

Earthquakes and Volcanoes

Earthquakes

There's nothing quite like getting caught up in an earthquake. The ground shakes and rolls. The Earth makes a big shift. Have you ever felt an earthquake? An earthquake causes Earth's surface to move and shift. A large earthquake can change the land in seconds.

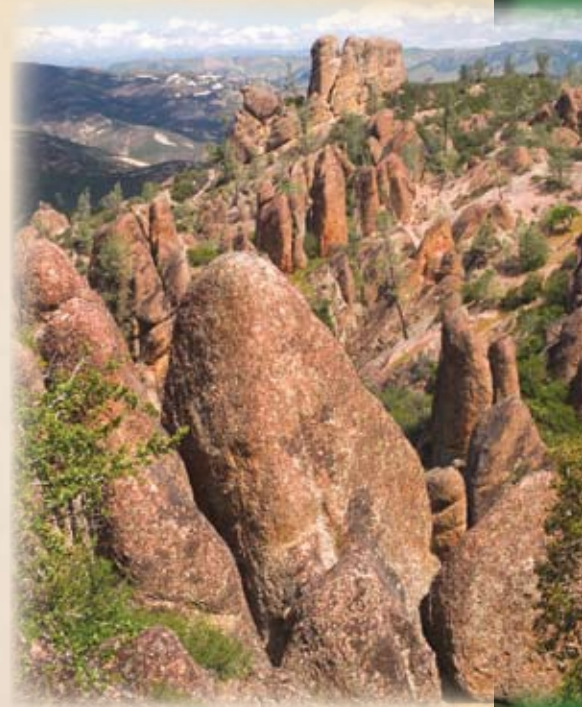
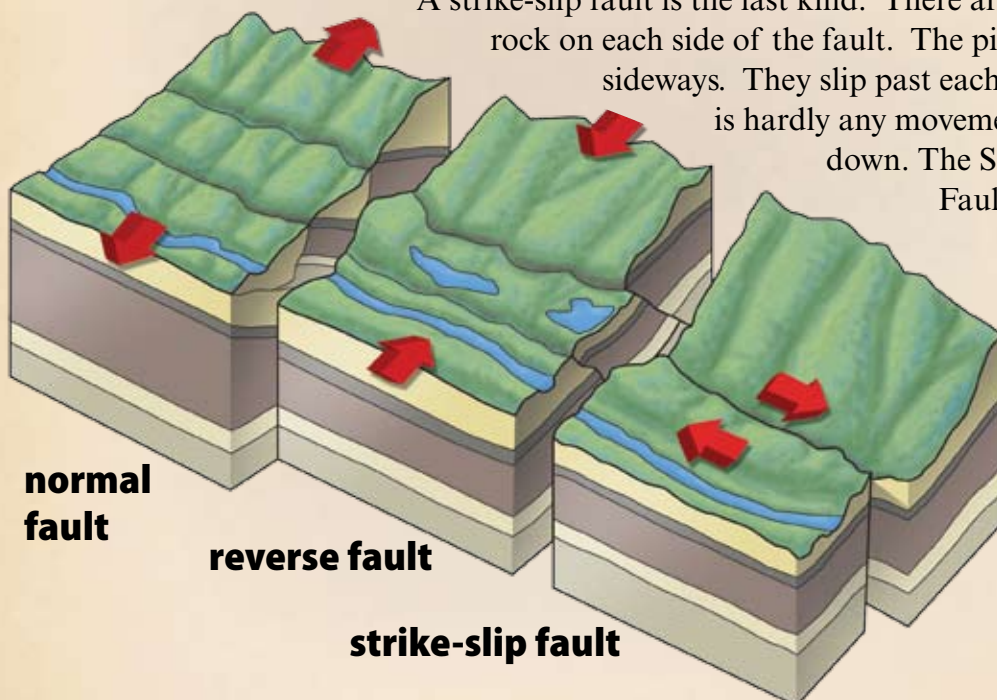
The outer shell of Earth's crust is broken up into many parts. Those parts of the crust move. Stress builds between them. The places between the parts are called fault lines. When too much stress builds along a fault line, the rock breaks or suddenly shifts. This is an earthquake.

Types of Faults

There are three main types of faults. A normal fault runs at an angle to the ground. The stresses push out. They push away from the fault line. This causes one big piece of rock to drop. It goes under the other piece. The Rio Grande Valley in New Mexico is a normal fault.

A reverse fault is also when the fault line is at an angle. The stress is not the same. Here, the stresses push in toward the fault line. One big piece of rock moves up. It goes over the other part. A reverse fault can be found at Glacier National Park. A reverse fault is also called a thrust fault.

A strike-slip fault is the last kind. There are pieces of rock on each side of the fault. The pieces move sideways. They slip past each other. There is hardly any movement up or down. The San Andreas Fault in California is a strike-slip fault.

