SeaWorld/Busch Gardens
Splash of Math
K-3 Classroom Activities

Sea Animal Survey

OBJECTIVE

The student will gather, organize, display, interpret, and analyze data.

ACTION

1. Distribute copies of the *Sea Animal Survey* funsheet on page 3. Or, if your students can read, you may wish to make a more extensive list on the chalkboard of all the animals students choose.

2. Using the *Ocean Animals* cards in **Background Information**, talk about some of the different kinds of animals that live in the ocean. Which of the animals have students seen before? Ask students to choose their favorite animal from the list.

3. Working individually, in groups, or as a class, students gather data on each student's favorite animal. Students can survey their classmates and mark on their funsheets, or each student can make a tick mark on the chalkboard next to his or her favorite animal. (Students may take home funsheets to survey their families and neighbors.)

4. How many students chose a sea lion as their favorite? How many chose a killer whale? How many chose a sea turtle? Which animal seems to be the most favorite? Is it possible that this animal is not really the favorite ocean animal? (Do some people have favorite ocean animals that are not on the funsheet or represented in the cards?) Ask students if they think this data is representative of everyone in their school or neighborhood. Why or why not? Do they think it is representative of every-one in the United States? Of everyone in the world?

5. Ask students to work in groups to create graphs that show how many students picked each animal. Ask a representative from each group to explain to their classmates how they made their graph.

6. (For grades 2-3) Re-create on the classroom chalkboard the data from a cooperative learning group in Ms. Potter's second-grade class: sharks (2); killer whale (5); sea lion (1); sea turtle (0); penguin (2).

   Ask students to create two kinds of graphs with this data. (Students should be able to create a bar graph and pie graph. To prompt students to create a pie graph, try draw-ing a circle on the board and dividing it into tenths.)

7. (For grades 2-3, show transparencies of or re-create *Sea Animal Survey* graphs A, B, and C on the top of page 4.) READ: The General Curator at SeaWorld is responsible for the health and well-being of all the animals in the park. If you were the General Curator, which of the following graphs would help you decide what kinds of animals to display in the park? What can you learn from the other two graphs and how could you use that information?

8. (For grades 2-3, show transparencies of or re-create *Sea Animal Survey* graphs D, E, and F on the bottom of page 4.) READ: The Director of Operations at SeaWorld schedules all the shows. If you were the Director of Operations, which graph would help you decide how many Shamu shows to schedule for Saturday? What can you learn from the other two graphs and how could you use that information?

BACKGROUND INFORMAITON

To learn about a population, we can survey everyone in the population. Alternatively, we can survey a subgroup of the population and make inferences about the population based on what we learn from the subgroup. In this activity, students survey classmates.

You can turn this into a family-partici-pation activity by having students take the Sea Animal Survey funsheet home. They survey their families and/or neighbors, and bring the resulting data back to class to work with, beginning action step #4 at school. Then, students can work with their own data, or they can combine the data they've gathered.

MATERIALS

For each student group:
• *Ocean Animals* cards (**Background Information** PDF)
• copies of *Sea Animal Survey* funsheet (page 3) or blank paper
• pencils
• chalkboard and chalk (or other large writing surface and markers)
For grades 2–3:
• *Sea Animal Survey* graphs, page 4 (Enlarge 130% and photocopy on transparency.)
• overhead projector

ANSWERS

5. Students should be able to make various kinds of bar graphs from their data.

6. Students should be able to create a bar graph and a pie graph using the data from Ms. Potter's class. Here are two examples:
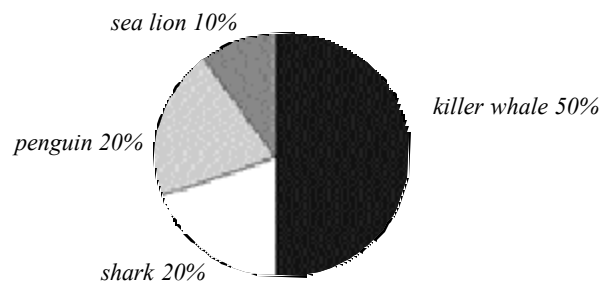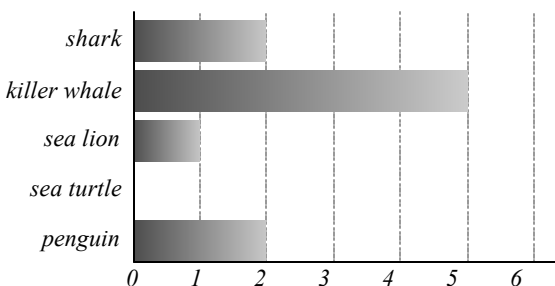

