Enrich your learning with movies and documentaries in conjunction with this DVD Learning Guide! Simply rent or purchase the media, then use this guide to teach this film’s topics!

1. RENT
2. WATCH
3. LEARN!

Each DVD Learning Guide Includes:
- Vocabulary from the Film
- Discussion Questions based on Film Content
- Lesson Plans and Activities
- Related Books and Online Resources

Links to Netflix and Amazon included!
A Homeschool Learning Network® Learning Guide

Format: DVD
Age Levels: Elementary School, Middle School, High School
Genre: Documentary
Category: Science : Zoology
Rating: NR
Length: 50 minutes
Producer: IMAX
Warnings: No warnings

Summary

In this breathtaking, IMAX-filmed presentation, capture rare footage of the blue whale, follow the humpbacks across their ancient passageway from Alaska to Hawaii and back again, and experience close-up encounters with right whales. Listen to the astounding sounds of whale songs, and dive into the water with researchers for breathtaking views of whale calves while learning about the life cycle, mating and feeding habits of the largest mammal that ever lived! This presentation for all ages is a graceful, awe-inspiring glimpse into the underwater world of whales.

Vocabulary (Grades 1-12)

Try the following activities with the vocabulary words to the right. Depending on the age and ability of your students, they may be able to complete assignments from multiple grade levels.

1-2: Ask your students to copy the following words in alphabetical order, and to describe each of the words verbally. Practice spelling.

3-5: Look up each word in a dictionary, and write down its definition. Write each word in a sentence, or write a paragraph using the words.

6-8: Write a description or review about this DVD using the vocabulary words. Above each vocabulary word, write N if it is a noun, V if it is a verb; ADJ if it is an adjective; ADV if it is an adverb.

9-12: Write down words you hear in the video you don’t understand. Break the words into parts and see if you can determine the meanings. Look up the meanings.

Vocabulary

<table>
<thead>
<tr>
<th>Mammal</th>
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</thead>
<tbody>
<tr>
<td>Hydrophones</td>
</tr>
<tr>
<td>Plankton</td>
</tr>
<tr>
<td>Survive</td>
</tr>
<tr>
<td>Blubber</td>
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<tr>
<td>Krill</td>
</tr>
<tr>
<td>Upwelling</td>
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<tr>
<td>Baleen</td>
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<tr>
<td>Callosities</td>
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<tr>
<td>Breaching</td>
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<tr>
<td>Migration</td>
</tr>
</tbody>
</table>
Discussion Questions

Ask students to read through their questions carefully before watching the film, and take notes during the film. After watching it, ask students to write their answers to the following questions on a separate piece of paper.

Learning Styles: Auditory, Verbal  Intelligences: Verbal/Linguistic, Interpersonal

Elementary

1. What are the largest creatures ever to live on earth?
2. What whale is the largest animal ever to have lived?
3. What are callosities?
4. Where is one place that humpback whales go to have their babies?
5. Do humpback whales eat while breeding in Hawaii?

Intermediate / Advanced

1. What is the key to survival for all animals in the sea, including the whale?
2. How do blue whales capture and eat krill?
3. Name three interesting facts about how big the blue whale is.
4. Name three facts about the right whale.
5. Why is it thought that whales tail slap and breach?
6. How did the name "right whale" come about?
7. Name three facts about the humpback whale.
8. What is an ancient whale pathway? How do they know their way? What are the dangers?
9. What is the gravest threat today to whales like the humpback?
10. What is the bubble net strategy?
Lessons & Activities

Whale Form and Function

Subjects: Science
Grades: K-12
Style: Visual/Auditory/Experiential/Kinesthetic

Concepts:
You will learn about the forms and functions of various types of whales.

Lesson:
Using the resources below and books from your library, let’s “dive deep” into understanding whales’ form and function! Choose three whale types from the following resources, and then complete the steps below:

- Whale Resources: [http://www.whalesongs.org/resources/resource.html](http://www.whalesongs.org/resources/resource.html)
- Whale Identification Key: [http://www.frenchpass.co.nz/whales.html](http://www.frenchpass.co.nz/whales.html)
- Parts of a Whale: [http://www.acsonline.org/factpack/whlparts.htm](http://www.acsonline.org/factpack/whlparts.htm)

1. Make a chart on a landscape-oriented paper or poster board that lists the types of whales as rows, and the following as columns:
   - Size
   - Swimming Depth
   - Feeding
   - Teeth/Baleen Size
   - Body type
   - Swim speed
   - Distribution

2. Brainstorm in each category filling in the chart, and write a paragraph about each column, and why there might the adaptations occurred.

3. Choose 1-2 whales, and draw scientific illustration of them. Older students should calculate what scale they are drawing their model. 1” = 10’ is a good scale to start with. Identify the parts of a whale.