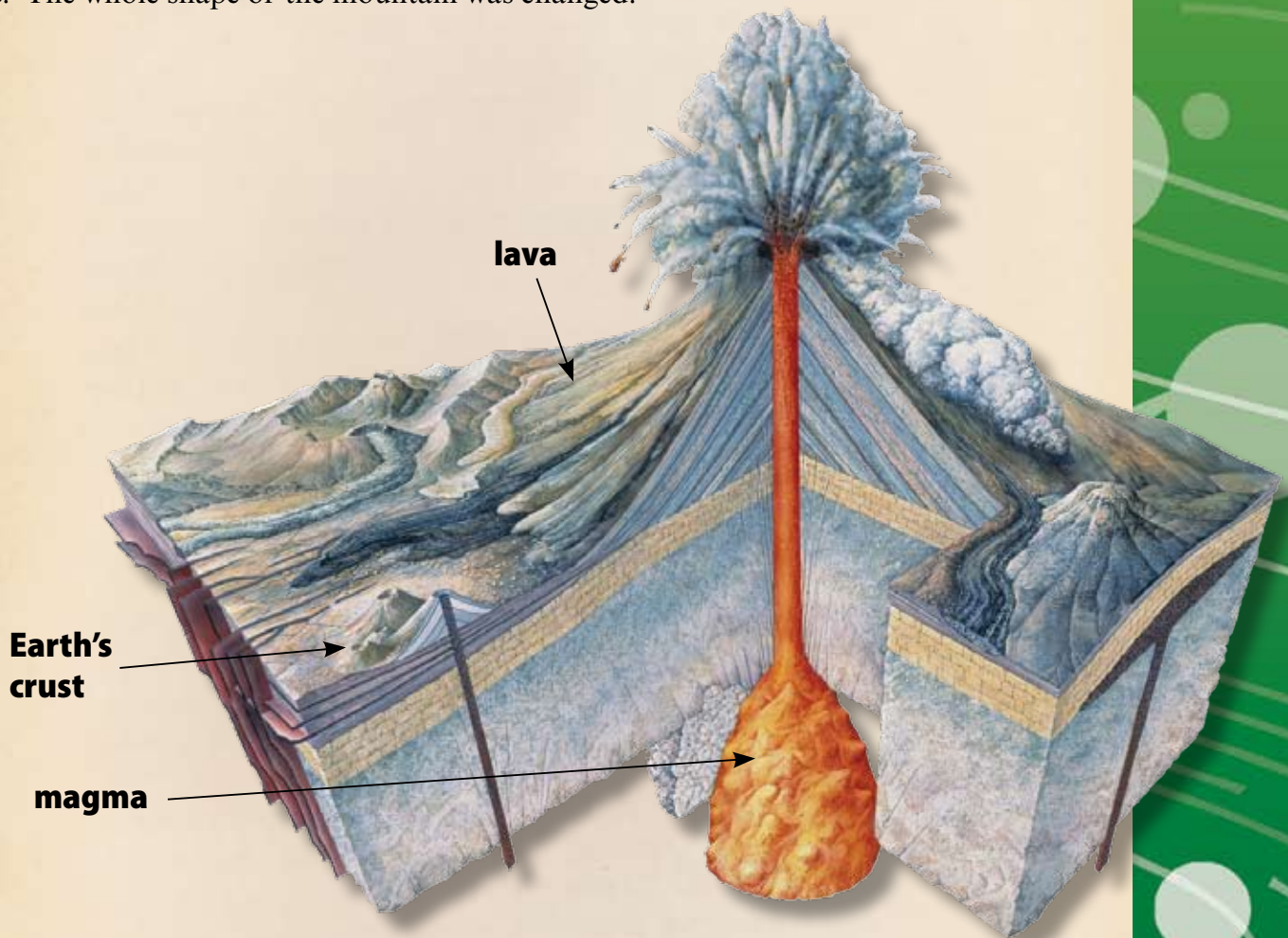


Volcanoes Create Landforms

A volcano spits out melted rock, or magma. Magma comes from deep in the Earth. It pushes through where there is a weak spot in the crust. Most volcanoes happen near the edge of Earth's plates. The stress at the edges makes the crust weak. This lets magma burst out.

When the melted rock reaches the surface, it is called lava. Lava cools and gets hard. It becomes new landforms. Lava adds new rock to the land that is there. It can also form new islands.

Volcanoes have made many landforms on Earth. Mt. Fuji in Japan was made by volcanoes. So were the Hawaiian Islands. Volcanoes can also cause death and danger. Mt. St. Helens in the state of Washington, U.S.A., has done just that. It had a big blow up. The whole shape of the mountain was changed.



Comprehension Question

What causes earthquakes?

