

A dramatic sky with dark blue clouds and a bright sunburst breaking through a gap in the clouds. The sunburst is a bright, glowing area of light that illuminates the surrounding clouds, creating a high-contrast scene. The clouds are dark and textured, with some lighter areas where the sun's light hits them. The overall mood is powerful and atmospheric.

Earth's

Atmosphere

WHAT IS THE EARTH'S ATMOSPHERE?

A thin layer of air that forms a protective covering around the planet.

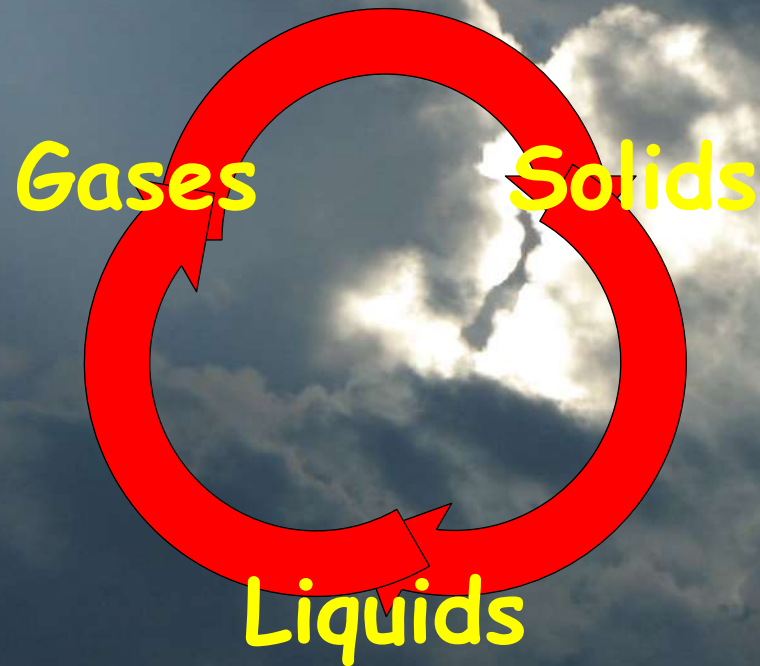


Why is the atmosphere so important to us?

