# EDUCATORS' GUIDE

### **Dolphins at Daybreak** and **Dolphins and Sharks:** A Nonfiction Companion to Dolphins at Daybreak



PB: 978-0-679-88338-8 EL: 978-0-375-89426-8 Grades: 1–4 F&P: M • Lexile: 350L MAGIC FACT TRACKER Dolphins and Sharks

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#### **ABOUT** Dolphins at Daybreak

Jack and Annie are off in the Magic Tree House again, this time to a whole new world

under the ocean. Complete with a giant octopus, a hungry shark, and dolphins to the rescue, this Magic Tree House book delivers an underwater adventure kids can dream about.

#### **ABOUT** Dolphins and Sharks:

A Nonfiction Companion to Dolphins at Daybreak

How fast can some dolphins swim? What is the biggest shark? Why do sharks attack? Find out the answers to these questions and more in this Fact Tracker! Includes an illustrated gallery of dolphins and sharks, information on the ocean, dolphin communication, how sharks hunt for food, ocean exploration, and lots more!

## CLASSROOM CONNECTIONS

#### **ACTIVITIES FOR** Dolphins at Daybreak

#### Create an Underwater Scene

Jack and Annie are amazed to find colorful mountains, valleys, caves, and sea planets on the sandy bottom of the coral reef waters.

Have students compile animal, plant life, and topographical data about this underwater location using information in *Dolphins at Daybreak* and other library and Internet resources. A large sheet of roll paper offers a perfect palette for a jointly created underwater landscape mural of coral shapes and swaying grasses done in tempera. Individual students can make personal contributions to the mural by drawing, cutting out, and pasting on pictures of animal life typically found in these waters.

#### **CURRICULUM:** Art • Science

When Jack and Annie dive into the ocean in their mini-sub, they enter a strange new world filled with many unusual sea creatures. Have students list the different ocean animals that Jack and Annie encounter on their undersea adventure. Ask them to choose which of these sea creatures they would like to be for a day. In explaining and justifying their choices, have students address the following aspects of that animal's life in a short composition to be read aloud:

Undersea environmentShelter/protectionPhysical characteristicsPredators/preyFriends

**CURRICULUM:** Art • Language Arts • Science

#### **ACTIVITIES FOR** Dolphins and Sharks: A Nonfiction Companion to Dolphins at Daybreak

#### **Getting Started**

Using a map or a globe, locate and name each of the four oceans on our planet. Using Internet or library resources, invite students to find out how large each of the four oceans is, listing from largest to smallest. Have students compare the size of each ocean with the size of the United States to demonstrate how vast these bodies of salt water are.

Ask students to name and share what they know about some of the millions of creatures who make their homes in the ocean. Discuss how, in the ocean, larger and stronger animals eat smaller and weaker ones, creating a food chain. Ask them to guess, which among these sea creatures are called predators given their place at the top of the food chain.

Have students ever seen dolphins or sharks at an aquarium, sea show, or in their natural habitat? What were their impressions? What famous fictitious dolphins and sharks (such as Flipper or the shark in Jaws ) have they heard of? Indicate that the information they gather about dolphins and sharks through the following activities will help to distinguish the reality of these spectacular creatures from the myths that surround them.

#### How Deep Is the Ocean?

Oceans are wide, covering almost 140 million square miles of the earth's surface, but they are also deep, some going as far as six miles down. Using a large shoebox, have students create their own ocean diorama showing the three layers of the ocean and some of the different creatures who live in each zone. Students can paint the back of the inside of the box different shades of blue to show light variations at each layer. They can use browns to create the ocean floor on the bottom.

Then, have students draw and color or cut out pictures of undersea creatures and suspend them with string of different lengths to hang in their appropriate zone. Pipe cleaners can be used to fashion coral and seaweed; glitter can be used to add the right touch of underwater sparkle.

**CURRICULUM:** Science Art

#### "Eye" Can Hear You!

Discuss with students how dolphins depend much more on their ears than their eyes to locate fish and other sea creatures they like to eat. Involve them in a game to help them to better understand the process of echolocation. In an open play area, one student will be the dolphin and be blindfolded. Other students will be fish and may stand, sit, lie down, or slowly mill about within set boundaries. The dolphin sends out a verbal signal, "echo," and the other fish respond with "location." Volume of responses may vary. When the dolphin successfully tracks his food, the food becomes the next dolphin and the game begins anew. Students may then reflect on whether it is easier to find food by sight or by sound and consider what would be different in a real ocean setting.

#### The Art of the Bone

Introduce students to the term scrimshaw, the craft of carving designs into bone, practiced by the whalers in the 1800s and learned from many native peoples. Whalers would use the teeth or jawboned of the whales to create elaborate carvings. Discuss how this technique can be done with other materials, without harming animals.

Supply each with a paper and pencil, a large bar of soap (such as Ivory) with the name scraped off to create a smooth surface, a plastic knife, and black water-based paint with brush. Have students draw outlined images of one or more dolphins or sharks they have become acquainted with. Lay outline on soap and trace into surface using the plastic knife. Remove paper and go over lightly with black paint. After drying for a few minutes, lightly run water over soap to remove excess paint, allowing color in carved areas to remain and enhance their images.

#### **CURRICULUM:** Research • History Art

#### **Sidewalk Preditors**

A great white shark may grow to 21 feet and weigh as much as 7,000 pounds. A hammerhead shark may grow as much as 20 feet and weigh in at 1,000 pounds. Divide your class into small groups, each assigned with a particular shark. Arm each group with a supply of sidewalk chalk and take them out to a blacktop area (school yard, parking lot). Using tape measures or rulers, have them measure out the length of their predators and approximate their sizes in life-size outline chalk drawings. Then have the entire class stand inside each drawing, estimating how many times larger than the whole class each shark predator is.

#### **CURRICULUM:** Math • Art

#### **Cetacean Songs**

The language of marine animals in the group known as Cetacea includes various clicks and whistles that often sound musical to the human ear. Most striking is the song of the humpback whale. Download and have students listen to the song of this majestic creature of the deep. How does the music sound? Like an instrument? Like a cry? What feelings do these songs evoke? Ask each student to write a free-verse poem about the song of the humpback whale, describing how it makes them feel. Complete this musical adventure with your class singing "Baby Beluga" by Raffi.

**CURRICULUM:** Music • Science • Language Arts

#### **Shark Bytes**

Separate your class into five groups, assigning each group one of the five sharks introduced in this Fact Tracker. (pp. 88–97) Using Internet or library resources, have students further research the unique attributes of each introduced in this guide, including their abilities to hear, smell, see, swim, sleep, find and eat food, and protect themselves. Have each group conduct a shark interview for their class, with one student playing the role of the shark and the others the roles of reporters who want to know all there is to know about this ancient animal of the deep.

CURRICULUM: Research Science • Art

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