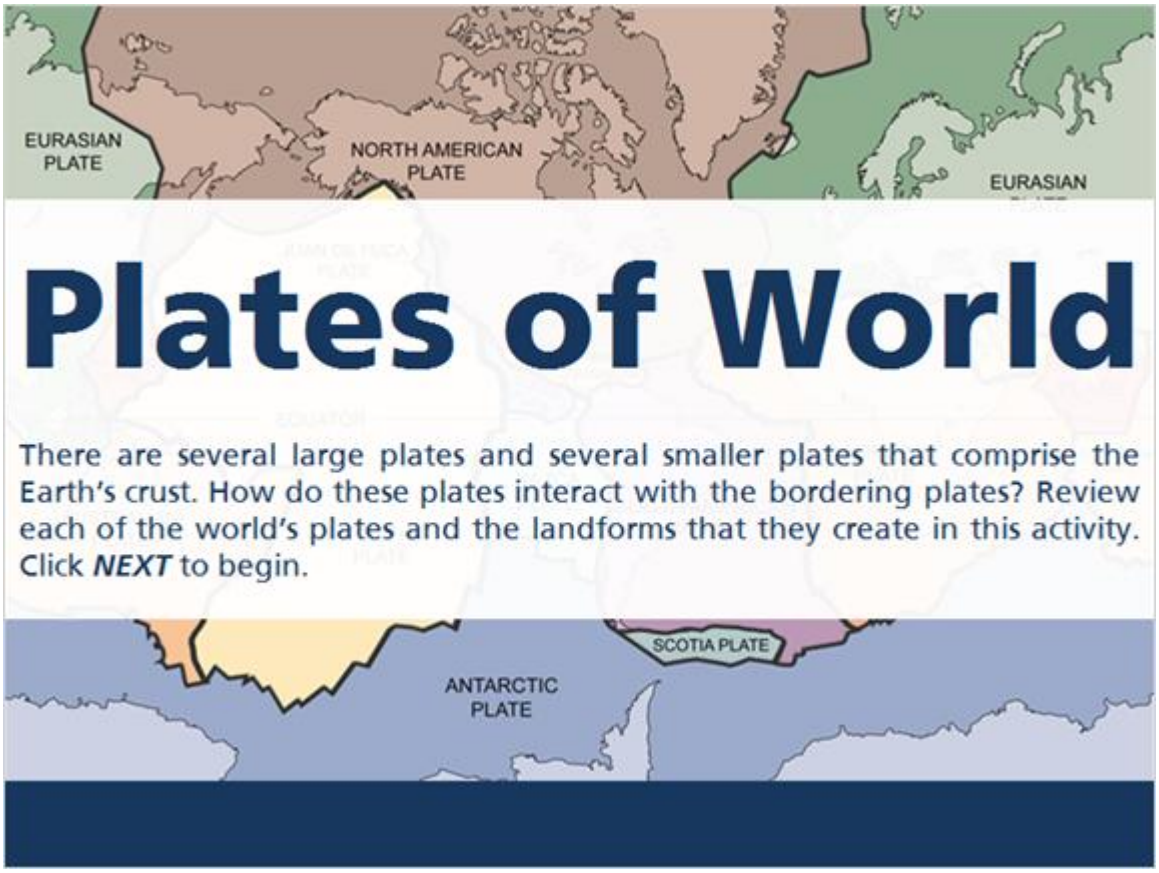
Module 7: Plate Tectonics and Earth's Structure
Topic 2 Content: Plates of the World Presentation Notes



There are several large plates and several smaller plates that comprise the Earth's crust. How do these plates interact with the bordering plates? Review each of the world's plates and the landforms that they create in this activity. Click ***NEXT*** to begin.

