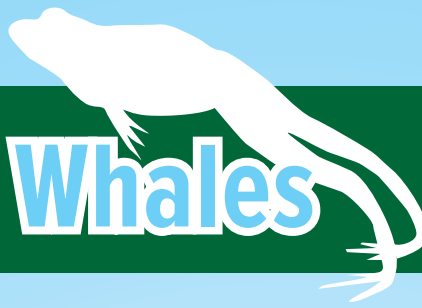


Wonderful Whales



Goals:

Sing a song about whales and draw a blue whale to scale on blacktop.

Objectives:

- Name several differences between fish and whales.
- Describe several features of whales and explain how these features help whales live in the ocean.
- State several facts about blue whales.

Grade Level: K-4

Subject Areas:

science and music

Materials Needed:

- pictures of fish and whales
- guitar or piano (optional)
- recordings of humpback whale songs and device for playing them (optional)
- chalk
- measuring tape or yardstick

Here are a couple of activities that will get your kids thinking, talking, and singing about whales.

Whale Music

Start this activity by leading a brief discussion about whales in general. Explain that for many years people thought whales were huge fish. But scientists eventually discovered that these animals are mammals, just as people are. Unlike most fish, they're warm-blooded, bear live young, nurse their young with milk from their bodies, and must come up to the water's surface to breathe.

As you show the kids pictures of whales and fish, explain that another difference between the two kinds of animals has to do with the way they swim. Fish swim by moving their tails from side to side. Whales, on the other hand, move their tails, or flukes, up and down. Point to the tails in the pictures of both animals so the kids can see that each of them is built for moving in a certain way. Here are a few more whale facts you can cover:

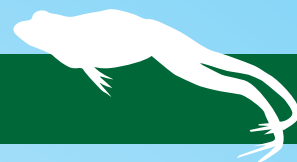
- A whale's side fins, called flippers, help the animal steer. (Point to the flippers in a picture of a whale.)
- A thick layer of fat, called blubber, keeps whales warm in the chilly ocean waters where they live.
- Whales breathe through one or two blowholes located on the top of their heads. Show the kids pictures of a whale spouting. Explain that when a whale does this, it's exhaling. The misty spray that comes out is the whale's breath. It changes to fine droplets of water when it hits the cool air, just as our own breath does when it's cold outside.

You might want to have the kids listen to some real whale songs before they sing their own song about whales. (See the end of the activity for some suggestions of whale song recordings you can play.) Explain that many kinds of whales make sounds, but one species—the humpback whale—sings long, complicated songs. Show the kids some pictures of humpbacks. (For a lot of information about these whales, see "A Whale of a Whale" below from *Ranger Rick*, October 1984.)

Many scientists think that only male humpbacks sing, and that they do it to attract a mate. But nobody really knows for sure. One thing researchers do know, though, is that all of the singers in a particular area sing the same song. And the songs seem to change quite a bit from one year to the next.

Now have the kids pretend that they're whales as they march around in a circle, sing the song shown below, and perform the motions that go with each verse. (Have them sing to the tune of "The Farmer in the Dell.")

Wonderful Whales



Verses

1. My flukes move up and down,
My flukes move up and down,
Heigh-ho the whale-oh,
My flukes move up and down.
2. My flippers help me steer, etc.
3. My blubber keeps me warm, etc.
4. My blowhole helps me breathe, etc.

Motions

1. Place hands side by side, with palms up, on your backside (where a tail would be). Move them up and down.
2. Hold arms straight, slightly up from sides, and bend your body this way and that
3. Wrap your arms across your chest and give yourself a hug.
4. Make a fist and place it on top of your head. Exhale loudly after the first, second, and fourth phrases in the verse.

Draw a Whale to Scale

Almost everyone is impressed with the sizes of whales. Try this short outdoor activity to help your kids visualize just how big the biggest species is.

Before the kids arrive on the day of the activity, measure off 100 feet (30 m) on a blacktop play area or parking lot. Then use chalk to draw the shape of a blue whale (see left) within that space so that it fills up the entire length. (Older kids might be able to draw the whale themselves.)

