





# OCCEANS

**EDUCATIONAL ACTIVITY GUIDE** 

Educational Materials developed in cooperation with





## oceans

**EDUCATIONAL ACTIVITY GUIDE** 

### Dive into a Mysterious Liquid World

Disneynature is proud to invite you and your students to join an incredible adventure into the largest and most mysterious places on Earth, the oceans. Disneynature, the same studio that took you across the world in the record-breaking film, EARTH, now takes you and your students below the surface with OCEANS, releasing October 19 on Blu-ray™ Hi-Def and DVD.

Nearly three-quarters of the Earth's surface is covered by water and OCEANS boldly chronicles the mysteries that lie beneath. Dive deep into the very waters that sustain all of mankind—exploring the playful splendor and the harsh reality of the weird and wonderful creatures that live within. Featuring spectacular never-before-seen imagery captured by the latest underwater, technologies, OCEANS offers an unprecedented look beneath the sea in a powerful yet enchanting motion picture that is now available for your classroom.

This OCEANS Activity Guide, created with NATIONAL GEOGRAPHIC, is designed to help you integrate OCEANS into your curriculum leading up to the film's availability in October. It provides standards-based activities for grades 2-6 that introduce key concepts from the film and set the stage for further learning. Additional educational materials are available at www.disney.com/oceans. Reserve your copy today to "sea" this epic film together as a class when it arrives on Blu-ray and DVD on October 19, 2010.



ORDER OCEANS NOW on Blu-ray Combo pack or DVD though October 25th and Disneynature will Make A Contribution In Your Honor to Save Our Coral Reefs. To learn more,

visit www.disney.com/oceans



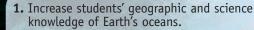


### 42-Page Downloadable Educator's Guide and Whiteboard Lessons

Introduce your students to the science and geography of the oceans with a free downloadable 42-page Educator's Guide and whiteboard lessons at <a href="https://www.disney.com/oceans">www.disney.com/oceans</a>. The guide introduces students to the following topics:

- What are the physical characteristics of the ocean?
- What are some ocean habitats?
- What are some threats harming the oceans today?
- What adaptations allow species to survive in the oceans?

Interactive whiteboard lessons accompany the Educator's Guide. These will allow you to turn the guide into a complete interactive experience.



- 2. Enrich students' viewing of the Disneynature film **OCEANS** and inspire children's appreciation of the ocean and its awesome wildlife.
- **3.** Develop an understanding as to why oceans are important.

Activity	National Science Education Standards for Grades 2-6
Activity 1: Explore Ocean Habitats	Organisms and environment     Characteristics of organisms     Populations and ecosystems
Activity 2: What Lives in a Kelp Forest	Characteristics of organisms     Organisms and environment     Populations and ecosystems
Activity 3: Adapting to the Oceans	Adaptations and environment Characteristics of organisms     Organisms and environment     Life cycles of organisms
Activity 4: What's your Oceans IQ?	Characteristics of organisms     Organisms and environment     Populations and ecosystems     Properties of Earth materials



On Blu-ray™ Combo Pack, DVD and Movie Download October 19



### **TEACHER'S NOTES**

#### **ACTIVITY 1**

#### **Explore Ocean Habitats**

Divide students into groups of three or four. Explain that they are teams of National Geographic explorers and scientists, and National Geographic has asked them to explore the ocean habitats and learn as much as they can. Write the word "habitat" on the board. Conduct a discussion about the word, asking students what a habitat is. Guide the discussion so that students conclude that a habitat is the place a plant or animal lives. Explain that plants and animals have unique adaptations that allow them to get everything they need to survive from their habitats.

What are these habitats? coral reefs, coastal mangroves, California kelp forests, rocky beaches, sandy beaches, estuaries, sea grass beds, kelp forests, hydrothermal vents, open oceans

In part 1, ask the groups to check the ocean habitat that they would most like to study. Have the students read aloud their habitats to the class to ensure you have a range of habitats. In part 2, students will use the library and some websites to research the chosen habitats. Some useful websites include: www.agua.org, www.montereybayaguarium.org, and www.flmnh.ufl.edu/fish/kids/kids.htm. For older children, the groups can divide this work so that some of them look at the Internet and others go to the library. When they are finished researching the chosen habitat, each group should draw a picture of it and include some plants and animals. In part 3, have students in grades 2-3 write a paragraph explaining why they like the habitat. Have students in grades 4-6 write a persuasive paragraph that explains why it is important to explore and learn more about the habitat they chose.

After finishing their paragraphs, have the groups read theirs aloud to the class. Direct the class to discuss the habitat and ask them to vote on which one they would like to explore further on a National Geographic expedition. As a class, brainstorm ways you can help protect these habitats in your everyday routines.

