

Lesson Plans and Activities for Educators K-5

Coral Reef Resource Guide

Source: EPA and University of Southern Mississippi

Lesson Summary: A comprehensive and easy to use guide containing 55 lessons and activities related to coral reefs. Many activities can be adapted to various grade levels. Simply click on the pdf of the lesson you are interested in using in your classroom. English and Spanish.

Grade Level: K-12

Go to: <http://www.usm.edu/aquarium/old/coralreef/index.html>

ABC Ocean Book

Source: Treasures@Sea

Lesson Summary: Write each letter of the alphabet on a sheet of paper. Have students draw a letter. They choose a sea animal whose name begins with that letter. Then draw the animal or find a picture of it to glue to the page. Write facts about the animal under the picture. When all the letters have been finished, photocopy and staple all the pages into a book for each child to take home.

Grade Level: K-3

Go to: <http://www.usm.edu/aquarium/old/coralreef/index.html>

Beach Zonation

Source: New Jersey Marine Sciences Consortium

Lesson Summary: During this activity, students investigate beach zonation by gathering and comparing sand samples gathered from different areas of the beach. Students will be able to identify and separate the different zones of the beach by observation of various visual characteristics, including grain size and composition; understand that the zones of the beach respond to weather, waves and human actions; draw conclusions about how beaches work.

Grade Level: 4-12

Go to: http://www.njmsc.org/Education/Lesson_Plans/Beach_Zonation.pdf or
http://www.njmsc.org/Education/Lesson_Plans/Lesson_Plans.htm

Build a Fish

Source: New Jersey Marine Sciences Consortium

Lesson Summary: Students learn about fish anatomy and morphology and discover how the shapes of a fish's parts are related to how the fish functions. Younger students can also assemble a paper fish from prepared parts.

Grade Level: K-8

Go to: http://www.njmsc.org/Education/Lesson_Plans/Build_A_Fish.pdf or
http://www.njmsc.org/Education/Lesson_Plans/Lesson_Plans.htm

Build an Ocean

Source: FKNMS

Lesson Summary: Students will identify basic mangrove/seagrass/coral reef plants and animals and describe this interrelated ecosystem.

Grade Level: K-3

Go to: SEFCRI Teacher Resource CD

A Chance of Success

Source: Sea World

Lesson Summary: The student will learn about the physical factors that limit where coral reefs develop.

Grade Level: 4-8

Go to: <http://www.seaworld.org/just-for-teachers/lisa/i-030/pdf/4-8.pdf>

Clarity and Turbidity

Source: New Jersey Marine Sciences Consortium

Lesson Summary: Students will be able to identify possible environmental complications that can be attributed to clarity and turbidity, and measure the clarity of a body of water.

Grade Level: 4-12

Go to: http://www.njmssc.org/Education/Lesson_Plans/Clarity_and_Turbidity.htm or http://www.njmssc.org/Education/Lesson_Plans/Lesson_Plans.htm

Coral: What Portion is Alive?

Source: Coral Reefs: An English Compilation of Activities for Middle School Students

Lesson Summary: Students will comprehend the living portion of stony corals are all on the exterior non-attached surface.

Grade Level: K-8

Go to: SEFCRI Teacher Resource CD

Coral Reef Activities

Source: ABC Teach.com

Lesson Summary: A variety of activities related to art, math and geography.

Grade Level: K-5

Go to: http://www.abcteach.com/directory/basics/science/habitats_biomes/coral_reef/

Coral Reef Café

Source: Coral Reef Adventure Film

Lesson Summary: Students will simulate the variety of methods with which different fishes on a reef feed. Learn how the size and shape of a fish's mouth and teeth provide hints about what type of food it eats.

Grade Level: 3-8

Go to: <http://www.coralfilm.com/CRAEducatorGuide.pdf>

Coral Reef Jeopardy

Source: Florida Sea Grant

Lesson Summary: Based on the game Jeopardy!, students will be challenged to compose the correct question when an answer is given related to coral reef biodiversity, reproduction, zonation, threats and facts about southeast Florida coral reefs.

