



Educator's Guide: World of Wonder: Mountains

By Charlotte Guillain

Illustrated by Chris Madden

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Curriculum Connections, Grades 2-5
English Language Arts, Art, 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 the mighty Himalayas to the majestic Rockies, take a look at the plants, animals, and land formations in Earth's amazing mountain ecosystems. In this beautifully illustrated book, readers will see the different flora and fauna, learn about the diverse range of species, and understand the importance of maintaining these alpine landscapes and snowy mountain peaks.

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

Chris Madden is an editorial and lifestyle illustrator, born in Salford, UK. Since graduating from Stockport College with a first-class BA honors degree in Design and Visual arts, his illustrations have appeared in many national magazines and newspapers. He is the illustrator of *We Travel So Far* and *We Build Our Homes*.

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: *molten*, *crevasse*, *seracs*, *chasm*, *magma*. 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? 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 book report?
3. Can you name several ways that new mountains are created? What is the Earth’s mantle? How long does it take for Earth’s rock plates to push against each other and force the rock upward? Does it make you nervous to find out that what you are standing and living on is not exactly “solid ground”?
4. Have you ever seen a mountain, or a mountain range? Which one? Where is it? Did you climb it, or drive in a car to the top? Can you name some of the mountain ranges you learned about in the book?
5. Which mountains are the highest on Earth? Why are the Himalayas called “the rooftop of the world”? What does their name mean? What are the rivers of ice called, which flow down the sides of the Himalayas? In what part of the world are they located? What is the landscape like, high on their slopes?
6. Which Himalayan mountain is rising faster than any other mountain? What is the English name for the highest mountain on Earth? How tall is it? What are some other names for Mount Everest? Which animals and plants can you find at the top? How does the jumping spider survive there? Can you name some of the insects that live at the bottom of the Himalayas, in the grassy meadows?
7. What is the tallest mountain in the world if you consider that part of it is hidden under the sea? What does its name mean? Where can you find Mauna Kea?
8. Why do you think that humans are fascinated with knowing which mountains are highest, which animals are fastest and which trees are oldest? Are you interested in these kinds of “extreme” facts?
9. What is the Khumbu Icefall? What pulls it down the mountain? What are the towers of ice called, that form on the icefall? What happens when the ice cracks? What is the difference between an icefall and an icefield? The book asks: “What will happen as winters become warmer and less snow falls? How long will the glaciers inch their way down the mountainsides?” What do you think will happen? What can people do to help preserve the mountain ecosystem?

10. How does the snow leopard's coat camouflage her from her prey? What are some other ways a snow leopard's body and fur make it suitable for living on a snowy mountain? What will happen to the snow leopard if the mountain ecosystem changes?
11. What happens to make a volcano erupt? How many active volcano systems does Iceland have? Can you remember and pronounce the name of Iceland's highest mountain? What happens to the ice of glaciers when a volcano erupts?
12. The highest mountain in Japan is also a volcano. Can you remember the name? How is Mount Fuji responsible for earthquakes? What are some of the creatures who call Mount Fuji home? How long has it been since an eruption?
13. What is the highest and largest mountain range in Europe called? Can you name some of the countries where you can find the Alps? What is the highest mountain in the Alps? What does its name mean? Can you name some of the animals found living in, or flying above, the Alps? What are some of the reasons the Alpine ibex is well-suited for living on the mountainside?
14. What is the largest lake in the Alps? What's the name of the river that flows down from the snowy mountain and forms the lake? Would you be willing to go swimming in that lake?
15. How does the Alpine longhorn beetle make music? What physical feature gives the beetle its name?
16. What noisy event happens when snow piles up too high on icy mountain slopes? Do you think that might be a reason not to build a house on the side of a snow-covered mountain?
17. Which mountain range is the longest on land? On what continent can you find the Andes? How long ago did they begin to form? What types of climates can you find in the Andes? Can you name some of the animals, birds and reptiles found in the Andes?
18. What is the name of the red lake in the Bolivian Andes? Why is this lake red? What rose-colored birds can you find in the lake?
19. What are some of the minerals that color the rocks that make up the Rainbow Mountains? Where can you find this mountain range?
20. In what countries can you find the Rocky Mountains? What are some of the habitats found in the Rockies? How does a river turn into a waterfall? What will you find at the bottom of the Lower Yellowstone Falls?
21. Can you think of some ways that people interact with mountains for recreation? Would you be interested in climbing a large mountain? How about skiing or snowboarding down a mountain? Or riding a mountain bike on some high mountain trails? Why are people fascinated with mountains?

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 mountains!)

Imagine that you are a journalist with an assignment to interview a mountain climber who is getting ready to climb one of the tall mountains mentioned in the book. Write an article with 6-10 questions for the climber and his or her answers to the questions.

Art

Create an original painting, drawing, sculpture, collage or other artistic representation of a mountain or a volcano.

Using all the mountains mentioned in the book, create a chart, drawing, poster or other depiction showing their relative heights.

Science

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

- Mount Everest climbing expeditions
- Avalanches
- Volcano eruptions
- Butterflies of the Himalayas
- The Andean condor
- Endangered species that live on mountains

Using the facts in the book, write two or three paragraphs about the relationship between mountains and rivers. How do mountains provide water to rivers? How are waterfalls formed? How does a river change a mountain's terrain over many years?

Conduct research and write a report on how climate changes is affecting mountain ecosystems. You can start with the author's note, where she says: "But now mountains are being affected by changes that they have never faced before. Our climate is getting warmer. Higher temperatures are melting glaciers faster than they can be replaced by winter snowfall. The water from these glaciers keeps billions of people and animals alive. But if the glaciers melt too quickly, the land in the valleys below will flood. Then, when the glaciers are gone, there will be a shortage of fresh water. Without water, wildlife in the valleys, and throughout the world, will disappear."



Guide created by We Love Children's Books

Also Available in the
World of Wonder series

