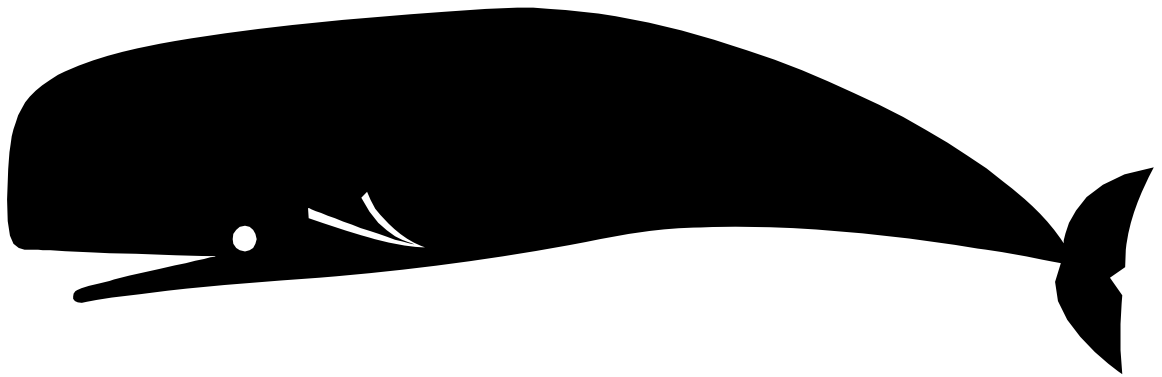


Whales & Whalers



Teacher Activity Packet

Grades 4-7



Independence
Seaport Museum

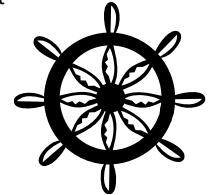
211 South Columbus Blvd
Philadelphia PA 19106
Group Sales: 215.413.8630
www.phillyseaport.org

To The Teacher:

We are so excited that you scheduled a visit for your class to Independence Seaport Museum.

To both prepare your students for their museum visit and as a wrap up after, we have created this packet for you to use in the classroom. We hope the activities included will complement your visit and inspire your students to want to learn more.

We look forward to seeing you !



The Education Department

About the Lesson:

Overview

This lesson is designed to get students thinking about the massive creatures known as whales ... their physical attributes, intelligence, ocean migration patterns, and why some are so sought by whalers.

Objective

Students will refresh what they already know about whaling and sustainable development as they learn new vocabulary and concepts.

Directions

Make copies of the **History of Whaling** and have students read the background out loud. Next, pass out the accompanying worksheet and allow students time to complete it. Finally, have students break into groups and discuss their answers. Once in groups, pass out the remaining worksheets to help students think about the whale.

WHALING — A History

Whaling began in the 12th century in the Bay of Biscay off northern Spain. Here a group of Spaniards called the Basques hunted the small, slow Biscayan Right Whale. It was named the "right" whale because it was small enough to float after it has been killed. The larger species of whale would sink and were, therefore called the "wrong" whales. By the 13th century the Basques had established a precedent that would be continued for the next seven centuries — the Biscayan Right Whale had been hunted into extinction.

By the 16th Century the whalers of Europe had extended the hunt into the Atlantic off the coast of Great Britain and France. They pursued the species known as the Atlantic Right Whale. It was black in color, very abundant, and rich in oil. By the 17th century the Atlantic Right Whale was extinct.

The whaling fleet now moved further north into the waters around Iceland and Greenland. Here lived a species that was rich in the valuable whale products of Baleen, oil, and meat. It was named the Greenland Right Whale and it too, soon became extinct.

By the beginning of the 19th century the whalers of the North Atlantic were in serious trouble. The majority of small whales were now extinct; only the large, fast-swimming whales remained. Then in 1862 a Norwegian whaler named Svend Foyn developed a new method for hunting the big whales. He adapted the steam engine to his whaling ship and invented a cannon-fired harpoon with an explosive head. With this device he could now catch the faster whales. The problem of keeping these large whales afloat still remained. To solve this problem Foyn pumped compressed air into the carcass.

Armed with Foyn's new technique the North Atlantic whalers now attacked the large blue whale. The technique was so effective that by 1903 the blue whale was no longer found in the Northern Hemisphere.

Having destroyed their livelihood in the Northern Hemisphere, the whalers now turned to the great Antarctic summer feeding grounds. The first Norwegian fleets to sail in the Antarctic returned home with reports of whale herds of tremendous size.

The estimates of the first Norwegian fleet was accurate. The herds were so bountiful, it is estimated that 25% of the whales killed floated away before they were skinned. The whales refused to learn any lessons from their experiences in the North Atlantic. They picked the slowest species in the Antarctic region, the humpback whale, and hunted it mercilessly. In 1911, 8,500 humpback whales were killed; by 1925, only nine humpback whales could be found to kill.

As the whalers killed off the whales that bred near the Antarctic islands where their fleets anchored, they forced themselves to go out to sea to find whales. This would have been a very costly operation since it involved hauling the dead whales back to one of the islands to be processed. However, in 1925 a Norwegian captain constructed a large "factory" ship that could accompany the fleet out into the Antarctic Ocean. The ship had a slipway by which the whale was hauled onto the deck to be processed. The factory ships were so successful that by 1930, thirty-eight of them were in operation. These ships permitted the whaling nations to increase their catch from 20,500 in 1925 to 40,200 in 1931.

