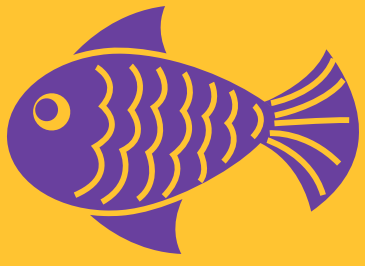
Courtney the Oceanographer: Saving the Ocean

Meet Courtney!

Hi there! My name is Courtney. I am an oceanographer.
An oceanographer is a person who studies the ocean.



Oceanographers' Work

Here are a few examples of projects that oceanographers work on:

Learn about what animals live at the bottom of the ocean and how they survive there.

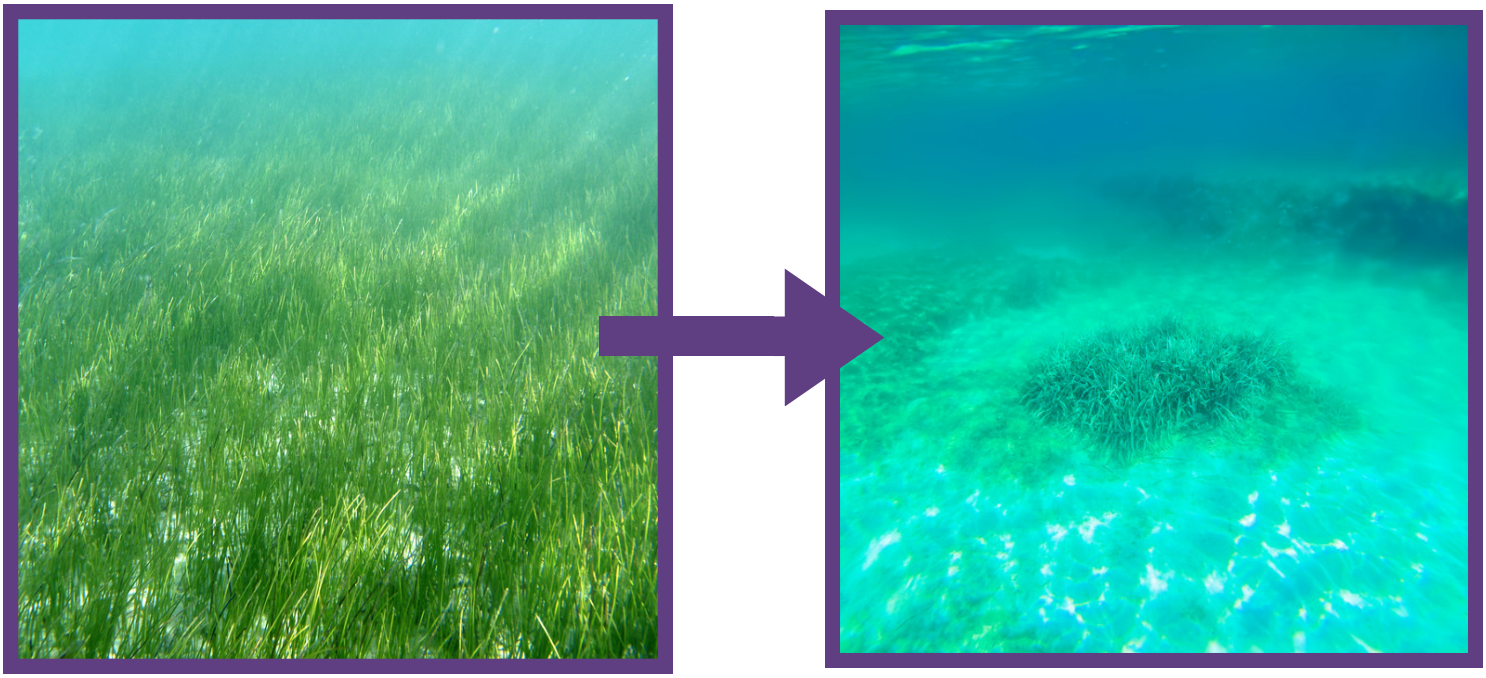
Giant Japanese Spider Crabs are camouflaged with the ocean floor. This means they are the same color as the ocean floor and are able to hide from predators who might eat them.

Reduce ocean pollution.

For example, oceanographers work with other scientists to come up with ways to reduce ocean pollution. The large number of plastic straws and bags in the ocean are examples of pollution. Animals can get injured by getting tangled in the bags or can become sick after eating a plastic straw.