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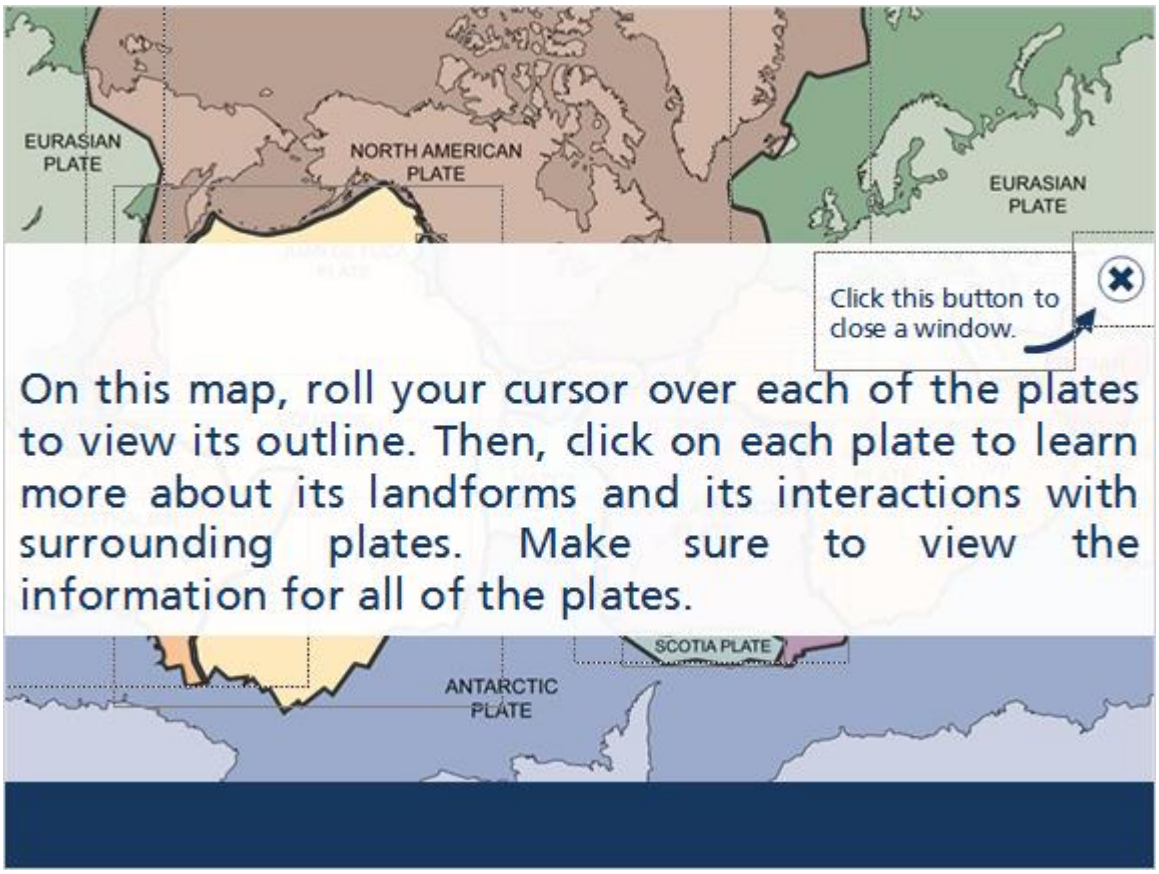
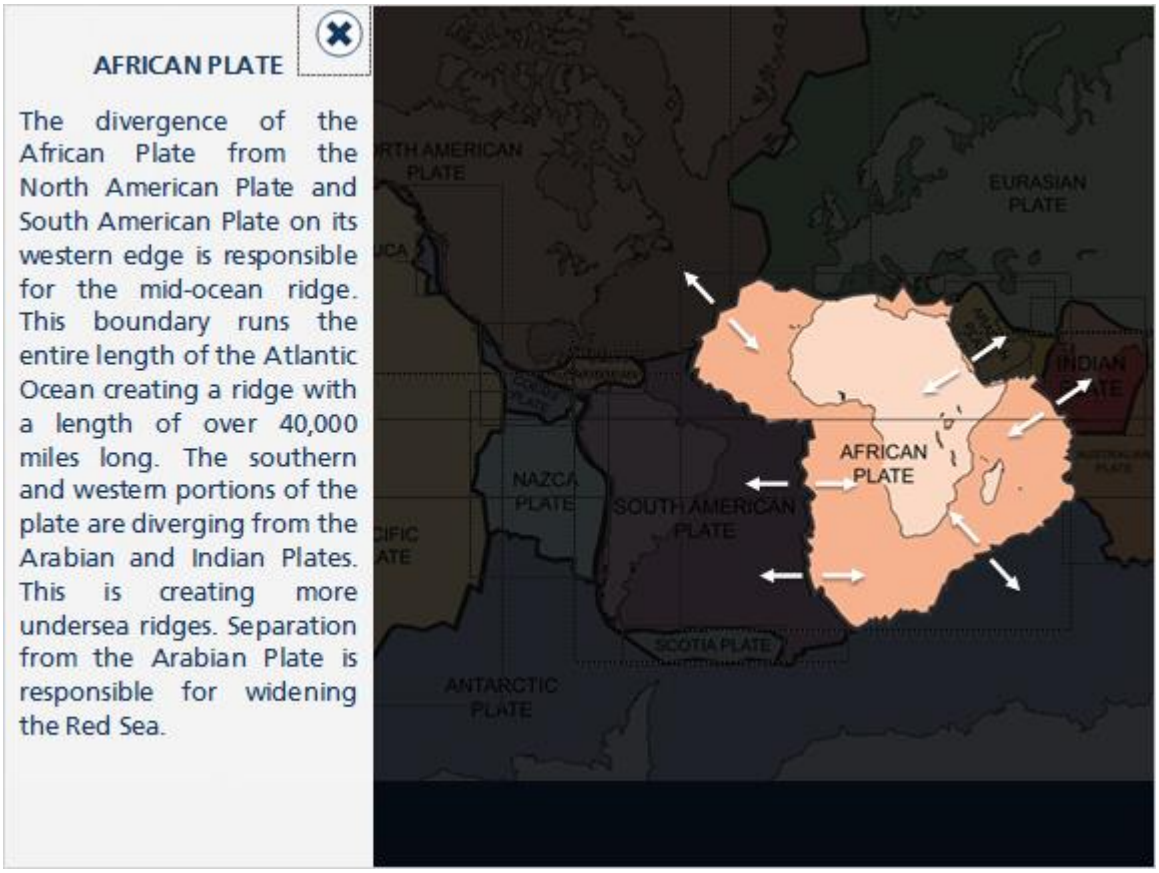


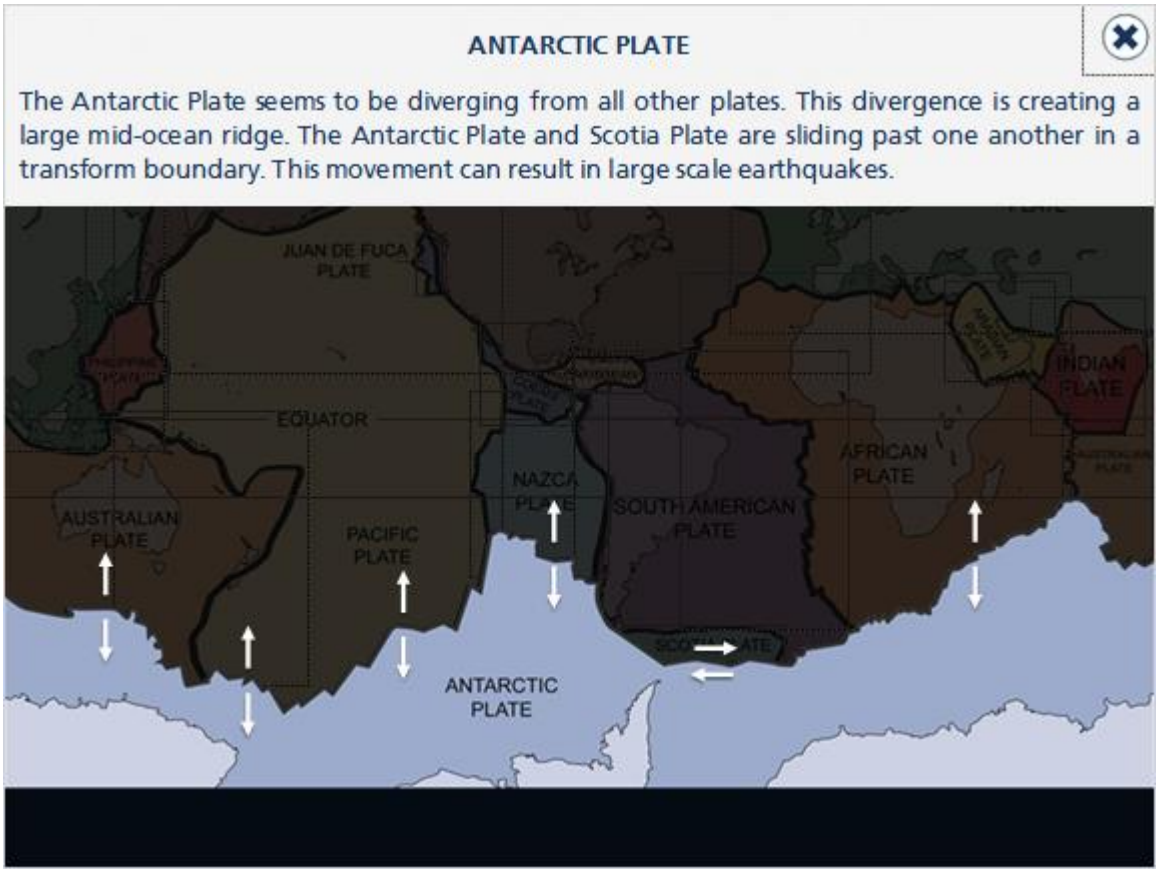
On this map, roll your cursor over each of the plates to view its outline. Then, click on each plate to learn more about its landforms and its interactions with surrounding plates. Make sure to view the information for all of the plates.