In 1931, the first attempt to create international regulations for the whaling industry was initiated. This attempt was the CONVENTION FOR THE REGULATION OF WHALING. This agreement tried to protect the remaining "right" whales, immature whales, and female accompanied by a calf. Its effects were immediately doomed because two of the leading whaling nations, Germany and Japan, refused to sign it.

Following World War II a second attempt was made to establish controls due to predictions of many marine scientists that the whale would be annihilated if the pre-war slaughter continued. In 1946 in Washington, D.C. the International Whaling Commission was created. Most of the world's whaling nations joined the Commission. The Commission had the duty to set minimum-length requirements, set the opening and closing dates for the whaling season and set an annual Antarctic quote.

Despite its impressive responsibilities the Commission was also doomed to the role of a powerless administrator. Any member nation, if it gave 90 days notice, could refuse to obey any Commission decision. Also, the Commission was powerless to limit the number of factory ships or to allocate a quote to any of them. This would have violated the principal of the freedom of the high seas which grants to every nation the right to use the resources of the oceans as it decides. The result was an increasing number of whaling fleets hunting fewer and fewer whales.

In the years since the International Whaling Commission, the estimated quantity of whales has continued to decrease. The necessity to make decisions based on the opinions of the member nations has resulted in protection for the various species of whales coming to little and too late. While scientists and annual catch statistics continually predicted that the blue whale was being hunted into extinction, the Japanese, Russian, and Dutch members refused to agree to any regulations to protect it. In 1964 the number of blue whales killed dropped to 20 for the entire whaling industry. This is compared with 29,400 killed in 1931.

Following the 1964 season the member nations agreed to place the blue whale on the protected species list. In effect the whaling industry had waited until the blue whale could no longer be hunted profitably before they would protect it.

In 1946 the Commission set a quota of 16,000 whales that could be killed. Scientists predicted then that the figure was too high and the whale population would not be able to recover. By 1963 the Committee of Three, a team of three scientists hired by the Commission to advise on the proper quota limit, suggested a limit of 4,000 whales. The Japanese refused to accept the quota of less than 10,000 whales. Since the Japanese refused to accept, the rest of the nations on the Commission agreed to the Japanese figure.

WHALING — A History

Check your knowledge! Answer all of the questions below.

1. Define the term "right" whale.

2. What did Norwegian Captain Svend Foyd invent?

3. What was the last species of whale exterminates in the North Atlantic?

4. What two nations refused to sign the 1931 CONVENTION FOR THE REGULATION OF WHALING?

5. What was the whale kill quota set in 1963?

6. How many whales do scientists think exist today?

Whaling Word Puzzle

Draw a line from each whaling term to its definition. Then put the correct letter above the number to spell out the valuable substance found in a sick sperm whale that is used to make perfume.

1. Slops
 2. Trypots
 3. Scrimshaw
 4. Nantucket Sleigh Ride
 5. Cutting In
 6. Chanteys
 7. Spermaceti
 8. Bible Leaves
- E. Rhythmic songs that help the crew pull together as they haul ropes or hoist blubber.
 - G. Etchings on whalebone done by sailors in their spare time.
 - B. Clothing for the crew members of a whaling ship.
 - I. Cutting the blubber off a whale in one long winding piece.
 - A. When a harpooned whale pulls a boat around in the ocean for hours before being killed.
 - R. Small pieces of blubber cut so that they fan out like pages of a book when they are tossed in the trypots.
 - S. The huge cast iron kettles in which the blubber is boiled down into oil.
 - M. Oil from the head of a sperm whale, finer quality than oil from the blubber of ordinary whales.

R

4 7 1 6 8 3 5 2



Answer: AMBERGRIS

True or False?

Read the statements about whales and decide whether they are true or false. Check the box! Once you've completed all seven, turn the sheet over and see if you were correct.

TRUE

FALSE

1. Most of the sailors who made up whaling crews in the 1800s were men in their thirties.

2. A "blanket piece" refers to the huge strip of blubber that was cut and peeled off the whale's body.

3. Whale oil for candles and lubrication cost between 410 and \$150 per barrel during the 1800s.

4. The blue whale is the largest fish found in the ocean today.

5. Whalers celebrated the successful capture of a whale in a practice called "gamming."

6. Scrimshaw was the art of tattooing whaling scenes on the arms of whalers.

7. A limited number of whale species today can be hunted commercially by Americans.

True or False?

Please find the answers below:

1. False. Sailors joining a whaling ship were mostly between the ages of 14 and 16.
2. True. The blanket piece weighed about 2,000 pounds. It was cut into smaller chunks called "horse pieces".
3. True. The availability of whale oil fluctuated causing the price of a barrel to vary.
4. False. The blue whale is the largest species of whale, but whales are not fish. Whales, like people, are mammals.
5. False. When whaleships passed at sea, they often stopped so that the crews could visit. This was gamming.
6. False. Scrimshaw was the art of etching whaling scenes in bone (jaw), teeth, or baleen. Other products were made from these materials as well.
7. False. Whales have been protected worldwide from commercial hunting by Americans since 1972 when Congress passed the Marine Mammal Protection Act.

Resources

Books

Whales and Dolphins

Carwardine, Mark.

New York, N.Y. : DK Pub., 2002.

Book of Whales

Ellis, Richard

New York, NY : Knopf, 1985.

Blue Whales

Calambokid, John,

New York, NY : Voyager Press, 1997.

The Whale Warriors:

The Battle at the Bottom of the World to Save the Planet's Largest Mammals

Heller, Peter

New York, NY : Free Press, 2007.