4. Create accurate whale sculptures using self-hardening or bakable clay! If you have more than one student, switch whale sketches so students can learn about more than one whale type. Make sure your sculpture is accurate, and paint it carefully with accurate colors! Younger children can create a diorama with their sculptures.
Additional Lessons and Activities for Your Child’s Learning Style

Visual (seeing)

• Can you identify whales? Which whales are black and white? Are Blue Whales blue? Go on this WebQuest to be able to identify different types of whales:

• If you live near the sea, plan a whale watch! If you do not live by the sea, you can still observe Whale behavior! Use the following resource and worksheets to learn more about visually identifying whale behavior:
  o Whale Behavior Key http://stellwagen.nos.noaa.gov/wildlife/behaviors.html
  o Whale Behavior Worksheet http://www.stemnet.nf.ca/CITE/whale_behaviour_2.PDF
  o Whale Behavior Matching http://www.stemnet.nf.ca/CITE/whale_behaviour.PDF

Auditory (hearing)

  o Name three parts of a whale song, and their relationship to each other.
  o How long is a whale’s song?
  o Why do they sing?

• After listening to whale songs and researching them, try your hand at some creative poetry or fiction! Pretend you are a whale, singing to your mate. Write a “translation” of your song into English. Now write it as if you were trying to ward off other male whales.

Experiential (feeling, internalizing)

• Swim with the Whales! What would it be like to swim with whales? Would you be excited, or frightened? View the “Swimming with Whales” movie available online (4.7 or 8 Mb) at this site: http://www.decadencefilms.com/whales/, or review the DVD for footage. Write your own fictional account about swimming with a whale. What did you feel? What did the whale do?

• Whaling History, was it a travesty? Research the history of the Whaling Industry at http://history.freehomepage.com/. Answer some of the following questions, and then create a Wanted Poster for Whales. The poster should include why it should be preserved, alternatives for whaling, and a description of the type of whale.
  o Do you think whaling was always bad?
  o Is or was there a time that whaling would be acceptable?
How and why are whales still being killed today?

How does that make you feel?

**Kinesthetic (movement and tactile)**

- How big is big? Using chalk, a measuring stick, your driveway, and a picture of your whale, see how big the biggest mammal REALLY is! Choose one whale from the list below, and draw it full size in your driveway. Try drawing a dolphin (12 feet) and a human (6 feet) next to the whale to see the size difference! To find pictures of whales go to the following Web site, or research them at your local library.

  - Enchanted Learning Whale Templates

<table>
<thead>
<tr>
<th>Whale Type</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humpback whale</td>
<td>52 feet</td>
</tr>
<tr>
<td>Orca (Killer whale)</td>
<td>27 feet</td>
</tr>
<tr>
<td>Gray whale</td>
<td>45 feet</td>
</tr>
<tr>
<td>Sperm whale</td>
<td>60 feet</td>
</tr>
<tr>
<td>Bowhead whale</td>
<td>60 feet</td>
</tr>
<tr>
<td>Blue whale</td>
<td>110 feet</td>
</tr>
</tbody>
</table>

- Graphing Whales! Now that you have drawn a whale full-size, compare whale sizes using this Enchanted Learning chart:


**Learn More! Books and Online Resources**

**BOOKS**

**The Best Book of Whales and Dolphins**

**The Whales' Song (Picture Puffins)**

**Whales (Wild Marine Animals)**

**Whales (Great Creatures of the World)**
Lesley Dow, Checkmark Books; ASIN: 0816022712
ONLINE RESOURCES

Whales
http://www.pbs.org/oceanrealm/seadwellers/whaledwellers/
From the PBS series: Secrets of the Ocean Realm, Sea Dwellers.

Zoom Whales
This site contains just about everything you might want to know about whales and dolphins. It includes pictures, information sheets, printouts, and a geologic time-chart.

Whales: A Thematic Web Unit
http://curry.edschool.virginia.edu/go/Whales/
Work on projects about whales plus find links to other great whale sites.

Nature: Humpback Whales
http://www.pbs.org/wnet/nature/humpback/
Learn about the mysterious habits and the songs of these whales.

Killer Whales
http://www.seaworld.org/infobooks/KillerWhale/home.html
Find fun facts, video clips from the Shamu Cam, and more.

Baleen Whales
http://www.seaworld.org/infobooks/Baleen/home.html
Find information on these whales' behavior, diet, life span, scientific classification, and much more.

Virtual Whales
http://www.cs.sfu.ca/research/Whales/
Explore the world of the Pacific humpback whale. Includes animation.

Save Our Whales
http://www.rightwhales.org/
Learn what this organization is doing to protect right whales and how you can do your part as well. Includes facts about these animals and the problems facing their survival as a species.