African Plate



The divergence of the African Plate from the North American Plate and South American Plate on its western edge is responsible for the mid-ocean ridge. This boundary runs the entire length of the Atlantic Ocean creating a ridge with a length of over 40,000 miles long. The southern and western portions of the plate are diverging from the Arabian and Indian Plates. This is creating more undersea ridges. Separation from the Arabian Plate is responsible for widening the Red Sea.

Antarctic Plate

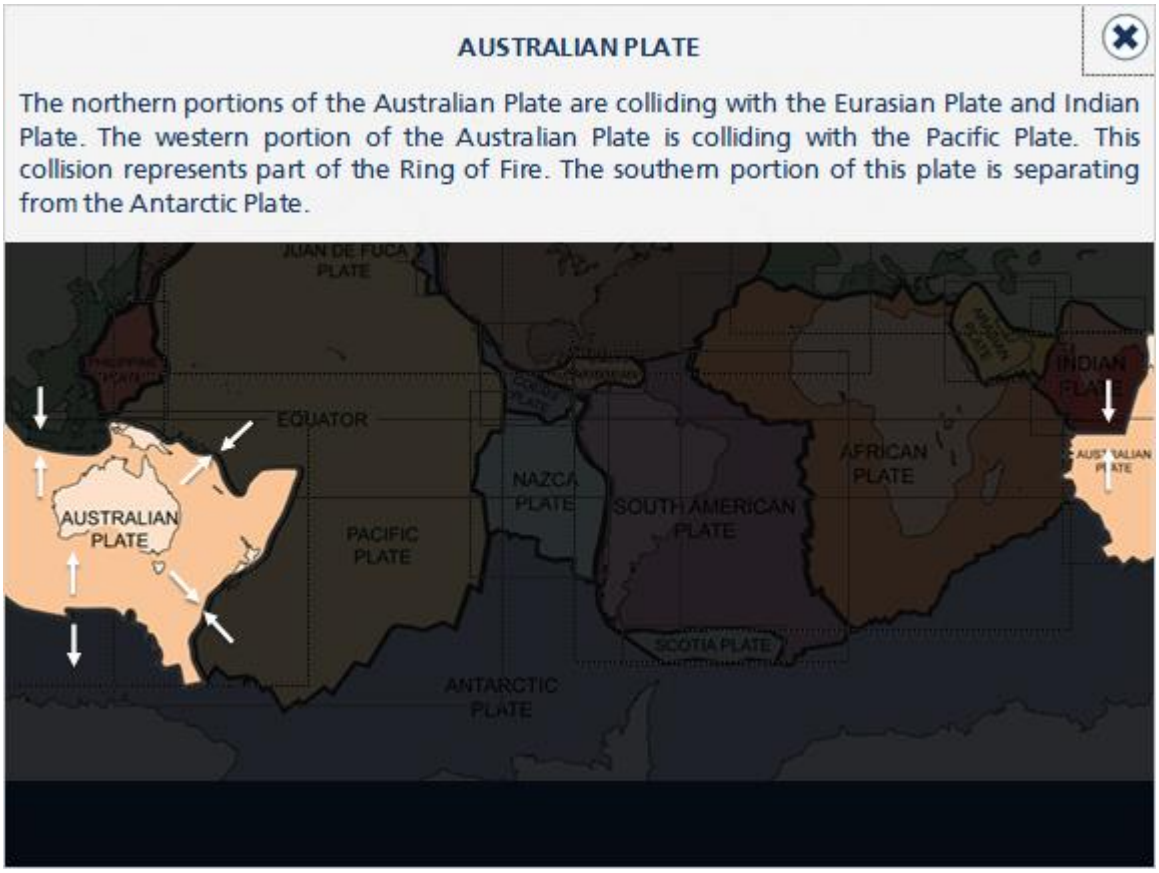


The Antarctic Plate seems to be diverging from all other plates. This divergence is creating a large mid-ocean ridge. The Antarctic Plate and Scotia Plate are sliding past one another in a transform boundary. This movement can result in large scale earthquakes.

Arabian Plate

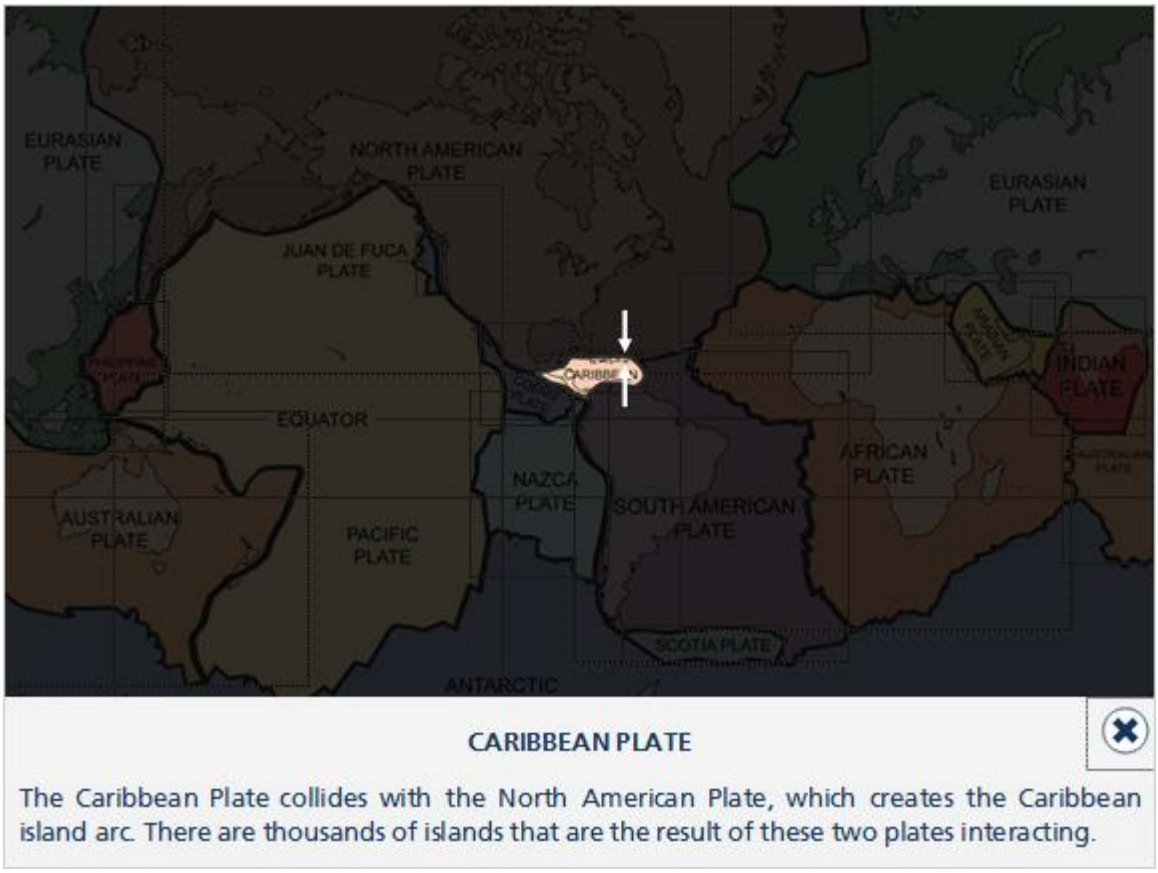
The location of the Arabian Plate provides several interactions with other plates. The Arabian Plate and African Plate are pulling in opposite directions. This divergence is creating a widening of the Red Sea. Over millions of years, the Red Sea will eventually become an ocean. The Eurasian Plate and Arabian Plate are colliding in the northern section of the plate boundary. This collision is creating the mountain ranges of Iran.

