

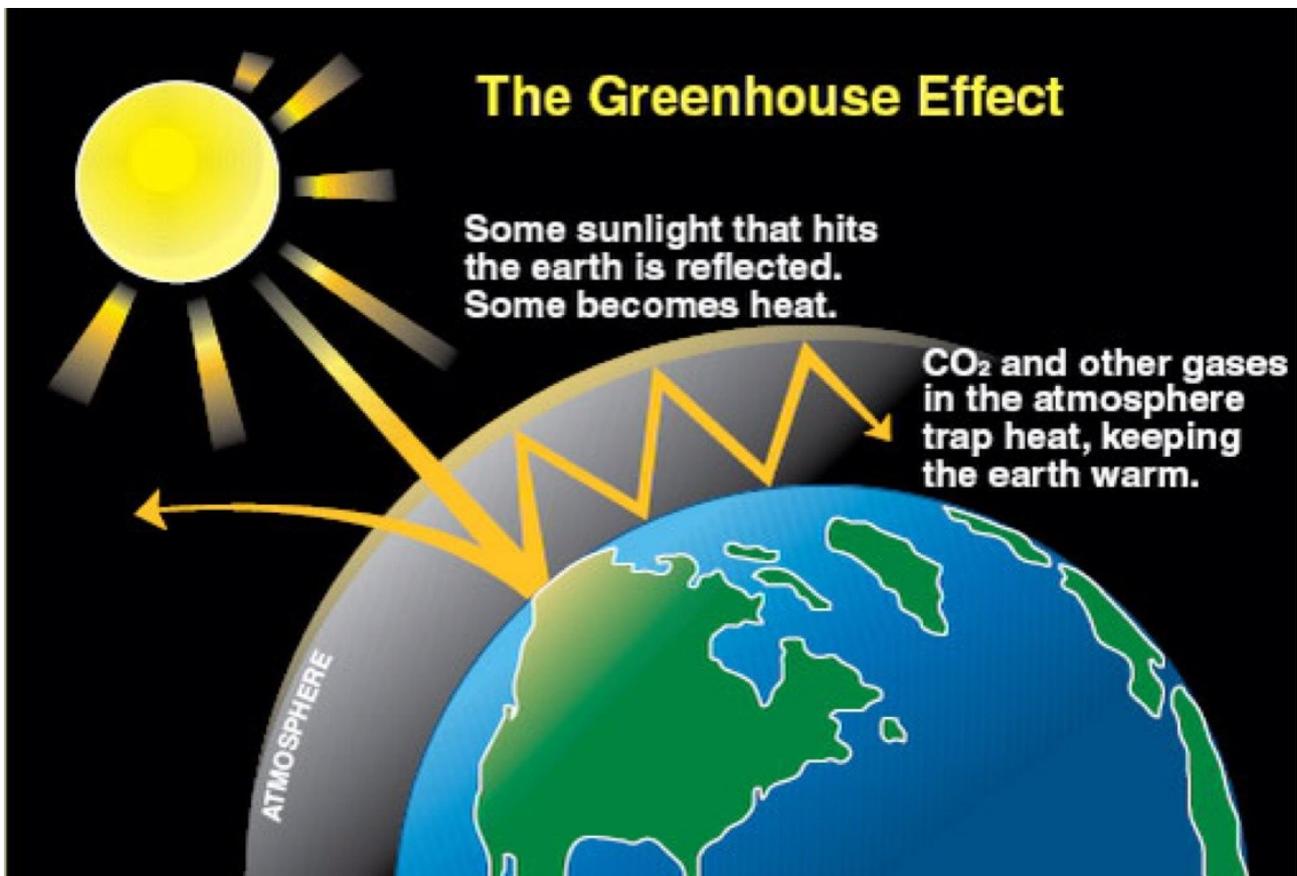
The Earth is surrounded by layers of gases. These gases are called atmosphere and they are vital for the existence of life on the planet.