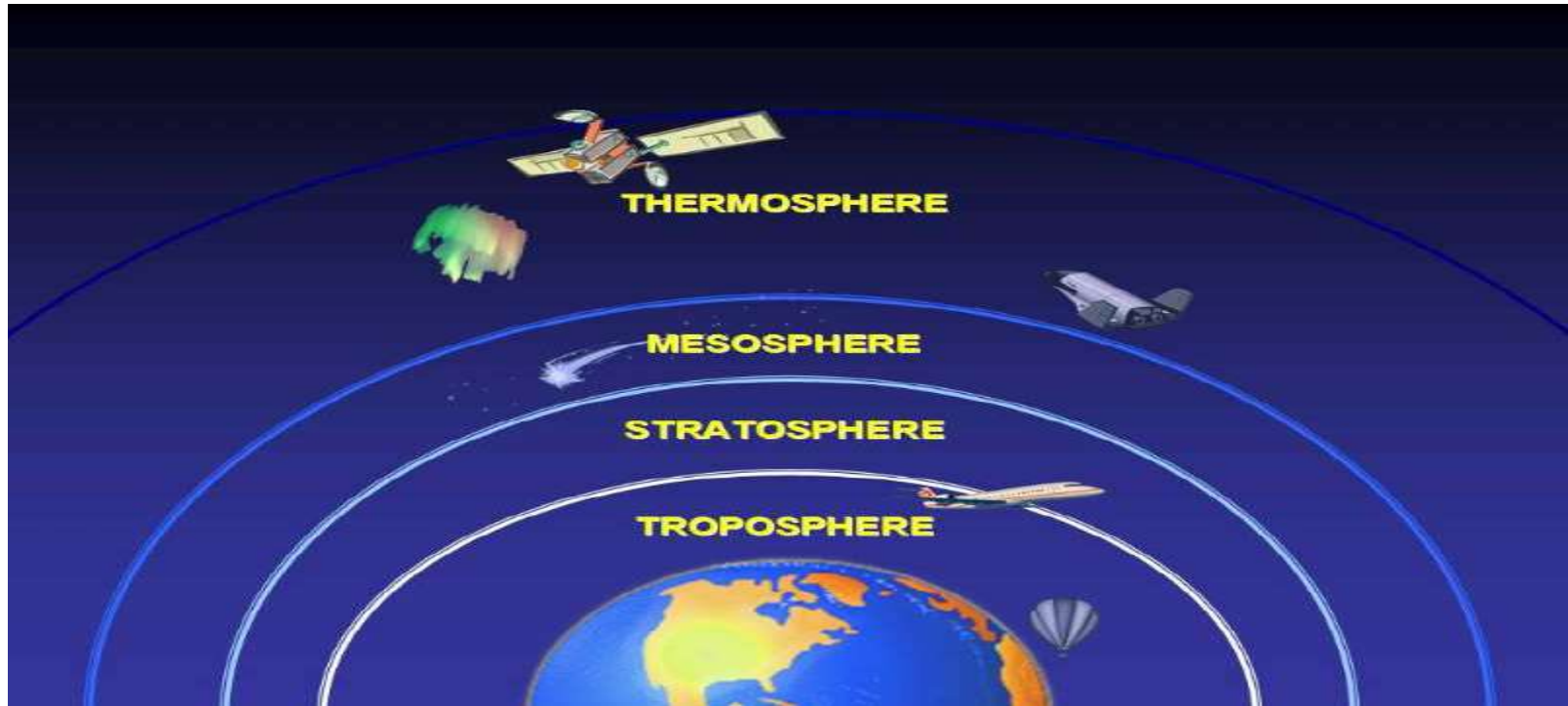
- Helps maintain a balance between the amount of heat absorbed from the Sun and the amount of heat that escapes back into space.
- The days would be extremely hot, and the nights would be extremely cold.
- Protects life-forms from some of the Sun's harmful rays.

What makes up the
Atmosphere?

What makes up the atmosphere?