Australian Plate



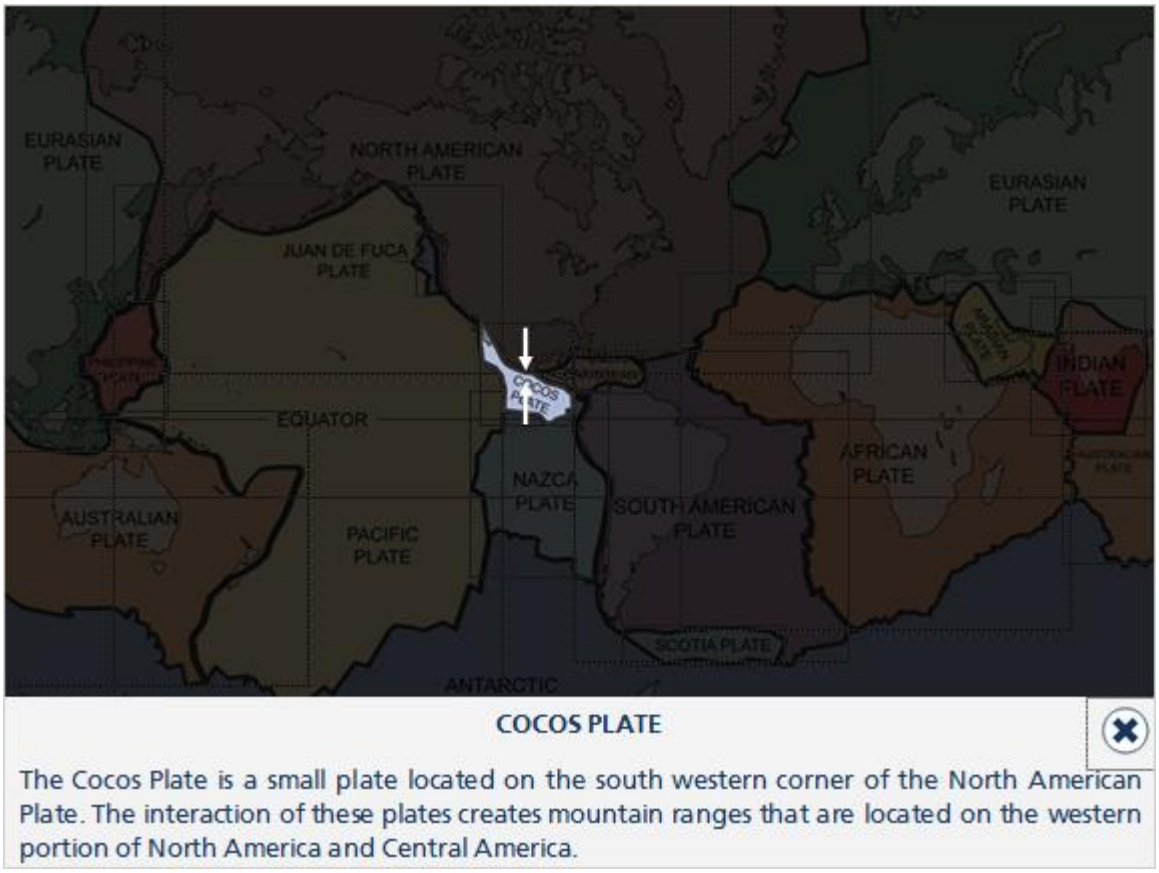
The northern portions of the Australian Plate are colliding with the Eurasian Plate and Indian Plate. The western portion of the Australian Plate is colliding with the Pacific Plate. This collision represents part of the Ring of Fire. The southern portion of this plate is separating from the Antarctic Plate.

Caribbean Plate



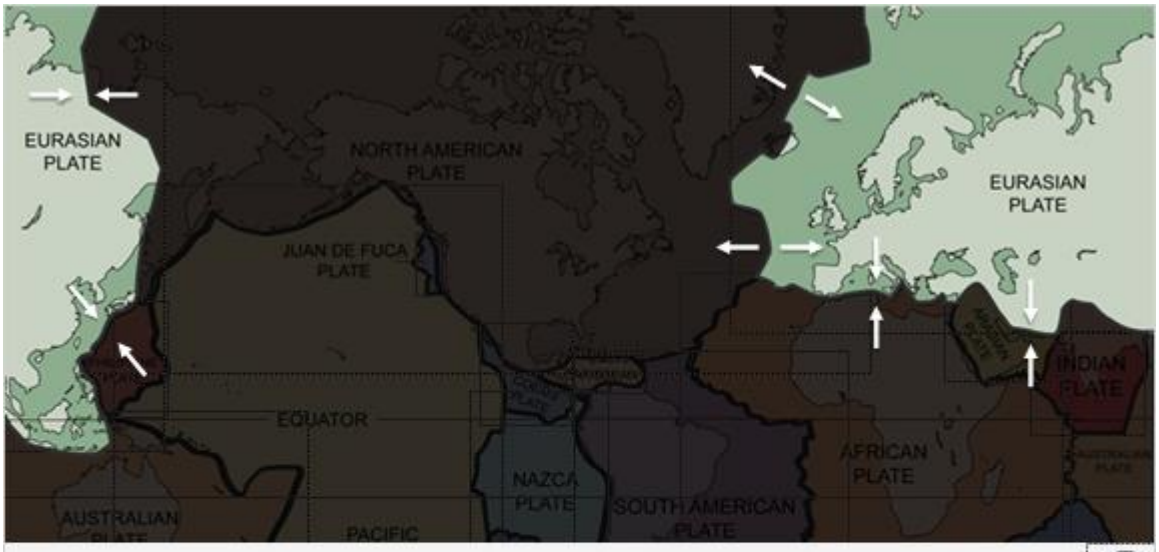
The Caribbean Plate collides with the North American Plate, which creates the Caribbean island arc. There are thousands of islands that are the result of these two plates interacting.

Cocos Plate



The Cocos Plate is a small plate located on the south western corner of the North American Plate. The interaction of these plates creates mountain ranges that are located on the western portion of North America and Central America.

