

## Eat Like a Whale

### Materials:

Plastic container  
(shoebox sized)

Plastic comb

Seasoning (oregano or other  
leafy dry spices work best)

Tweezers or small tongs

Carrot or apple chunks

Clock or stopwatch

### Objective:

Simulate different feeding  
methods of whales in order  
to understand the differences  
in feeding methods between  
toothed and baleen whales

### Guiding Questions:

How are the feeding habits of  
toothed whales and baleen  
whales different?

What special adaptations do  
toothed and baleen whales  
have to get enough food in  
their aquatic environment?

Whales can be classified into 2 groups (sub-Orders) based on their different mouth and skull structures that allow them to feed on different types and quantities of food. In this activity you will explore which feeding style is most effective at gathering zooplankton (seasoning) and which is most effective for gathering fish and squid (carrot or apple chunks).

### Procedure

1. Fill the plastic container approximately halfway with water.
2. Sprinkle some of the seasoning onto the water and place the carrot or apple chunks into the water.
3. Using the tweezers or tongs pick up as many pieces of seasoning as possible in 15 seconds. Record the number of pieces of seasoning in the table. Comment on the ease or difficulty in picking up this type of food.
4. Using the tweezers or tongs pick up as many pieces of carrot or apple as possible in 15 seconds. Record the number of pieces of carrot or apple in the table. Comment on the ease or difficulty in picking up this type of food.
5. Holding the comb vertically sweep it across the surface of the water and pick up as many pieces of seasoning as possible. Record the number of pieces of seasoning in the table. Comment on the ease or difficulty in picking up this type of food.
6. Holding the comb vertically sweep it across the surface of the water and pick up as many chunks of carrot or apple as possible. Record the number of chunks in the table. Comment on the ease or difficulty in picking up this type of food.

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 Plastic comb  
 Seasoning  
 Tweezers or small tongs  
 Carrot or apple chunks  
 Clock or stopwatch

	Type of Mouth Part			
	Tweezers / Tongs		Comb	
Food Type	number picked up	easy or hard	number picked up	easy or hard
Seasoning				
Carrot or apple chunks				

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What special adaptations do toothed and baleen whales have to get enough food in their aquatic environment?

### Think About It

1. What does the comb represent?
2. What do tweezers (or tongs) represent?
3. What does the seasoning represent?
4. What does the carrot or apple chunks represent?
5. Based on the data you wrote in the table above, do you think that a toothed whale eats zooplankton? Explain your reasoning.
6. Based on the data you wrote in the table above, what do you think a baleenwhale eats?
7. Cetaceans swallow their food without chewing it. This website explains the process of digestion without chewing, and has many photos. Please note, there are photos of internal organs. <https://www.mmapl.ucsc.edu/normal-anatomy-harbor-porpoise/digestive-system-harbor-porpoise>