

ISLANDS BORN OF FIRE

ACTIVITY 1

As you saw in the film *Galapagos: Nature's Wonderland*, the Galapagos Islands are the tops of volcanoes that erupted at the bottom of the Pacific Ocean. The oldest of these volcanoes erupted millions of years ago and has moved slowly toward the east ever since. Today, it is more than 120 miles from where it started!

How does this happen? Scientists explain that the Earth's surface is made up of gigantic slabs of rock, called *tectonic plates*, that fit together like the pieces of a puzzle. But unlike puzzle pieces, tectonic plates slowly shift position by pushing into and pulling away from each other over millions of years.



The Galapagos Island volcanoes sit on a tectonic plate that is slowly pushing east into South America. But the "hot spot" that created these volcanoes is not moving at all, because it lies below the Earth's surface. As the tectonic plate moves over it, the hot spot keeps breaking through the surface in a different place, creating a new volcano as an older volcano moves out of the way.

You can see this process at work on the map below. Use the map to create a timeline of these three Galapagos Islands: **Fernandina** on the west, **Santa Cruz** in the center, and **San Cristóbal** on the east. Write the islands' names into the spaces to show which is oldest, which is middle-aged, and which is youngest.



Oldest

Middle-Aged

Youngest

It took more than 4 million years for the oldest of the Galapagos Islands to move to where they are today. What do you think will happen over the next 4 million years? Will there be more islands? Look closely at the map to see what happens to the islands as they get older. Discuss in class what you think the Galapagos Islands will look like in another 4 million years.