



The Mini Page

Issue 03, 2023

Founded by Betty Debnam

Next Week:
Our States:
Delaware



Isn't It Grand?

Mini Page photos

Has something in nature ever taken your breath away? For example, maybe a dramatic thunderstorm caught your attention, or a tiny ladybug surprised you when it spread its wings and flew away.

Many people feel awestruck when they first visit the Grand Canyon in Arizona. The Mini Page visited the canyon last fall and learned about this vast geologic formation.

Origins

The canyon is formally called the Grand Canyon of the Colorado River. The river, which starts in northern Colorado and flows more than 1,400 miles through Utah, Arizona and Nevada, empties into the Gulf of California in Mexico.

Scientists believe that over 2 billion years, the river's water, working with **uplift** of the Colorado Plateau, has cut the deep canyon into the land. (Uplift is a result of tectonic plates moving and changing the Earth's surface.)

Geologists are able to see different layers of rock in the canyon's walls and tell how old those layers are.

Layers

There are three main layers of rock in the canyon.



Along the Bright Angel trail into the canyon, hikers can see clearly the layers of rock that have formed the canyon walls over millions of years.

• **Metamorphic** rocks are the oldest and deepest layer. These rocks are called the Vishnu Basement rocks and have **igneous** rock, or **granite**, mixed in with them. They are roughly 1.7 billion years old.

• The next layer is called the Grand Canyon Supergroup, and it includes **sandstone** and **mudstone**, along with some igneous rock.

• The higher layers are made mostly of sandstone, which gives them their reddish color, and were formed just a few million years ago. These layers contain a lot of fossils, most from sea creatures who lived there when the land was covered by ocean.

More than just rocks

There's more to the Grand Canyon than rivers and rocks. It's home to a wide variety of plants and animals. The North Rim of the canyon is roughly 8,000 feet higher than its floor. As a result, widely different life-forms can exist there.

At the South Rim of Grand Canyon National Park, you're likely to see a lot of squirrels, birds (including scrub jays and ravens), mule deer and elk. Farther down in the canyon, bighorn sheep scamper on the steep walls, and reptiles such as snakes and lizards are present from the canyon floor to the rim.

Several types of fir, pine and juniper trees live along the rim. Cactuses and wildflowers also thrive there.

Mini Fact:

Grand Canyon National Park was established by Congress in 1919.

Historic figures

Architect **Mary Colter** designed many buildings at the South Rim of the Grand Canyon. She was unusual for her time; most architects were men in the early 20th century.

Colter designed the Desert View Watchtower, which lies at the east end of the park. It is 70 feet tall and was designed to look like an ancestral Puebloan watchtower.

John Wesley Powell was a geologist and explorer who was the first person to travel the Colorado River through the canyon. With a team of 10 men, Powell took three months to go from Green River, Wyoming, to Moab, Utah.

Powell designed his own wooden boats, which weren't well-suited to the rocky riverbeds. The part of the journey through the Grand Canyon was particularly difficult, with sections of rapids challenging the crew.



The Desert View Watchtower opened in 1932.



John Wesley Powell
1834-1902

NPS photo



A juniper tree

Resources



On the Web:

- bit.ly/MPcanyon
- bit.ly/MPcanyon2

At the library:

- "Grand Canyon: The Complete Guide" by James Kaiser

The Mini Page © 2023 Andrews McMeel Syndication

Try 'n' Find

Words that remind us of the Grand Canyon are hidden in this puzzle. Some words are hidden backward or diagonally, and some letters are used twice. See if you can find:



ARIZONA, BIRDS,
COLORADO, COLTER,
FOSSILS, GRAND CANYON,
GRANITE, IGNEOUS,
LAYERS, METAMORPHIC,
MUDSTONE, PARK,
PLANTS, PLATEAU,
POWELL, REPTILES, RIVER,
SANDSTONE, UPLIFT.

L G R A N D C A N Y O N Y Q P
L T K R A P F R E T L O C S L
E F V S A N D S T O N E W D A
W I C O L O R A D O X E H R N
O L I I G N E O U S V S S I T
P P R E P R E P T I L E S B S
M U T J C I H P R O M A T E M
E T I N A R G G P L A T E A U
P S L I S S O F X L A Y E R S
A N O Z I R A E N O T S D U M

Cook's Corner

Nuts and Bolts

You'll need:

- 1/2 cup butter, melted
- 2 tablespoons Worcestershire sauce
- 1 teaspoon seasoned salt
- 2 cups pretzel bits
- 2 cups wheat cereal
- 2 cups corn cereal
- 1 cup mixed nuts



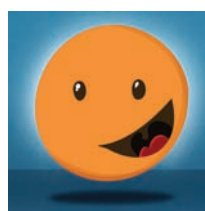
What to do:

1. Combine melted butter, Worcestershire sauce and seasoned salt in a large microwave-safe bowl. Mix well.
2. Stir in pretzel bits and cereals. Mix well.
3. Microwave on high for 6 minutes. Stir halfway through cooking.
4. Add nuts and mix well.
5. Let stand for 10 minutes before serving. Makes about 7 cups.

* You'll need an adult's help with this recipe.

7 Little Words for Kids

Use the letters in the boxes to make a word with the same meaning as the clue. The numbers in parentheses represent the number of letters in the solution. Each letter combination can be used only once, but all letter combinations will be necessary to complete the puzzle.



1. contain (7) _____
2. computer in your pocket (10) _____
3. baby cow (4) _____
4. person guiding a team (5) _____
5. a year has 12 of these (6) _____
6. late part of the day (7) _____
7. brown sauce (5) _____

| | | | |
|-----|-----|------|------|
| SMA | AVY | LUDE | CA |
| GR | MON | ACH | NING |
| NE | INC | EVE | HO |
| LF | THS | RTP | CO |

Answers: include, smartphone, coach, months, evening, gravity.

Mini Jokes



Melanie: What's a donkey's favorite party game?
Matt: Pin the Tail on the Human!

Eco Note



An exotic bird thought to have gone extinct 140 years ago has been "rediscovered" by researchers on a tiny island off Papua New Guinea. The black-naped pheasant pigeon was spotted in images from remote cameras on Fergusson Island. "It is the kind of moment you dream about your entire life as a conservationist and birdwatcher," said expedition co-lead John Mittermeier. The team initially had help from one local who reported seeing the pheasant-pigeon several times in an area with steep ridges and valleys, and described hearing the bird's distinctive calls.

adapted with permission from Earthweek.com

For later:

Look in your newspaper for articles about national parks.

Teachers: Follow and interact with The Mini Page on Facebook!



Books from The Mini Page are wonderful resources and make great gifts! See all of our Mini Page products at MiniPageBooks.com, or call 844-426-1256 for more information. Mail payment to: Andrews McMeel Universal, Mini Page Books, 1130 Walnut, Kansas City, MO 64106. Include \$6.00 shipping and handling per order.



The Mini Page © 2023 Andrews McMeel Syndication

©2023 Blue Ox Technologies Ltd. Download the app on Apple and Amazon devices.