Earthquakes and Volcanoes

Earthquakes

If you live in some parts of the world, you know about earthquakes. There's nothing quite like getting caught up in one. The ground shakes and rolls. The Earth makes a big shift. Have you ever felt an earthquake? An earthquake causes Earth's surface to move and shift. A large earthquake can change the land in seconds.

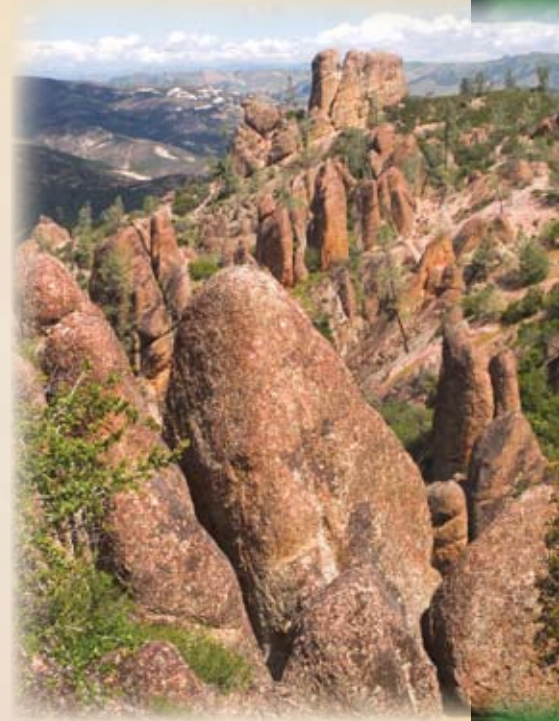
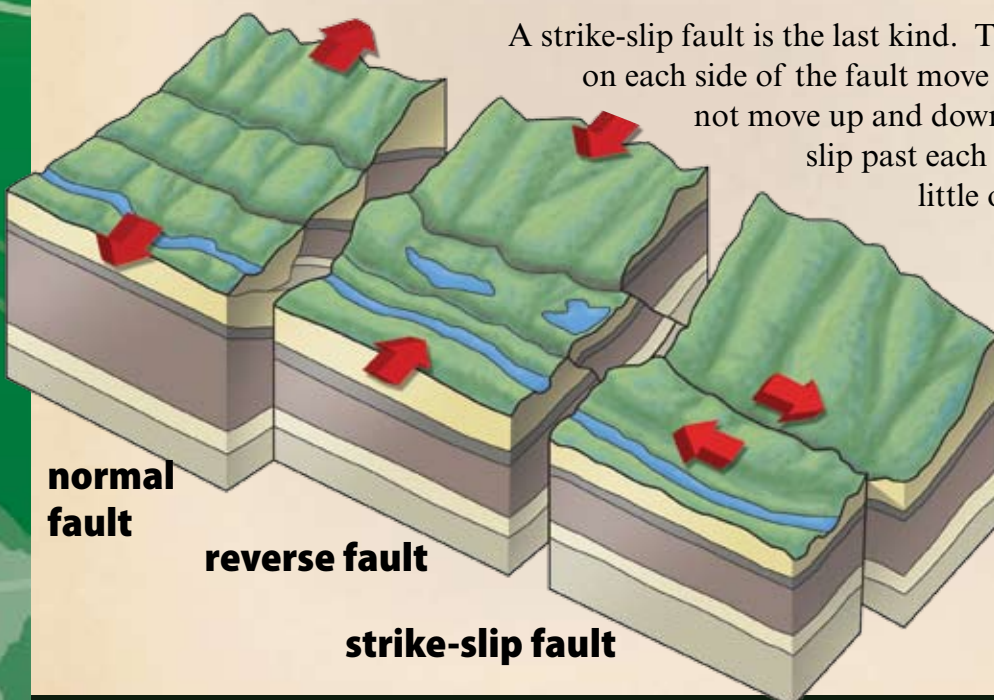
The outer shell of Earth's crust is broken up into many pieces. As those pieces of the crust move, stress builds between them. The borders between pieces of crust are called fault lines. When too much stress builds along a fault line, the rock breaks or suddenly shifts. This is an earthquake.

Types of Faults

There are three main types of faults. A normal fault is when the fault line in Earth runs at an angle to the surface. The stress from an earthquake pushes out. The stress pushes away from the fault line. This causes one big piece of rock to drop below another piece. The Rio Grande Valley in New Mexico is a normal fault.

A reverse fault is also when the fault line is at an angle. The stress is not the same. Here, the stress from an earthquake pushes in toward the fault line. One big piece of rock moves up and over another piece. A reverse fault can be found at Glacier National Park. A reverse fault is also called a thrust fault.

A strike-slip fault is the last kind. The pieces of rock on each side of the fault move sideways. They do not move up and down as much. They slip past each other. There is little or no up-and-down movement. The San Andreas Fault in California is a strike-slip fault.

