

# Team OCEAN Tours Lesson Plan- Habitats

- Let the students know that today we are in or near a Marine Protected Area. MPAs are areas in the ocean where fish are protected. You can still fish in an MPA but not for all types of fish. You must check the fishing rules if you are fishing at the ocean or in an MPA.

**What is a habitat?** Where an organism (plant or animal) lives.

## Habitats provide:

Food or energy: What the animal or plant needs in order to grow and survive. Energy could be in the form of sunlight, or resources that allow the organism to make energy such as sources of decomposition or chemical energy.

Shelter: An organism must protect itself to stay alive, and in many cases the habitat provides the shelter where predators can be avoided and the organism can rest.

Water: For many organisms water is necessary for survival and growth. But water is not always easily available in every environment or the water may be salty.

## Student engagement:

- Ask the students what types of food can be found in this habitat?
- Ask the students what types of shelter can be found in this habitat?
- Ask the students about types of energy in this habitat?
- Ask the students about living organisms that live in or around sea water but who still need freshwater and how they can change sea water into freshwater for survival.

## On the water:

Use the lenses to focus on found species and discuss their habitat needs.

Species	Food or energy	Shelter	Water
Eel grass	Photosynthetic	Eel grass beds	Surrounded by salt water but bodies may have pathways where salt water can be taken in and the salt excreted through which creates freshwater inside the organism.
Cormorants	Fish	Fly, and gathering in groups	
Sea otters	Worms, clams, mussels, rays, sharks, fish, snails	Raft in groups, hold on to kelp to keep from drifting away.	
Pelicans	Fish	Fly and gather in groups on land	
Harbor seals	Octopus, squid, fish, rays, sharks	Haul out on land and sneak around in the water	

To learn more about **Marine Protected Areas** check out: [Californiampas.org/explore/fun-activities](http://Californiampas.org/explore/fun-activities)  
**Team OCEAN Tours** is a project funded by the **Ocean Protection Council** and **Coastal Quest**.

## NGSS

Use these disciplinary core ideas to help guide your habitat discussion with students.

For example, ask the students what will happen to organisms if the habitat changes? (3-LS4-4). What might eat eel grass within the Elkhorn Slough habitat? (MS-LS2-2) What happens to organisms whose food disappears? (MS-LS2-4)

3-LS3-2	The environment affects the traits that an organism develops.
3-LS4-3	For any habitat some organisms survive well, some less well, and some cannot survive at all.
3-LS4-4	Change in those habitats affects the organisms living there.
5-LS2-1	Organisms within a habitat are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants.
MS-LS1-5	Genetic factors as well as local conditions affect the growth of organisms.
MS-LS2-1	Growth of organisms and population increases are limited by access to resources.
MS-LS2-2	Organisms within a habitat can have many interactions such as predation, mutualism, resource partitioning, and competition.
MS-LS2-4	Disruptions to any physical or biological component of an ecosystem can lead to shifts in all its populations.

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