



Ecotide

Ocean Gardens

Gazters

Francisco Jacob Flores Rodríguez

Intelligent Systems Engineering

Julio César Gómez Sustaita

Intelligent Systems Engineering

Hiram Jalil Castillo Gutierrez

Intelligent Systems Engineering

Ashanti Flores

Bachelor's degree in urban and landscape design

Alan Axel Castro Resendiz

Intelligent Systems Engineering



The challenge

Create an accessible platform that visually, sonically, and interactively educates users about important ocean-provided services in a way they can easily understand.'



Ecotide

Impact on the community

Helping people understand how oceans and phytoplankton impact our world

An immersive experience

You can hear the sound of nature, while you get to expand your knowledge.

Ecotide



Explore gardens

Marine gardens are underwater havens teeming with diverse life forms.

Learn more →

About oceans

Phytoplankton

Explore gardens

Ecotide



Oceans

Vast, deep bodies of saltwater covering much of Earth's surface.

Learn more →

Ecotide



Phytoplankton

Microscopic, photosynthetic organisms in oceans, crucial for marine food chains.

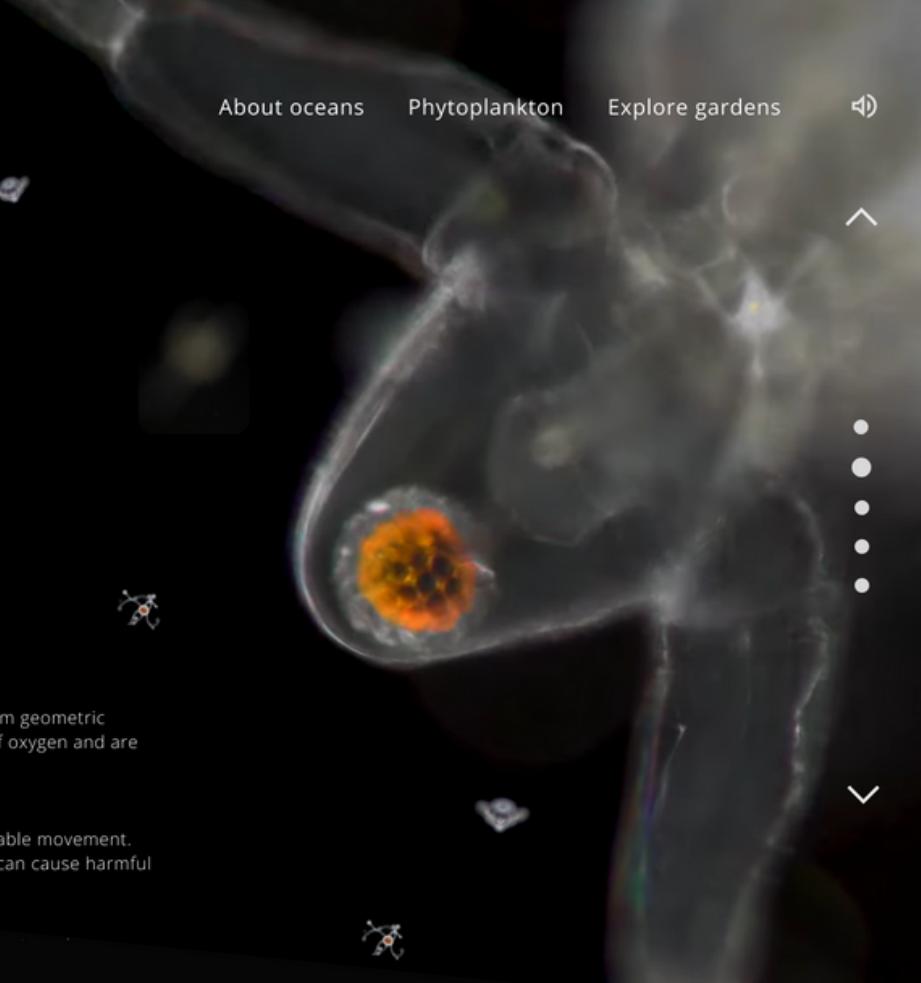
Learn more →

About oceans

Phytoplankton

Explore gardens

Awareness of our broad ecosystem



[Home](#) [About oceans](#) [Phytoplankton](#) [Explore gardens](#)

Phytoplankton types

Diatoms
Single-celled algae with silica shells that form geometric structures. They are an important source of oxygen and are found in both cold and warm waters.

Dinoflagellates
Single-celled algae with two flagella that enable movement. Some can be bioluminescent, while others can cause harmful algal blooms.



[Home](#) [About oceans](#) [Phytoplankton](#) [Explore gardens](#)

Similarities

Use of Solar Light:
Both on land and in the ocean, the primary source of energy is solar light. Photosynthetic organisms harness solar energy to convert carbon dioxide and water into sugars and oxygen.

Oxygen Production:
In both cases, photosynthesis releases oxygen as a byproduct. Both on land and in the ocean, oxygen production is essential for maintaining adequate levels of this gas in the atmosphere, facilitating the respiration of aerobic organisms.

Importance in the Food Chain:
Photosynthesis in both environments is crucial for the food chain. Phytoplankton in the ocean and terrestrial plants serve as the foundation of the diet for other organisms, and through them, photosynthetic energy is transferred to higher levels of the food chain.



[About oceans](#) [Phytoplankton](#) [Explore gardens](#)

Pacific Ocean

The Pacific Ocean, the world's largest and deepest, spans a vast expanse in the western hemisphere. Characterized by its vastness and diversity, it harbors a rich marine biodiversity, from majestic whales to tiny planktonic organisms. Additionally, the Pacific is prone to seismic and volcanic activity due to its location in the "Ring of Fire," making it a geologically active region. Its name, "Pacific," can be deceiving, as it also witnesses powerful storms and tropical cyclones that form in its warm waters.

Atlantic Ocean

Indian Ocean

Antarctic Ocean

Arctic Ocean

Easy to use!

The image displays three screenshots of a mobile application interface, likely for a smartphone or tablet. The top two screenshots show the main navigation bar at the top, which includes a back arrow, the word "Home", and three menu items: "About oceans", "Phytoplankton", and "Explore gardens". A small icon resembling a speaker with a double-headed arrow is also present.

Screenshot 1 (Left): This screen shows a close-up image of several long, thin, translucent organisms, possibly kelp or phytoplankton, against a dark background. Below the image, the title "What is phytoplankton?" is displayed, followed by a detailed description of phytoplankton as microscopic organisms that perform photosynthesis and form the foundation of the marine food chain. A vertical navigation bar on the right side contains five small circular icons, with the bottom one highlighted in white. A downward-pointing arrow icon is located below the fifth icon.

Screenshot 2 (Middle): This screen features a large, detailed image of Earth from space, showing continents and oceans. Several small satellite icons are scattered around the globe. To the right of the globe, the names of the world's major oceans are listed vertically: "Pacific Ocean", "Atlantic Ocean", "Indian Ocean", "Antarctic Ocean", and "Artic Ocean".

Screenshot 3 (Bottom): This screen is titled "Oceans Garden" and shows a detailed image of Earth from space. Below the globe, a text block discusses oceanic gardens, mentioning kelp forests and underwater meadows as vital habitats for marine life. To the right, another text block explains the importance of these ecosystems for marine biodiversity and the health of the oceans. A vertical navigation bar on the right side contains two small circular icons, with the top one highlighted in white. A downward-pointing arrow icon is located below the second icon.

You can find our work at



 [Ecotide Platform](#)

 [GitHub Repo](#)

 [Eigma Design](#)