

# Blobs of Magma Cool into Granite



**Magma** is molten rock beneath Earth's surface that can cool into a rock. Blobs of molten magma can rise through the crust. If a blob of magma gets stuck in the crust, it cools slowly into rock.

In the past, blobs of magma got stuck in the crust and cooled slowly into the granite of the High Sierra. Magma helps to *build* a landscape.

# Plates Squish and Mountains Rise



**Tectonic plates** can cause mountains to form.

When two tectonic plates run into each other, land sitting on the plates can start to wrinkle. These wrinkles are small hills on the landscape.

The process of mountains forming is called **uplift**.

In the past, plates squished together and the High Sierra started to uplift. Uplift helps to *build* a landscape.



# Glaciers Carve Valleys



**Glaciers** are masses of snow and ice that form slowly over many years. As more and more snow and ice are added to a glacier, it becomes heavier and can start flowing slowly downhill. Glaciers **erode** the landscape and carve wide, rounded valleys shaped like the letter U.

In the past, glaciers carved U-shaped valleys in the High Sierra. Glaciers help to *break down* a landscape.



# Uplift and Earthquakes Continue



Some of the geology of the past is also the geology of the present!

**Uplift** is still happening in the High Sierra. Two plates are no longer squishing together, but there are **faults** instead. As faults move and adjust, they push up great mountains and cause earthquakes.

When you feel an earthquake, there is a chance that the High Sierra is becoming taller! Uplift helps to *build* a landscape.