



AFTERSCHOOL EXCHANGE ACTIVITY

WHALES: GIANTS OF THE DEEP

PREPARATION

Grade Levels: 4-6

The activity will be most effective if delivered in six one-hour periods, with a group of no more than twelve children. Activities 1 and 2 focus on the video, activities 3-5 focus on a written and artistic project, and a 6th activity serves as a summary. Activities 3-5 can be shortened depending on how quickly the children complete their individual projects and what type of art project they choose.

Prerequisite:

The group leader should videotape the public television show: “Humpback Whales” from the NATURE series and be familiar with its content. The show is approximately 52 minutes in length, and approximately half of the video is used in these activities.

Materials:

Students will need:

- pencils, pens
- loose leaf paper
- dictionaries (three or more if possible for students to share)
- large note cards
- paint
- clay that dries and can be painted on OR
- chicken wire, newsprint, papier mâché

Group leader will need:

- world map
- chart paper
- copies of Handout #1 and Handout #2 for each child
- handout questions copied on chart paper, with space to write the answers
- non-fiction and picture books on whales

Academic Goals:

Children will:

- learn about humpback whale migrations, feeding, social organization, population, scientific investigations
- be able to compare humpback whales in different parts of the world

- conduct their own research using non-fiction, fiction, and/or Internet sources to learn about a specific type of whale
- create their own replica of a whale using art materials
- present their research in written form to display with their model

Social Goals:

Children will

- work in pairs and teams to answer questions and report to the group
- share text resources when researching individual projects
- work together to make sure the size of their whale model is relative to others

STEPS

Activity 1:

Introduction (10 minutes)

1. Tell the children they will learn about whales and watch a video from the NATURE series. Before the video, ask the children to name as many different kinds of whales as possible. Make a list of the whales on chart paper. Ask the children to mention additional information they may know about whales in general, or specific whales, and write that on the chart paper as well.

2. Tell the children they will see segments of a video about humpback whales. Ask them to guess how much a humpback whale weighs and record the estimates (but do not give away the answer). Distribute Handout #1 and go over the questions for the first segment to make sure the children understand.

Learning Activities (50 minutes)

1. Start the video (2:30 into the video beginning with: “Southeast Alaska in mid-December.”) and stop after the narrator says: “Humpbacks are world famous for their beautiful and haunting songs...he uses a hydrophone to locate and listen to singers.” (12:40 mark). Give the children a few minutes to jot down their answers to the first set of questions. When they’ve finished, ask them to share their answers and take turns writing them on the chart paper that has been prepared in advance with the questions. Children may correct and/or add to their answers as necessary. Then, ask for volunteers to come up to the world map and point out the migration route of the whales.

2. Ask the children to read the next set of questions before showing the next segment. Forward the video to the 25:20 point (“Sal Cerechio says: “Okay, it’s now 6:14 on the 20th of March 1977.”) Play the video, stopping at 35:56 with, “This male’s song will probably never be heard north of the equator...it’s very own language.”

3. Have the children answer the next questions in pairs, using the dictionaries if necessary. When they are finished, ask each pair to answer one question, going around

the room until all are answered. Record the answers on the chart paper. Children may correct and/or add to their answers as necessary. Then, ask the children to point out relevant locations on the map: Mexico, the Antarctic, the South Pacific Islands of Tonga and Fiji, and the equator.

Activity 2:

Introduction (10 minutes)

If there was not enough time to complete all the answers to the questions from the previous activity, take a few minutes to do so now. Otherwise, briefly reviews the previous session and ask the children if they have any questions. Write these questions on a separate piece of chart paper.

Learning Activities (50 minutes)

1. Introduce the final segment of the video that has to do with the Hawaiian humpback whales migrating north and how they hunt for food. Review the questions on Handout #2 relating to the video segment, then start the video where you last stopped (35:57). At the end of the video (52:13), have the children write the answers to the questions on their handouts. Then, divide the children into groups of three and give each group a turn to answer a question. Give each team a point for a correct answer. When the questions are all answered, the team that has the most points will be first to select their preference for the whale project.
2. Distribute Handout #3, which provides guidelines for the project. Refer back to the list of different types of whales from the previous activity. Compare the list to the one on the handout, which lists a number of the more common whales. Explain that each child will do a project about a specific whale. The project will involve independent research from text resources (fiction and non-fiction) and the Internet (if feasible), as well as creating a model of a whale.

Activity 3:

Introduction (5-10 minutes)

Ask the winners of the handout quiz to choose which whales they want to do for their project. Then, ask the other children to select their whale (you may want a child who has lower literacy skills to take the humpback, since this whale has been discussed in class and the background information will be helpful in completing the tasks).

Learning Activities (50 minutes)

1. Explain that for the project, each child will need to use books and the Internet (if possible) to find information about their whale according to the categories on the bottom of Handout #3. Children should take notes about each area on paper and after you have checked the information, each child will write it on the note cards with a pen. The second part of the project involves creating a replica of each type of whale. The whale and the note cards will be used to create a whale exhibit.