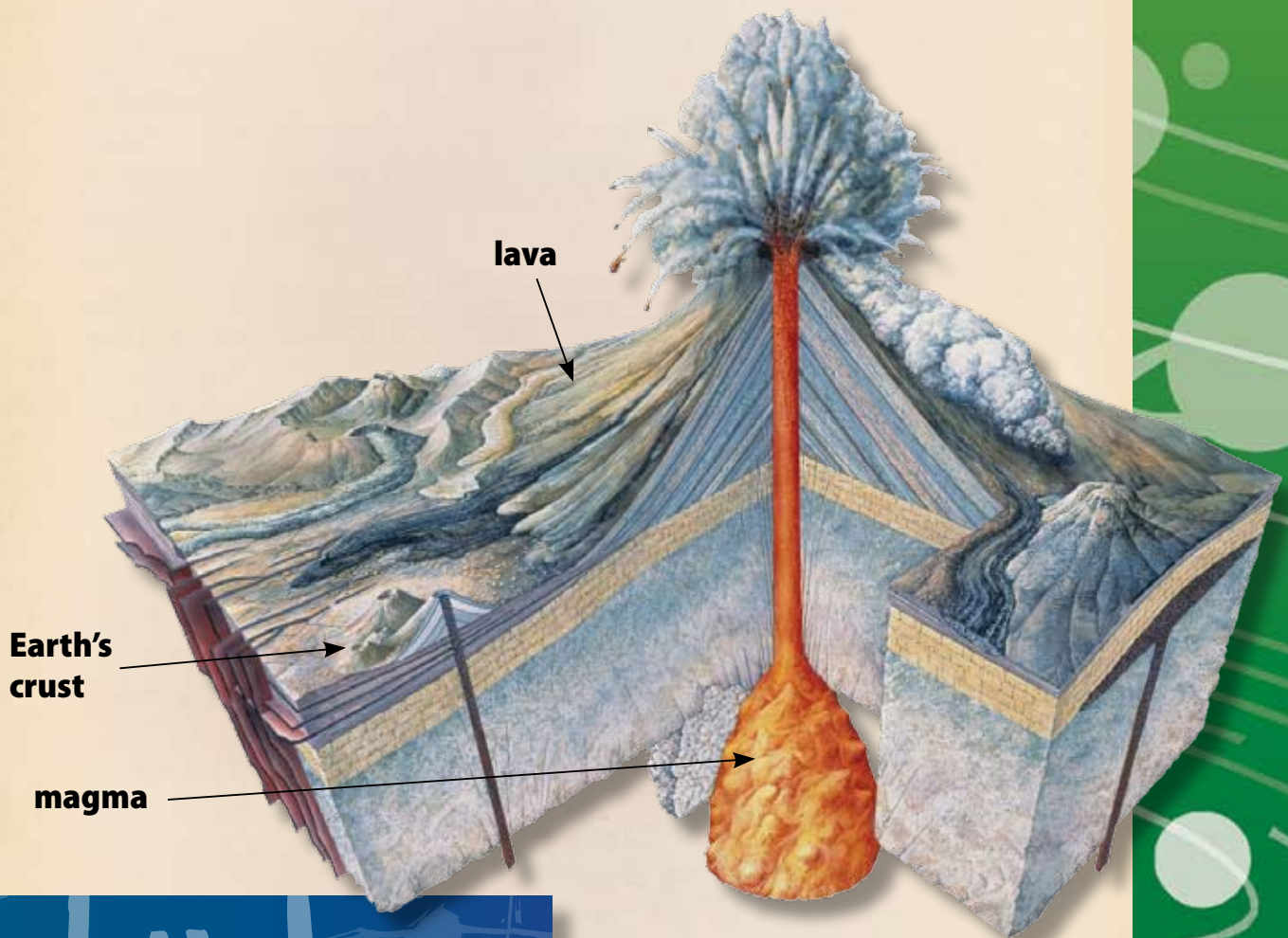


Volcanoes Create Landforms

A volcano spits out melted rock, or magma. Magma comes from inside the Earth. It breaks through where there is a weak spot in the crust. Most volcanoes happen near the edge of Earth's plates. The push and pull at the edge makes the crust weak. This lets magma reach the surface.

When the melted rock reaches the surface, it is called lava. Lava cools and gets hard. It becomes new landforms. Lava adds new rock to the land that is there. It also forms new islands.

Volcanoes have made some of the most well known landforms on Earth. Mt. Fuji in Japan and the Hawaiian Islands were made by volcanoes. Volcanoes can also cause death and destruction. Mt. St. Helens in the state of Washington, U.S.A. has done just that. Due to the most recent big eruptions, the whole shape of the mountain has changed.



