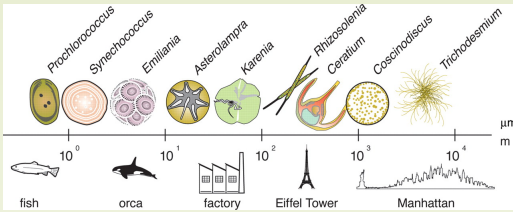




# Plankton: Small bugs with a BIG impact - Ask us why!

## How big are Plankton ?

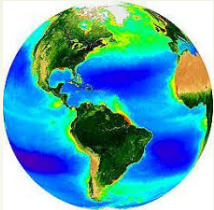
Answer: Tiny, many are less than the diameter of a human hair.



A teaspoon of water can hold millions of cells! Although most are microscopic, their size vary as much as a fish and of Manhattan!

## Is the ocean always blue ?

Answer: No.



Phytoplankton can color the sea. If there is a lot of phytoplankton, the ocean looks green and it can be seen by satellites from space! Some plankton can even make the water shine!

## Can phytoplankton kill ?

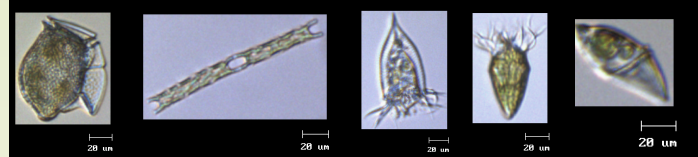
Answer: Sometimes.

Some phytoplankton species are toxic. If they grow thick and form a bloom, they can color the water forming a **red tide**.

Scientists usually call these events **HABs for Harmful Algal Blooms**.

## Are they plants or are they animals ?

Answer: Many are both



Some are plant-like (phytoplankton), some are animal or animal-like (zooplankton), but many can function as **BOTH**.

## What is the fastest animal in the world ?

Answer: The copepod

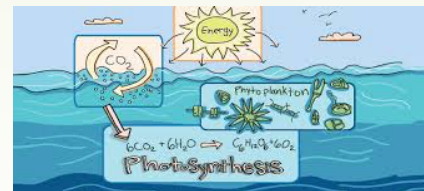


Yep, not the cheetah! The **copepod** is a tiny cousin of lobsters and crabs.

It is shaped like a bullet and has long antennae that it uses to feel around and slaps against its body to dart away. It can propel itself 500 times its length in less than one second!

## Have you thanked a phytoplankton today ?

Answer: You should



Phytoplankton make half of the oxygen we breathe, and they take up  $CO_2$ , helping to take it out of the atmosphere and cooling the Earth. They do it in a process called **photosynthesis**. Besides, without plankton, we wouldn't have fish for dinner!

## Can phytoplankton swim ?

Answer: Yes they can!

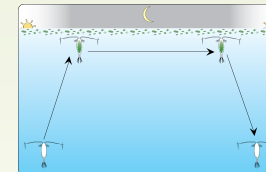


Many have little tails called **flagella** that they beat to move around.

Others use tricks to stay afloat, like spines, or oil.

## How deep can plankton go ?

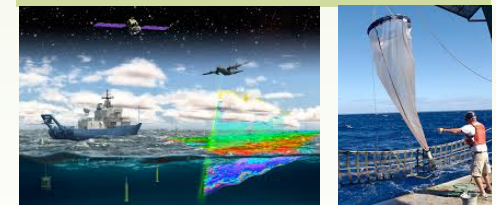
Answer: As deep as whales do.



Many large zooplankton like krill and copepods go up at night to eat and down during the day to escape being eaten, doing **vertical migration**.

## How do we study plankton?

Answer: Up close and from far.



From space (satellite), at sea (floats, nets, CTD, IFCB) and in the lab (Microscopy, FlowCam, Flowcytometry).