

# Educator's Guide: World of Wonder: The Deep Blue

By Charlotte Guillain

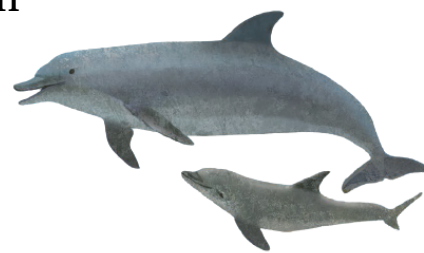
Illustrated by Lou Baker Smith

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Curriculum Connections, Grades 2-5

English Language Arts, Art, History, Science

## Objective

Students will listen to the teacher read the book aloud or read the book independently; extend vocabulary; participate in a class discussion; and complete independent activities using the book as a springboard.

## About the Book

From vibrant coral reefs to mysterious deep-sea trenches, readers will swim through tropical seas and dive into the darkest depths of the ocean to discover Earth's diverse and delicate ocean ecosystems. In this beautifully illustrated book, readers will be immersed in different ocean landscapes, learn about the diverse range of species, and understand the importance of maintaining these beautiful, natural habitats.

## About the series

The World of Wonder series shines a light on our planet's fragile ecosystems--from majestic mountains to expansive forests and deep oceans, gently covering important topics such as climate change and the impact of humans on the natural world.

## About the Author

Charlotte Guillain lives in Oxfordshire, UK. She writes fiction and non-fiction for children, including the picture book *Spaghetti with the Yeti*, which was shortlisted for Oscar's First Book Prize 2014 and was featured in CBeebies Bedtime Stories.

## About the Illustrator

Lou Baker Smith is an illustrator based in Bath, UK. She has worked on a range of subjects throughout her career, especially food-related pieces for cookbooks, packaging, and brochures. Her love of color, textures, and layers is a key theme that runs through her work.

### Pre-reading discussion

If students are reading the book independently, ask them to keep a list of words that are unfamiliar or not understood in context. Encourage them to first try to figure out the meanings from the text and pictures, and then to consult a dictionary.

If reading the book together as a class, have students point out unfamiliar words. Give a brief definition and keep a list of these words for later review. Some possible examples: *microworld*, *coastline*, *plankton*, *shoal*. Show the “Contents” page to the class and explain what a Table of Contents is. Read aloud the chapter headings and find out which chapters the class is most interested in reading.

### Post-reading discussion questions

1. Did the Table of Contents at the beginning of the book give you a good idea of what information might be included inside? Were you more interested in the book after hearing the chapter headings? Did you want to “jump ahead” to read a specific chapter?
2. At the end of the book, you can also find an Index. Do you know how to use the index to quickly find something mentioned in the book? Can you see how an index would be useful when you are writing a report about this book?
3. Do you remember what percent of the Earth’s surface is made up of oceans? What are the names of the five distinct oceans? Which ocean is the largest and deepest? What does the name of that ocean mean?
4. What causes the water on Earth to be pulled by tides? What happens to the ocean animals who are left behind on the shore when the tide is out? Name some of these animals. Have you been to the beach and seen the tide going in or out? Have you seen any animals in the tidepools? Have you watched the waves crashing along the shore? What causes waves?
5. What river empties into the Atlantic Ocean, bringing tons of mud with it? How much of Earth’s fresh water comes from the Amazon? Would you like to take a swim in this muddy water? What are some of the good things that are carried along by the river?
6. How are food particles carried through the ocean? What are these microscopic nutrients called? Name some of the fish that eat the plankton. How do the sardines protect themselves from predators? Who are some of their predators?
7. What is the name of the super-sized seaweed that grows underwater off the coast of Canada? How tall can it grow? How fast can it grow? What are some of the animals that shelter in the kelp? What is the creature that ravages the kelp for food? How does a sea otter break open a sea urchin?
8. How is seagrass different from kelp? Why is the water cleaner where seagrass grows? What migrating reptile eats seagrass? How many pounds can it eat each day?

9. Which trees grow out of the sea in tropical coastlines? How do they survive in salty water? How do their roots help keep coastlines from eroding? Which marine mammals live among the mangroves in Florida? Have you ever seen a manatee? What do they eat?
10. What is a coral polyp? Where can it be found? Why do its tentacles wave in the water? How does a single coral polyp transform into an enormous reef?
11. What reef is the largest living structure on earth? How far does it stretch? Which land continent is it near? What are some of the different species that make the reef their home? Which is the most venomous?
12. What is a ring-shaped reef called? How did it form? How is the lagoon inside the ring formed? What does it mean when a reef is bleached? What role does climate change have in this process?
13. What is the term for the open ocean, when no land can be seen on the horizon? What is the largest creature on Earth, sometimes found here? What causes hurricanes to form here?
14. What is the Great Pacific Garbage Patch? How long can it take the plastic to be worn away? What dangers can it pose to sea life? Can you think of some things that humans can do to reduce their use of plastic?
15. What is the “deep ocean”? How far below the surface does the twilight zone begin? How far below does the midnight zone begin? What creatures live in the deep ocean? How do they find food? How do they keep predators away? How would it feel to live in such a dark place?
16. What is the abyssal plain? How far from the surface can it be found? How thick can the mud on the bottom surface be? What’s the name of the deepest trench in the plain, and in what ocean can it be found? How deep does this trench get?
17. In the Arctic Ocean, how are icebergs formed? Which mammal living there is called “the unicorn of the sea”? Do you see where that nickname comes from? What do they eat? How do they break through the surface ice to feed in winter?
18. Can you think of some ways that people interact with oceans for recreation? Have you swum in the ocean, or ridden on a boat or ship? Have you or someone you know been scuba diving? How about surfing?
19. In the author’s note, she says “Every living thing on the planet needs the oceans, including us. Together we need to raise awareness about the problems the oceans face and protect the creatures that live there.” Talk about some of the ways humans need the ocean’s resources, and also about what can be done about some of the problems facing them.

## Activities

### English Language Arts

Consult your list of unfamiliar vocabulary words from the story. After confirming the definitions for all, use each of them in a sentence.

Choose a chapter heading from the Table of Contents, and write an original story or poem using that title. (It doesn't have to be about the ocean!)

Imagine that you are a journalist with an assignment to interview a scientist who is studying how to grow enough seaweed to feed everyone in the world. Write an article with 6-10 questions for the scientist and his or her answers to the questions.

### Art

Create an original painting, drawing, sculpture, collage or other artistic representation of the ocean or the plants and creatures that live in the ocean.

Create a comic or short graphic story about animals living at the bottom of the Mariana Trench.

Create a poster portraying some of the dangers of the ocean. Examples: tsunamis, tidal waves, underwater volcanos, sharks, shipwrecks.

### History

Conduct research and write a report on one of the following:

- Ocean travel—when/how did people begin travelling over the ocean and how this has changed over the years
- Famous shipwrecks
- How oceans have affected countries during war

### Science

Conduct research and write a report on one of the following:

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|----------------------------|------------------|
| • Crown-of-thorns starfish | • Arctic tern    |
| • Blue-ringed octopus      | • The blue whale |
| • Sea anemone              | • Krill          |



Using the facts in the book, write two or three paragraphs about the relationship between phytoplankton and the ocean food web that depends on it. What are the conditions that make it flourish? What other life thrives when phytoplankton thrives?

Choose one of the five oceans, conduct research, and write a report detailing and describing five facts about that ocean.

**Guide created by We Love Children's Books**

**Also Available in the  
World of Wonder series**

