

Food Figures



Objective

The student will calculate killer whale dietary requirements from metric to imperial. The student will construct a pie chart based on given information.

Materials

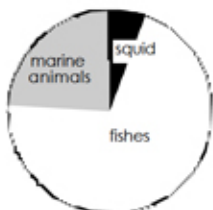
- Copies of Food Figures funsheet
- Pencils
- Calculators

Action

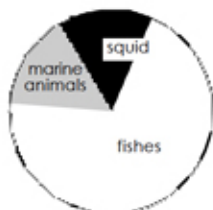
1. Open activity with a discussion about killer whales. Where do they live? What do they eat? How do they hunt? Are they social or solitary? (See separate PDF pages "Background Information" for reference.)
2. Distribute the Food Figures funsheet to your students. Answers are given below.

3. ANSWER KEY

1.



Antarctic killer whales



Bering Sea killer whales

2. Student answers will vary.

3. Bering sea

food type	weight (kg)	weight (lb)
fishes	97.5-130	214.5-286
squids	30-40	66-88
marine mammals	22.5-30	49.5-66

4. Antarctic

food type	weight (kg)	weight (lb)
fishes	100.5-134	221-295
squids	9-12	20-26
marine mammals	40.5-54	89-119

Deeper Depths

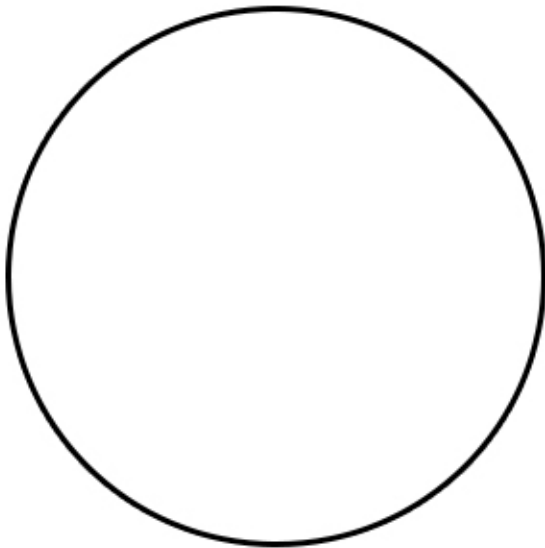
Have students create more ways to graphically represent the information given in this activity.



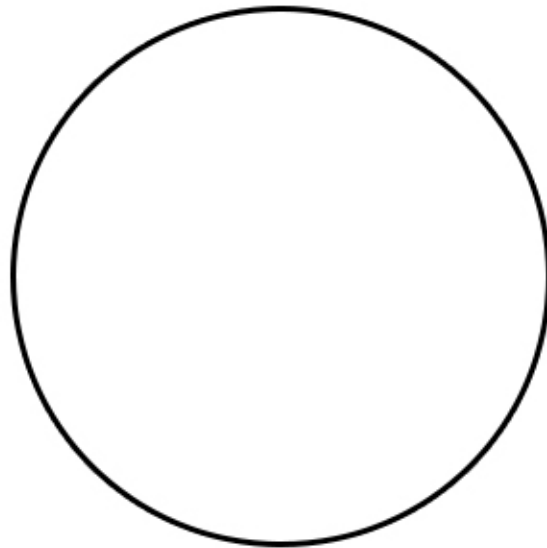
Name _____

In the Antarctic, killer whales eat about 67% fishes, 27% marine mammals, and 6% squids. Killer whales in the Bering Sea (near Alaska), eat about 65% fishes, 20% squids, and 15% marine mammals.

1. The circles below represent 100% of the food eaten by killer whales. Draw lines to illustrate the percentages of foods eaten by killer whales in each region. Label each part of your graph.



Antartic Killer Whales



Bering Sea Killer Whales

2. Write at least two sentences that describe your graphs.



3. On a field expedition in the Bering Sea, you observed a male killer whale and estimated his weight at 5,000 kg (11,000 lb.). You know from observations in zoological parks that killer whales eat about 3-4% of their body weight in food each day. Based on the food data from problem #1, estimate how many kilograms of fishes, how many kilograms of squids, and how many kilograms of marine mammals this whale may eat. Next, convert kilograms to pounds (1 pound = 2.2 kilograms).

5,000 Kg (11,000 lb.) Bering Sea Killer Whale Food Intake		
Food Type	Weight in Kilograms	Weight in Pounds
Fishes	_____	_____
Squids	_____	_____
Marine Mammals	_____	_____

4. Estimate how many kilograms of fishes, squids, and marine mammals this same killer whale may eat if it lived in the Antarctic.

5,000 Kg (11,000 lb.) Antarctic Sea Killer Whale Food Intake		
Food Type	Weight in Kilograms	Weight in Pounds
Fishes	_____	_____
Squids	_____	_____
Marine Mammals	_____	_____