Humpback Whale Photo Gallery
http://www.sanctuaries.nos.noaa.gov/pgallery/pgallery.html
From the Hawaiian Islands Humpback Whale National Marine Sanctuary.
DISCUSSION QUESTIONS ANSWER KEY:

**Elementary**
1. Whales.
2. The Blue Whale
3. White patches of skin on right whales’ heads
5. No.

**Intermediate / Advanced**
1. Successful feeding.
2. They drive them to the surface, then clamp their mouth shut, baleen captures the krill as the water drains away, and they swallow their meal.
3. Answers will vary but may include: Its heart is bigger than a car; a child could crawl through its arteries; voices can carry at least 1,000 miles.
4. Answers will vary but may include: They have been hunted to near extinction, but their numbers have recovered to about 4,000. They have callosities; they give birth to one calf every 3 years.
5. As a challenge to other whales; a form of communication.
6. Because they were rich in oil that kept them afloat when killed, they were the “right whales” to hunt.
7. Answers will vary, but may include: They are among the smallest species of whale; they have teeth; humpback males sing; calves weigh 2-3 tons when born;
8. The passage between Hawaii and Alaska, for example, that has been their migration path for thousands of years. The calls of distant whales or by instinct. Fishing nets or accidents with passing freighters.
9. Killer whales
10. The whales, in a coordinated effort, blow nets of bubbles to encircle small schools of fish. Then, while one screams, they all rocket through the bubble net to eat the fish. The fish won’t pass through the “net of bubbles”.
More SCIENCE DVD Learning Guides available at www.hlnfamily-estore.com:

- Animals in the Wild: Amazing Habitats
- Animals in the Wild: Fangs and Claws
- Bears
- Dolphins: The Ultimate Guide
- Macgillivray Freeman's Dolphins
- Man's Best Friend
- Mountain Gorilla
- Mozu the Snow Monkey
- Nature Archive Series: Cats
- Search for the Great Sharks
- SuperCroc: It Didn't Walk With Dinosaurs, It Ate Them
- Survival Island: Animal Cities of South Georgia
- Tigers of the Snow
- Whales, An Unforgettable Journey
- Wolves
- Wolves at Our Door
- Allosaurus
- T-Rex: Back to the Cretaceous
- When Dinosaurs Ruled: Birth of the Giants
- Cancer Warrior
- Growing Up Well: Hey What About Me?
- Growing Up Well: Kids Get Cooking The Egg
- Growing Up Well: Let's Get a Move On!
- Growing Up Well: Paws, Claws, Feathers & Fins
- Pregnancy for Dummies (Movie Disc 1)
- Stress Relief: Yoga for Beginners
- The Joy of STRESS with Loretta LaRoche
- Death Trap
- Evolution: Great Transformations & Extinction!
- Evolution: The Evolutionary Arms Race & Why Sex?
- Evolution: Darwin's Dangerous Idea
- Evolution: The Mind's Big Bang & What About God?
- Land of the Mammoth
- The Human Face P1
- The Human Face P2
- The Incredible Human Body
- The Mind's Eye
- The Miracle of Life
- Tropical Rainforest
- Blue Planet Seas of Life: Open Ocean, The Deep
- Blue Planet Seas of Life: Seasonal Seas, Coral Seas
- Blue Planet Seas of Life: Tidal Seas, Coasts
- Into the Deep, Close Encounters of the Oceanic Kind.
- Origins of Life: four billion years in the ocean
- Amazing Earth
- Blue Planet
- Dinotopia
- Dinotopia Disc 1
- Dinotopia Disc 2
- Eruption of Mount St. Helen's
- Faster Than Sound
- Genesis: Four Billion Years in the Making
- Nature's Fury
- Ring of Fire
- StormChasers
- Twilight of Steam
- Cosmic Voyage
- Cosmos: One Voice in the Cosmic Fugue, The Harmony of the Worlds
- Cosmos: The Shores of the Cosmic Ocean
- Destiny in Space
- For All Mankind
- From The Earth To The Moon (Disc 1)
- From The Earth To The Moon (Disc 2)
- From The Earth To The Moon (Disc 3)
- Imax: Solar Max
- Life Beyond Earth
- Mission to MIR
- Standard Deviants Astronomy Adventure P1
- Standard Deviants Astronomy Adventure P2
- Stephen Hawking's Universe: The Big Bang
- The Dream is Alive
- The Planets: Giants and Moon
- The Planets: Life Beyond the Sun and Destiny
- The Planets: Star and the Atmosphere
- The Planets: Different Worlds and Terra Firma
- The Right Stuff
- UFOs and Aliens
- Understanding the Universe