from the UV rays and solar radiation.

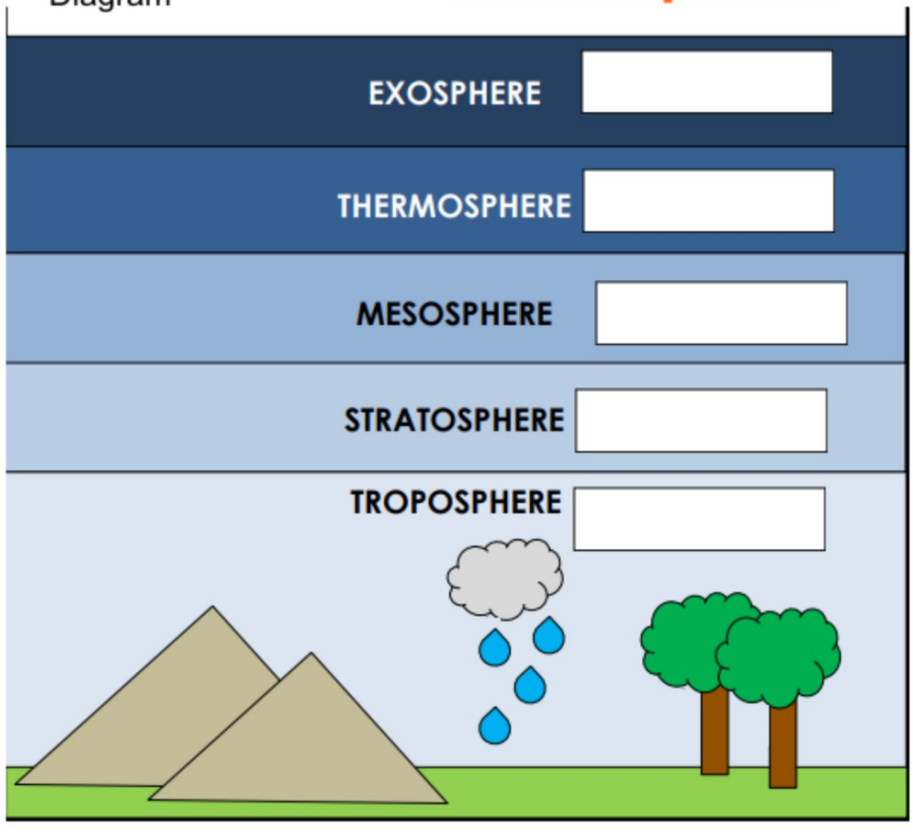
3. The further you go away from the earth, the thinner the air becomes.

Write an interesting fact for the following layers.

MESOSPHERE	→ coldest layer
TROPOSPHERE	→ weather occurs
STRATOSPHERE	→ ozone → airplane fly here

Atmosphere

Diagram



REVIEW

Label the diagram to the left with the words below.

mesosphere

exosphere

troposphere

thermosphere

stratosphere

In which layer of the atmosphere does weather occur?

Weather occurs in the troposphere. This is where humidity, air pressure, wind, and precipitation occur.