Comprehension Question

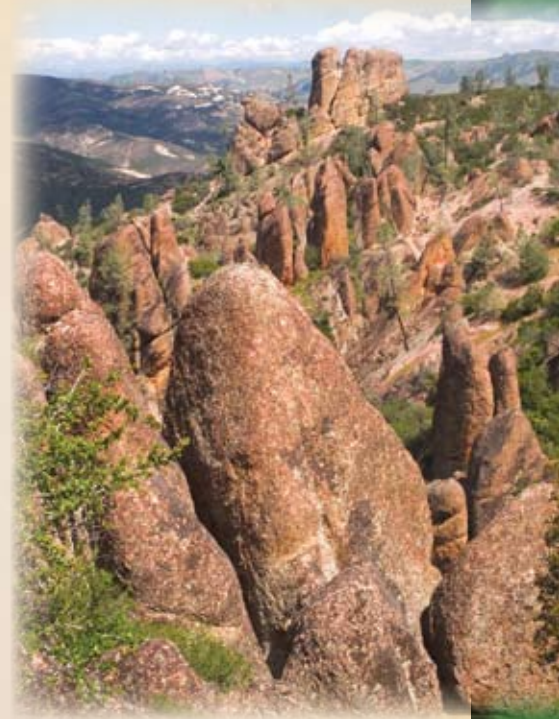
Why do earthquakes happen on fault lines?

Earthquakes and Volcanoes

Earthquakes

If you live in certain parts of the world, you are very familiar with earthquakes. There's nothing quite like getting caught up in all the shaking and rolling that goes on when the Earth makes a big shift. Have you ever felt an earthquake? An earthquake causes Earth's surface to move and shift. A large earthquake can change the land in seconds.

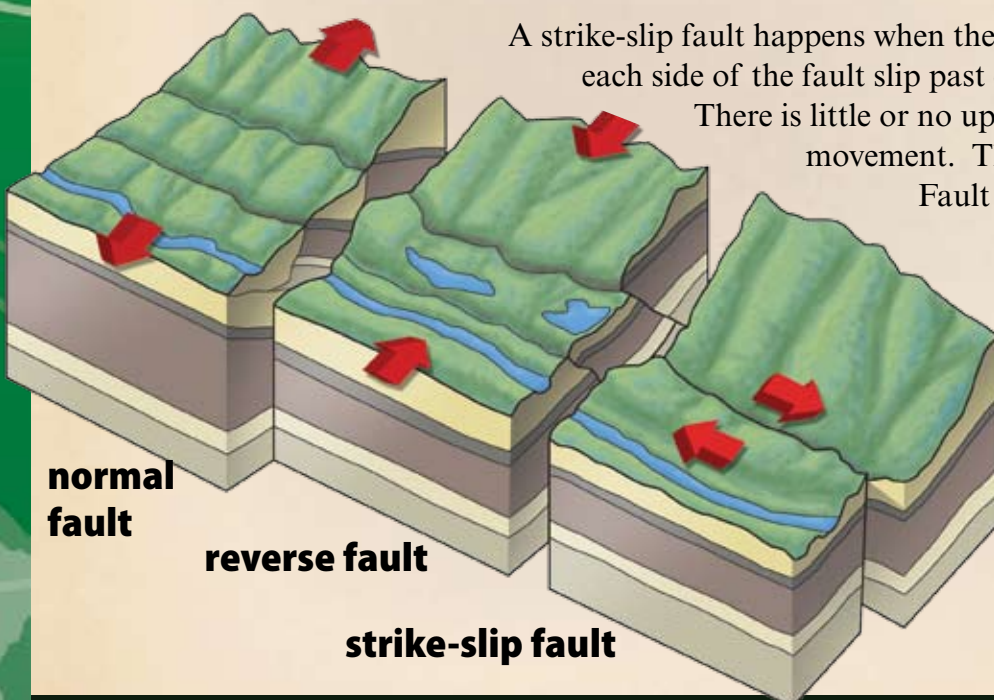
The outer shell of Earth's crust is broken up into many different pieces. As those pieces of the crust move, stress builds between them. The borders between pieces of crust are called fault lines. When too much stress builds along a fault line, the rock breaks or suddenly shifts. This is an earthquake.



Types of Faults

There are three main types of faults. A normal fault happens when the fault line in Earth runs at an angle to the surface. The stress from an earthquake pushes out, away from the fault line. This causes one section of rock to drop below another section. The Rio Grande Valley in New Mexico is an example of a normal fault.

A reverse fault also happens when the fault line is at an angle. But in this case, the stress from an earthquake pushes in toward the fault line. This causes one section of rock to move up and over another section. An example of a reverse fault can be found at Glacier National Park. A reverse fault is also called a thrust fault.



A strike-slip fault happens when the sections of rock on each side of the fault slip past each other sideways.

There is little or no up-and-down movement. The San Andreas Fault in California is an example of a strike-slip fault.