7. Graph B would help the General Curator decide what animals to display at SeaWorld.

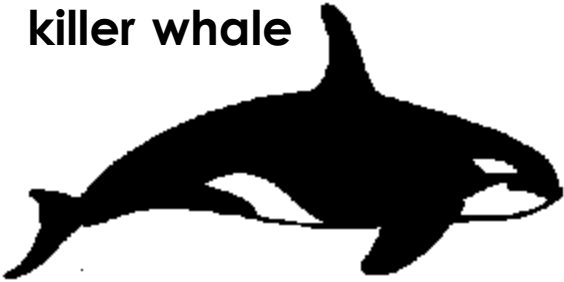8. Graph F would help the Director of Operations to schedule the Shamu shows.

Sea Animal Survey

Which ocean animals are favorites? Survey your classmates. Ask each person which of the animals below he or she likes best. Put a checkmark next to that animal. Continue until you have asked everyone in your class.

shark
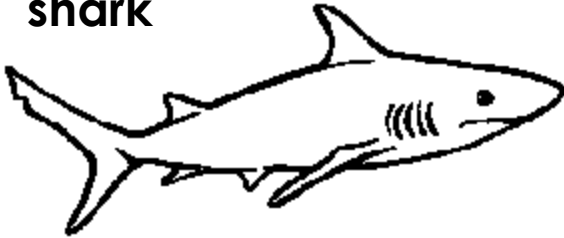
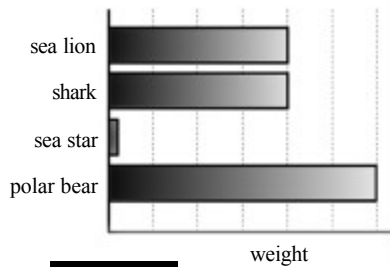**killer whale**

sea lion
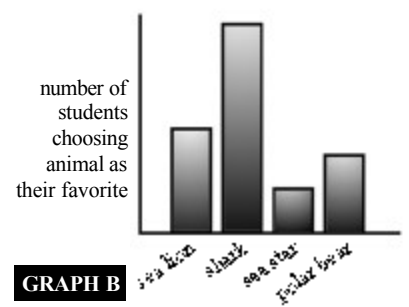
sea turtle

penguin

Sea Animal Survey Graphs

Photocopy on transpacency at 130%

Which graph would help you decide what kinds of animals to display at SeaWorld?
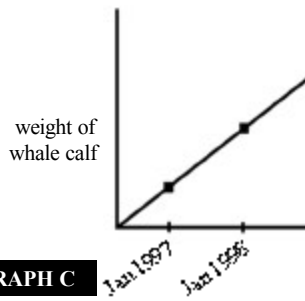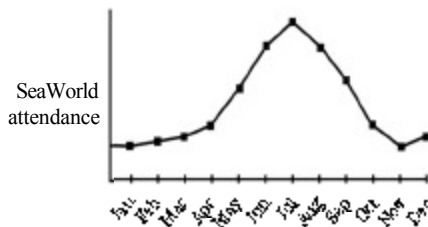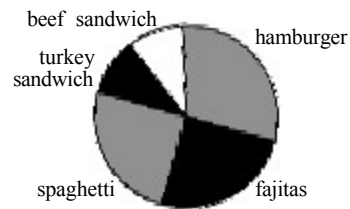
Graph _____ because _____

sea lion

shark

sea star

polar bear

weight

GRAPH A

number of
students
choosing
animal as
their favorite

sea lion   shark   sea star   polar bear

GRAPH B

weight of
whale calf

Jan 1997   Jan 1998

GRAPH C

Which graph would help you decide how many Shamu shows to schedule for Saturday?

Graph _____ because _____

SeaWorld
attendance

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

GRAPH D

beef sandwich

turkey
sandwich

hamburger

spaghetti

fajitas

What people at SeaWorld eat for lunch

GRAPH E

SeaWorld
attendance

GRAPH F

Su   M   T   W   Th   F   Sa