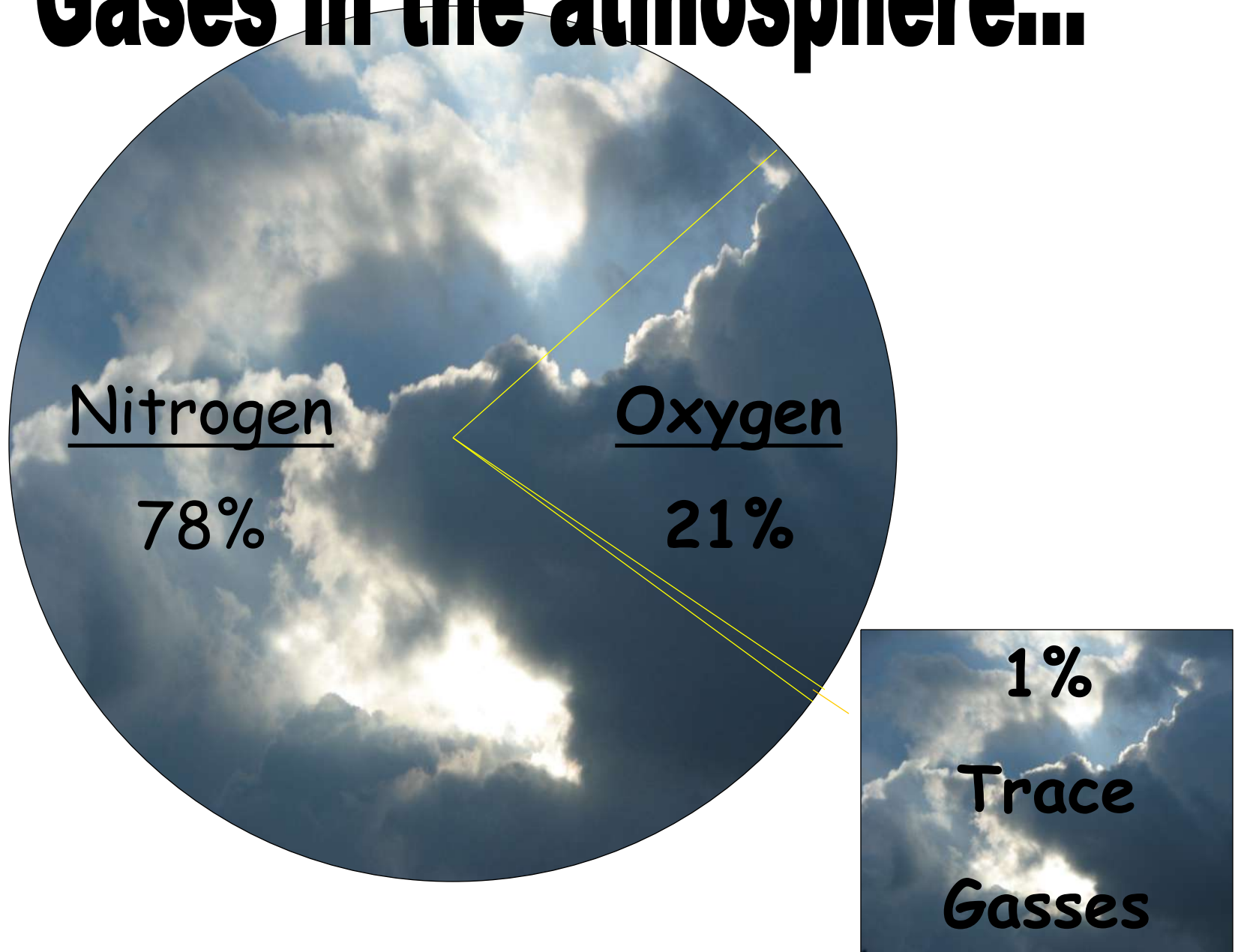


Where is it found?

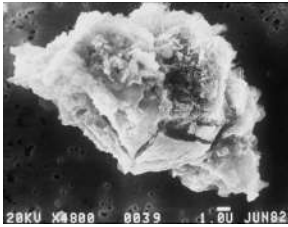


- It begins Earth's surface and ends in outer space.

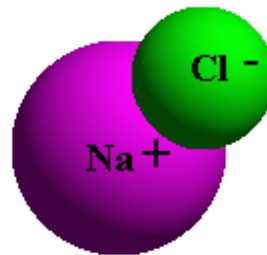
Gases in the atmosphere...



Other particles that are in the atmosphere



Dust



Salt

Salt



Pollen

How do the solids get in the atmosphere?