**normal
fault**

reverse fault

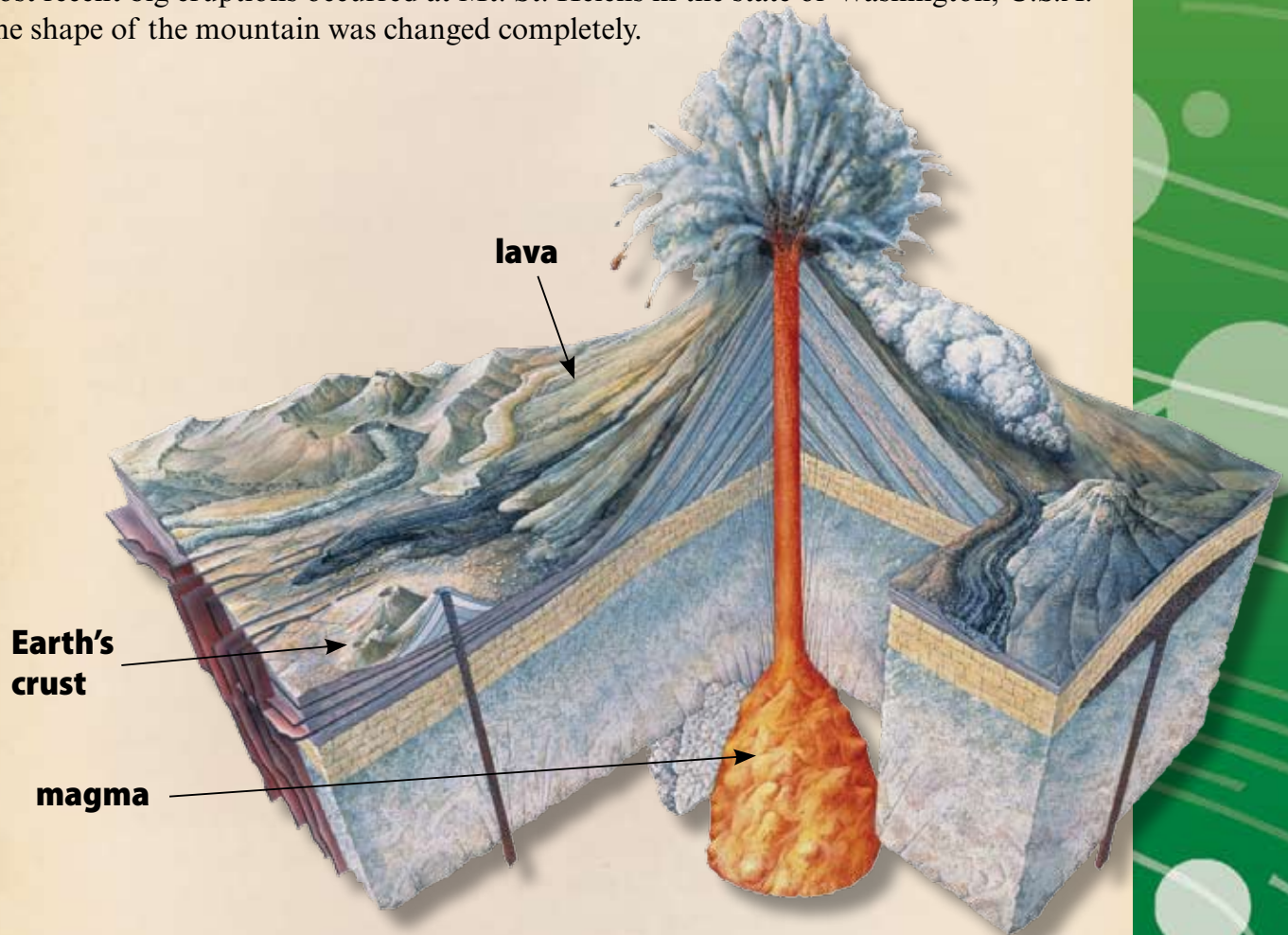
strike-slip fault

Volcanoes Create Landforms

A volcano happens when melted rock, or magma, inside the Earth breaks through a weak spot in the crust. Most volcanoes happen near the edge of Earth's plates. The push and pull at these borders makes the crust weak. This lets magma reach the surface.

When the melted rock reaches the surface, it is called lava. Lava flowing from a volcano hardens to become new landforms. Lava adds new rock to existing land. It can also form new islands.

Volcanoes have made some of the most beautiful landforms on Earth. For example, Mt. Fuji in Japan and the Hawaiian Islands were made by volcanoes. Volcanoes can also cause death and destruction. Mount Etna in Italy has done just that. One of the most recent big eruptions occurred at Mt. St. Helens in the state of Washington, U.S.A. The shape of the mountain was changed completely.



Comprehension Question

Why do earthquakes and volcanoes happen along fault lines?