2. Possible books available from public libraries that children can utilize include:

- Bunting, E. (2001). *Whales Passing*. Blue Sky Press: NY
Bunting, E. (1980). *The Sea World Book of Whales*. Hartcourt Brace Jovanovich: FL
Davies, N. (1997). *Big Blue Whale*. Candlewick Press: MA
Gibbons, G. (1991) *Whales* (1991). Holiday House: NY
Milton, J. (1989). *Whales: The Gentle Giants*. Random House: NY
Sobol, R. (2001). *Adelina's Whales*. Dutton Children's Books: NY

Possible Internet sites include:

<http://www.pbs.org/wnet/nature/humpback/>

<http://www.whales-online.org>

<http://www.whale.net>

<http://http/dkd.net/whales>

<http://www.enchantedlearning.com/subject/whales>

Also, a search for "whales" on www.yahooligans.com will list Web sites with information on specific types of whales.

These related sites are also suitable for children who may finish the project ahead of the others:

<http://www.savethewhales.org>

<http://www.savebiogems.org>

Activity 4:

Learning Activities: (one hour)

1. Children continue to work on the written portion of the project. When most of the children are finished with their rough drafts, get the children together and ask each the size of his/her whale. Write the name of the whale and its size on a note card, and arrange the cards in order of size, starting with the blue whale, the biggest. As the children create their whales, they can refer to the cards to make sure their whale is relative in size to the whale larger and smaller than theirs. Be sure to provide pictures of each whale (either from the Internet or from a book) for the children to refer to while they create their models.

2. Depending on time and resources, children can create their whales with clay or they can use chicken wire to create the shape and then add papier mâché around the form. Either way, while the whale is drying, the children can continue to write up their data neatly on cards.

Activity 5:

Learning Activities: (one hour)

1. Children continue to finish their whales – this will take more time if they make them out of papier mâché (approximately two paper coats per session, plus time for set up and clean up). Once the whale models are dry, children can paint them.

2. Children should also make a sign with the name of their whale and display the sign, their model and their note cards on shelves or tables where people can view them.

Activity 6:

Learning Activities (45 minutes)

1. Drawing from the information on the note cards and the models, create a scavenger hunt where children search for information from the cards. (For example, “Name three baleen whales,” or “What is the smallest whale?”) Children fill out the scavenger hunt sheets and then gather again to go over the answers together.
2. One option, rather than making up the scavenger hunt questions yourself, is to have the children come up with questions based on the whale exhibit. Compile the questions, add some of your own if necessary, and have the children do the scavenger hunt the following activity period.

CREDITS

This AFTERSCHOOL EXCHANGE activity was developed by Julie Spiegel Ph.D., Educational Specialist at The Point CDC, based on the Thirteen program NATURE: HUMPBACK WHALES.

HUMPBACK WHALES

HANDOUT #1

Segment 1:

Where do the humpbacks spend the summer?

Where do they go in the winter?

When do they begin the journey?

Why do the humpbacks migrate to warmer waters?

- 1.
- 2.

Define the word migrate:

How many humpbacks visit Hawaii each year?

What is a female whale called? A baby?

How long do a female whale and her baby stay together?

How much does a humpback whale weigh?

- a. 25 tons
- b. 40 tons
- c. 50 tons
- d. 100 tons

How long can adult humpbacks remain underwater before coming up for a breath?

A baby?

How far under the water do humpbacks swim? (how many 6' men standing on top of one another)?

What are humpbacks famous for?

Humpback Whales handout #1, page 2

Segment 2:

Is the song of the Mexican whale the same or different from the whales in Hawaii?

Does it change or stay the same during the breeding season?

What do the following terms mean? (use the dictionary if needed)

1. Breaching -

2. DNA analysis -

What part of the whales' body do scientists base the DNA analyses on?

What are scientists trying to learn from the whales by photographing and taking DNA samples?

1.

2.

Are the humpbacks found in the Antarctic in February the same as those found in Hawaii?

What direction do these whales go? Where do they go?

Why are there so few whales in this area?

How are northern whales different from southern whales? (there are hints if you need them)

1. (appearance)

2. (song)

3. (type of song)

4. (traveling)

5. (breeding)

HUMPBACK WHALES

HANDOUT #2

Segment 3

How does the scientist track the whale migration?

What do the results tell us about whale feeding?

What food is a favorite of humpbacks along the Alaska coast?

What are the purposes of tagging whales?

Can a whale's signal be picked up when it is under the water? Why or why not?

What have scientists learned so far from tagging?

What is another word for data? (use the dictionary if need be)

How long may whales stay in one area to feed?

When do they move on to another area?

What is a shoal? (use the dictionary if need be)

Explain what a "bubble net" is:

What is the purpose of the scream?

How many whales set the net or scream?

For how long will whales bubble net?

HUMPBACK WHALES

HANDOUT #3

Whale Projects

Types of whales include: humpback, grey, orca (killer), blue, fin, bowhead, black right, pygmy right, sei, pilot, narwhal, sperm, white

Data to be Collected:

Name of the whale

Size

Physical Characteristics (include if it is a baleen or toothed whale)

Social Organization

Life Span

Population

Habitat

Feeding

Predators

Threats to survival (example: pollution, hunting, development)

Additional interesting fact/s