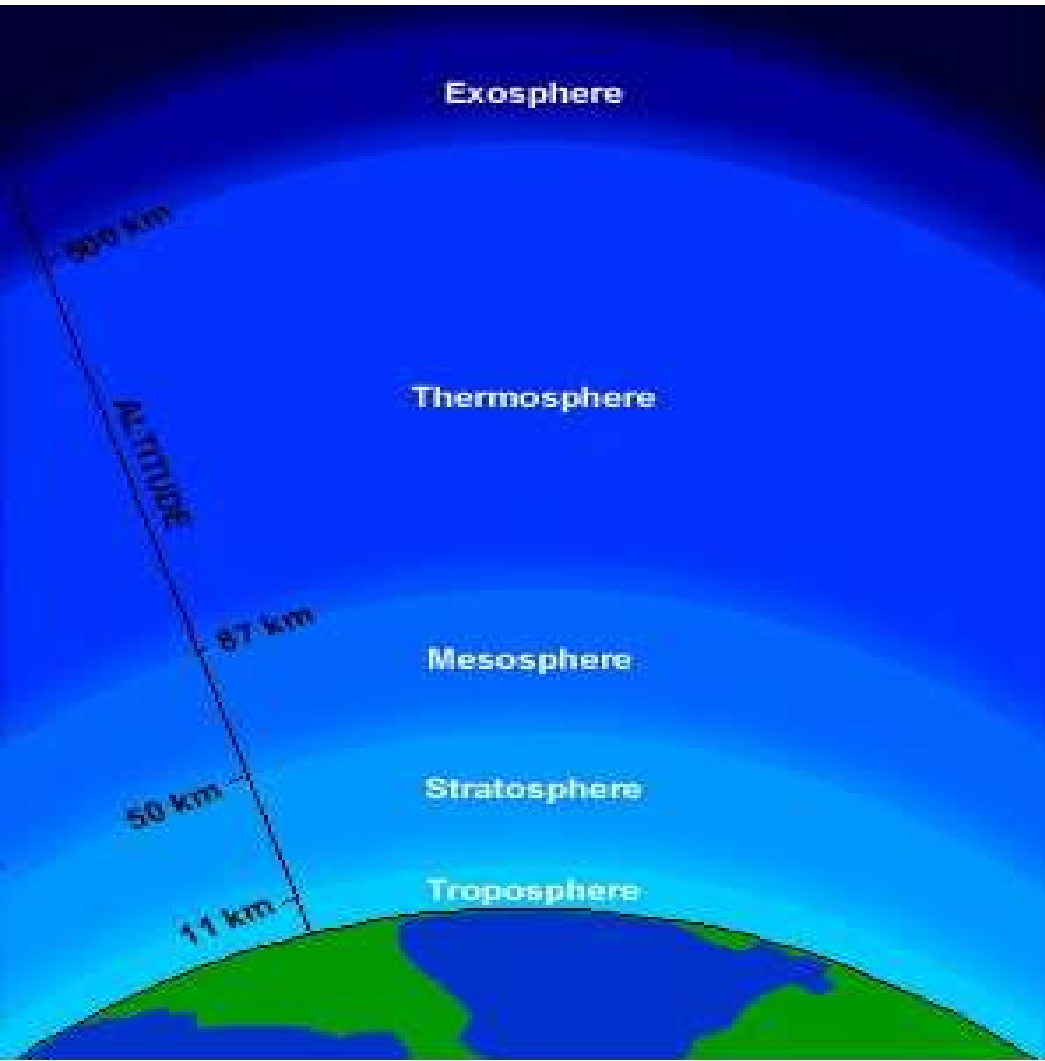
- Dust: dust storms, wind blowing
- Salt: Spray form the ocean water
- Pollen: from plants

What types of liquids are in the atmosphere?

- Droplets other than water!
- Where do they come from? When a volcano erupts, liquids are released.
- For example: Sulfuric acid can produce spectacular sunsets!

Layers of the Atmosphere

How many layers are there in the Earth's atmosphere?



The atmosphere is made up of 4 main layers

- Troposphere
- Stratosphere
- Mesosphere
- Thermosphere

What is unique about the troposphere

It is where we... sleep play eat study

The lowest layer of the Earth's atmosphere...

Contains 99% of the water vapor & 75% of the atmospheric gases.

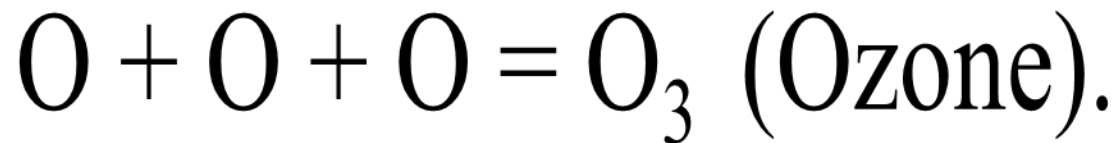
Rain, snow, and clouds occur here.



Where is the Stratosphere?

Located above the troposphere!

It contains the ozone layer, which is



Why is the Ozone layer important?

Protects us from harmful rays from the sun, by absorbing most of the ultraviolet (UV) radiation—one type of energy that comes from the sun that causes damage to skin and causes cancer.