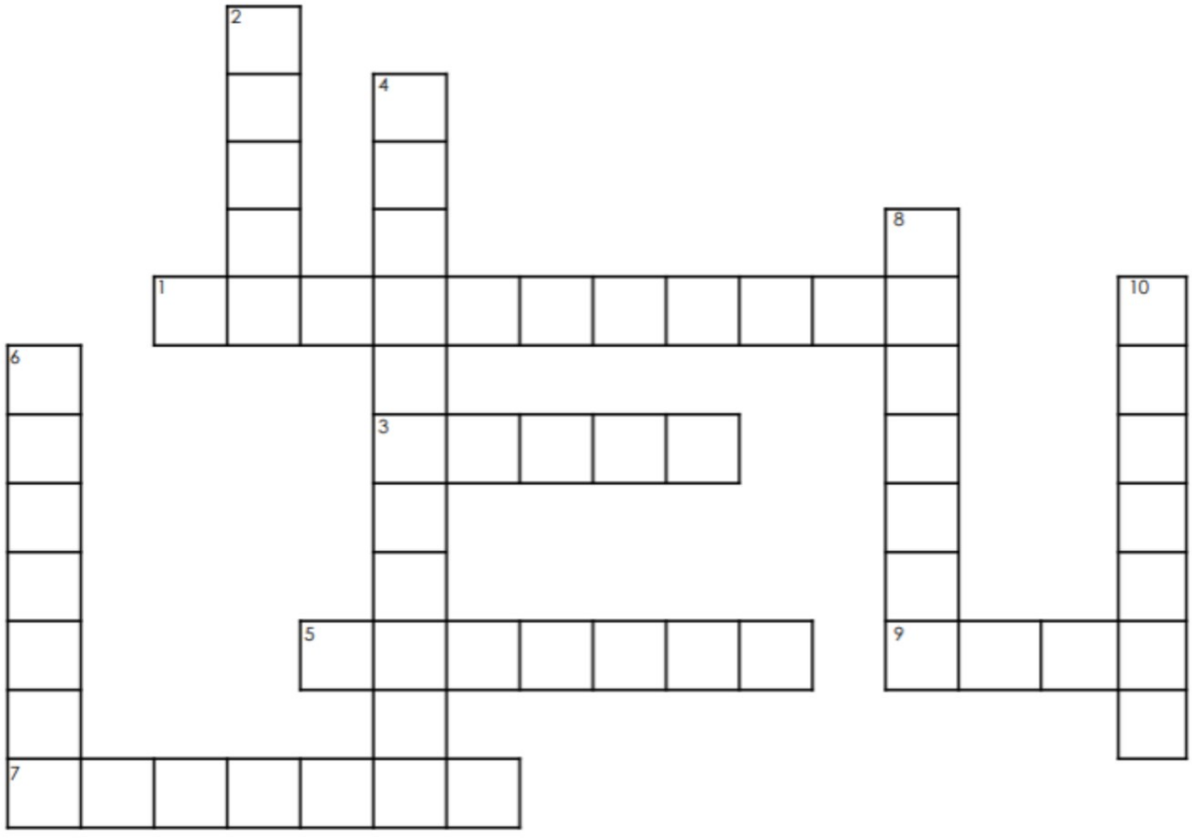
New

Atmospheric Pressure- air around you has weight, and it presses against everything it touches

let's learn about EARTH'S ATMOSPHERE

Name: _____

Complete the crossword puzzle using the clues below:

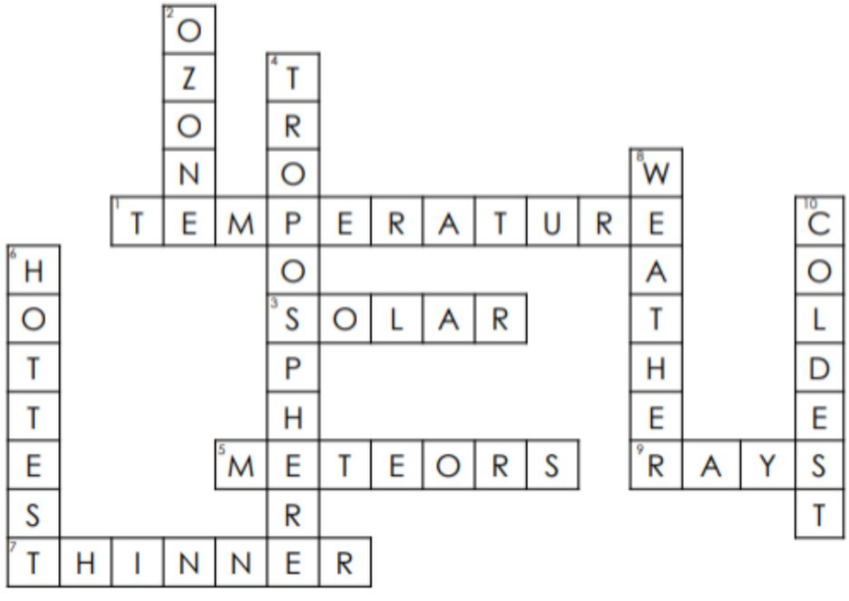


Across	Down
1. The atmosphere helps keep Earth at the perfect _____.	2. The _____ is gas that protects us from UV rays.
3. The thermosphere is hot and the air is thin and doesn't absorb a lot of _____ radiation.	4. The _____ is the lowest layer of the atmosphere.
5. The mesosphere is the layer where _____ disintegrate.	6. The thermosphere is the _____ layer of the Earth's atmosphere.
7. The further you move away from Earth, the _____ the air becomes.	8. _____ occurs in the layer of the troposphere.
9. The top of the stratosphere is warmer because it is heated by the sun's _____.	10. The mesosphere is the layer of the atmosphere with the _____ temperatures.

let's learn about EARTH'S ATMOSPHERE

Name: ANSWER KEY

Complete the crossword puzzle using the clues below:



Across	Down
1. The atmosphere helps keep Earth at the perfect **TEMPERATURE**.	2. The **OZONE** is gas that protects us from UV rays.
3. The thermosphere is hot and the air is thin and doesn't absorb a lot of **SOLAR** radiation.	4. The **TROPOSPHERE** is the lowest layer of the atmosphere.
5. The mesosphere is the layer where **METEORS** disintegrate.	6. The thermosphere is the **HOTTEST** layer of the Earth's atmosphere.
7. The further you move away from Earth, the **THINNER** the air becomes.	8. **WEATHER** occurs in the layer of the troposphere.
9. The top of the stratosphere is warmer because it is heated by the sun's **RAYS**.	10. The mesosphere is the layer of the atmosphere with the **COLDEST** temperatures.