









GET READY FOR

National Geographic Film Concert:

Secrets of the Whales

Student Presentation Study Guide

Secrets of the Whales

A unique film-concert experience, James Cameron and Brian Skerry's Secrets of the Whales comes to life on stage, pairing highlights from the Emmywinning National Geographic Disney+ original series with a live symphony orchestra and live narration from award-winning recording artist, Jann Arden.

PLEASE NOTE: This concert presentation includes one 20-minute intermission.



About Brian Skerry



Brian Skerry is a photojournalist and film producer specializing in marine wildlife and underwater environments. Since 1998 he has been a contract photographer for National Geographic Magazine covering stories on every continent and in nearly every ocean habitat.

Brian's work has also been featured in publications such as *The New York Times*, *The Washington Post*, *Paris Match*, *Esquire* and *Audubon*. He is the author of 12 books including the acclaimed monographs *Ocean Soul* and *Shark*. His latest book, *Secrets of the Whales* was released in April 2021 by National Geographic as part of a multi-platform project he created that includes a cover story in *National Geographic* magazine and a 4-part documentary film series, which won the 2021 Primetime Emmy Award for Outstanding Documentary.

<u>About Brian</u> (brianskerry.com) Brian Skerry: Revealing the 'Secrets of the Whales' (nationalgeographic.com) How Nat Geo Explorer Brian
Skerry Is Protecting the Ocean
(Youtube)



Whale and Ocean Terminology

Word	Definition
Accelerate	to increase speed or velocity
Acidification	to become more acid
Advocacy	activity by an individual or group that aims to influence decisions within political, economic, and social institutions
Baleen	filter-feeding system inside the mouths of baleen whales
biodiversity	all the different kinds of living organisms within a given area
Biologist	expert in or student of the branch of science concerning living organisms
Bioluminescence	light emitted by living things through chemical reactions in their bodies
Blubber	thick layer of fat under the skin of marine mamals
Blue whale	the largest animal known to ever exist, 98 ft long and weighing 199 tonnes
Bowhead whale	species of Baleen whale, found in the Artic and subartic waters
Cetacean	type of aquatic mamal including whales, dolphins and porpoises known for being highly intelligent with complex social behaviour
Climate change	significant and long-lasting change in the Earth's climate and weather patterns
Coast	the part of the land near the sea; the edge of the land
Commons minke whale	small curved dorsal fin
Conservation	prevention of wasteful use of a resource
Continental shelf	area of seabed around a large landmass where the sea is relatively shallow compared with the open ocean. The continental shelf is geologically part of the continental crust.
Coral Bleaching	loss of symbiotic algae (zooxanthellae) in corals, leading to a loss of pigmentation.
Coral Reef	rocky ocean feature made up of millions of coral skeletons.
Dorsal fin	fin located on the back of most marine and freswater vertebrates
Ecosystem	community and interactions of living and nonliving things in an area.
Endangered	in danger of being harmed, lost or extinct
Exploration	the action of traveling in or through an unfamiliar area in order to learn about it
Fin Whale	second longest whale after the Blue Whale
Fluke	either half of the traingle-shaped end of a whales tale
Fluke print	pattern of smooth water formed by a whales tail just under the surface of the water, as it dives below
Gray Whale	baleen whale that migrates between feeding and breeding grounds yearly





Word	Definition
Humpback whale	large baleen whale known for being an acrobatic and vocal whale
International Whaling Commision	group of national governments that decides on the rules for whaling
Krill	small marine crustacean, similar to shrimp
Land	part of the earth's surface that is not covered by water, as opposed to the sea or the air
Marine	having to do with the ocean
Marine Ecosystem	community of living and nonliving things in the ocean
Marine mammal	an animal that lives most of its life in the ocean but breathes air and gives birth to live young, such as whales and seals
Marine pollution	any persistent solid material or chemical that is manufactured or processed and directly or indirectly— intentionally or unintentionally — disposed of or abandoned into the marine environment
Norht Atlantic right whale	critically endangered Arctic baleen whale
Ocean	large body of salt water that covers most of the Earth
Ocean circulation	worldwide movement of water (currents) in the ocean
Ocean Trench	a long, deep depression in the ocean floor
Oceanographer	person who studies the ocean
Omura's whale	least studied baleen whale
Organism	an individual animal, plant, or single-celled life form
Phytoplankton	microscopic organism that lives in the ocean and can convert light energy to chemical energy through photosynthesis
Pod	total population of people or orgnasis ina particular area
Pygmy Righ whale	smallest Baleen whale
Rice's whale	newly designated species
Sea	the expanse of salt water that covers most of the earth's surface and surrounds its landmasses
Seafloor	surface layer of the bottom of the ocean.
Shallows	an area of the sea, a lake, or a river where the water is not very deep
Southern Right Whale	One of three species classified as right whales that inhabit the oceans south of the equator
Water Cycle	movement of water between atmosphere, land, and ocean



