

# **Heal the Ocean's SEA ADVENTURE GUIDE**



**An at-home, marine science education guide with resources for online learning, crafts, and activities created by scientists, artists, teachers, and parents.**

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Heal the Ocean**



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# PART 1: ONLINE LEARNING RESOURCES

Let's dive on in and get our feet wet with exciting lessons about our big blue ocean!

Each online learning resource in this section has marine science learning activities, lessons, and curriculum for kids of all ages and grades. Materials include lecture-style learning through videos and webinars as well as interactive games and presentations. Click the links found in the description of each resource to explore curriculum options.



# MONTEREY BAY AQUARIUM



Photo by Monterey Bay Aquarium

Monterey Bay Aquarium has many resources for educators – fun lessons, games, activities, and resources for at-home learning.[i] The Aquarium’s Curriculum section is sorted by grade and exhibit. Each lesson includes instructions and recommendations for materials and procedures. The Games & Activities section includes fun crafts, games, and art activities – most of which can be done with materials already in your home. The Ocean Habitats and Animals A to Z sections allow kids to virtually explore the ocean by habitat and animal type – a great way to learn about life underwater! For a fun break and enhanced learning, check out the Aquarium’s Live Web Cams and watch how animals explore, play, and eat.

To access Monterey Bay Aquarium’s resources, click [here](#).

# HEAL THE BAY



Image by Heal the Bay

Heal the Bay has released an online, interactive science education series called "Knowledge Drops," where their team of scientists, experts, and advocates explores the water world while offering fun lessons about the marine environment. Each lesson is about an hour long and includes a live presentation, interactive polls, videos, and Q&A. The series focuses on a variety of marine topics, from tide pools and marine animals to beach water quality and plastics pollution. While geared for 3rd through 8th-grade students, all ages and learning levels are invited to digitally attend![[ii]]

To view the schedule of lessons, RSVP to a live presentation, or to see past "Knowledge Drops" videos and lessons, [click here](#).

# AQUARIUM OF THE PACIFIC, LONG BEACH



Image by Aquarium of the Pacific, Long Beach

The Aquarium of the Pacific, Long Beach, created an Online Academy to bring its educational programming and activities to the public. From live videos of animal feedings and lessons on sharks and shark teeth to daily talks about marine careers and fun animal facts, the Aquarium is bringing ocean education to your living room. Videos and activities are available any time on demand, including archived lectures, virtual classroom sessions, and digital exhibits. They have also created content on STEM careers and sustainability geared for students in sixth through twelfth grade[iii].

To access the Aquarium's Online Academy [click here](#).



# NOAA

The National Oceanic and Atmospheric Administration (NOAA) has rounded up a collection of their most popular online educational resources to help students learn about the ocean and atmosphere. Resources include scientific data investigations, weather analyses, and climate change awareness activities. NOAA provides online webinars and hands-on science activities that can be done in 15-30 minutes with materials around your home[iv]. The Discover Your World With NOAA Activity Book provides fun games, challenges, and stories on subjects ranging from making your own compass to learning how to tie nautical knots. To access NOAA's online education resources, [click here](#).

Bonus: You can even learn about our National Marine Sanctuary System from home! Check out the National Marine Sanctuary website for educational videos, virtual dives, interactive maps, online games, and coloring pages and puzzles[v].