What I am Working On

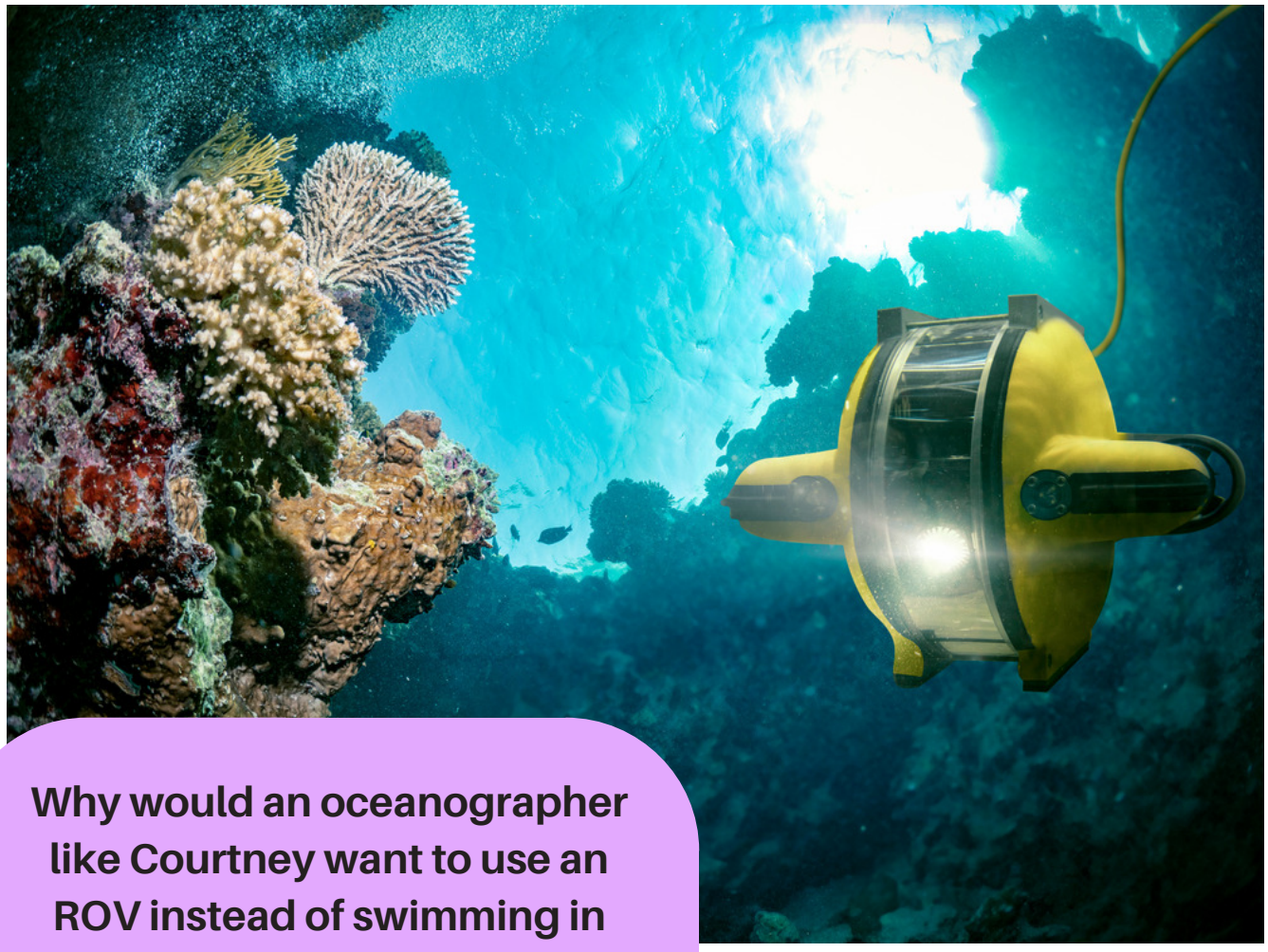
Right now, I am solving a big problem. Seagrass is disappearing in some areas of the ocean! Seagrass is a type of plant that grows underwater. As an oceanographer, it is my job to figure out why the seagrass population is disappearing.



It is also my job to explain to other scientists why it is a problem that seagrass is disappearing and ways we can grow more seagrass in the future.

