

## Video: Geysers and Hot Springs

Have you ever seen a picture of Old Faithful erupting in Yellowstone National Park? Or perhaps you have had the chance to visit the park yourself. Have you ever wondered what causes this hot water to erupt from the earth? The eruption of Strokkur in Iceland is another example of this natural wonder.

As rain water hits the ground, it seeps into cracks in the earth's surface, and sometimes collects in underground reservoirs, such as caves and large crevices. If these water-filled caves and crevices are located close to molten rock (magma) buried within the earth, the collected water heats up. The heated water moves upward over time. As the hot water gets closer to the surface, the reduced pressure allows the water to boil and turn to steam. Because a gas occupies more space than a liquid, the steam collects and builds up pressure. Once the pressure from the steam is high enough, water and steam erupt, or shoot up through a vent in the rock above. This is when we observe a geyser erupting. In Yellowstone National Park, Old Faithful erupts as often as once every 45 to 90 minutes.

In order to erupt regularly, a geyser must be fueled by a regular water and heat source. After the eruption is over, water seeps back into the reservoir, heats up, and the cycle repeats. This image shows the Valley of the Geysers in Russia.

Thermal springs, sometimes called hot springs, such as the Hamambogazi Springs in Turkey, form in much the same way as geysers. In the case of thermal springs, however, the heated water rises to the surface and collects in a reservoir above ground, rather than building up pressure below ground and erupting from a small opening like a geyser. People often build structures around thermal springs and use them as tourist attractions. This image shows a thermal spring fed pool in Glenwood Springs, Colorado.