

NEW BEDFORD WHALING MUSEUM

WHALES GIANTS OF THE OCEAN

Lesson 4 - How Big Are Whales? Lesson Variations

Lesson times: 45-60 minutes



We have provided two variations of the original lesson plan, including a lesson that requires the students to research the lengths of several cetacean species.

www.whalingmuseum.org



Adaption #1

Estimate and Measure - Lengths Provided (hybrid / online)

Before beginning this activity, students who are working at home will need to create a measuring tool, unless they have a 100 foot long rope. Show them this [video](#) which demonstrates how to make a measuring tool out of cardboard.

- Take your students outside to a large space like the school playground or parking lot. Students at home will need to find a long space like a sidewalk or parking lot.
- Have them estimate the length of a blue whale based on what they saw in the illustrations or in other prep materials you may have provided.
- Have them mark their estimates (by placement of a book, hat, rock, block, or chalk mark)
- Direct them to do the same for other species such as sperm whale, right whale, humpback and orca.
- Using a 100 foot (30 m) rope, have students measure the length of a blue whale next to where they estimated the blue whale's length.
- Repeat the process for the other whales. Refer to this [table](#) to provide them with the actual lengths of other species.
- On this same table we have provided additional species and lengths for those who would like to work with some smaller lengths.

Using other units of measurement

- Have students predict how many classmates (or family members, if they are working at home), lying head-to-toe, would equal the length of one blue whale.
- Have them lie down head-to-toe to see how close their predictions were.
- Have them write down the result in the same table.
- Continue this process for some or all of the other species listed.

Optional

- For a group with strong math skills, have them measure the height of one student (they can measure themselves) and calculate the number of students needed to equal one blue whale. Students in class can lie down head-to-toe to measure. Students at home can do the lie-down measuring by either getting help from someone in the house who will mark where you start and mark where your feet are each time you lie down until you've reached 100 feet in length.
- How close are the two estimates?

Comparison

- Have students choose an object with a length that can be easily found online or in a book (bus, car, television) or measured in class (desk, new pencil).
- Direct them to use the length of that object and create their own size comparison to the blue whale and at least two other whales in the table.
- Students write the results of their calculations in Table 1.

Have students finish the lesson by completing the [Think About It](#) page

Adaptation #2

Estimate and Measure - Students Research the Lengths

- Provide the students with [Table 2](#) that lists species without providing lengths.
- Have the students write in their estimates for the lengths of the whales listed.
- Using books or online resources, have the students find the lengths of the whales listed in the table and write those lengths into the Actual Length column.
- Review the actual lengths with the students and have them correct any errors. Use [Table 1](#) as a reference.
- Go outside with the students and use the marked 100 foot (30m) rope to demonstrate the distances of the whales in [Table 2](#).
- While the rope is on the ground, have students lie down head-to-toe along the rope to demonstrate the number of students needed to equal the length of the whales. Have the students fill in that number in the 'Number of students' column.
- Have students choose an object with a length that can be easily found online or in a book (bus, car, television) or measured in class (desk, new pencil).
- Direct them to use the length of that object and create their own size comparison to the blue whale and at least two other whales in the table.
- Students write the results of their calculations in the table.

Have students finish the lesson by completing the [Think About It](#) page.