Eurasian Plate



EURASIAN PLATE

The Eurasian Plate is separating from the North American Plate on the eastern side, while colliding with the Philippine Plate, the Pacific Plate, the African Plate, the Arabian Plate, the Indian Plate, and the western portion of the North American Plate. The converging of the Indian Plate and Eurasian Plate has created the Himalayan mountain range. The Eurasian Plate collision with the Australian Plate and the Philippine Plate are responsible for the creation of thousands of islands. This movement sometimes triggers major earthquakes.

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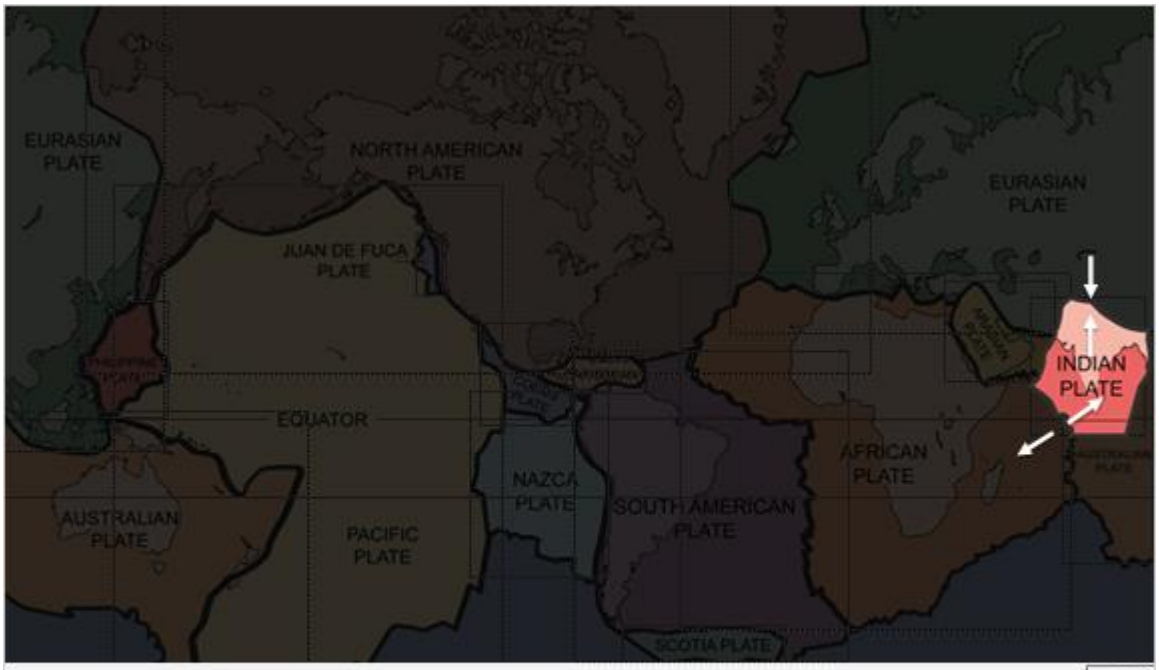
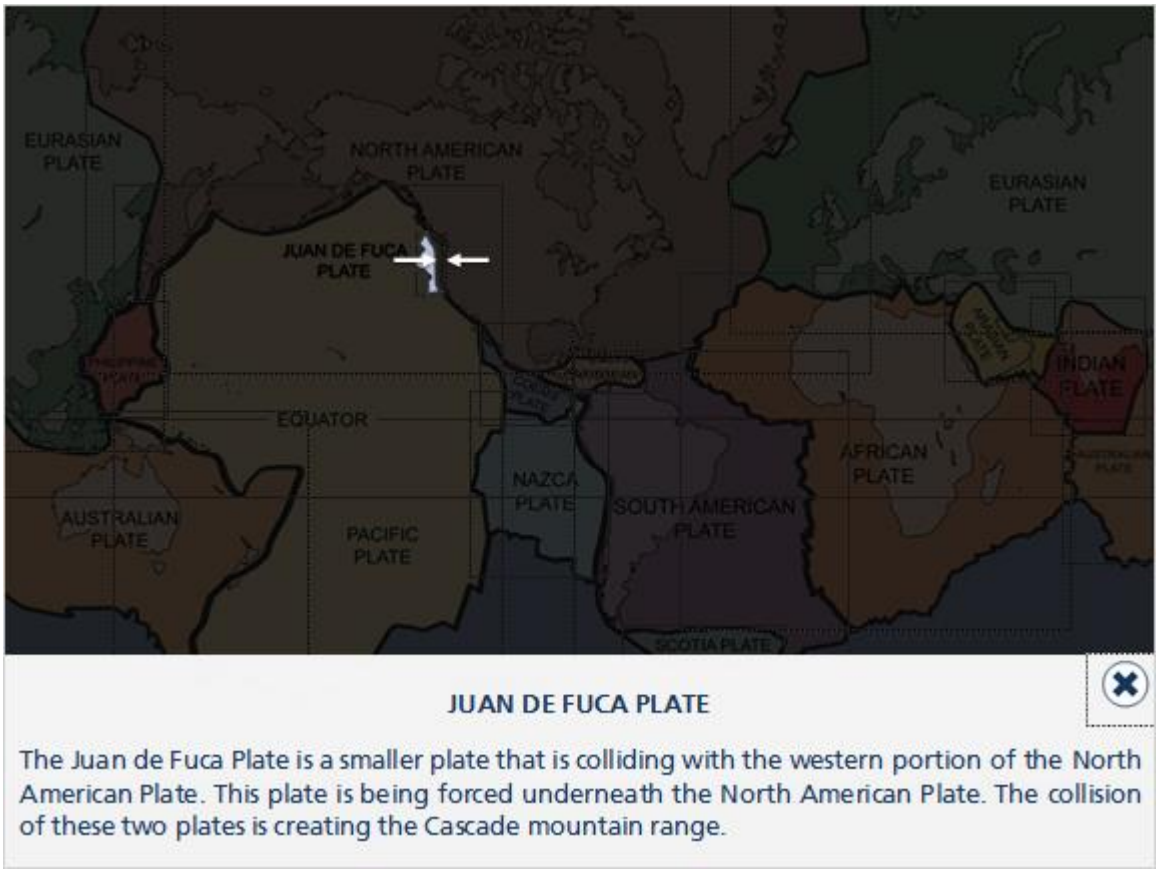
Indian Plate



