

GEODE GEOLOGIST - For all ages with supervision

DESCRIPTION

Rockhounds, unite! What's inside a geode? How do you split them open? This activity teaches basic geode geology, then lets children break open geodes and learn all about them!

MATERIALS

- Geodes – These can be purchased via the links below:
 - <https://a.co/d/iWnyd94>
 - <https://a.co/d/5Z0JHJn>
- Hammers
- Paper bags
- Goggles



BREAK OPEN A GEODE

1. Take all your materials outside or to some other location you can safely break the geodes open.
2. Place each geode in a paper bag or sock and lie it on a firm piece of ground, such as on cement.
3. Put on your safety goggles and make sure the area is clear.
4. Smash or tap the geode inside the bag with your hammer until it breaks.
5. Examine the pieces--be careful of any sharp edges!

QUESTIONS TO ANSWER

Q: How do geodes form?

A: Geodes form when rocks contain pockets of air, which occur after volcanic eruptions when lava cools around air bubbles. Water seeps into these pockets, and when it evaporates it leaves minerals behind. Over

thousands of years, crystals eventually fill the cavity. The largest geodes can take a million years to grow! The larger the crystals, the older the geode.

Q: Why are geodes different colors?

A: Different minerals are different colors! Iron makes red or purple crystals, titanium makes blue crystals, nickel or chromium make green crystals, and manganese makes pink crystals.

Q: What kind of rock is inside my geode?

A: Most geodes contain quartz or amethyst crystals, but some have agate, chalcedony, or jasper. Still others have calcite, dolomite, or celestite.

RELATED BOOKS

BIG ROCK by Bruce Hiscock (DB 30530)

- Traces the origin and history of an ordinary rock in the Adirondack Mountains and describes how it reveals information about the history of the earth.

SHAPING THE EARTH by Dorothy Patent (BR 13380)

- A brief history of the planet Earth. Discusses its origins some 4.5 billion years ago; the effect of the arrival of life about 3.5 billion years ago and its interaction with geologic forces; and how humans have modified the environment for the past 11,000 years. For grades 5-8. Available in braille.

EARTH'S STORY by Gerald Ames (DB 08760)

- Investigates the earth's history by examining clues from its surface. They study the earth's crust, showing how it was formed and how it has changed through the ages.