

Now **You're** The Expert

Junior Naturalist Kit

Now that you've
met me, it's time to
show the world
what you know!

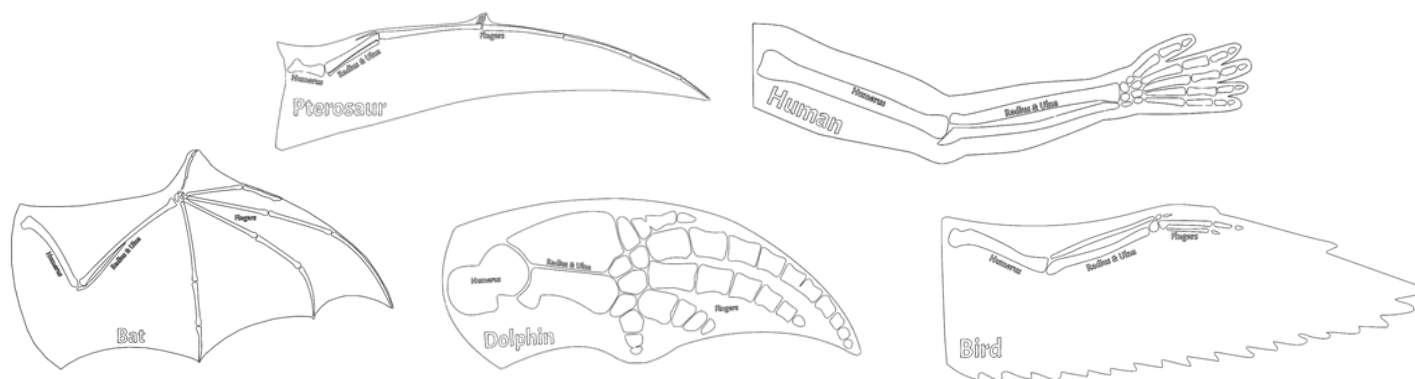


Forest Whales

Part 1: We all have the same bones

Look at your arm. Now look at the cutouts in front of you.

A human arm. A dolphin flipper. A bat wing. A bird wing. A pterodactyl wing.



They look completely different on the outside. But inside? They are built from the same bones, in the same order. Scientists call this “homologous structure,” which is a fancy way of saying: these animals are more related than they look.

Your job: Be the expert. Ask your grown-up these questions.

Question 1: "Can you point to where YOUR humerus is right now?" (The humerus is the upper arm bone. It goes from your shoulder to your elbow. Every animal on this page has one.)

Question 2: "Did you know that a dolphin's flipper has finger bones inside it?" (It's true. Dolphins have four to five finger bones hidden inside their flippers. You just can't see them from the outside.)

Question 3: "What do a bat and a bird have in common with you?" (Their wings are actually arms. A bat's wing is a stretched-out hand with a very thin layer of skin between the fingers. A bird's wing has the same upper and lower arm bones as yours, just shaped differently for flight.)

Bonus challenge for grown-ups: Try to bend your arm the same way a dolphin bends its flipper. Spoiler: you can't. The bones are the same, but the joints work differently.



Part 2: Meet the whales

Whale Matching Game

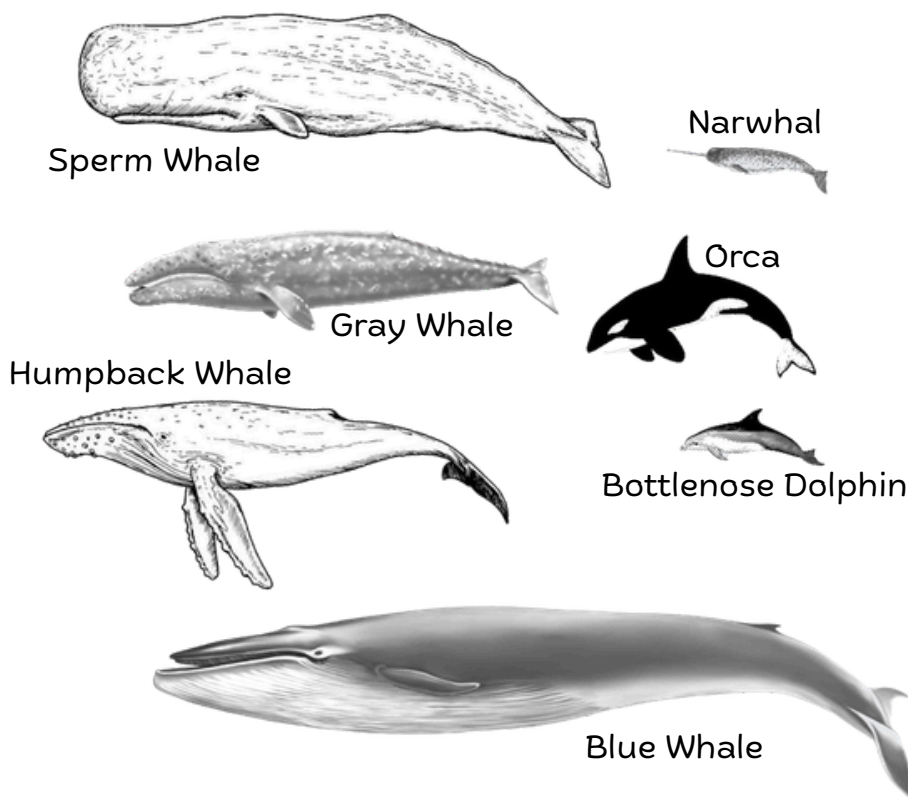
Using the cutouts, quiz the grownups and have them match these clues to the correct whale or dolphin. Answers are at the bottom of the page.

