

Cavers Go Deep Into the Earth



photos courtesy NPS

Mini Fact:

Explorers divide up the zones of a cave — **entrance, twilight and dark zones** — based on the amount of light in each.



photo courtesy Bernard Szukalski

Cavers waded through an underground river.

Last week, we learned about how caves are formed and what types of formations and animals are found inside them.

This week, let's go exploring ourselves. A **speleologist** (spee-lee-AHL-uh-jist) is a scientist who studies caves. They can be experts in different things about caves. For instance, some are geologists. They study how caves are formed. Some are biologists. They study plants and animals that live in caves.

Others explore and map caves as their hobby. They are called **spelunkers** (spee-LUNK-ers), or cavers.

Human exploration

Of course, the first cave explorers were ancient people. Go back some 30,000 years and you will find people were exploring caves.

Back then, people sought shelter in caves from the cold, rain and snow. To light their way, they carried torches or stone lamps. They burned animal fat for fuel.

One famous cave scientist was a man named Edouard-Alfred Martel. He lived in France from 1859 to 1938. As a little boy, Martel loved caves.

He worked hard to measure caves and took careful notes about what he found in them. He also developed special ways of using ropes and safety equipment to make cave exploring safer.



Edouard-Alfred Martel

Martel explored thousands of caves in his lifetime and started the first international society to study them. He is remembered today as the father of speleology.

Safe exploring

Caves can be dangerous places. You can get lost in the dark. Rocks or boulders could fall on you. If you go into a cave, follow these basic rules.

1. Never explore caves alone. Go with at least two other companions. Kids should go only with an adult.

2. Tell other people where you are going and when you will return.

3. Always carry three sources of light: a helmet-mounted light, a flashlight and a backup light. Take more batteries than you think you will need.

4. If you get lost, stay where you are until help arrives.

5. Don't touch cave formations. It takes hundreds of years for a stalactite to form. If you break one, you have damaged the cave for a long time.

Cave explorers have a motto: "Take only pictures, leave only carefully placed footsteps, kill nothing but time."



This caver prepares to climb into Spider Cave at Carlsbad Caverns National Park.

Two cool caves

Carlsbad Caverns National Park in the Guadalupe Mountains in New Mexico

Special features:

- the Big Room, one of the largest cave chambers in the world. It could hold six football fields.
- some of the world's largest stalactites and stalagmites.
- Mexican bats. Hundreds of thousands of bats, which summer in the cave, fly out at sunset to hunt for food.
- wall paintings by American Indians.

Mammoth Cave near Cave City, Kentucky

Special features:

- several rivers, lakes and waterfalls.
- spectacular stalactites and stalagmites.
- blind fish and crayfish that live in the rivers.

Resources



On the Web:

- bit.ly/MPcavetour

At the library:

- "Caves: An Explorer Travel Guide" by Anna Claybourne

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Try 'n' Find

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



CARLSBAD, CAVER, COMPANION, ENTRANCE, EQUIPMENT, EXPLORE, FORMATIONS, HOBBY, LIGHT, MAMMOTH, MARTEL, RIVER, SAFE, SCIENTIST, SPELEOLOGIST, SPELUNKER, TWILIGHT.

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

Cook's Corner

Easy Ice Cream Topping

You'll need:

- 1/2 cup crunchy hazelnut spread (Nutella or another brand)
- 1/3 cup apricot preserves

- 4 to 6 servings vanilla ice cream



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

What to do:

1. Combine hazelnut spread and preserves in a medium bowl.
2. Microwave on high for 60 seconds. Stir to mix thoroughly.
3. Spoon over vanilla ice cream. Serves 4 to 6.

Mini Jokes



Sam: What illness did the chimney get?
Sarah: The flue!

Eco Note



Rocks may seem fixed, but they are slowly changing all the time. This process is called the **rock cycle**. Surface rocks are worn away by ice, wind and water to form sediment. This is then compressed on the sea floor to form **sedimentary rock**. At the same time, molten rock erupts through the Earth's crust onto the surface, forming **igneous rocks**, while heat and pressure create **metamorphic rocks** underground.

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For later:

Look through your newspaper for articles about exploring the natural world, including caves, the oceans or space.

Teachers: For standards-based activities to accompany this feature, visit: bit.ly/MPstandards. And follow The Mini Page on Facebook!



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1. A large hole underground (4-letter noun)

□ □ □ □

2. A portable light with batteries (10-letter noun)

□ □ □ □ □ □ □ □ □ □

3. Someone who travels to learn (8-letter noun)

□ □ □ □ □ □ □ □

4. To find or learn about something (8-letter verb)

□ □ □ □ □ □ □ □

1. Marsha and Billy were afraid to enter the dark _____.
2. Ned always keeps a _____ by his bed at night.
3. Gavin hopes to be an _____ in a foreign country.
4. Tina plans to _____ a hidden box buried years ago.

ROOTONYM®

by Jan & Carey Orr Cook



Study the definition. When you know the missing word, fill in the letter boxes and the sentence blanks.

Answers: Cave, Flashlight, Explorer, Discover.

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