

LET'S CELEBRATE AMERICA

THE GRAND CANYON

This Place Rocks



by Joanne Mattern



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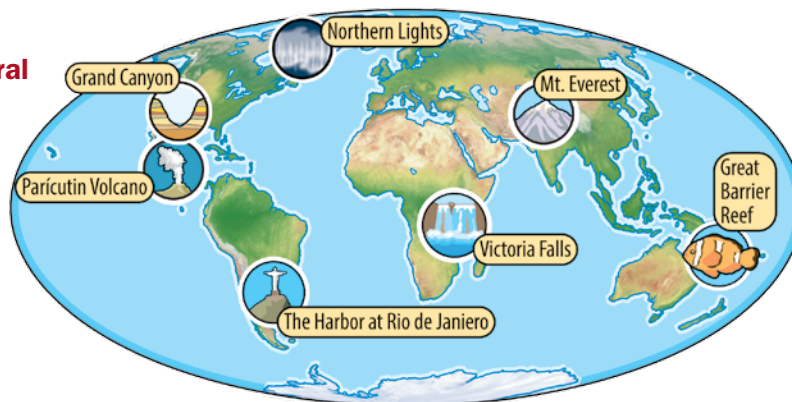


A Place of Beauty

Look around. You are standing in one of the most amazing places on Earth. A huge crack in the land spreads out in front of you. Looking down, you see rocks that rise from the ground far below. Some of the rocks are flat on top. Others are jagged and sharp. The landscape is striped with different colors, and the rocks glow in the sun. Patches of green dot the ground and small, narrow **canyons** cut into the rocks. A sparkle of water shows a river flowing at the bottom of the canyon. From the top, the river looks small, but a closer look shows a noisy rush of water carving through the canyon floor.

This place is the Grand Canyon. It is millions of years old. It is one of the most beautiful places on Earth. The Grand Canyon is one of the Seven Natural Wonders of the World. It is the only Wonder located in the United States.

The seven natural wonders of the world





How Was the Grand Canyon Formed?

The Grand Canyon is in northern Arizona. The canyon is located on a large, flat area of land called the Colorado **Plateau**. The Grand Canyon is 277 miles (446 km) long. In some places it is 18 miles (29 km) wide and more than a mile (1.6 km) deep. The Grand Canyon is in the **desert**. The land here is very dry.

Yet, water formed the Grand Canyon. The Colorado River flows through the bottom of the canyon. Over millions of years, the water wore away the rocks around it. This process is called **erosion**. Wind and rain also cause erosion. Rain washes away bits of rock. Wind blows against the rocks and wears them away, one tiny piece at a time.



We learn much about nature, culture, and history of the Grand Canyon from this magnificent river.



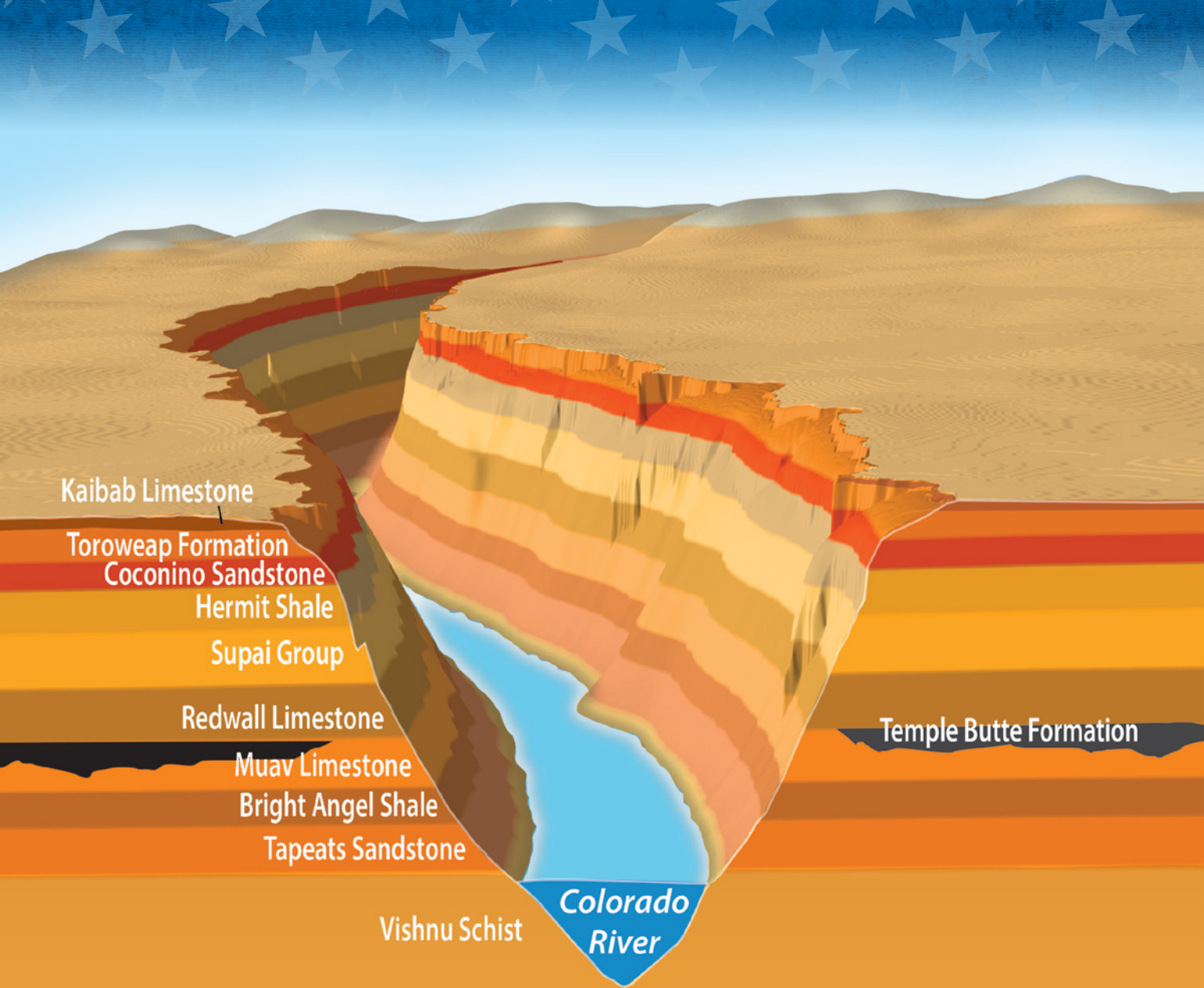
Erosion by wind and rain creates beautiful rock formations in the canyon.