When you're ready to start the activity, show the kids a picture of a blue whale. Explain that these mammals are probably the largest animals ever to live. The biggest ones may get to be 100 feet (30 m) long and may weigh more than 80 tons (72 t). That's longer than three school buses parked end to end and heavier than 11 African elephants! Most scientists think that not even the largest dinosaurs got to be this big.

Now take the kids outside and lead them on a "tour" of the blue whale you drew. Have them walk inside the whale from head to tail so they can see how little of the whale the entire group fills up.

If you're working with older kids, you might also want to try letting one of the kids lie down along the length of the whale (at either the head or fluke end). Mark that

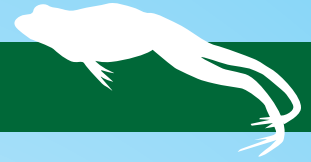
person's length on the blacktop. Then give the kids measuring tape or a yardstick so they can figure out how many times longer the whale is than that person.

To wrap up the activity, ask the kids what they think whales this size might eat.

Explain that, surprisingly enough, most of a blue whale's diet is made up of small shrimp-like crustaceans called krill. During the winter blue whales don't eat much, but during other times of the year they eat incredible amounts of food. A single blue whale can eat as much as eight tons (7.2 t) of krill each day!

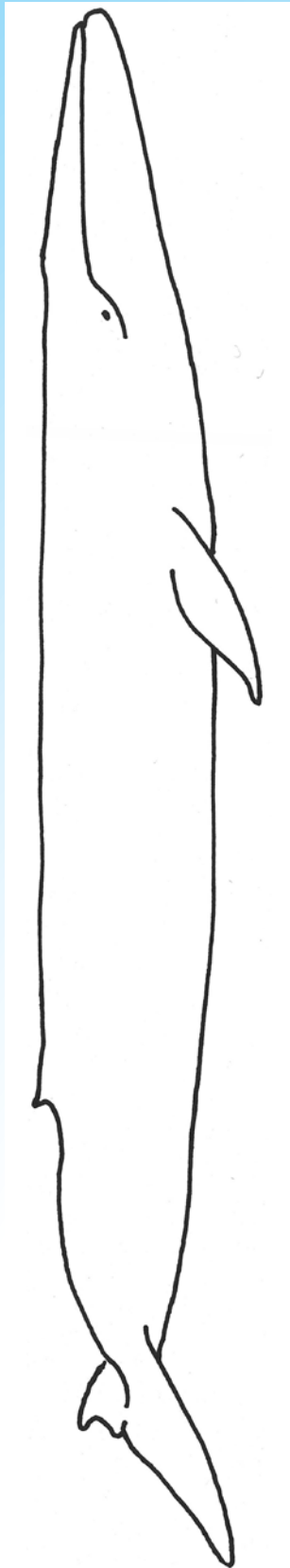
Whale Song Recording Resources

- **Ocean Mammal Institute:**
<http://www.oceanmammalinst.com/songs.html>
- **The Whalesong Project:**
<http://www.whalesong.net/>
- **Songs of the Humpback Whale:**
<http://www.livingmusic.com/catalogue/albums/songshump.html>
- **National Park Service:**
<http://www.archive.org/details/HumpbackWhales-SongsSoundsVocalizations>

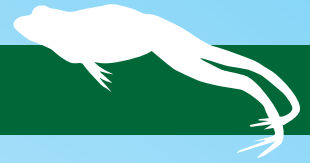


Wonderful Whales

Blue Whale
100 feet (30 m)



Wonderful Whales



A Whale of a Whale

by Gerry Bishop

What sings like a bird, leaps like a leopard, and plays like a puppy? You'd probably never guess a great big blubbery whale. But a humpback whale does all these things and more.

The Humpback Comeback

At one time about 100,000 humpbacks swam the oceans of the world. But great numbers were killed for their oil and meat. By the 1950s they were nearly extinct. Finally the humpbacks were protected by law, and now they seem to be making a comeback. At last count there were about 7000, and the numbers keep growing.

No-so-gentle Giants

Some people like to think of whales as gentle, peaceful creatures. But they've never seen two male humpbacks in combat! Male humpbacks spend lots of time fighting for mates. Battling males charge, push and shove, and lash out with their huge tails. Their battle roars can sound like the screams of angry elephants.