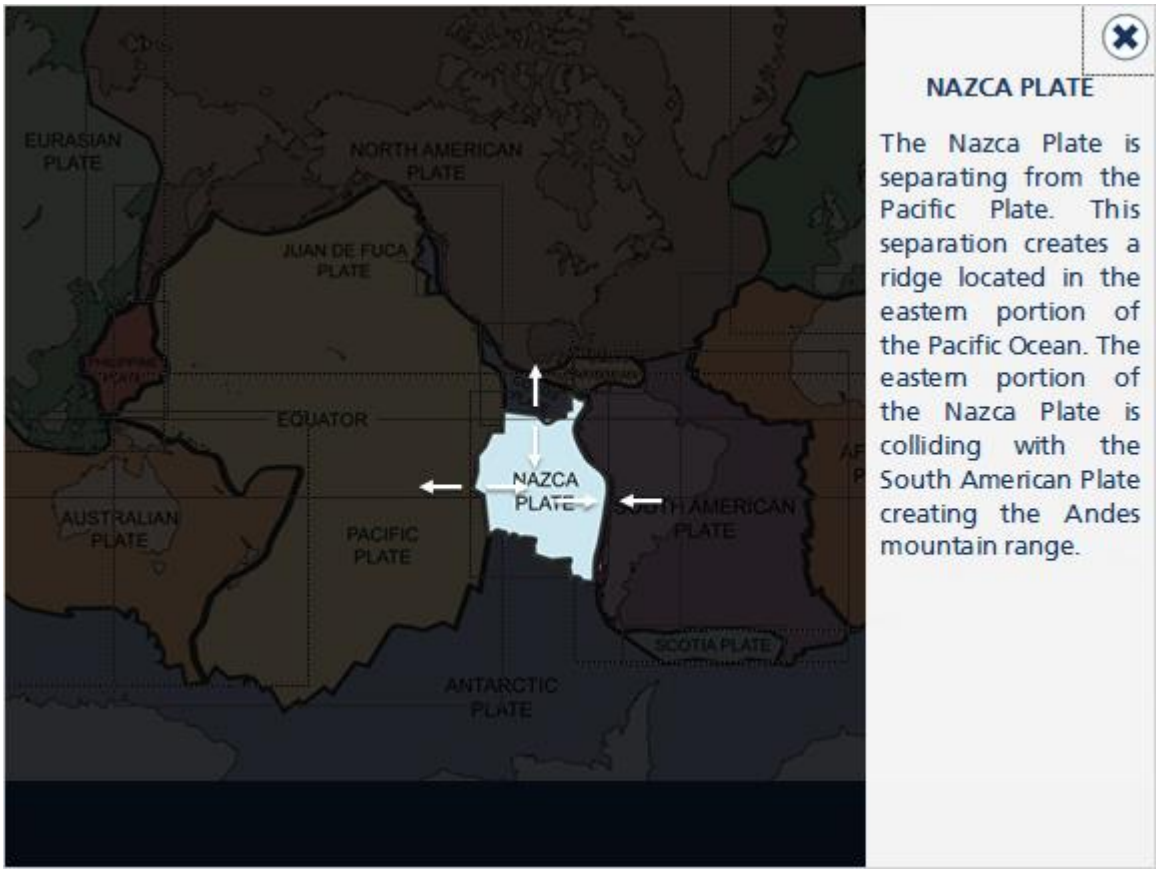
The Indian Plate and the Eurasian Plate are colliding, and this collision is creating the tallest mountain range in the world. The Indian Plate and the African Plate are separating. This is causing the Indian Ocean to become larger with each passing year.

Juan De Fuca Plate



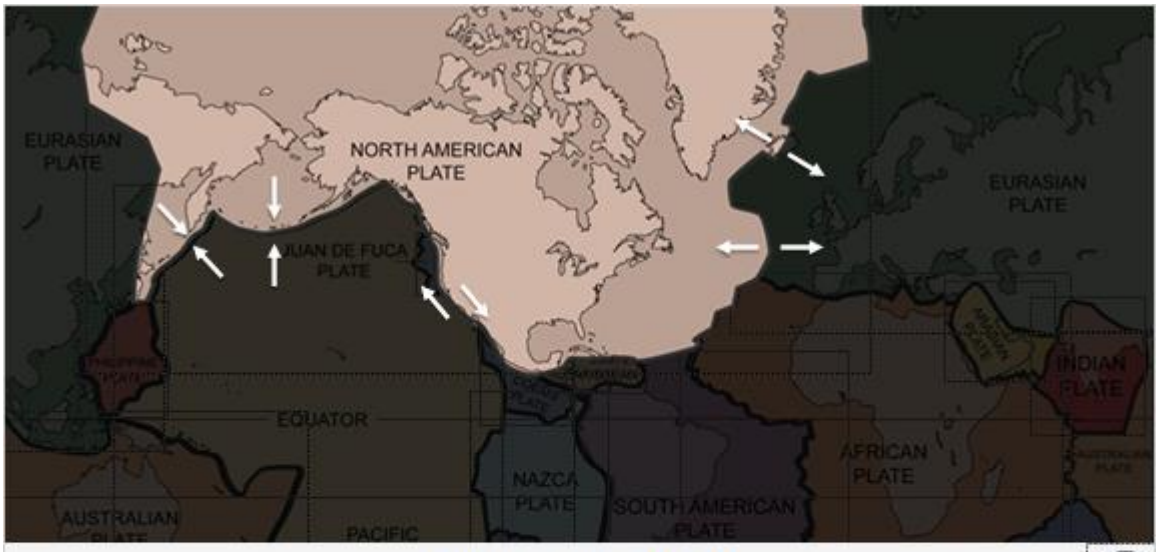
The Juan de Fuca Plate is a smaller plate that is colliding with the western portion of the North American Plate. This plate is being forced underneath the North American Plate. The collision of these two plates is creating the Cascade mountain range.

Nazca Plate



The Nazca Plate is separating from the Pacific Plate. This separation creates a ridge located in the eastern portion of the Pacific Ocean. The eastern portion of the Nazca Plate is colliding with the South American Plate creating the Andes mountain range.

North American Plate



NORTH AMERICAN PLATE

Along the North American Plate boundary, all three different plate interactions occur. The North American Plate is separating from the Eurasian Plate. This separation is causing a rift zone in the middle of the ocean. The rift zone is called the mid-ocean ridge and runs the entire length of the Atlantic Ocean. This plate is also colliding with the Pacific Plate. Collisions of plates results in the formation of the Aleutian Islands. The North American Plate and Pacific Plate are sliding past each other on the western portion of the North American Plate. This represents a transform plate boundary.