Earthquakes and Volcanoes

Earthquakes

If you live in certain parts of the world, you are very familiar with earthquakes. There's nothing quite like getting caught up in all the shaking and rolling that goes on when the Earth makes a big shift. In an earthquake, Earth's surface moves and shifts, and a large earthquake can change the land in seconds.

The outer shell of Earth's crust is broken up into many different pieces. As those pieces of the crust move, stress builds along the fault lines, or the borders between them. When too much stress builds along a fault line, the rock breaks or suddenly shifts, causing an earthquake.

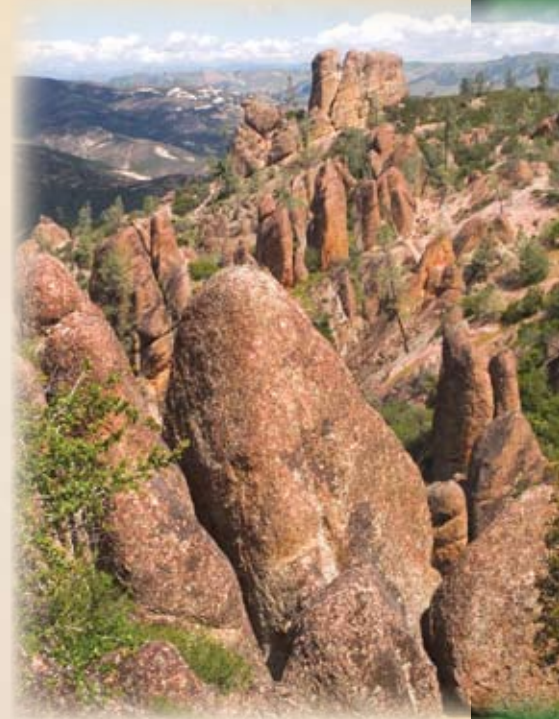
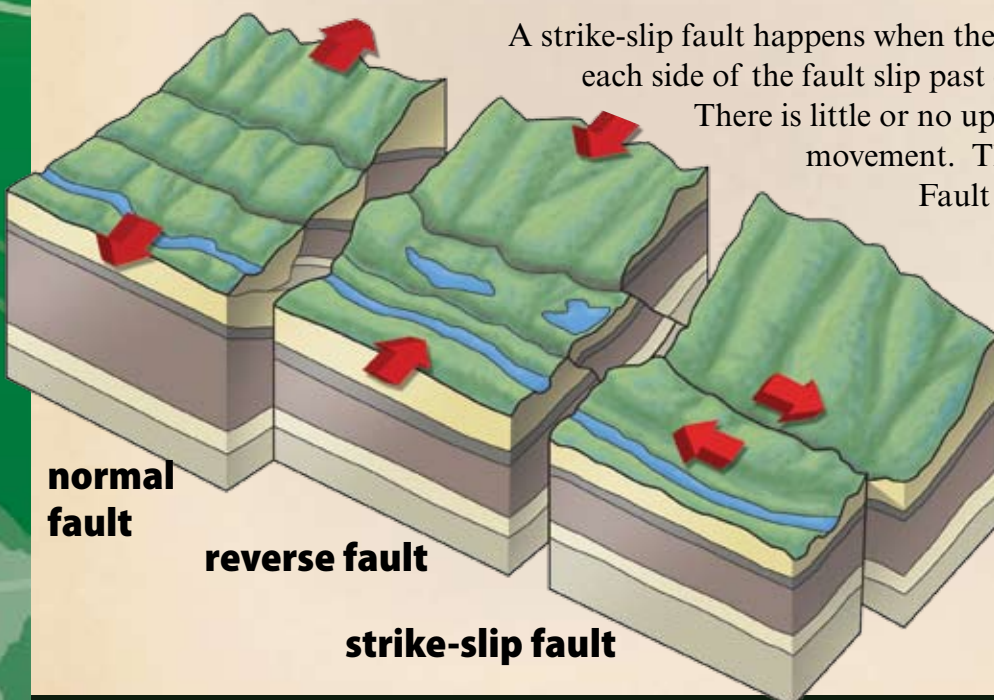
Types of Faults

There are three main types of faults: normal, reverse, and strike slip. A normal fault happens when the fault line runs at an angle to the surface. The stresses from an earthquake push out, away from the fault line, causing one section of rock to drop below another section. The Rio Grande Valley in New Mexico is an example of a normal fault.

A reverse fault or thrust fault also happens when the fault line is at an angle, but in this case, the stress from an earthquake pushes in toward the fault line. This causes one section of rock to move up and over another section. An example of a reverse fault can be found at Glacier National Park.

A strike-slip fault happens when the sections of rock on each side of the fault slip past each other sideways.

There is little or no up-and-down movement. The San Andreas Fault in California is an example of a strike-slip fault.

