

Caves: Earth’s Underground Treasures

PowerPoint Script

1. Title: Caves: Earth’s Underground Treasures
2. No one knows how many caves there are on Earth. Probably millions.
3. Many are undiscovered and others are being explored by people just like you.
4. Caves are found on each of the Earth’s seven continents. They are located under mountains, in the ocean, on islands, and even inside glaciers. The United States has approximately 17,000 known caves.
5. What is a cave? A cave is defined as “any naturally occurring void, cavity, recess or system of interconnected passages which occurs beneath the surface of the earth or within a cliff or ledge and which is large enough to permit an individual to enter, whether or not the entrance is naturally formed or manmade”.
6. Caves can be tiny or huge with many miles of interconnecting passages.
7. Caves can be made up of small and large caverns or rooms, deep pits, underground waterways, and strange looking rock formations.
8. They can be dark, noisy, windy, frightening and fascinating.

There are several different types of caves.

9. **Lava tubes** are caves that form from a river of molten lava that flows out of a volcano. In the open air, the exposed surface of the lava cools and gradually hardens. Meanwhile, the hot lava inside keeps flowing, like water through a pipe. When the volcano stops erupting, the hot lava eventually drains out of the hardened exterior, leaving a long cave.
10. **Sea caves** are found along the shores of oceans and large lakes. They are formed by hundreds or thousands of years of wave action. Over time, as powerful waves batter a rock cliff, the pounding water breaks away weak and loose pieces of rock. Sand and gravel carried by the water help chip away at the rock, like millions of tiny hammers. Eventually a cave forms, and it keeps getting larger until it is beyond the reach of the waves.
11. **Glacier caves** are caves that form completely in ice. They almost always form from flowing water entering a glacier through cracks or crevasses, which are then enlarged over time by erosion and melting.

12. **Sandstone caves** are shallow, hollowed-out cavities in the base of cliffs made of a soft rock called sandstone. As rainwater or water from a stream flows down the face of a sandstone cliff, it dissolves some of the cementing chemical that holds together the sand grains that make up the rock. The water then washes away some of the sand and gradually carves out a cave. Ancient people who lived in caves preferred sandstone caves to all other types
13. **Solutions caves** are the most common type of cave found in the world. They are also some of the largest. Solution caves form over hundreds of thousands of years as water in the ground trickles down through cracks in the underlying rock. Ever so slowly, the rock is weakened and dissolved away by the water. Eventually, small tunnels form in the rock. The tunnels then enlarge and become irregular passages. As more rock dissolves, some of the passages become large caverns with truly beautiful and spectacular rock and crystal formations.

Some cave systems extend for great distances and to extreme depths.

14. Mammoth Cave – located in the state of Kentucky is the world's longest cave. Cave explorers have mapped out more than 390 miles of cave passages which makes Mammoth Cave 3x longer than any other known cave.
15. Kruber Cave, also called Voronja Cave, is located in the country of Georgia. From the cave's entrance to its deepest explored point the cave tunnels 7188' underground. This makes it the deepest known cave in the world.
16. The deepest known cave in the United States is a lava tube in Hawaii called Kazumura Cave. Kazumura Cave is 3614' deep.
17. The world's largest natural underground chamber, or cave room, is found in Good Luck Cave located in Malaysia on the island of Borneo. It is called the Sarawak Chamber and measures approximately 2300' long, 1300' wide' and 230' high. It is the size of nearly 30 football fields!
18. The largest cave room located in the United States is called the Big Room and is found in Carlsbad Cavern in New Mexico. While it is beautifully decorated it is only about the size of 6 football fields.
19. Caves are so different from our world above ground that entering into a cave is almost like stepping onto another planet.
20. Deep underground, caves contain rare and delicate rock formations,
21. well preserved fossils,

22. and valuable clues to our prehistoric and historic past.
23. For scientists caves are natural laboratories where they can study the formation of caves, observe many fascinating rock and mineral formations, examine life histories of rare animals, and learn more about the lives of ancient people.
24. The study of caves is called *speleology*. The word comes from the Greek words *spelaiion* which means “cave” and *logos* which means “knowledge”. A scientist who studies caves is called a speleologist.
25. Speleologists must be good at caving, or exploring a cave.
26. Cavers are skilled at moving through a cave’s narrow passages, giant caverns, and sometimes dangerous waterways.
27. The only way to find out about a cave is to explore it inch by inch.
28. Beneath the surface of the earth lie some of our planet’s last unexplored places.
29. Caves can be dark and mysterious but also places of amazing beauty. Caves are fragile resources that have unique scientific and recreational value.
30. By learning more about caves and sharing what you know with others, you can help preserve the wildness and beauty of these remarkable underground treasures.
31. To learn more about caves visit the National Speleological Society (NSS) at www.caves.org.