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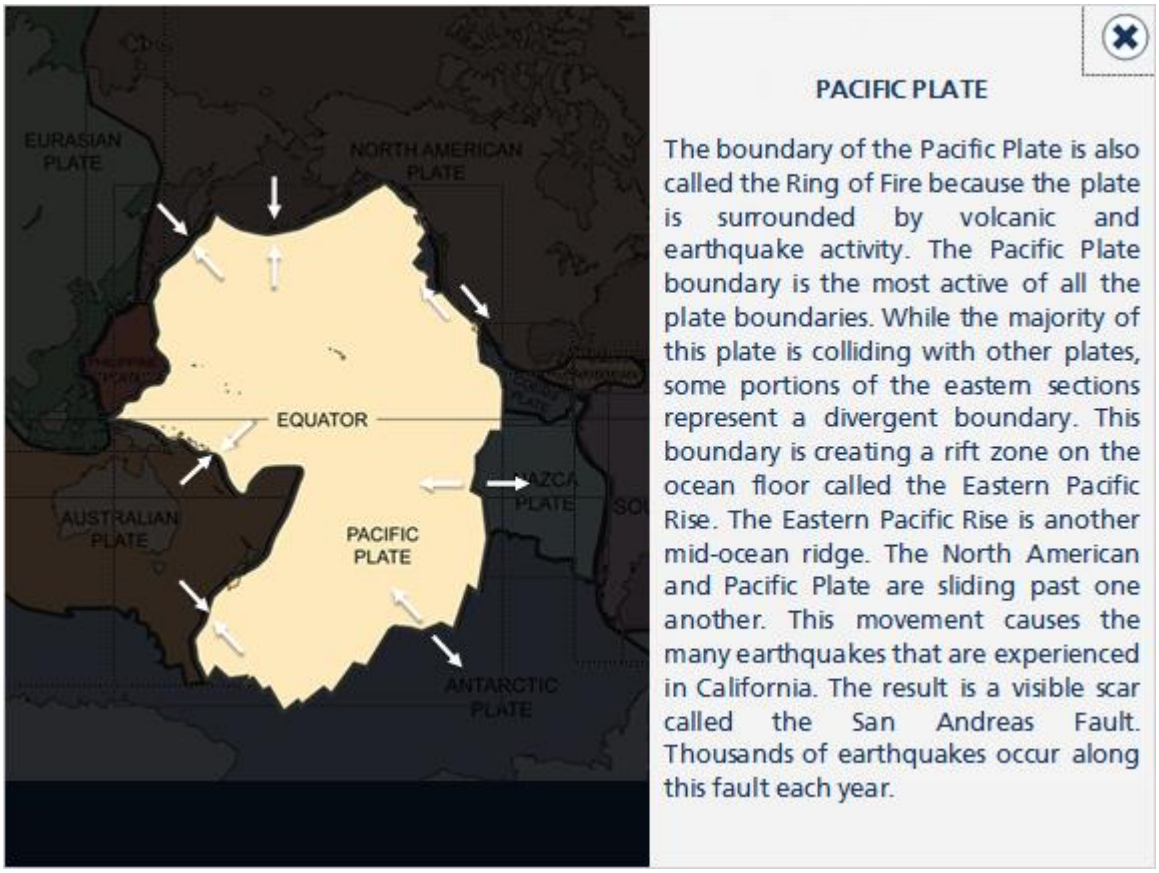
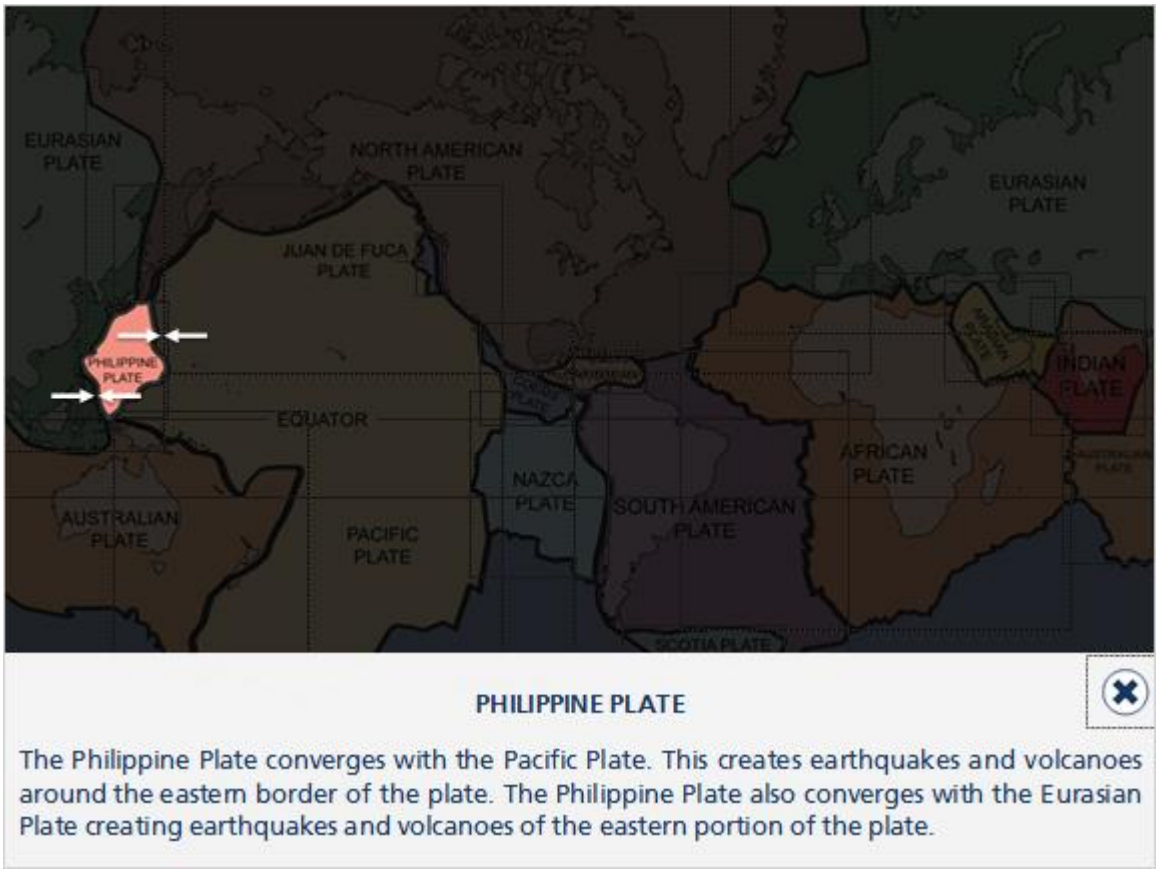
Pacific Plate