Grade Level: 5-12

Go to: SEFCRI Teacher Resource CD

Coral Reef Race for Survival

Source: Coral Reefs: An English Compilation of Activities for Middle School Students

Lesson Summary: Students will identify at least three ways corals benefit people; name three natural disturbances to coral reefs and three human induced threats to coral reefs; increase their knowledge on the survival needs of corals; and gain insight on ways to protect corals from human disturbances.

Grade Level: 3-8

Go to: SEFCRI Teacher Resource CD

Dining Out in the Coral City

Source: Shedd Aquarium

Lesson Summary: If you live on the coral reef, you have no use for knives and forks. Students will learn some of the ways reef animals have developed different adaptations for feeding, experiment with some reef animal eating "tools", and make comparisons between how humans eat and how reef animals eat.

Grade Level: 3, 4, 5

Go to: http://www.sheddaquarium.org/sea/lesson_plans.cfm?id=41 or http://www.sheddaquarium.org/sea/search_results.cfm

The Edible Coral Polyp

Source: Coral Reefs: An English Compilation of Activities for Middle School Students

Lesson Summary: Students will review the parts of a coral polyp by building an edible coral polyp model.

Grade Level: K-5

Go to: SEFCRI Teacher Resource CD

Egg Carton Coral

Source: Coral Reefs: An English Compilation of Activities for Middle School Students

Lesson Summary: Students will construct models of coral colonies showing many aspects of the coral's natural history – including the structure of coral polyps and the coral colony's colonial life style.

Grade Level: K-5

Go to: SEFCRI Teacher Resource CD

Fish Morphology

Source: New Jersey Marine Sciences Consortium

Lesson Summary: Students study the parts of a fish to develop the understanding that the shape, form and structure of a fish's parts influence its lifestyle and behavior. Students will be able to identify the various parts of a fish; describe the concept of fish morphology; relate shape, form and structure of a fish's parts to function; and draw inferences about where and how fish might live based on its morphology.

Grade Level: 3-12

Go to: http://www.njmssc.org/Education/Lesson_Plans/Fish_Morphology.htm or http://www.njmssc.org/Education/Lesson_Plans/Lesson_Plans.htm

Growing Coral

Source: Sea World

Lesson Summary: Students will observe the growth of crystals that develop in a way similar to how coral polyps create their calcium carbonate cups.

Grade Level: 3-8

Go to: <http://www.seaworld.org/infobooks/Coral/gcoral.html>

How to Hide in the Ocean

Source: Woods Hole Sea Education Association

Lesson Summary: Students will observe and discuss the advantages of camouflage, then try their hands at designing a well-camouflaged fish.

Grade Level: K-8

Go to: <http://www.sea.edu/academics/k12.asp?plan=hideinocean>

Making Sense of Sharks

Source: Shedd Aquarium

Lesson Summary: From dark, deep waters to shallow sandy beaches, sharks' incredibly sharp senses make them the ocean's most successful predators. Get a sense of how sharks use their senses. Students will explain how sharks use an integrated system of senses to locate prey and compare human and shark senses.

Grade Level: 1-5

Go to: http://www.sheddaquarium.org/sea/lesson_plans.cfm?id=33 or http://www.sheddaquarium.org/sea/search_results.cfm

Read a Fish

Source: Shedd Aquarium

Lesson Summary: Do you know that you can "read" a fish without even using the alphabet? You can learn a lot about a fish just by looking at it. Students will be able to explain how features of fishes can reveal information about them, begin to develop a sense of the diversity of fishes and learn to record their findings by starting a fish journal.

Grade Level: K-2

Go to: http://www.sheddaquarium.org/sea/lesson_plans.cfm?id=40 or http://www.sheddaquarium.org/sea/search_results.cfm

Reef Story Play

Source: University of Miami

Lesson Summary: Students will act out characters in a coral reef play.

Grade Level: K-5

Go to: SEFCRI Teacher Resource CD

Remote Sensing and Coral Reefs

Source: NOAA Satellite and Information Service

Lesson Summary: Coral reef and ocean curriculum that includes seven lessons on: Remote Sensing and the Electromagnetic Spectrum, Altimetry, Phytoplankton and Ocean Color, Introduction to Coral Reefs, Symbiosis and Coral Anatomy, Sea Surface Temperature and Coral Bleaching, and Coral Reef Conservation.