Extension Activity: After students decide which habitat to study further on a National Geographic expedition, have them develop a PowerPoint or whiteboard presentation about the habitat each chose.

#### **ACTIVITY 2**

#### What Lives in a Kelp Forest

Start the lesson by asking students what kinds of habitats they would find in the oceans. Prompt students to mention habitats not included in Activity 1. List the habitats on the board. After you finish the list, circle or add "kelp forest" to the list. Explain that a kelp forest is a unique habitat they will see in the Disneynature film **OCEANS**.

Remind students that kelp is a type of brown algae that grows at shallow depths in the oceans. Kelp can grow 100 feet high. Explain that in many ways kelp forests are similar to forests that grow on land. For example, both kinds of forests have layers. Point to a picture of a land forest and describe its layers—emergent layer, canopy, understory, and floor.

Direct students to research kelp and the animals that live in kelp forests. Then in **part 1**, have them label the three layers of a kelp forest—canopy, middle, and floor. After labeling the diagram, have them add pictures of the animals that live in each of the layers.

After students finish **part 1**, explain that plants and animals fall into different categories. Some of these categories are: producers, consumers, herbivores, carnivores, omnivores, decomposers, and scavengers. Review the categories to ensure students understand what they are. Have students write each plant and animal under the proper category on the table in **part 2**. After they have finished, ask them to explain aloud their reason for putting the plants and animals in each category. It is okay if students believe that some of the plants and animals belong in more than one category. In their explanations, check students' understanding of the meaning of each category.

**Example:** Sea otters are top predators of the kelp forest. They are consumers of sea urchins, which are herbivores that eat mostly kelp, a producer. When otters are eliminated (as they have been in many areas), they no longer keep the sea urchin numbers in check. The urchin numbers rise quickly, and urchins consume huge amounts of kelp, forming large bare areas. Loss of the kelp leads to losses of other species that depend on it.

**Extension Activity:** Working individually, have students draw a postcard that illustrates life in a kelp forest. On the back, ask them to write what they like most about kelp forests.

#### **ACTIVITY 3**

#### Adapting to the Oceans

Explain that in the Disneynature film **OCEANS**, students will learn that all ocean plants and animals have adaptations that allow them to survive in their habitats. Remind students that an adaptation is a body part, special ability, or behavior. As an example, explain that the human thumb is an adaptation. It helps people pick up things. Illustrate this by asking students to first pick up a pencil or a pen without using their thumbs. Then repeat using their thumbs.

Ask students what kinds of adaptations they can think of that allow animals to survive in the oceans. They will probably talk about gills, fins, etc., which is a great introduction to this activity. Tell them that in this activity they will learn about some of the adaptations that allow animals to survive in a coral reef. These adaptations include color; shape; body parts, such as fins; behaviors, such as a leaf fish acting like leaves that sway in ocean currents; and many other things.

On the activity sheet, have students read about the adaptations that sea turtles, great white sharks, sea dragons, and clown fish have, and then ask them to answer the questions. Discuss student answers as a group.

**Extension Activity:** Have each student choose an animal that lives in a coral reef and one that lives in a kelp forest. Then have the students research the adaptations their chosen animals have. Ask students to conclude if the animal could survive if it were taken from its normal habitat and placed in the other habitat. Note that some animals can and do survive in both habitats.

#### **ACTIVITY 4**

#### What is your OCEANS IQ

This is a take-home activity that students can complete with their parents. It will give your students the chance to share what they recently learned about the oceans with their families.

Educational Materials developed in cooperation with NATIONAL GEOGRAPHIC. Additional input received from the education and science experts of Disney's Animal Programs and Environmental Initiatives to inspire children to take positive action for wildlife and wild places.



## **Explore Ocean Habitats**

From anemones to whales, you meet many sea creatures in the new Disneynature film **OCEANS**. The ocean is packed with living things.



Imagine that you are an explorer and scientist who studies ocean habitats. You would like the National Geographic Society to send you on an expedition to an ocean habitat, but you have to make a plan before you can go. Check the ocean habitat you would like to study.

- ROCKY BEACH
- SANDY BEACH
- ESTUARY
- SEA GRASS BED
- OPEN OCEAN (pelagic)
- SARGASSO SEA (Sargassum rafts)
- **MANGROVE**
- HYDROTHERMAL VENT
- CORAL REEF
- ( KELP FOREST



Use the library and the Internet to research your habitat. Draw a picture of the habitat and the plants and animals that live in it in the space below.

### Spinner Dolphins

can weigh as much as 170 pounds, mainly hunt at night, and are able to leap 14 times in a row!

On the back of this sheet, write a paragraph about the habitat. Your teacher will tell you what kind of paragraph you should write.