**What is causing damage
to our ozone layer...
endangering our future!**

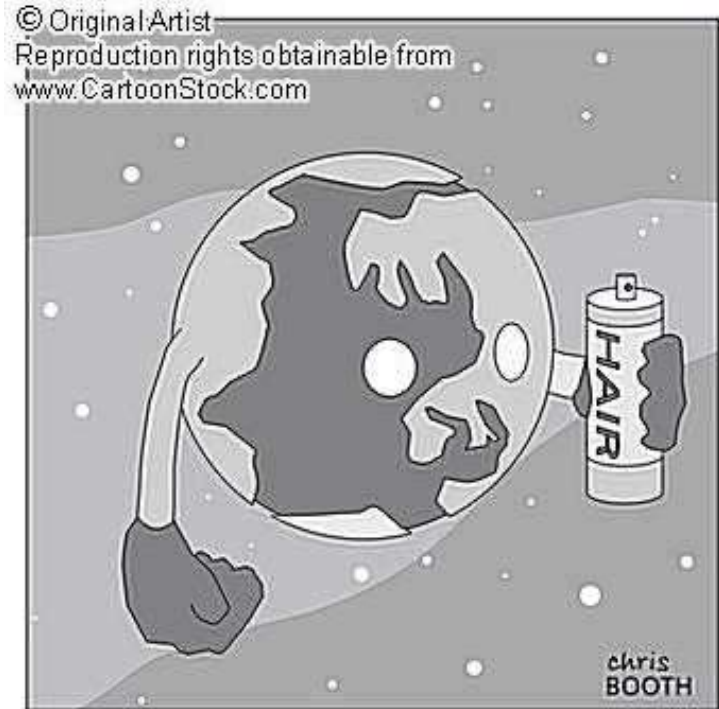
Hole in the Ozone Layer?



Caution! Dangerous Pollutants!

Smog

CFC's



"CFC's?! I've been using
this stuff for years!"

What are CFCs?

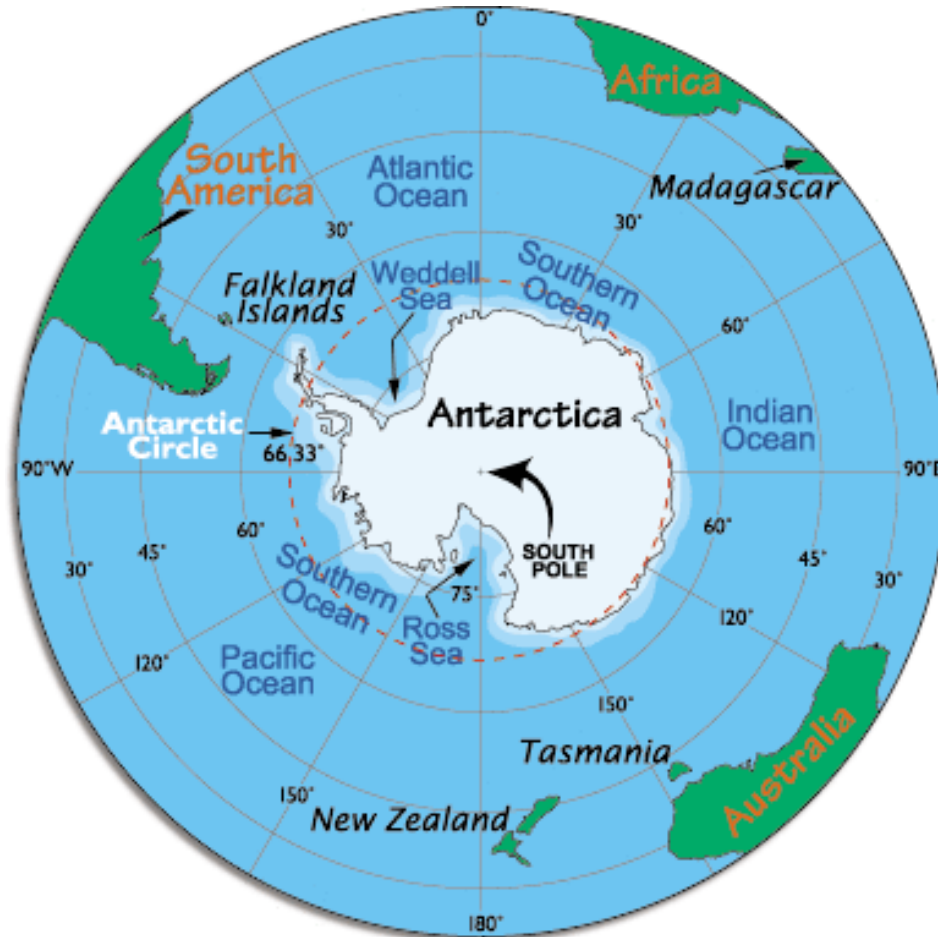
- Chemical compounds used in refrigerators, air conditioners, aerosol spray cans & the making of foam packaging materials (like packing peanuts)

How do they destroy the ozone layer?

