

# Hoodoos

## HOW DO HOODOOS FORM?

Where can you see Thor's Hammer, take a photo of the giant Rabbit, and meet Queen Victoria? At Bryce Canyon National Park in Utah. These aren't names of characters in a book or movie—they're hoodoos!

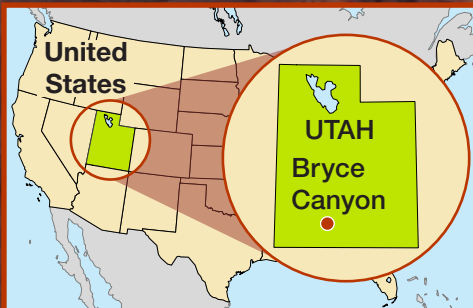
A *hoodoo* (HOO-doo) is a rock column with a strange shape. The shape is the result of different layers of rocks. The layers wear away more quickly or slowly depending on what they're made of. A hoodoo's thin sections are made of softer rock that wears away faster than its thicker, harder sections.

Water and gravity are the natural forces that carve hoodoos. First, water flows into the rock through breaks and cracks. It dissolves some rock, causing weathering. The water freezes and thaws, weakening the rock and breaking it into small pieces called *sediment*.

After weathering, erosion occurs. Rain and runoff pick up and carry away the loose sediment. This causes holes and cracks in the rock to grow larger. Gravity causes the weakened rock to fall, and the oddly shaped hoodoo is left standing. Eventually, water and gravity will bring the whole hoodoo crashing down.

### Do You Know?

Some of the world's most famous hoodoos are found in Bryce Canyon, Utah. However, hoodoos are also found in other places that have the right mixture of rock types, weathering, and erosion.



Hoodoos in Utah's Bryce Canyon National Park

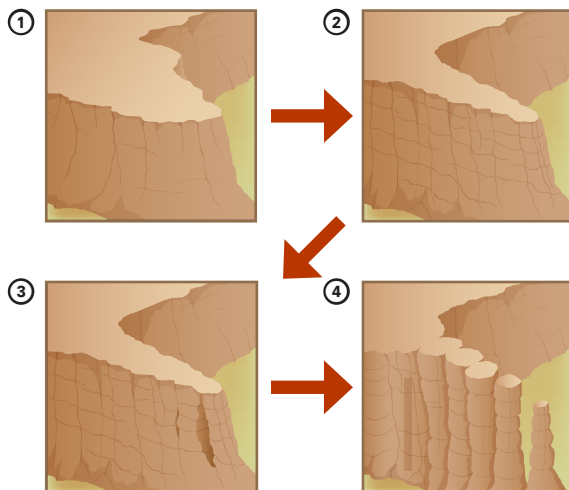


# THE UPLIFTING STORY OF HOODOOS

Hoodoos form in places where the land has risen due to the movement of Earth's plates. As plates crash together, the land rises. This process, called *uplift*, creates an area of high, level ground called a *plateau*.

As the land rises, the water fights against it. The water carves down into the rock due to gravity. Weathering and erosion change the shape of the land by widening cracks in the rock. They carve canyons and create thin rock walls. Gradually over time, holes form and grow in the walls. Eventually, gravity causes parts of the walls to collapse. Columns of rock—hoodoos—are all that remain. The land is now full of strange shapes.

## HOW HOODOOS FORM



1. A plateau is created as a result of uplift.
2. Water wears away rock and leaves behind a thin rock wall.
3. Holes grow in the rock.
4. Hoodoos remain.

# Nature's Jackhammer

Daily temperatures at Bryce Canyon often drop below and soar above freezing. The changes cause water to freeze and thaw. That's when harmless water becomes a slow but powerful jackhammer!

**Wowser!**

You might feel small standing next to a hoodoo! A large one can be taller than a 10-story building!

Water seeps into holes and cracks in the rock during the day and then freezes at night. When water freezes, it expands to about 110% of its original volume. Ice acts like a wedge (called *frost wedging*) as it pushes the rock with great force. The rock splits apart from the inside out.

**Math Moment**

If a hoodoo is 45 meters tall and a bug can climb half a meter in 1 minute, how long will it take the bug to reach the top of the hoodoo? Write your answer in a mixture of hours and minutes.