

LESSON TIME: 45 minutes - 1 hour

- INTRODUCTION/OBJECTIVE – 10 minutes
- LESSON FACTS – 15 minutes
- HANDS-ON ACTIVITY – 10-15 minutes
- ACTIVITY PAGES (INDEPENDENT) – 5 – 20 minutes
- REVIEW – 5 minutes

Use our blog posts <https://exploremarinelifelife.com/educational-posts?blogcategory=Whales> and activity guides at <https://exploremarinelifelife.com/activities> to help you find facts and discussion topics for your lesson plans.

Remember: You don't have to win a Teacher of Year Award. **Your objective is to engage your student(s) and inspire them to keep learning!**

If you have any questions or comments, please reach out to us at exploremarinelifelife@gmail.com

MATERIALS

- Photo/website featuring a whale
 - o Ideally 2 whales – one baleen and one toothed whale – both are found on blog posts at <https://exploremarinelifelife.com/educational-posts?blogcategory=Whales>
 - Printed activity page(s) for independent work <https://exploremarinelifelife.com/activities>
 - Writing instruments – pencils, pens, or crayons
 - OPTIONAL – Rice, bowl, water, tweezers, fork or comb (whale eating activity)
 - OPTIONAL – Website to watch a video about gray whales
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LESSON PLAN AGENDA

INTRODUCTION/OBJECTIVE - Explain the lesson plan and dive right in!

1. When your students hear the word “whale” what words come to mind?
 - a. Come up with a list
 - i. Examples: Big, Blue, Orca, Killer Whale, cold, krill, giant, spout, blowhole, dorsal fin, pectoral fin, tail, fluke, melon, teeth, baleen
 - b. Look at a picture of a whale and add to the list
2. What do your students find fascinating about whales?
3. What would your students like to learn about whales?

Your objective is to make them excited about the topic!

LESSON FACTS - Educate and discuss whale characteristics and attributes

1. Background about whales
 - a. Whales are thought to have been related to dinosaurs and were land creatures
 - b. Part of the cetacean family, which includes dolphins and porpoises
 - c. Closest land animal is the hippopotamus
2. Different types of whales and characteristics
 - a. Baleen
 - i. Largest animals in the world
 - ii. Longest migration of all animals
 - iii. Baleen are like bristles
 - iv. Two blowholes
 - v. Most species are bigger than toothed whales
 - b. Toothed
 - i. One blowhole
 - ii. A few teeth to 240 teeth
 - iii. Eat everything from fish to seals
3. Science-related whale facts
 - a. Mammals
 - b. Migration patterns
 - i. Whales live in all oceans
 - c. Echolocation
 - d. Non-verbal communication methods
 - i. Pectoral slaps
 - ii. Breaching
 - iii. Spyhopping
 - e. What comes out of their spout when they take a breath? It isn't water!
4. Importance of whales
 - a. Importance to the food chain and stabilization of other species. Affects the food supply of other types of marine life
 - b. Studies show that the nutrients in some whale poop helps the environment by stimulating the growth of phytoplankton (the ocean's trees) which pulls carbon from the atmosphere making our air cleaner
 - c. Protected by different laws – commercial fishing is outlawed but aboriginal species are still allowed to hunt whales occasionally for subsistence (non-trade) purposes
5. OPTIONAL – if you need more material for the lesson plan
 - a. Dolphin, porpoise and narwhal discussion
 - b. Watch a video about gray whales from a naturalist - https://www.youtube.com/watch?v=a-XY--d_plU

HANDS-ON ACTIVITY – Interactive activities to reinforce lesson facts

1. Echolocation activity
 - a. Discuss how an echo works and, if possible, try to create an echo at home in a small room or closet
 - b. Have students stand close to a door or wall, close their eyes, and make a noise. Have them focus on the echo bouncing back to them. Have the student move closer and farther from the door and wall and listen to the varying sounds “bouncing” back to them, depending on how far the student is to the door or wall. This is echolocation! It shows how whales rely on echolocation in the deep, dark ocean.
2. Eat like a baleen whale activity (OPTIONAL)
 - a. Discuss how humans eat using our mouth, tongue and teeth
 - b. Discuss how toothed and baleen whales eat
 - c. Put dry rice in a bowl and have the student grab piece by piece with a tweezer (or use a larger food item and use chopsticks to pick up the item) – this is showing a toothed whale eating. Add water to the bowl with rice and use a fork or comb to scoop up the rice and have the water flow through the tines, capturing the rice on the top – this is showing how a baleen whale eats

ACTIVITY PAGES – Activities for all ages

1. Select one or more activity pages from <https://exploremarinelifelife.com/activities>
2. OPTIONAL: Have your student draw a whale or color a whale
3. OPTIONAL: Read a book with a whale character (suggestion is *Amos & Boris* by William Steig)

REVIEW – Wrap up the lesson

1. Ask open ended questions to find out what the students have learned about whales
 - a. How do whales eat?
 - b. How do whales communicate?
 - c. What is the most fascinating thing you learned about whales?
 - d. What other questions do you have about whales?
 - e. What would you like to learn more about whales or the ocean?
 - f. What was your favorite part of the lesson?
2. To conclude, think of a whale-related activity to do when the safer-at-home directive is lifted