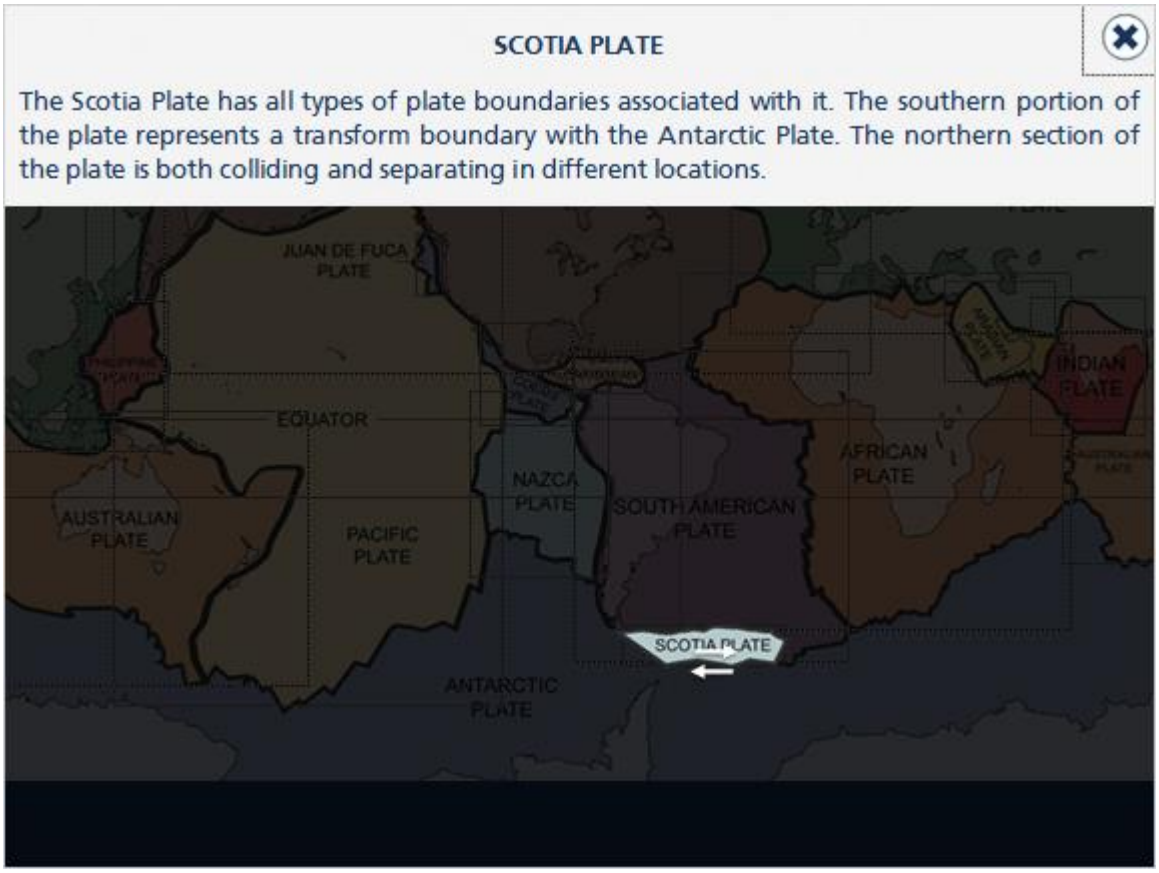
The boundary of the Pacific Plate is also called the Ring of Fire because the plate is surrounded by volcanic and earthquake activity. The Pacific Plate boundary is the most active of all the plate boundaries. While the majority of this plate is colliding with other plates, some portions of the eastern sections represent a divergent boundary. This boundary is creating a rift zone on the ocean floor called the Eastern Pacific Rise. The Eastern Pacific Rise is another mid-ocean ridge. The North American and Pacific Plate are sliding past one another. This movement causes the many earthquakes that are experienced in California. The result is a visible scar called the San Andreas Fault. Thousands of earthquakes occur along this fault each year.

Philippine Plate



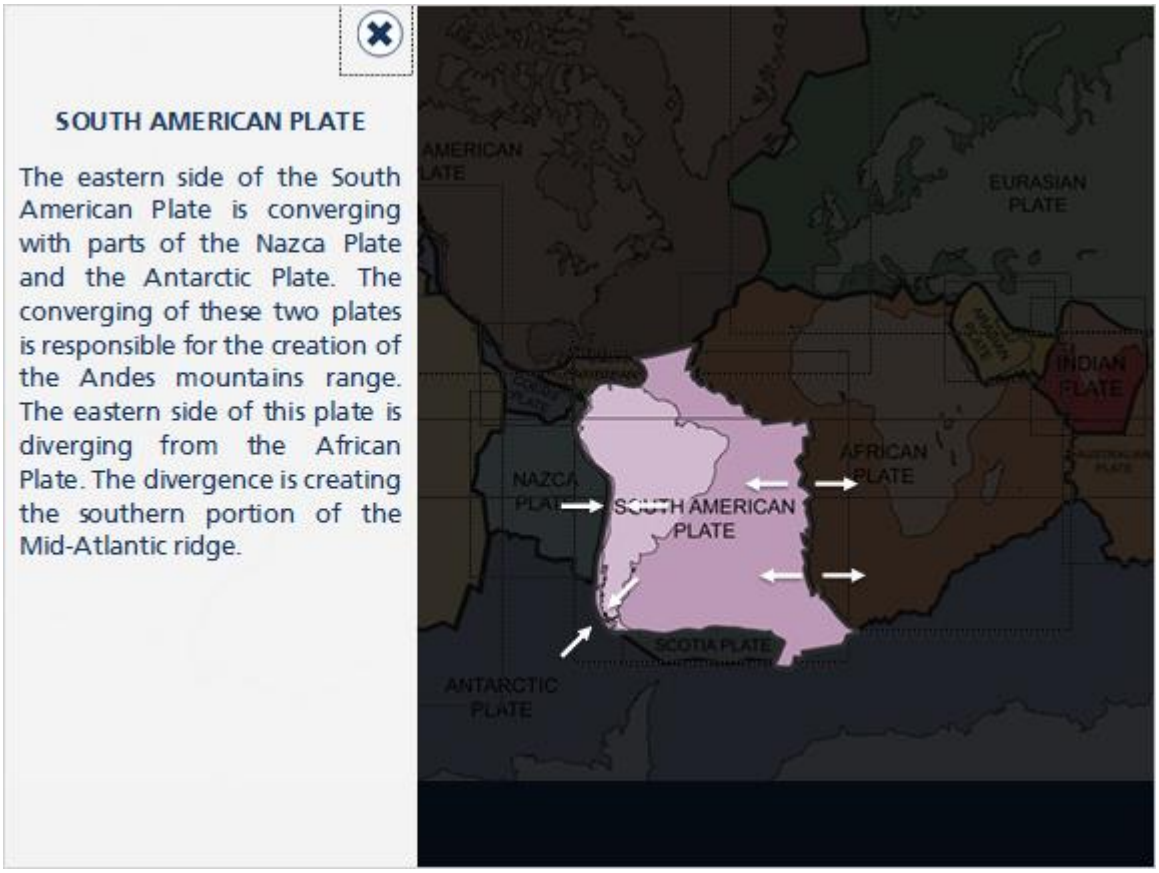
The Philippine Plate converges with the Pacific Plate. This creates earthquakes and volcanoes around the eastern border of the plate. The Philippine Plate also converges with the Eurasian Plate creating earthquakes and volcanoes of the eastern portion of the plate.

Scotia Plate



The Scotia Plate has all types of plate boundaries associated with it. The southern portion of the plate represents a transform boundary with the Antarctic Plate. The northern section of the plate is both colliding and separating in different locations.

South American Plate



The eastern side of the South American Plate is converging with parts of the Nazca Plate and the Antarctic Plate. The converging of these two plates is responsible for the creation of the Andes mountains range. The eastern side of this plate is diverging from the African Plate. The divergence is creating the southern portion of the Mid-Atlantic ridge.