

## How Deep Do They Dive?

### OBJECTIVES

Student relate pictures to mathematical ideas and create a graph.

### MATERIALS

- scissors
- glue, gluesticks, or tape
- chalkboard or other writing surface
- MAXIMUM DIVING DEPTHS** table (at right)

*one set per student:*

- copies of the two *How Deep Do They Dive?* funsheets on pages 20-21

### BACKGROUND

Most whales find their food within 100 m (330 ft.) of the ocean surface. But many whales are capable of diving to great depths. The sperm whale is one of the deepest-diving mammals. It can dive down to at least 1,000 meters!

#### MAXIMUM DIVING DEPTHS (APPROXIMATE)

Dall's porpoise	100 meters
Pacific white-sided dolphin	200 meters
beluga whale	300 meters
bottlenose dolphin	500 meters
pilot whale	600 meters



### ACTION

1. Distribute the *How Deep Do They Dive?* funsheets.
2. Explain to students that they will graph the maximum diving depths of five whales. Copy the names of

the whales and their diving depths on the board.

3. Each whale illustration represents 100 meters. Students determine how many of each whale they need to cut. (*There will be extra whales on the funsheet.*)
4. Students glue the whales on their graphs. They begin at the ocean surface and work down.

### DEEPER DEPTHS

Working in groups, students determine other ways to display this data. Let them try some of their ideas. Then ask students to list some advantages and disadvantages of each method.


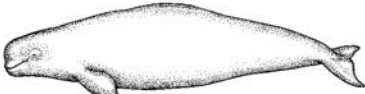


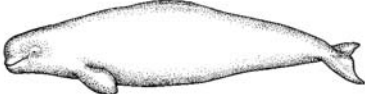



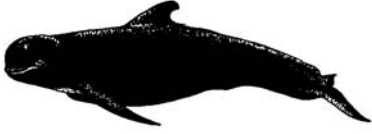
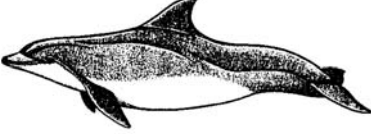


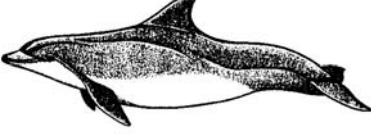


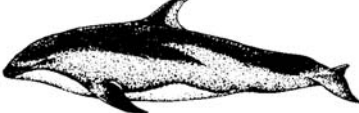











Look for examples of how people use graphs to communicate, and share these examples with your students. (*Hint: newspapers and periodicals often use graphs to communicate mathematical information.*)

### ANSWERS

Students glue the following whales to their graphing funsheet:

- ◆ six pilot whales
- ◆ five bottlenose dolphins
- ◆ three beluga whales
- ◆ two Pacific white-sided dolphins
- ◆ one Dall's porpoise

## How Deep Do They Dive?

 bottlenose dolphin	 beluga whale	 pilot whale
 bottlenose dolphin	 beluga whale	 pilot whale
 bottlenose dolphin	 beluga whale	 pilot whale
 bottlenose dolphin	 beluga whale	 pilot whale
 bottlenose dolphin	 beluga whale	 pilot whale
 Pacific white-sided dolphin	 Dall's porpoise	 pilot whale
 Pacific white-sided dolphin	 Dall's porpoise	 pilot whale
 Pacific white-sided dolphin	 Dall's porpoise	 pilot whale
 Pacific white-sided dolphin	 Dall's porpoise	 pilot whale

Name \_\_\_\_\_

## How Deep Do They Dive?

A large gray rectangular area with a decorative white wavy border on the left side. The area is divided into four horizontal sections by dashed lines, intended for writing answers.