Clues:

1. "I have a long, spiral tooth that can grow up to 10 feet. People used to think I was a unicorn."
2. "My head makes up one third of my entire body. I am the largest toothed predator that has ever lived on Earth."
3. "I am the largest animal that has ever existed on this planet. My heart is the size of a small car."
4. "I am the whale that gave Forest Whales its name. I migrate farther than almost any other mammal, traveling up to 16,000 miles each year."
5. "I am the most recognizable dolphin in the world. I am highly intelligent, live in social groups, and am known for my friendly behavior."
6. "My songs can travel hundreds of miles underwater and can last for hours. Every male in my population sings the same song, but the song slowly changes over time."
7. "I am black and white and one of the most powerful predators in the ocean. Despite my nickname, I am actually the largest member of the dolphin family."

Answer Key:

1. Narwhal
2. Sperm Whale
3. Blue Whale
4. Gray Whale
5. Bottlenose Dolphin
6. Humpback Whale
7. Orca



Part 2: Meet the whales (continued)

Compare and Contract

Use the cutouts to help answer these questions.

Bottlenose Dolphin vs. Orca

- Which one is larger? (Orca. An orca can reach 32 feet and weigh up to 6 tons. A bottlenose dolphin averages 8 to 12 feet.)
- What do they have in common? (Both are actually dolphins, not whales. Both are highly social and communicate with their pods using sounds. Both are warm-blooded and breathe air.)
- What makes them different? (Orcas hunt in coordinated groups and eat marine mammals including other dolphins and whales. Bottlenose dolphins typically eat fish and squid.)

Sperm Whale vs. Blue Whale

- Which one is larger? (Blue whale. It can reach 100 feet and is the largest animal ever to live on Earth. A sperm whale reaches about 60 feet.)
- What do they have in common? (Both are massive, deep-diving whales. Both are mammals that breathe air. Both live in oceans around the world.)
- What makes them different? (The sperm whale has teeth and is a predator, hunting giant squid in deep water. The blue whale has baleen plates instead of teeth and eats tiny shrimp-like creatures called krill, consuming up to 4 tons of krill per day.)

Gray Whale vs. Humpback Whale

- Which one is larger? (Humpback. Humpbacks reach 50 to 60 feet. Gray whales reach 40 to 50 feet.)
- What do they have in common? (Both are baleen whales. Both migrate long distances each year. Both are known for their acrobatic surface behaviors like breaching.)
- What makes them different? (Gray whales feed primarily on the seafloor, filtering tiny crustaceans from the sediment. Humpbacks are famous for their complex, evolving songs, sung only by males. Gray whales are the species Clara is based on.)

Narwhal vs. Bottlenose Dolphin

- Which one is larger? (About the same. Narwhals reach 13 to 20 feet including the tusk. Bottlenose dolphins reach 8 to 12 feet.)
- What do they have in common? (Both are toothed whales in the same larger group called odontocetes. Both are social animals. Both use echolocation to find food.)
- What makes them different? (The narwhal's famous spiral tusk is actually an elongated tooth that can grow up to 10 feet. Narwhals live in Arctic waters year-round. Bottlenose dolphins are found in temperate and tropical oceans worldwide and are among the most studied marine mammals on Earth.)



Part 3: You are now a junior naturalist

Five things you now know that most grown-ups don't:

1. A dolphin's flipper has finger bones inside it, just like your hand.
2. Sperm whales may have names for each other, communicated through patterns of clicks called codas.
3. A bowhead whale discovered in Alaska had a harpoon tip from the 1800s lodged in its neck. The whale was approximately 200 years old.
4. The blue whale's heart is large enough for a small child to crawl through its arteries.
5. Humpback whales compose songs that slowly change over time and spread across entire ocean populations, similar to how music trends spread among humans.

One last challenge:

Tonight at dinner, teach your family one fact from this kit. See if they already knew it. They probably didn't.

You've earned it. You're the expert now.



Forest Whales visits schools, libraries, and community events across Wisconsin and the Midwest. Learn more at forestwhales.com

Clara's Migration Map tracks every community we visit. Find it at forestwhales.com



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