



Lassen Rock Guide



Basalt (<52% Silica)

Usually dark gray to black in color and has small mineral crystals that are not visible to the naked eye. May have small holes (vesicles) created by trapped gas bubbles that escaped as the fluid lava cooled. Common in shield volcanoes and the lava flows of cinder cone volcanoes.

Park Area: Butte Lake, Sifford Mountain



Andesite (52-63% Silica)

This type of lava rock is typically associated with composite volcanoes. It can be light or dark in color and small mineral crystals can be seen throughout the rock. Commonly it is grey in color with white feldspar crystals. Andesite gets its name from the Andes Mountains where it is found in abundance.

Park Area: Brokeoff Mountain, Mount Diller



Dacite (63-69% Silica)

Pink to grey to black in color, this volcanic rock is characterized by large white feldspar mineral crystals. This rock type is associated with the lava of plug dome volcanoes. This lava is less fluid (viscous) than iron rich lava and is more explosive in the eruption sequence if the magma has lots of gas.

Park Area: Lassen Peak, Reading Peak



Rhyolite (>69% Silica)

Generally a light colored rock, but can look very different depending on how it erupts. Often creates plug dome volcanoes because its silica content results in extremely high viscosity (resistance to flow). If the magma has gas and bubbles form, they can cause the magma to explode because the gas can not escape.

Park Area: Raker Peak, Grassy Swale



Pumice

White to light grey in color you can see mineral crystals throughout the rock. Pumice has a very rough texture with small holes. Some types of this lightweight rock are able to float in water, other types are denser and sink when placed in water. It is created at the time of an explosive volcanic eruption.

Park Area: Devastated Area



Scoria (Cinder)

This type of rock is filled with holes that were created by trapped gas that expanded and then escaped when the lava cooled. Because of all the gas, the lava is shot into the air like a fountain where it cools and piles up to make cinder cones. The rock is usually dark red or black.

Park Area: Cinder Cone



Breccia (Agglomerate)

Volcanic breccia is made of volcanic rock fragments, generally blown from a volcano during an explosive eruption or eroded from it. The rock is made up of angular fragments of other rocks and held together by mineral cement or a fine-grained matrix from the eruption.

Park Area: Brokeoff Volcano Remnants



Hydrothermally Altered Rocks

Channelways in hydrothermal areas allow ascending hot, acidic water to react with the rock, thereby altering them. Rocks exposed in areas of hydrothermal activity are often so intensively altered that the original rock types cannot be determined. Typically these rocks are a light-grey or orange brown color.

Park Area: Sulphur Works, Bumpass Hell



Basaltic Andesite of Fantastic Lava Beds

Formed in the mid 1600s, this rock is blocky and dark grey to black in color. Small holes (vesicles) that were formed from trapped gas are visible with the naked eye. Note the small clear and milky quartz mineral crystals—a feature that is rare in basaltic rocks.

Park Area: Fantastic Lava Beds



1915 Black Dacite

One of newest rocks in California. This dacite is the material that formed the new lava dome inside the Lassen Peak crater between May 14 and May 19 and was blown apart in the eruption of May 19-20, 1915. It has a black, glassy texture with large white feldspar mineral crystals.

Park Area: Devastated Area, Lassen Peak



Lassen Peak Dacite

This is the original dacite rock that makes up Lassen Peak. It is grey in color with white feldspar crystals. If you hike the trail to the summit of Lassen Peak you will see pink colored rocks that were oxidized during the eruption 27,000 years ago. However, the true color of the dacite on Lassen Peak is grey.

Park Area: Lassen Peak



Banded Pumice

The banding in this rock was the result of complex mixing of two different magma types during the May 22, 1915 eruption. The light color bands are dacite and the dark bands are andesite. This rock has white feldspar crystals throughout and small holes (vesicles) that come from trapped gas.

Park Area: Devastated Area

Please do not remove rocks from the park.

We encourage you to be curious and study them, but please put them back when you are done. The rocks in the park belong to all of us, please leave them here for those that come after you. Removal of rocks from the park is unlawful.