The atmosphere plays a double role:

- a) it protects life on Earth (blanket & suntan lotion)
- b) it sustains life on Earth (breathing, photosynthesis)

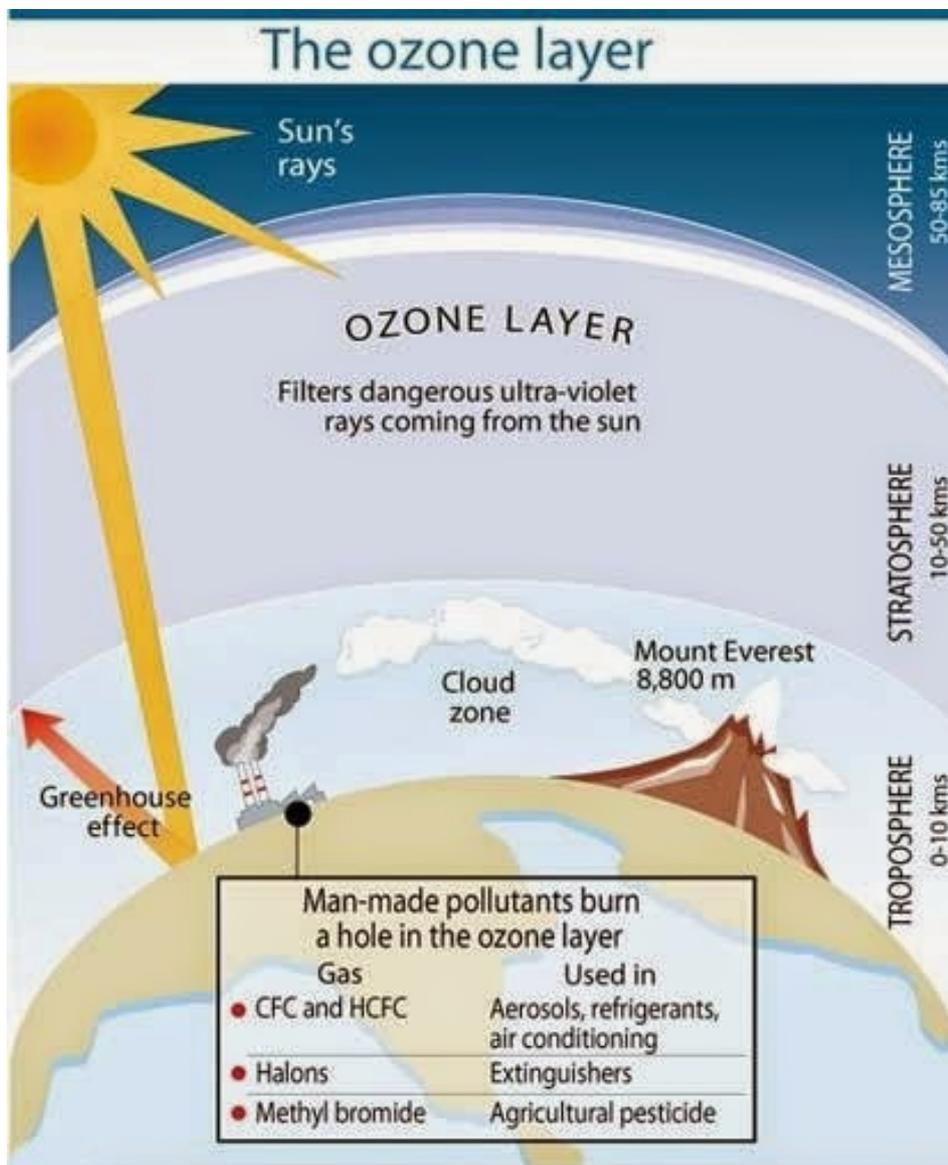
The atmosphere is our blanket!

The atmosphere is a blanket that **insulates** our planet. That means that it keeps the overall temperature relatively steady. During the day the atmosphere **absorbs** heat from the Sun. In this way it's not too hot during the day and also it **releases** this warmth at night so it keeps us warm when the Sun is gone. So, the Sun **functions** like a blanket. This is called the Greenhouse Effect.



The atmosphere is our suntan lotion

Another **protective function** of the atmosphere is performed through the Ozone layer. The Ozone layer functions like a pair of sunglasses or like suntan lotion. In other words the atmosphere protects us from the **harmful ultraviolet** solar radiation (UVA, UVB).



