Composition of the Atmosphere

Nitrogen and Oxygen

- Make up 99% of the atmosphere
- Nitrogen: important for fixation (production of soil elements necessary for agriculture)
- Oxygen: important for respiration (the ability for our bodies to generate energy)

Water Vapor

- Varies with the level of **humidity**
- There is usually more water vapor in more humid areas.
- In warmer regions humidity level increases because water vapor is able to hold more moisture.

Greenhouse Gasses

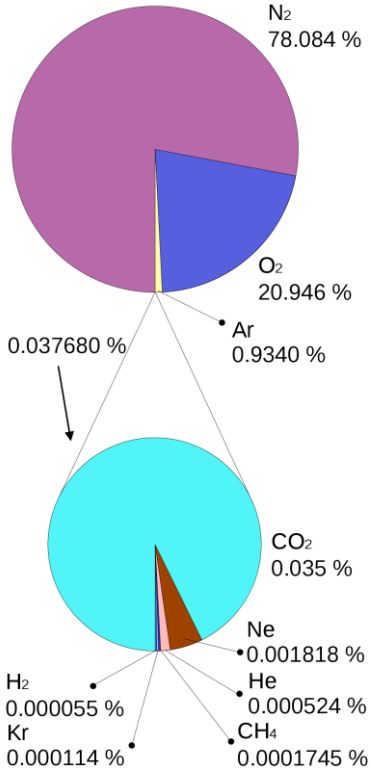
- Help trap heat in the atmosphere to maintain a stable temperature for supporting life ($CO_2, CH_4, Ozone$).
- Organisms can only tolerate a certain range of temperatures, so these gases help prevent temperatures from becoming too extreme.

Particulates

- Ash, dust, and other solids that help water vapor condense to initiate precipitation so that liquid water is available for life
- Initiates precipitation by inducing water vapor to condense.

Study Tip

If the gasses in the atmosphere had an alphabet it would be mostly Ns and Os since the atmosphere is primarily composed of nitrogen and oxygen.



Circle chart that shows the relative composition of air, each of the substances in air is necessary to sustain life in one way or another.

Concept Check

- List the substances that exist in the atmosphere and explain why each is able to sustain life on Earth.
- What are particulates and how do they help maintain Earth as a suitable environment for life?