Erosion takes a long time. It has taken six million years for the Colorado River to carve the Grand Canyon out of the rocks. The movement of water created different shapes in the rocks. Some of the rocks are flat on top. These are called **mesas**. Some rocks are harder than others. If a rock is soft, it wears away more quickly than a rock that is hard. That is why the rocks in the Grand Canyon have different shapes.

IT'S A FACT

Arizona's nickname is the Grand Canyon State.





There are different kinds of rock in the Grand Canyon. The rocks are also different colors. The color of a rock depends on the minerals it is made of. Some of the rocks are white limestone. There is also a type of red limestone. Limestone is soft and wears away easily.

World's Biggest?

At the bottom of the canyon you can see a dark rock called schist. **Sediment** created by sand and mud flowing in the Colorado River also turned into a type of rock called sandstone. You can see this red-colored rock near the bottom of the canyon. All in all, there are about eleven different layers of rock in the Grand Canyon.

The average depth of the Grand Canyon is about 1 mile (1.6 km). But the Yarlung Tsangpo Canyon in the Himalayas is the world's longest and deepest canyon. The widest? Capertee Valley Canyon in Australia at 18 miles (29 km) wide!

The rocks at the top of the canyon are young compared to the rocks at the bottom. The rocks at the top of the canyon are about 250 millions years old. The rocks at the bottom formed two billion years ago!



Nearly 40 rock layers are exposed in the Grand Canyon.

Many people like to explore the Colorado River. Guides take visitors on white-water rafting trips down the river. They paddle large rafts through the rough water. Seeing the Grand Canyon from the river at the bottom is very different than looking down from the top!

IT'S A FACT

It takes two to three weeks to raft from one end of the canyon to the other.



River rafting trips take visitors through the heart of the Grand Canyon.

Protecting the Grand Canyon

The Grand Canyon is part of the U.S. National Park System. Lands in the park system are protected. People cannot build inside the park or damage any of the natural resources there.



Because the Grand Canyon is such a popular tourist site, the National Park Service has taken steps to protect the land there. People cannot drive up to the canyon because so many cars would pollute the air. Instead, visitors leave their cars farther away. They take buses to the South Rim. People also have to make reservations to camp in the Grand Canyon or take rafting trips down the Colorado River. These rules allow the Park Service to control how many people are in the canyon at one time. Park **rangers** also patrol the area. They pick up litter and make sure everyone follows the rules. Their job is to keep both visitors and the canyon safe.

The Grand Canyon can also help us understand how small our role is in the larger world. Standing on its rim and thinking about the millions of years that have passed since the canyon was created gives visitors an appreciation of their place in the natural world.

Park rangers protect the land, animals, plants, artifacts, and visitors at the Grand Canyon.



Glossary

canyon: a deep, narrow river valley with steep sides

desert: a dry area

erosion: the process by which moving water or wind wears away rock over time

fossils: the remains of ancient organisms that are preserved in rock

mesas: broad, flat-topped hills with steep sides

mules: animals that are part horse and part donkey

national park: an area that is owned and managed by the government

nomads: people who travel from place to place instead of settling in one place

plateau: a high, flat piece of land

ranger: a person who works in a national park

rapids: fast-moving water in a river

sediment: pieces of dirt, mud, and rocks that are carried by water



Learn More in the Library

Books

O'Connor, Jim. *Where Is the Grand Canyon?*
Grosset & Dunlap, 2015.

Rau, Dana Meachen. *U.S. Landforms* (True Books).
Scholastic, 2012.

Vieira, Linda. *Grand Canyon: A Trail Through Time*.
Walker Children's Press, 2000.

Web Sites

The Hualapai Nation's Grand Canyon West
www.grandcanyonwest.com

National Park Service

www.nps.gov/grca/learn/kidsyouth/index.htm

Science Kids

[www.sciencekids.co.nz/sciencefacts/earth/
grandcanyon.html](http://www.sciencekids.co.nz/sciencefacts/earth/grandcanyon.html)



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One of the most visited places in North America, Grand Canyon National Park is like an open window to Earth's geologic history. The carving of the canyon's walls by erosion left a cross-section of the Earth's crust from millions and millions of years ago. See for yourself how grand and beautiful this gorgeous gorge really is.



LET'S CELEBRATE AMERICA

Experience the history of some of the most important sites and symbols of the United States of America. Learn about natural wonders and human-made wonders and why they are still important to America's identity today.

Read about all these sites and symbols:

- ★ Ellis Island
- ★ Fort McHenry
- ★ The Gateway Arch
- ★ The Grand Canyon
- ★ Historic Williamsburg
- ★ The Liberty Bell
- ★ Martin Luther King Jr. Memorial
- ★ Mount Rushmore
- ★ Statue of Liberty
- ★ Yellowstone National Park