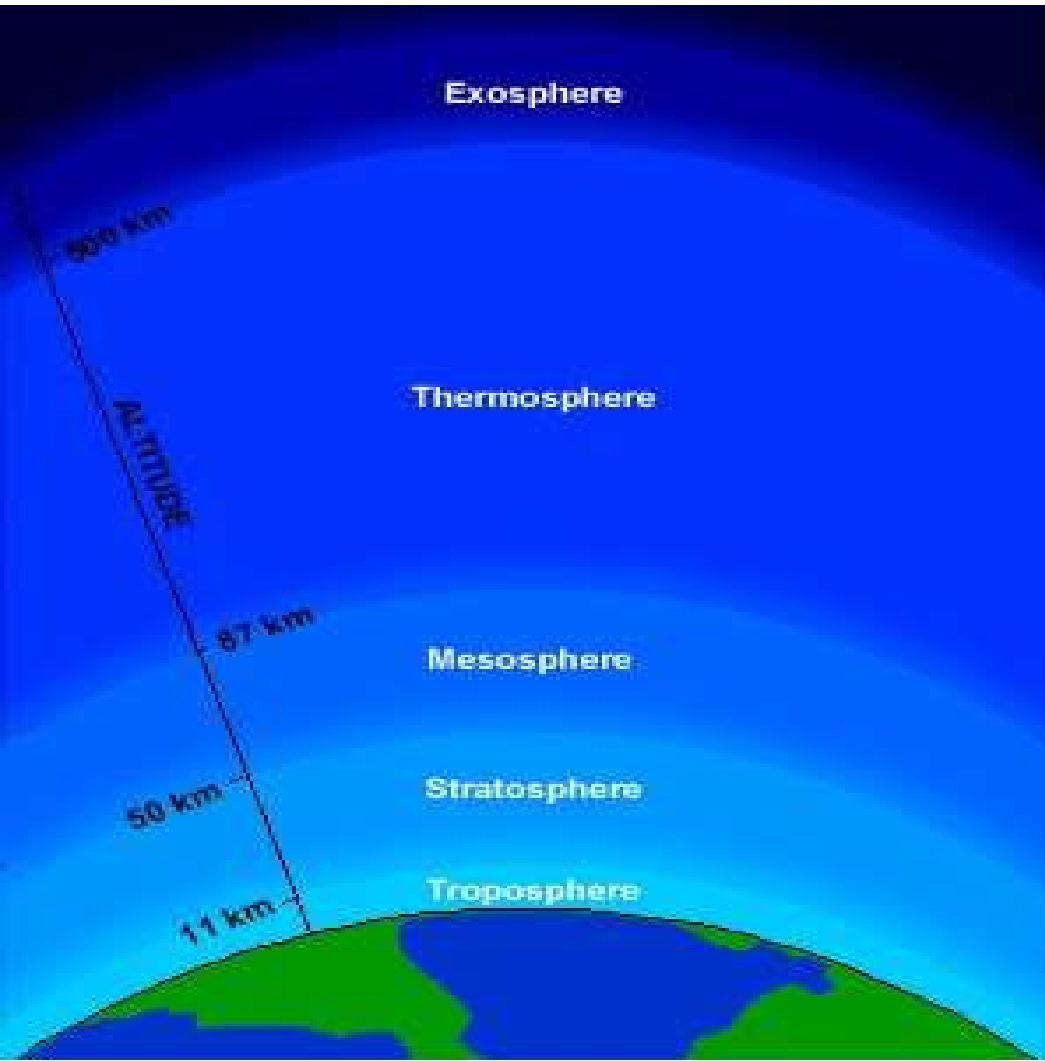
- They break the ozone molecule apart causing them to change into new compounds that don't block UV radiation, so more radiation reaches Earth.

Over which continent was a big hole in the ozone layer found???

- Antarctica!