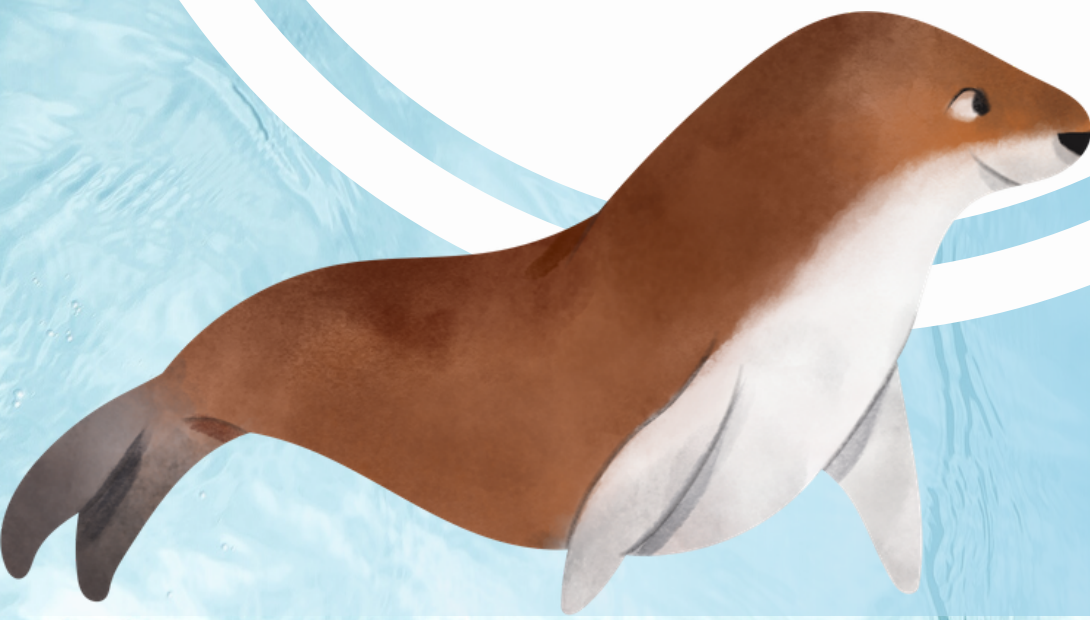


Photo from NOAA Office of National Marine Sanctuaries



## PART 2: CRAFTS

Bring out the crayons and scissors because this section features simple crafts your kids can do using materials found around your home! Each craft is an excellent opportunity to teach your kids about a specific ocean creature or an ocean issue. For more crafts, check out the "[Ocean and Sea Life Crafts and Activities for Kids](#)" board on Pinterest!





# SEA OTTER PAPER BAG PUPPET



Image by Chelsey Marashian of Buggy and Buddy.

Using brown paper lunch bags, scissors, glue, and some crayons, your kids can make an adorable Sea Otter Paper Bag Puppet! For instructions and a sea otter template to paste onto the brown bag, check out Chelsey Marashian's [Buggy and Buddy step by step guide](#).<sup>[vi]</sup>

Here are some fun facts from the [World Wildlife Fund](#) about sea otters that you can share with your kids:<sup>[vii]</sup>

- Sea otters eat a variety of invertebrates like sea urchins, abalone, clams, crabs, sea stars, squid, octopuses, and snails.
- A group of sea otters resting together is called a raft.
- Wild sea otters can live up to 20 years!
- Sea otters are considered a keystone species: meaning they play a vital role in the health and stability of the nearshore marine ecosystem – they help keep the ecosystem in balance. Sea otters eat urchins, which each large amounts of kelp. When sea otters eat urchins, kelp forests can flourish!
- Sea otters snooze while holding paws to prevent them from drifting apart from one another!

[Click here](#) for the Buggy and Buddy Sea Otter Paper Bag Puppet instructions.

# PAPER PLATE OCTOPUS

This craft, by Chelsey Marashian of [Buggy and Buddy](#), shows you how to make an Octopus from a paper plate, pasta noodles, and markers. If you don't have pasta, you can use colored paper clips, cut-up pieces of plastic straws, or craft pipe cleaners. This project teaches children about patterns, camouflage, colors, and counting (how many legs does an octopus have?). [Click here](#) to check out the Fine Motor Octopus Craft Blog Post on Buggy and Buddy and for instructions.[viii]



Image by Chelsey Marashian of Buggy and Buddy.

Here are some fun facts about octopuses from [National Geographic](#) that can be emphasized while making the Paper Plate Octopus:[ix]

- Octopuses are considered the most intelligent invertebrate – they have even been recorded using tools and escaping from aquarium tanks!
- Each of their arms (they have eight!) has neurons, which are what help with the thinking and processing of information in the brain, so each octopus arm almost has a mind of its own.
- Octopuses are supreme experts in camouflage: when they want to hide, they can change their skin color and pattern to completely blend in with their surroundings, and when it moves into a new place, it can immediately adopt the patterns of the new background it's moved into!