UNDERSTANDING OUR WATERWAYS

Local Possibilities

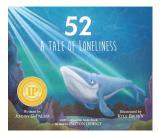
- Alberta WaterPortal | Education, Research, News About Water
- Alberta WaterPortal | Glaciers Introduction
- Drinking water and wastewater | Alberta.ca
- Fish Hatchery | Bow Habitat Station (alberta.ca)
- Climate change in Alberta | Alberta.ca
- Lotion in the ocean: is your sunscreen killing the sea? | Environment | The Guardian
- Does sunscreen damage freshwater lake ecosystems? | CBC Radio
- Water conservation primary resource National Geographic Kids (natgeokids.com)
- Ocean habitat (nationalgeographic.com)
- WUIW Tip Tank (wateruseitwisely.com)



Other Ways to know the Ocean

- All the ways of knowing | Ocean School (nfb.ca)
- <u>The Water Walker | Sustainability Classroom Resources at Resources for Rethinking</u> (resources4rethinking.ca)

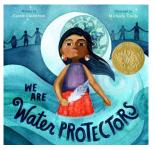
CHILDREN'S BOOKS



<u>52: A Tale of Loneliness</u>
Johnny DePalma
Readalong: Dedicated Review
(thechildrensbookreview.com)



Over and Under the Pond
Kate Messner, Christopher
Silas Neal (Illustrator)



We Are Water Protectors
Carole Lindstrom,
Michaela Goade (Illustrator)



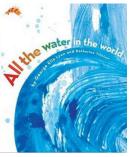
The Ocean Calls: A Haenyeo

Mermaid Story

Tina Cho

Readalong: Storytime Online |

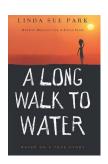
Waukee Public Library



All the Water in the World George Ella Lyon



Those Who Dwell Below Aviaq Johnston for readers aged 12+



A Long Walk to Water:
Based on a True Story
Linda Sue Park
for readers 10+



20 WAYS KIDS CAN HELP TO SAVE WATER

Water Conservation for Kids | The Water Page

IN THE GARDEN

Put a barrel outdoors to catch rainwater, then use that water for things like watering plants or flushing toilets and save hundreds of gallons of water a year!

In the summertime, it's fun to play under the lawn sprinkler. When you do, make sure it's when the lawn is being watered at the same time.

Do you have other summer water toys that require a running hose? These might be fun, but they also waste gallons and gallons of water.

If there is a pool or a hot tub at your house, encourage those who use it to cover it afterwards. This prevents evaporation and having to keep refilling.

If the adults in your home occasionally water the lawn, encourage them to water in the cooler parts of the day (early morning, or at or after sunset), and never on windy days. This keeps in the soil all the water being sprayed instead of most of the water being lost to evaporation.





Do you like a drink of cold water now and then? Rather than running the kitchen faucet for several minutes to get cold water, keep a pitcher of water in the refrigerator.

Is there a garbage disposal in your kitchen sink? Then, you know the water has to run into it when you turn on the switch. Instead of doing that and wasting water, why not start composting food waste instead? Collect things like fruit skins and peels, vegetable leaves and stems, and even dead plants and flowers. In a ceramic container, keep them moist and toss them for air once a week. The compost can then be added to a garden like a vitamin for your outdoor plants!

If there is a dishwasher in your house, encourage everyone to scrape their plates rather than rinse them before loading them into the machine. It should always be full before turning it on.

Do you have plants in your house? When meals are prepared and vegetables or other fresh produce are washed, collect that water and use it to water the plants.







In the tank part of the toilets in your house, put several drops of food coloring into the water. If you see the coloring seeping into the bowl, there's a leak. Fixing it can save about 600 gallons of water each month!



Do you notice that your toilet handle "sticks" and has to be "jiggled" for the toilet to stop flushing? If this is happening, water is continuously running through the toilet and needs to be fixed. Let the adults in your home know.

Use a wastebasket for used tissues, or things like gum wrappers, paper towels, or even dead bugs or goldfish. Don't flush them - the average flush uses as much as 5 gallons of water! Even if the toilets in your house are "low-flow" toilets, using them for trash still uses 1.5 gallons of water unnecessarily.



When you brush your teeth, don't leave the water running. Turn the faucet on to get your toothbrush and toothpaste wet, and then again to rinse your mouth and toothbrush. Don't leave the water running while you're brushing.

Since baths use a lot of water (about 37 gallons on average), take short showers instead and use only about 20 gallons of water, instead.



A regular shower head uses as much as 7 gallons of water every minute. Let adults know they could get a free low-flow shower head at the local water district. Or, suggest that they look for a low flow shower head that has a cut-off valve that shuts off the water flow while lathering your hair or shaving legs. You can then turn the water back on, without it starting off cold again. This will help to conserve even more water while showering.



Is there a leaky faucet or toilet in the bathroom at school? Be sure to let someone know so that it can be repaired.

EVERYWHERE!

Tell adults when faucets are dripping.



Whenever you wash your hands, don't leave the water running. Wet your hands and turn the water off. Use soap and lather your hands well, then turn the water on to rinse. Turn off the water and make sure it is off completely. Then dry your hands.

Encourage the others in your home, and your friends, not to leave any faucet running. Only use what is truly needed!