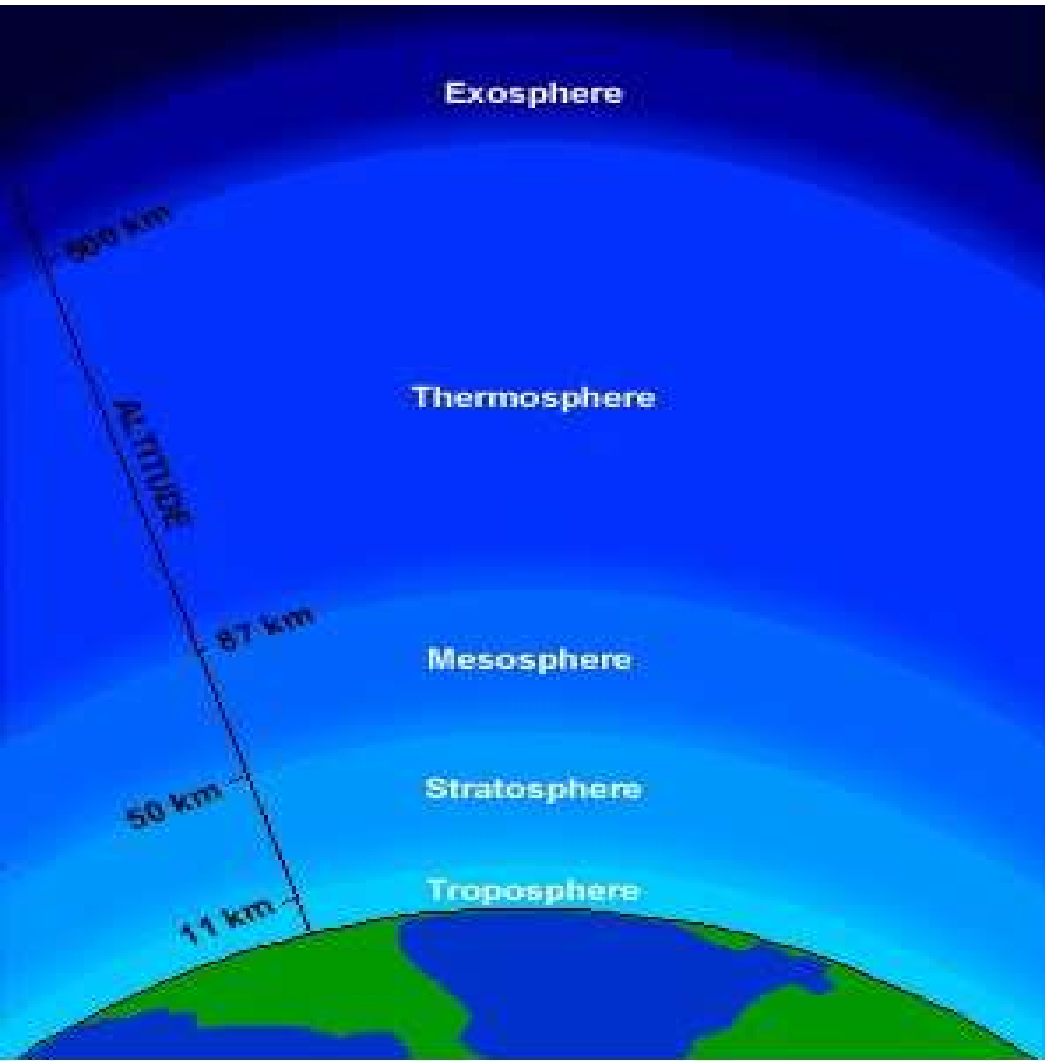
What are the upper layers of the atmosphere?



Mesosphere

Shooting stars are found here as meteors move through this layer

What are the upper layers of the atmosphere?