Grade Level: 4-6, adaptable to 9-12

Go to: http://coralreefwatch.noaa.gov/satellite/education/reef_remote_sensing.html

Sea Star Investigations

Source: Monterey Bay Aquarium

Lesson Summary: Learn about sea stars, where they live and how they eat through this integrated set of activities. Hands on activities include learning and singing a sea star song, sorting sea stars to learning about diversity and building a sea star to learn about sea star characteristics.

Grade Level: K-2

Go to: http://www.mbayaq.org/lc/teachers_place/activity_seastar.asp?bhcp=1

Shark! (for Grades K-3)

Source: Sea World

Lesson Summary: Students explore the natural history of sharks and recognize that humans are an interconnected part of sharks' ecosystems. The student will be able to create an artistic impression of a shark and identify shark body parts; explore ways to measure the size of a shark; portray a shark's ecosystem; investigate the sense of smell; discuss ways people impact shark populations and make suggestions for how people can conserve sharks; describe what sharks eat; and evaluate how schooling behavior is an adaptation for avoiding predators.

Grade Level: K-3

Go to: <http://www.swbg-animals.org/just-for-teachers/guides/pdf/shark-K-3.pdf>

Shark! (for Grades 4-8)

Source: Sea World

Lesson Summary: Students explore the natural history of sharks and recognize that humans are an interconnected part of sharks' ecosystems. The student will be able to identify and describe various shark adaptations; compare and contrast sharks and bony fishes; use a dichotomous key to identify shark families; discuss what sharks eat; demonstrate the steps of the writing process; create an artistic impression of a fish; and discuss why sharks need conservation and how people can help conserve sharks.

Grade Level: 4-8

Go to: <http://www.swbg-animals.org/just-for-teachers/guides/pdf/shark-4-8.pdf>

Shark Surprise

Source: Treasures@Sea

Lesson Summary: Children will create an undersea environment in their classroom while researching interesting facts about their favorite sea creatures.

Grade Level: K-2

Go to: <http://www.fi.edu/fellows/fellow8/dec98//lessons/index.html>

Sinking Races

Source: Woods Hole Sea Education Association

Lesson Summary: Students will build plankton models and compete to see which sinks most slowly.

Grade Level: 2-8

Go to: <http://www.sea.edu/academics/k12.asp?plan=sinkinggraces>

Something Fishy

Source: Shedd Aquarium

Lesson Summary: There are lots of fishes in the sea, but not all that swims is a fish. Learn what it takes to be a fish and find out why animals such as octopi or dolphins don't fit the bill.

Students will make a fish print, compare and analyze fish characteristics and identify features common to most fishes.

Grade Level: 1-5

Go to: http://www.sheddaquarium.org/sea/lesson_plans.cfm?id=31 or http://www.sheddaquarium.org/sea/search_results.cfm

Under the Sea

Source: Treasures@Sea

Lesson Summary: Children will create an undersea environment in their classroom while researching interesting facts about their favorite sea creatures.

Grade Level: K-2

Go to: <http://www.fi.edu/fellows/fellow8/dec98//lessons/index.html>

Wavy Sentences

Source: Treasures@Sea

Lesson Summary: This activity is to encourage students to be creative in their writing about the ocean. Students will write descriptive sentences about the ocean in up and down patterns, depicting the waves of the ocean. The students then add color and ocean animals creating an exciting colorful language art experience.

Grade Level: 2-5

Go to: <http://www.fi.edu/fellows/fellow8/dec98//writ.html>

Weave a Food Web

Source: Sea World

Lesson Summary: Students will discover the food/energy relationships within a food web in a coral reef habitat.

Grade Level: K-5

Go to: <http://www.aquarium.usm.edu/old/coralreef/37.pdf>

Web of Life

Source: FKNMS

Lesson Summary:

Grade Level: K-3

Go to: SEFCRI Teacher Resource CD

What's My Name?

Source: Sea World

Lesson Summary: The student will learn to use a dichotomous key to identify a variety of reef organisms.

Grade Level: 4-8

Go to: <http://www.seaworld.org/just-for-teachers/lisa/i-030/pdf/4-8.pdf>