



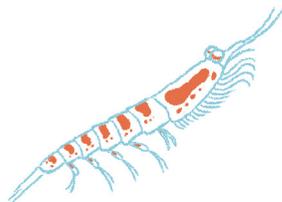
The Ocean provides most of the oxygen we breathe

Plankton

Plankton is the term used to define all the **small and microscopic organisms that drift or float in the sea or fresh water**, unable to swim or move with independence from water currents (if they could, they would be *nekton*). Many different organisms (diatoms, protozoans, jellyfish, eggs/larval stages of larger animals, etc.) fit this definition, regardless of their size or metabolic needs. There are two main plankton groups:



Phytoplankton: *plant plankton* that meets its metabolic needs through photosynthesis.



Zooplankton: *animal plankton* that feeds on other organisms to meet its metabolic needs.

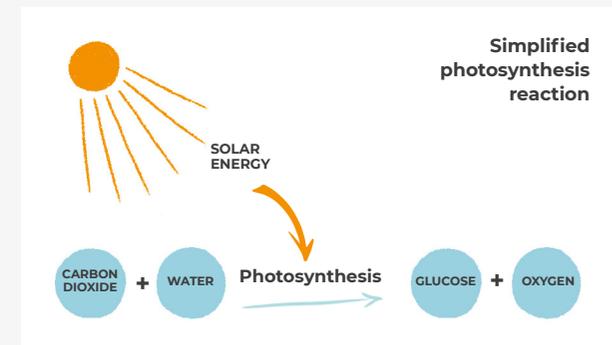
Plankton is considered the foundation for life in the Ocean:

1. It is the **first link in the marine trophic chain**, providing food to many living beings. For example, the blue whale, the largest animal on Earth, feeds almost exclusively on krill. One single adult can eat up to 40 million krill every day!!

2. But its importance goes much further than sustaining the whole marine food chain. **Phytoplankton is crucial to provide the oxygen in the air we breathe, acting as the most important oxygen producer on the planet.** Scientists estimate that it contributes between 50 and 85% of the oxygen in the Earth's atmosphere! Without plankton, life on Earth would not be possible.

Oxygen production

The oxygen we breathe is mainly produced by plant organisms through **photosynthesis**. This process converts solar energy (which is absorbed through chlorophyll pigments) into glucose (which is used by the organism to fuel its activities). To do so, CO₂ and water are needed, while **oxygen is a waste product that is released**.



This process occurs both on land and in the Ocean, but **the amount of oxygen produced in the Ocean is much greater (50-70%) than the oxygen produced by rainforests on land (estimated at 30%).**

Yes, it is important to protect the Earth's forests, but it is just as important to protect the Ocean's plankton, algae, kelp and seagrasses!

