

FORMATION OF THE ATMOSPHERE NOTES

Atmosphere = _____

Earth's 1st Atmosphere (_____ years ago)

Made of _____ & _____.

These light gasses (H & He), were heated by solar radiation _____. The gasses were carried away by _____.

FYI: _____ also had the same 1st atmosphere of H & He.

Earth's 2nd Atmosphere

_____ all over earth produced _____, carbon dioxide, & nitrogen gas.

The only living organisms were _____.

100's of millions of years passed

The earth continued to _____ & _____ formed clouds. Rainfall formed the _____.

Earth's 3rd atmosphere (Our Current Atmosphere)

Oxygen appeared when _____ broke the water vapor H_2O into H & O.

However, most of the _____ came from _____, when plants appeared **2-3 billion years ago**.

Photosynthesis makes oxygen by turning _____

As plants became wide spread _____ became abundant in the atmosphere.

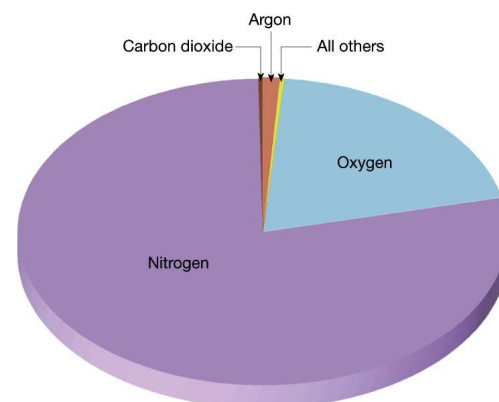
Today our atmosphere is:

78%

21%

0.93%

0.038%



Type of Gas	Percent of Gas in Air	
	Early Atmosphere	Present Atmosphere
Carbon Dioxide	92.2	0.03
Nitrogen	5.1	78.0
Sulfur dioxide	2.3	0.0
Hydrogen Sulfide	0.2	0.0
Ammonia	0.1	0.0
Methane	0.1	0.03
Oxygen	0.0	21.0
Argon	0.0	0.9

1. What three gases made up about 99 percent of the early atmosphere?
2. What two gases make up about 99 percent of today's atmosphere?
3. What gases present in the early atmosphere are not present in today's atmosphere?
4. What gases present in today's atmosphere were not present in the earth's early atmosphere?
5. How has the amount of carbon dioxide in the air changed over time?
6. What caused the change in the amount of carbon dioxide?
7. How does the amount of oxygen in today's atmosphere compare to the early atmosphere?
8. What caused the change in the amount of oxygen?

The Greenhouse Effect

The earth's surface & atmosphere are heated by the _____

The sun's energy is either _____ or _____:

What happens to solar energy?

Approximately: _____ is absorbed by earth
_____ is absorbed by the atmosphere (clouds, etc)
_____ is reflected back into space

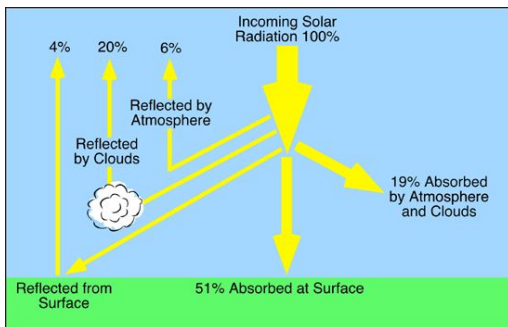
Solar energy passes through the atmosphere _____

Some of the sun's energy is _____

Greenhouse gases in the atmosphere _____

If we didn't have the greenhouse effect earth would be _____.

So, we need the greenhouse effect to keep us alive!



Here's how it works:

1. _____ radiation from the sun easily passes through the earth's atmosphere.
2. The shortwave radiation _____.

Heat waves have _____, and some can escape back into space, but others are trapped by the earth's greenhouse gasses. **This _____ earth.**

But there is a problem: Greenhouse gases are getting _____.

This _____ more _____ making earth warm up.

Greenhouse Gasses:

_____, _____, _____, _____

Carbon dioxide is the biggest problem:

- produced by _____
- Using _____
- Using _____
- using natural gas (_____)
- _____ for showers, clothes, etc

What can YOU do TODAY?

1. Use energy-saving _____. Buy energy-efficient fluorescent bulbs for your lights.
2. _____ - turn off VCRs & other unused appliances
3. Shop smart - Buy products that use less _____. Buy items made from recycled materials. Purchase only what you really need.
4. Wash clothes in _____, not hot.
5. Hang 1 load of clothes a week on a rack or clothes line
6. Recycle
7. Leave your car at home two days a week