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To learn more, visit www.disney.com/oceans

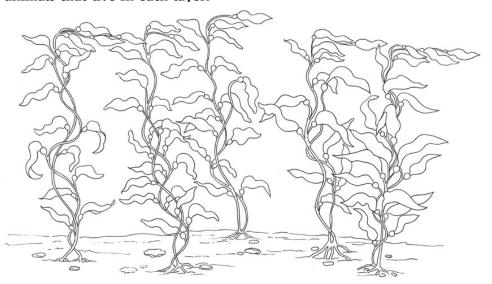
## What Lives in a Kelp Forest?

Diskeynature
OCEANS
ACTIVITY 2

In the Disneynature film **OCEANS** you visit a kelp forest. Kelp is an algae that grows in the ocean. Many ocean animals live in these giant forests.



Kelp forests are one kind of ocean habitat. Different animals live in the three layers of a kelp forest. Research the layers—canopy, middle, and floor—that make up a kelp forest and the animals that live in each layer. Then label each layer on the diagram below. Draw pictures and label the animals that live in each layer.





Write the name of the animals in the diagram in the correct category below. Some animals may be in more than one category. You may not have an animal for every category.

PRODUCER makes its own food	CONSUMER consumes food for energy	<b>HERBIVORE</b> eats plants	CARNIVORE  kills and eats animals	SCAVENGER eats dead animals	<b>DECOMPOSER</b> eats nutrients from decaying living things



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#### **Bluefin Tuna**

are carnivores that are warm blooded. Most fish are cold blooded. They can also swim up to 43 miles per hour!

## Adapting to the Oceans

In the Disneynature film OCEANS you visit a coral reef. The animals that live in a coral reef have adaptations that allow them to survive there.

Coral reef animals have adaptations that allow them to catch prey or keep them from becoming prey. Read what adaptations these reef animals have.



#### SEA TURTLE

Large size and hard shell protect it from being eaten, so it doesn't have many enemies as an adult.



#### **GREAT WHITE SHARK**

The great white shark has a special organ that detects small electric fields. All living creatures make electric fields when they move. Sharks can use these fields to find prev.



SEA DRAGON

The sea dragon's fins make this animal look like seaweed, so hungry carnivores just swim by.



**CLOWNFISH** 

This fish has a coating of a special kind of slime that protects it from an anemone's stingers. This allows it to hide from predators in anemones.

PART 2 Use the information you just learned to answer these questions.

- Which of these animals has adaptations that allow it to blend in with its background? \_\_\_\_\_
- Which of these animals has bright colors that might attract predators?
- 3 Which of these animals has a hard shell, making it difficult for other animals to eat it?
- 4 Which of these animals uses electric fields to track prey?
- 5 Which of these animals has adaptations that allow it to live safely with a normally

dangerous animal?



ART 3 Choose one of the animals shown, then research it and draw its life cycle on the back of this sheet. See if your family can find two ways they can help protect this animal and its habitat!



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**Humpback** Whales

A Humpback's flippers are the largest of any whale, measuring up to one-third the length of its body!

## Take-Home Activity



Check your family's OCEANS IQ with this take-home activity!

On **October 19, 2010**, Disneynature, the same studio that took you and your family across the world in the record-breaking film **EARTH**, will take you below the surface with **OCEANS** releasing on Blu-ray™ Hi-Def and DVD.

Nearly three-quarters of Earth's surface is covered by water, and **OCEANS** boldly chronicles the mysteries that lie beneath. Dive deep into the very waters that sustain all of mankind—exploring the playful splendor and the harsh reality of the weird and wonderful creatures that live within. Featuring spectacular never-before-seen imagery captured by the latest underwater technologies, **OCEANS** offers an unprecedented look beneath the sea in a powerful yet enchanting film.

Below, you'll find a family activity to test your **OCEANS IQ**. This makes for a great after-dinner activity. Don't be surprised if your child seems to know many of the answers!

Also, for each purchase of **OCEANS** on Blu-ray Combo Pack or DVD though October 25, Disneynature will make a contribution in your honor to save our coral reefs.

Dive in now at www.disney.com/oceans for more information.

(Teacher's Signature)

Water covers about	of Earth's surface.
sea turtle is born on	but spends most
f the rest of its life in the oceans.	
A kelp forest is an ocean	·
The	Ocean is larger than all of the continents combined.
A kind of	lives inside coral polyps. It gives coral its colorful look.
	covers a clownfish so it can safely live in a sea anemone.
·	forest can grow to be 100 feet high.
giant squid has eyes the size of a _	
An anglerfish has what looks like a fis	hing pole with a on it
iiant kelp doesn't have	·
ıme, /. kelp, 8. dınner plate, 9. lıght, 10. root	NSWER KEY: 1. Three-quarters, 2. land, 3. habitat, 4. Pacific, 5. algae, 6. Sl

Dugong

Dugongs are
mammals related
to elephants.
They live in herds,
weigh about 1,100
pounds, and can
stay underwater
for six minutes!

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