The atmosphere is **made up of** several gases:

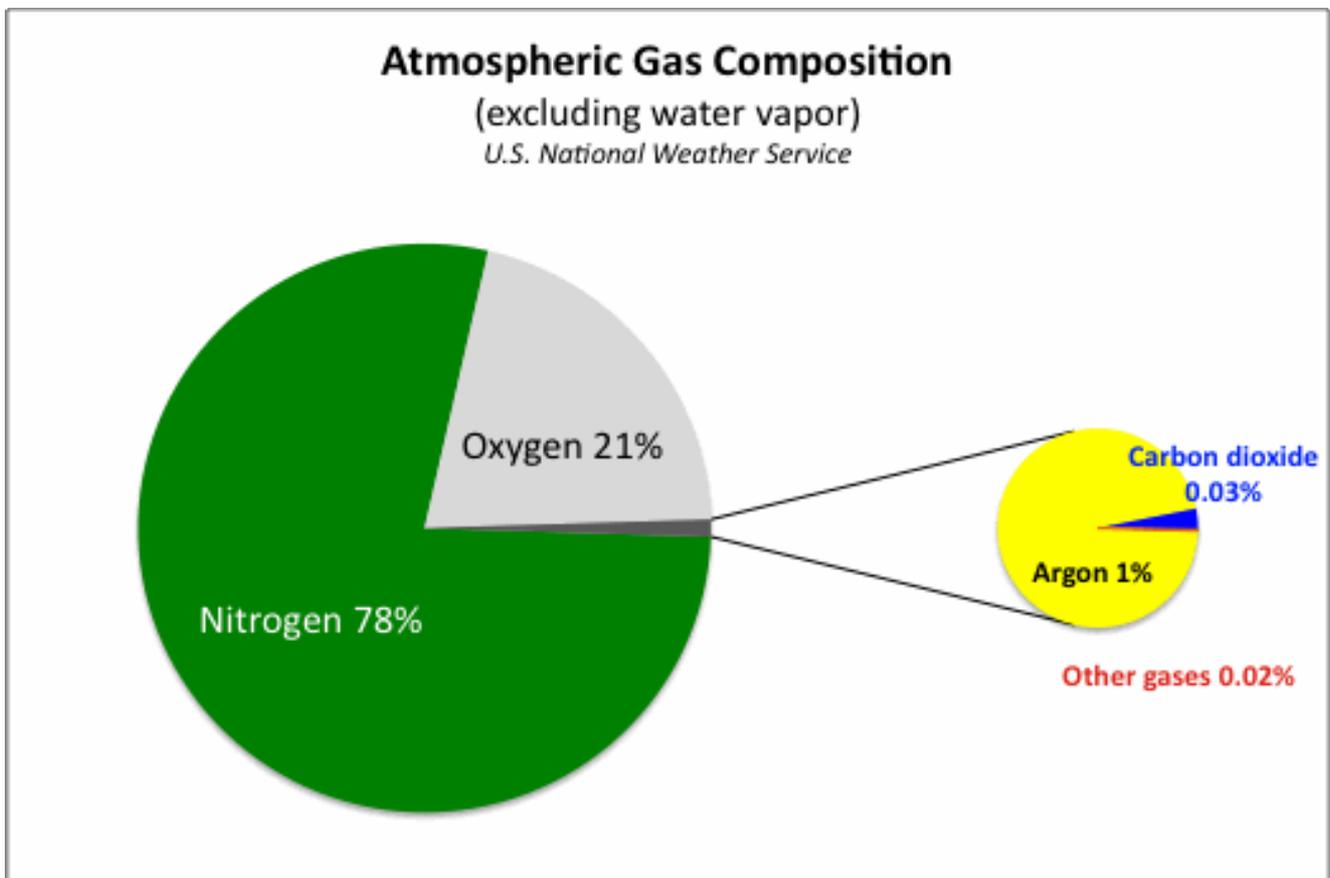
78% = nitrogen

21% = oxygen

01% = other gases like: argon, carbon dioxide, hydrogen, helium and more.

Oxygen is needed by animals to breathe.

Carbon dioxide is needed by plants to photosynthesize.



The atmosphere

The Earth's atmosphere is **divided up into** 5 major layers:

1. Troposphere: 0-16km. This is where we live. This is where the planes fly. It gets heated by the surface of the Earth
2. Stratosphere: 16-50km. It gets heated by the Ozone layer that absorbs the solar energy.
3. Mesosphere: 50km-80km. This is where most meteors burn upon entry in the atmosphere.
4. Thermosphere: 85km-500km. The air is very thin
5. Exosphere: 500km-10.000km. The thinnest layer. The borders to the Outer Space.