Thermosphere (high temps)

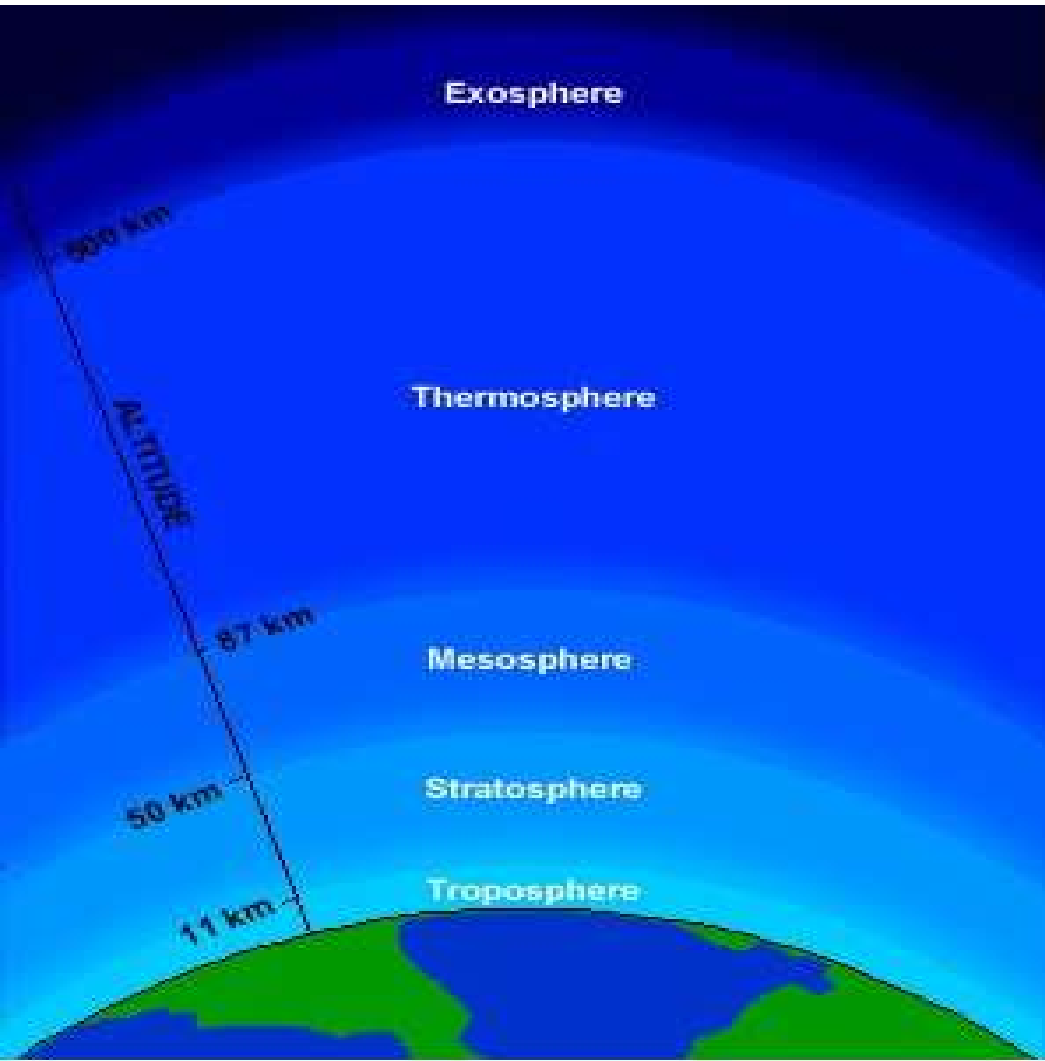
- The thickest layer
- Made up of 2 areas:
- Ionosphere
- Exosphere

Ionosphere

- Electrically charged particles allow radio waves to travel to other cities mostly at night, so you can hear radio stations from other cities in our country.

What are the upper layers of the atmosphere?

Exosphere



Beyond the exosphere is outer space.

Due to few molecules in this layer, the space shuttle maneuvered through this layer using only rocket thrusters because the wings are useless.

Atmospheric Pressure

Air pressure is the force pressing down on earth's surface.

What factors influence atmospheric pressure?



1. Earth's gravity
2. Distance from Earth's surface

The closer the atmospheric gases are to the Earth, the greater the pressure or force.

Which football player feels greater pressure?



Why???

Draw and label a diagram of
the layers of Earth's
atmosphere using page 405 in
the textbook.