

Name _____

Date _____

Topic: Maths - 'How big is big?' - Estimation and Measurement, looking at the blue whale

Reading/Discussion:

Blue whales are probably the largest creatures ever to have lived on earth. They are even bigger than T-Rex! They can grow to a length of about 85 feet but the largest ever recorded measured 108 feet. Can you imagine how big this is?

Blue whales are found in all the oceans of the world. They are called blue whales because they look light blue when they are just below the surface of the ocean on a sunny day, but actually they are usually light grey and white, with a mottled pattern which is unique to each whale, just as your fingerprints are unique to you.

Blue whales are mammals, which means that they need to breathe air but they can stay underwater for about 20 minutes at a time. They breathe through blowholes on top of their heads and when they blow out it reaches about 20 feet high. They speak to each other using low-frequency moaning sounds which can be heard for more than 100 miles in deep water. Look at the map and see if you can find another town about 100 miles away. Imagine being able to speak to someone there without using a telephone.

Although they are so big, blue whales eat very small shrimp-like creatures, called krill. Instead of teeth, blue whales have long fringed plates made out of keratin, which is the same material as your fingernails. These plates are called baleen and all the whale has to do is take a large mouthful of water then close its mouth and push the water through the baleen which acts as a net, trapping the krill inside. Don't try doing this at the table! A blue whale has to eat up to 4 tons of krill a day – that is about 40 million krill, and is the weight of about 3 small cars! Think how many cereal bowls that would fill!

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Activities:

A. What have we learned about the blue whale?

Answer the following questions to find out:

1. Which animal do you think is the biggest – the T-Rex or the blue whale?
2. What was the length of the longest blue whale ever recorded?
3. Are blue whales really blue?
4. How could you tell blue whales apart?
5. What sort of noise do blue whales make when they speak to each other?
6. How far can their voices travel through the deep ocean waters?
7. What do blue whales eat?
8. Why don't blue whales have to clean their teeth?
9. Can they breathe under water?
10. What oceans do blue whales live in?

B. How big is 85 feet?

Divide children into two groups – let one group draw and decorate the head of a blue whale and the other group its tail.

Now let the children try to estimate what the length of the whale (85 feet) would look like. Encourage them to use strategies such as visualising how many cars or busses long it may be. Once they have decided, ask them to place the head and tail at the chosen distance from each other, on a sufficiently long wall, floor or fence.

Lastly, using rulers or measuring tapes, measure the distance between the head and tail and let the children work out how close they came to the correct measurement.

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Answer Sheet

Activity A

1. The blue whale
2. 108 feet
3. No, they are usually light grey and white
4. By the mottled pattern which is unique to each whale
5. A low-frequency moaning sound
6. More than 100 miles
7. Small shrimp-like creatures called krill
8. Because they do not have teeth, they have baleen plates
9. No
10. All the oceans of the world