

NARWHAL

REVEALING AN ARCTIC LEGEND

Activity for Students and Families

Pin the Tail on the Narwhal

Created and field tested by: Smithsonian's National Museum of Natural History

Purpose: Assist in participants' understanding of narwhal tusk anatomy

Target Ages: 3rd – 8th grades and multigenerational groups

Content Standards: *NGSS*

3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates and reproducing.

MS-LS4-2. Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.

Background: Since narwhals are often referred to as the “unicorns of the sea,” people tend to assume the tusk sticks straight out of the head. By allowing participants the chance to see and handle a narwhal skull and tusk, they can better understand the placement and purposes of the tusk.

Goals: In this activity, participants will:

- Understand the tusk is a tooth
- Engage in the placement of a narwhal tusk on the skull
- Discover that the tusk does not protrude from the top of the head, but rather the mouth, making it a tooth

Materials:

- Narwhal skull model
- Narwhal tusk model
- Diagram of narwhal skull
- Paper cut-outs of narwhal tusks



Script:

The activity is most beneficial if it can be set up next to the exhibition panel that explains narwhal tusks. Use the models of the narwhal, tusk, and skull that are in the exhibition.

As participants approach, ask:

- What do you know about a narwhal tusk?
- Do you know where on the skull a narwhal's tusk is?
- Would you like to attempt to place the tusk on the skull?

Allow participants to place the paper tusk in its proper position on the skull. Praise anyone who makes the correct placement. Help others make the correct placement by showing them the illustrations.

Discuss:

- A narwhal's tusk is a tooth, so rather than protruding from the top of the head, it comes out of its mouth.
- What does the narwhal use its tusk for? There are several hypotheses, including for combat, mating and sensing their surroundings.
- Explain some of the observations described in the exhibition label, but emphasize that scientists are still trying to figure out the functions of the narwhal tusk.

Narwhal Tusk:



Image from Wiki Commons

https://commons.wikimedia.org/w/index.php?search=Narwhal+tusk&title=Special%3ASearch&go=Go&ns0=1&ns6=1&ns12=1&ns14=1&ns100=1&ns106=1#/media/File:Narwhal_tusk,_1701-1930_Wellcome_L0059030.jpg



Image from Wiki Commons

[https://commons.wikimedia.org/w/index.php?search=Narwhal+skull&title=Special%3ASearch&profile=advanced&fulltext=1&advancedSearch-current=%7B%7D&ns0=1&ns6=1&ns12=1&ns14=1&ns100=1&ns106=1#/media/File:Monodon monoceros \(cranio Narvalo, Narwhal skull\), museo di Bologna.JPG](https://commons.wikimedia.org/w/index.php?search=Narwhal+skull&title=Special%3ASearch&profile=advanced&fulltext=1&advancedSearch-current=%7B%7D&ns0=1&ns6=1&ns12=1&ns14=1&ns100=1&ns106=1#/media/File:Monodon monoceros (cranio Narvalo, Narwhal skull), museo di Bologna.JPG)



Image from Wiki Commons <https://commons.wikimedia.org/wiki/File:Narwalschaedel.jpg>

There have been instances of narwhals with two tusks, but that is very rare.

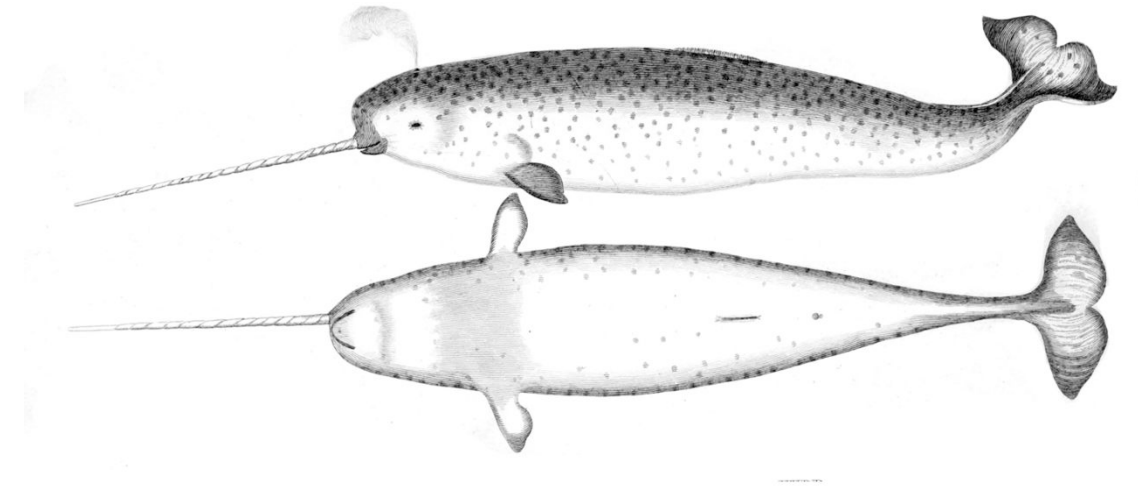


Image from Wiki Commons

https://commons.wikimedia.org/wiki/Monodon_monoceros#/media/File:Narwhalsk.jpg

This illustration shows the off-center position of the tusk as well as the narwhal's blowhole. Have students look for these elements in the exhibition.