



Whales and Ocean Noise

Background – Whale Communication

To begin, [listen to the sounds of the humpback whale here](#). Humpbacks, like other whales, use a wide variety of sounds to communicate. These sounds are made up of distinct sequences of boings, moans, bellows, grunts, sighs, and high-pitched squeals that may last up to 10 minutes or more. Researchers think these sounds could be used for communication, orientation and navigation, hunting prey, and avoiding predators, and courtship. Whale vocalizations may be the loudest sounds produced by any animal, and these sounds travel for long distances underwater.



Photo: Ed Lyman/NOAA

To learn more about why whales sing, [watch this explanatory video](#). Then expand on this knowledge by [using the lesson plan “Sanctuary Splash: Acoustics of Cetaceans”](#). During this lesson students will experience listening to whale vocalizations and will participate in simulations of sound perception and efficiency of sound transfer through matter.

The noises made by whales are not the only sound happening underwater! In this next video, researcher [Dr. Jenni Stanley investigates the underwater soundscape at Stellwagen Bay National Marine Sanctuary](#).

Whales also communicate using a wide variety of movements with their bodies. [Check out this webpage to see all the behaviors the humpback whale might exhibit](#), including breaching, spyhopping, and lobtailing.

National Marine Sanctuaries, Ocean Noise, and Whales

The ocean has become much noisier over the past 50 years, largely due to commercial shipping. [The following “How Increased Ocean Noise Affects Whales” lesson plan](#) will teach your class how ocean noise affects whales.

National Marine Sanctuaries are protected waters that include habitats such as rocky reefs, kelp forests, deep-sea canyons, and underwater archaeological sites. This network of underwater parks encompasses more than 620,000 square miles of marine and Great Lakes waters, which protects America's most iconic natural and cultural marine resources. National Marine Sanctuaries provide protected, more quiet waters for whales and other marine life and offer a wide variety of research opportunities for scientists.



Learn more about whales and national marine sanctuaries

- **The Koholā and the Kolea Coloring Book (in English and Hawaiian)**
 - [Coloring book and a story about the cultural importance of humpback whales in Hawai'i.](#)
- **Hawaiian Islands Humpback Whale National Marine Sanctuary Activities**
 - [Use this activity book](#) to learn about how the sanctuary helps protect humpback whales in Hawai'i and the ocean wilderness through research, education, conservation, and stewardship.
 - You can also use this [lesson plan to explore whales, sharks, and turtles at Hawaiian Islands Humpback Whale National Marine Sanctuary.](#)
- **Saving the Southern Resident Killer Whales**
 - News headlines about the Southern Resident killer whales are often bleak. When students are flooded with media coverage of environmental destruction, they can experience chronic anxiety. So, how can we inspire young people to become environmental stewards when they are inheriting seemingly insurmountable problems—like saving a critically-endangered marine mammal from extinction?
 - [This module has nine activities that can be used individually or as a full lesson plan.](#)

Planning a trip to a park or marine sanctuary to whale watch? Refer to these [Wildlife Viewing Guidelines](#) before you go to make sure you are protecting our wildlife and recreating responsibly!

[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.*