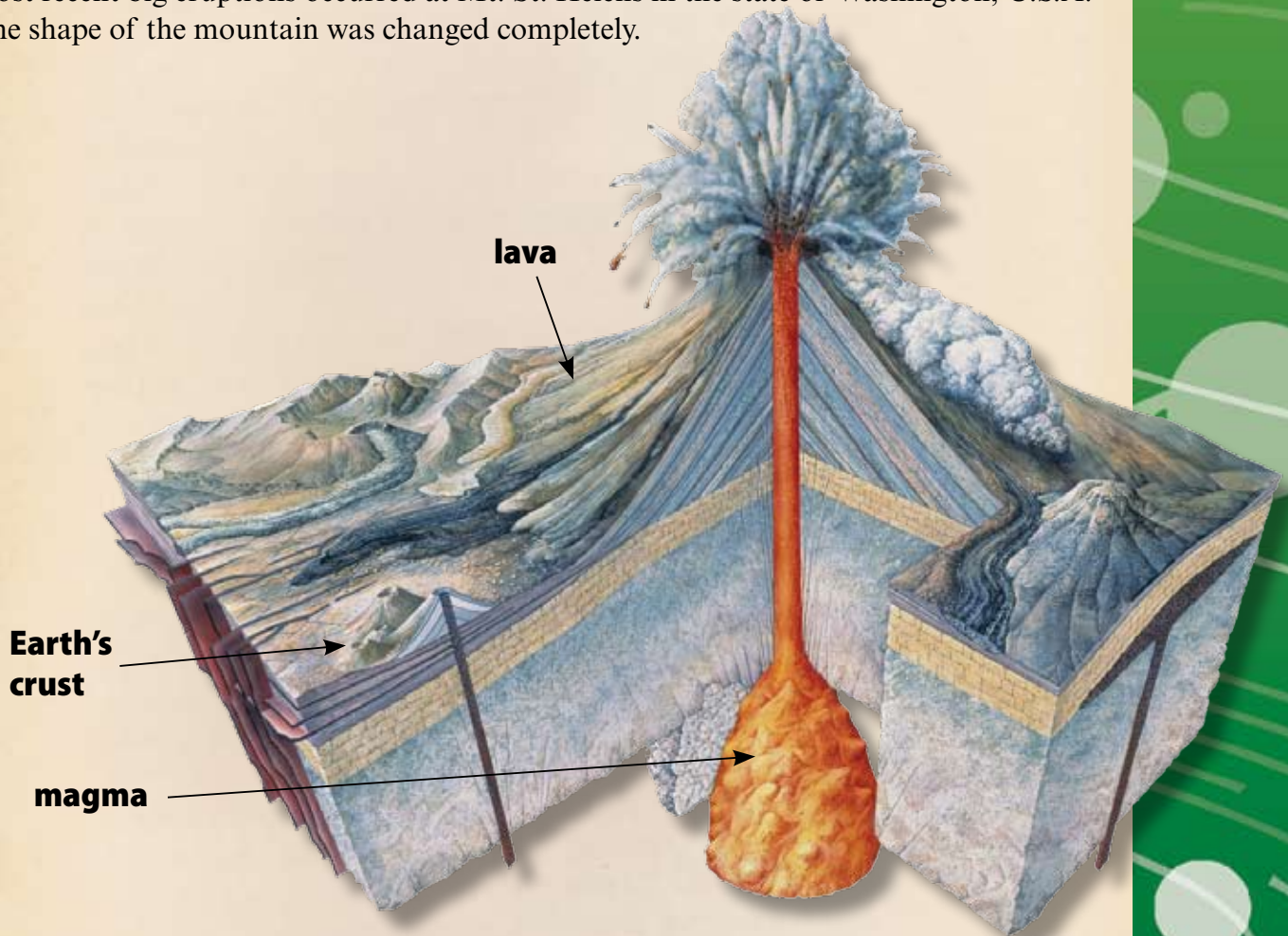


Volcanoes Create Landforms

A volcano happens when melted rock, or magma, inside the Earth breaks through a weak spot in the crust. Most volcanoes occur where pieces of Earth's crust meet, and where fault lines and earthquakes are common. The push and pull at these borders makes the crust weak, and magma can penetrate to the surface.

When the melted rock reaches the surface, it is called lava. Lava flowing from a volcano hardens and creates new landforms. Lava can add new rock to existing land, or it can even form completely new islands.

Volcanoes have made some of the most beautiful landforms on Earth. For example, Mt. Fuji in Japan and the Hawaiian Islands were made by volcanoes. Volcanoes can also cause death and destruction. Mount Etna in Italy has done just that. One of the most recent big eruptions occurred at Mt. St. Helens in the state of Washington, U.S.A. The shape of the mountain was changed completely.



Comprehension Question

Describe the relationships between fault lines, earthquakes, and volcanoes.