Humongous Humpbacks

A full-grown humpback is as big as a boxcar. That's four to five times larger than an elephant! On land, an animal that size would thump, thud, thump across the countryside like an overweight Brontosaurus. But in water a big whale moves as gracefully as a ballerina.

A humpback's knobby white flippers are the longest on any whale—so long they look like wings. They can be as long as 16 feet (5 m)—nearly one third the length of the whale's body.

Floating Islands

A big, slow-swimming whale must be a welcome sight to a sea creature looking for a home. Thousands of tiny, shelled animals called acorn barnacles attach themselves to a whale. On top of these grow hundreds of larger goose-necked barnacles. And the many grooves and slits in the whale's body are crowded with lice. Sometimes a humpback may carry over 1000 pounds (450 kg) of free-riding passengers.

Holy Cow, What a Calf!

"Baby" just doesn't seem like the right word for a humpback calf. After all, a newborn is about the size of a large station wagon.!

Mother humpback usually takes good care of her offspring. Often she will keep herself between the calf and any danger. She may even take it under a flipper to protect it. But sometimes she seems to be "napping on the job." Boaters and divers can often get close to a calf before its mother shows any alarm.

Lively Leapers

There's no livelier whale in the world than the humpback. Without warning, one may shoot above the surface like some sort of lumpy, bumpy guided missile. It may leap – or breach – thirty or more times in a row. Other humpbacks may join the party, and the sea will boil with them.

Why do they do it? No one knows for sure. Could they be trying to shake the pests from their skin? Could it be some sort of whale "body language"? Maybe they're showing off for each other. Or it could be that they're just having fun.

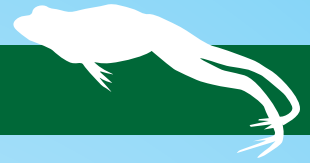
Toothy Terrors

The humpback's worst enemies used to be people. But now about all they have to look out for are killer whales, or orcas. Few people have seen orcas attacking a humpback. But many humpbacks carry scars that could have been made by nothing else. Calves would be easier prey, and the adults probably do their best to protect them. (A blow from a mama whale's tail would be something for even an orca to fear.)

Blowing Bubbles

A humpback eats up to two tons (1.8 t) of small fish and shrimplike creatures each day. When its food is swimming in a thick school, the whale charges right into it and takes a big gulp. But when the fish and shrimp are more scattered, the whale uses an amazing trick. It dives down and starts swimming in a circle beneath them. As it swims it blows streams of bubbles from the blowholes on top of its head. The bubbles rise like a circular net around the fish and shrimp, forcing them into a tight bunch at the surface. Then the

Wonderful Whales



whale charges up through the center of the "bubble net" and opens its mouth. Water pours through the brush-like strips of baleen hanging from the whale's jaws. The fish and shrimp are trapped on the baleen and are quickly gulped down.

Gulls often flock around a feeding humpback, trying to steal some of the food. But once in a while one gets too close and becomes part of the whale's dinner!

Underwater Rock Stars

No animal on earth sings like a male humpback. (Most females are silent.) A humpback's song is nature's loudest, longest, and slowest. One underwater photographer described a song so loud it felt like "drums on my chest."

When a male humpback decides to sing, it dives to about 80 feet (24 m). There it rests with its head down and its flippers stretched out. Then out come the most incredible moans, groans, moos, grunts, and twitters. The sounds form a tune that lasts up to 30 minutes.

And all the males in the area sing the same song.

But humpbacks are songwriters as well as singers. They tinker with their tunes bit by bit. In a few years, the songs are completely changed. "The songs we taped in 1964 and 1969," one scientist says, "are as different as Beethoven from the Beatles."

No one knows exactly why the whales sing, but there are some good guesses: They could be showing off for females and warning away other males, or just saying, "I'm me!" Whatever the songs mean, many people seem to like them as much as the whales do. A record album called "Songs of the Humpbacks" has sold over 100,000 copies.

Right now a humpback recording is on the Voyager 1 and 2 spaceships, heading toward the stars. Will anyone (or anything) ever come across these ships and play the records? Will they listen to the whales and wonder about them as much as we do?

From Ranger Rick, October 1984, p. 27-32