# CD SEA TURTLE

Using an old CD, some buttons from your junk drawer, paper, glue, crayons, and scissors, your kids can make Melissa Lennig's of Fireflies + Mud Pies up-cycled CD Sea Turtle! [x] This craft is a great way to explain to your child the importance of the four R's of sustainability – Refuse, Reduce, Reuse, and Recycle. By reusing items that are destined for the trash, like old CD's and mismatched buttons, we are helping keep waste out of the landfill. It is important to reuse materials and reduce waste to help keep pollution out of the environment, which helps keep animals and plants safe in nature.

[Click here](#) for the CD Sea Turtle instructions.



Image by Melissa Lennig of Fireflies + Mud Pies



## PART 3: ACTIVITIES

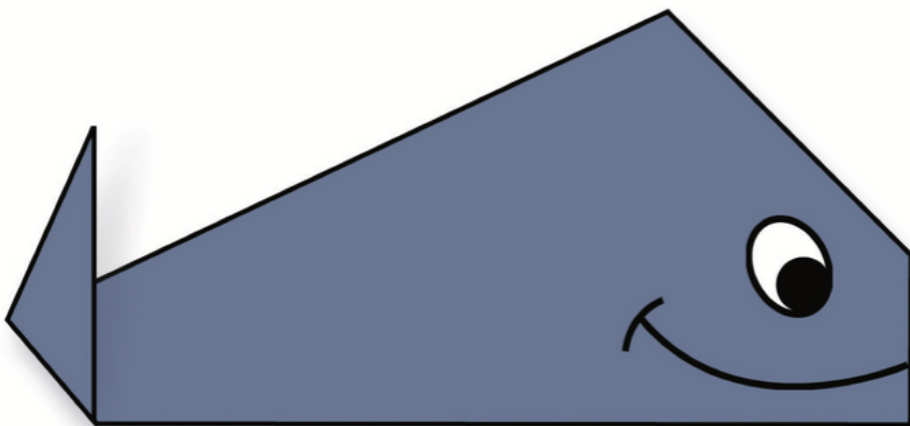
Let's think outside the box and do some fun ocean-related activities! From friendly aluminum foil boat racing competitions and ocean jokes to word searches and kid-approved yoga, there are tons of activities to keep your kids entertained while they learn about marine science!



# ACTIVITIES:

- Boat Building Contest – use aluminum foil to make “boats” then test the design in the bathtub by seeing how many pennies or paperclips the boat can hold!
- Bake “Beach Cupcakes” with “Edible Sand” (crushed up graham crackers). Decorate your cupcakes with icing shells or a fun drink umbrella.
- Make seashells and other sea creature sculptures out of play dough or clay.
- Tell some ocean jokes! (What did the beach say to the wave? -Long tide, no sea!)
- Print and color some ocean themed coloring worksheets with different sea creatures.
- Practice NOAA's endangered species origami - make whales and turtles out of paper!

## How to Make an Origami Blue Whale



Images L to R: Whale Origami, by NOAA; Beach Cupcakes, by The Imagination Tree; Aluminum Foil Boat, by STEAMing Into the Future.



# ACTIVITIES:

- Solve these [tricky ocean riddles](#) or these [ocean riddles for kids](#).
- Tie nautical knots with [NOAA's "Tied Up In Knots"](#) step by step guide.
- Learn how to [navigate by stars](#) with the National Maritime Historical Society.
- Play some ocean games on your computer at [NOAA's online arcade](#).
- Do an ocean-themed [word search](#), [connect the dots puzzle](#), [fill in the blank mad-libs](#), or vocabulary message lesson using this [guide from the Aquarium of the Pacific](#)!
- Channel your inner whale, pufferfish, dolphin, or octopus and practice "[Ocean Themed Yoga](#)," make the experience even more fun by playing ocean sounds on your speaker.
- Listen to [children's music about the ocean](#).
- Check out [National Geographic Kids](#) for educational quizzes, articles, computer games, and fun videos about the ocean (this is an excellent resource for kid-friendly DIY science experiments).



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