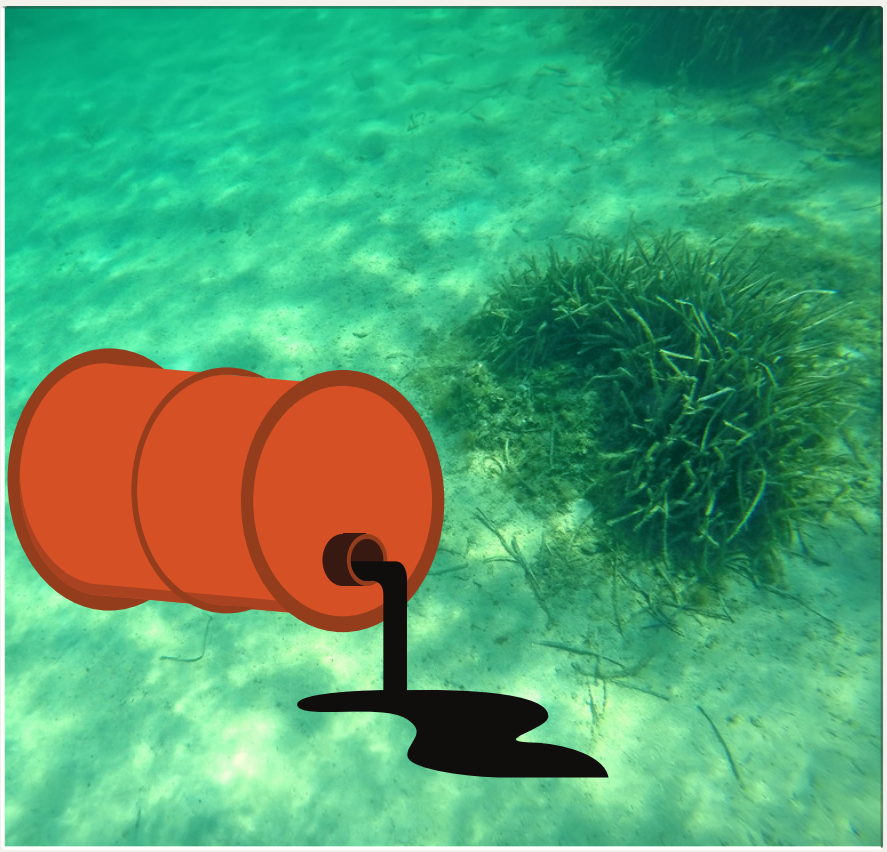
Using a ROV

To investigate why seagrass is disappearing, I am going to send an ROV into the ocean. ROV stands for “Remotely Operated Underwater Vehicle.” An ROV is an unoccupied vehicle, meaning there aren't any people inside driving it. It is similar to a robot! An ROV can take pictures and video underwater.



Why would an oceanographer like Courtney want to use an ROV instead of swimming in the ocean herself? Discuss with your class!

