Science a-z
QUICK READ

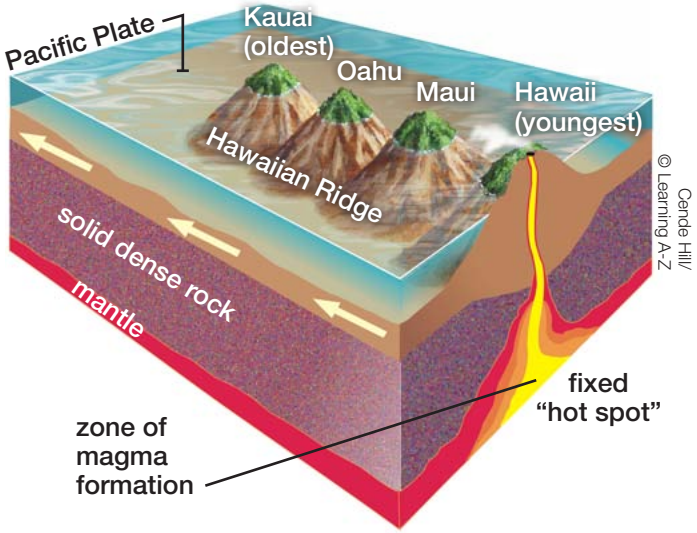
CHANGING LANDFORMS

From Fire to Land

If you want to see proof that Earth's landforms are changing, visit the Big Island of Hawaii! Volcanic activity formed all the Hawaiian Islands. You can see it happening now on the Big Island.

The Hawaiian Islands are located above a "hot spot." A hot spot is an area in Earth's **crust** where **magma**—superhot, melted rock—rises very close to the surface. Sometimes the magma seeps out through cracks in the crust, forming **volcanoes**. Each eruption creates new land as lava cools and hardens.

The Hawaiian Islands are in the middle of a huge sheet of rock that is part of Earth's crust. This sheet is slowly moving in a northwestern direction, over the hot spot. Over millions of years, volcanoes have formed over the hot spot, creating a chain of islands.



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As the Pacific Plate moves over the hot spot, volcanic islands form.

Do You Know?

Kilauea has erupted thirty-four times since 1952 and has been erupting nonstop since January 1983.

Some volcanoes release steam and gases as well as lava or mud.

Courtesy of U.S. Department of the Interior, U.S. Geological Survey

Kauai, the western island, is the oldest—about five million years old. The middle islands formed more recently. Now the hot spot is under the Big Island (also called Hawaii), which is less than half a million years old.

Kilauea, a volcano on the Big Island, is one of the most active volcanoes on Earth. Lava shoots into the air and pours down mountainsides into the ocean. As the lava cools, the island grows. It's one of the few places on Earth where you can watch new land being formed.

Brain Check

- ❏ What is a hot spot?
- ❏ Why did the hot spot form a chain of islands instead of just one?