



## Kelp Forest Ecosystems

### Introduction

Let's dive into a unique underwater ecosystem: the kelp forest! Begin by watching a [video introducing the plants and animals that live in kelp forests](#). While watching the video, use the guiding questions below to record what you've learned.

1. How many feet can kelp grow per day?
2. What's the name of the claw-like structure that anchors kelp to the seafloor/substrate beneath it (similar to a tree's roots)?
3. What type of sea creature can chew through that structure?

Next, read more about [kelp forest ecosystems on a NOAA site](#). Finally, check out a [video illustrating the differences between giant kelp and bull kelp](#). All finished? Now you're ready to move on to the activities below!



Photo: Chad King/NOAA

### Discover the Species that Call Kelp Forests Home

Watch a [1-minute video on animals that can be found in Olympic Coast National Marine Sanctuary!](#)

- How many species can you find? What are they? Were you surprised by anything you saw?

Watch a [1-minute video on sea stars in a kelp forest in Olympic Coast National Marine Sanctuary!](#)

- Which two species of sea star were shown in the video?

Watch a [2-minute video on sea otters in Olympic Coast National Marine Sanctuary!](#)

Ever wonder what an underwater ballet would look like? Watch [this 2-minute video on sea lions in a kelp forest in Olympic Coast National Marine Sanctuary!](#)

Take [a virtual dive with a sea lion](#) in Channel Islands National Marine Sanctuary! Use your mouse to zoom in and out and move around. Don't forget to take time to pause the video and look around. While you dive, fill out this ["See, Think, Wonder" graphic organizer](#).

## Threats to Kelp Forests

Next, learn more about threats to kelp forests by watching a [1-minute video on urchin barrens](#). As you watch, see if you can find the answers to these guiding questions:

- What is an urchin barren?
- What is the relationship between marine heat waves and kelp forests?

Go more in-depth into the threats facing kelp forests by reading about them at [“Impacts on Kelp Forests.”](#)

- What threats did you learn about that weren't shown in the video?

Visit an urchin barren in a [virtual dive in Monterey Bay National Marine Sanctuary](#). Use your mouse to zoom in and out and move around this 360 degree view of the sanctuary.

- How many different species can you find? Is this an example of a healthy kelp forest ecosystem? What do you think humans can do to help?



Photo: Chad King/NOAA

## Want to Keep Exploring?

Click around the Olympic Coast National Marine Sanctuary website [to learn more about the kelp forest ecosystem that exists there](#).

Dive into [this field guide to Monterey Bay National Marine Sanctuary](#) to discover the wildlife that live in and around a kelp forest habitat.

Check out a [live cam of a kelp forest](#) in Channel Islands National Marine Sanctuary! Can you spot any fish or sea lions swimming by?

[Download the ParkPassport App](#) to learn more about national marine sanctuaries. Take virtual tours, view live webcams, earn digital badges, and more.

All information in this document was adapted from the NOAA Office of National Marine Sanctuaries' resources. This collection was developed in partnership with the National Park Trust in support of the 50th anniversary of the National Marine Sanctuary System. *The inclusion of links in this guide does not imply endorsement or support of any of the linked information, services, products, or providers.*