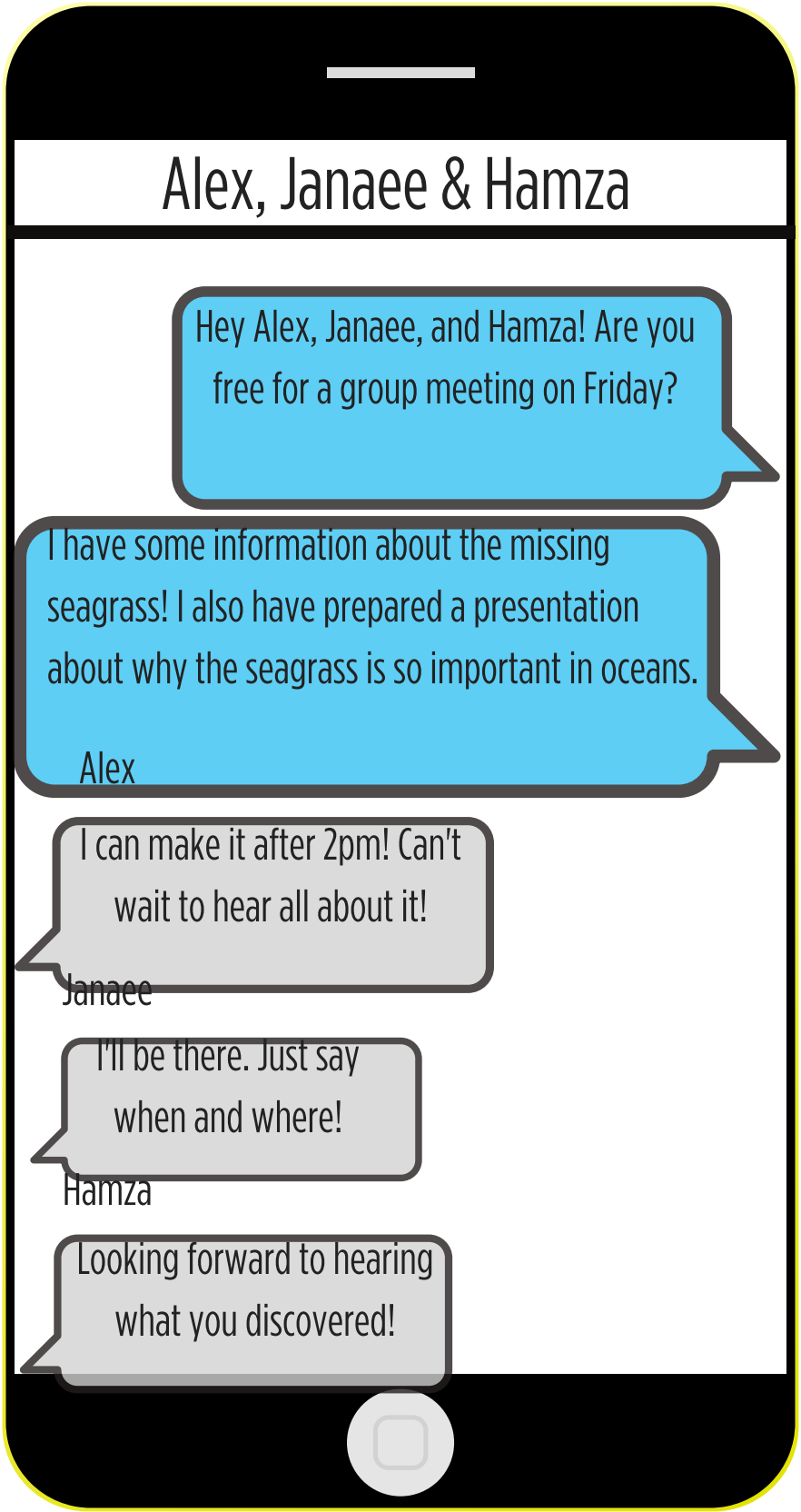
Investigating Seagrass Disappearance



After sending the ROV into the ocean, I get back some really interesting pictures and videos. In a few pictures, there was a large barrel of oil spilling into the water. The oil covered a large area of the ocean floor. I notice that seagrass is not growing in areas where the oil has spilled. I also notice that some of the seagrass looks brown and unhealthy. It is clear that oil is causing the seagrass to die.

Group Texts

I text a group of scientists so that I can update them on the pictures and videos captured by the ROV. I want the scientists to understand why the seagrass is dying and how this is a big problem.



Importance of Seagrass

I am really excited about our meeting on Friday! During the meeting, I am going to explain that the ROV was able to capture important information about why seagrass is dying. Then, I am going to explain that seagrass is extremely important to the ocean ecosystem.

An ecosystem is an area that has living and non-living things in it. For example, fish, sea turtles, and seagrass are living things in the ocean ecosystem. Water, sand, and oxygen are non-living things in the same ocean ecosystem.

Importance of Seagrass

Here are reasons that seagrass is important to the ocean ecosystem:

#1

Many marine animals eat seagrass for food. Without the seagrass, ocean animals will not have food. This means they will likely not survive.

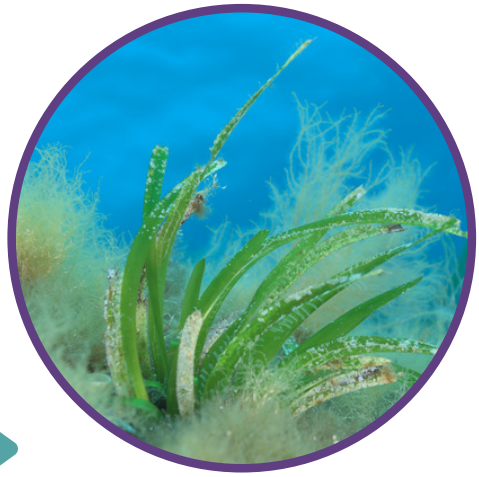
#2

Seagrass, like all plants, make food from non-living types of matter. Scientists use the word 'matter' to describe anything that takes up space and has mass. Mass is the amount of matter something has.

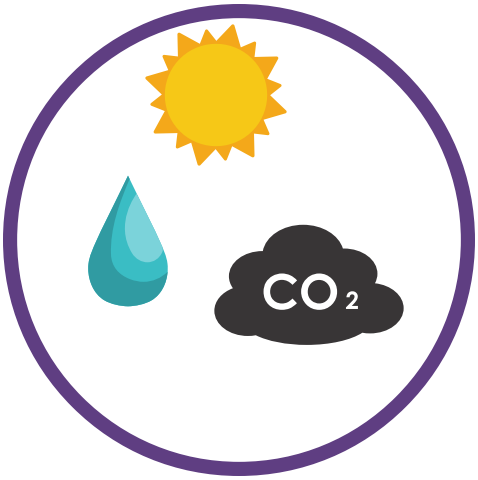
Seagrass survives and grows using sunlight, carbon dioxide (a gas), and water. As the seagrass grows, it can be eaten by marine animals!

Importance of Seagrass

Those non-living items are used to grow plants, like seagrass.



Animals eat plants to survive. When these animals die, they are turned into non-living materials used to grow plants.



Plants use non-living materials, like water, sunlight, and carbon dioxide to grow.

Seagrass is an important part of the cycle of matter! A cycle is when things go around and around. Without the seagrass, the cycle is broken, and there is no food in the ecosystem!