

DANCE STYLE LOCATOR

## *Related Topics: Plate Tectonics and Geological Time*

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### **MAP 1**

#### *Precambrian*

The widely accepted theory of Plate Tectonics claims that the continents have been colliding and splitting apart since the beginning of Earth's history. The outer layer, or crust, has been shifting and moving, changing the formations of the continents and oceans, due to movement of various under layers of the earth.

Based on studies of the oldest rock and sediment formations, the earliest maps of earth are still only guesses of how the continents looked in the late Precambrian Eon, about 665 million years ago. During the first 4 billion years of the Earth's history, the building blocks to complex life existed but had not yet developed. Scientists believe that continents came together and split apart several times into "supercontinents."

### **MAP 2**

#### *Early Triassic*

The most recent supercontinent is called "Pangaea," which means "all land," and was formed 200 million years ago. Fossils show that plant and animal life traveled throughout Pangaea before it split apart and turned into our formation of continents today.

### **MAP 3**

#### *Late Jurassic*

During the time of the dinosaurs, Pangaea started to break up into pieces, but since it was such a slow process, you can see that North America had separated from South America, but was still connected to Europe. The Southern continents were still joined into a large continent called "Gondwana."

### **MAP 4**

#### *Late Cretaceous*

The southern continent of Gondwana started to break up, separating South America, Africa, and Antarctica. Australia was still connected to Antarctica but beginning to move northward. India separated from Madagascar and raced northward at a continental speed record of 15-20 centimeters per year!

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(Plate Tectonics, continued)

### **MAP 5**

#### *KT Boundary*

Climate changes and other geological events have caused mass extinctions at various times during earth's history. One such event occurred 65 million years ago when an asteroid slammed into the earth in what is now the Yucatan Peninsula in Mexico. This event caused the extinction of at least 75% of life on earth, including the dinosaurs and most ocean life. Scientists call this the "K-T Boundary," which marks the end of the Mesozoic era and the beginning of the present Cenozoic era, also called "The Age of Mammals."

### **MAP 6**

#### *Modern world*

What we know as the "Ice Age" (the Pleistocene epoch) began only 1,600,000 years ago, a drop in the bucket of geological time. Modern human beings have only existed since the Holocene Epoch, which began 10,000 years ago! While that seems like a really long time, if you compare it to the slow changes of the earth, you can see that we are a very young species at the beginning of our history. It is hard to visualize geological time periods compared with the time frames that we experience as humans. Yet with all of our technological advancements in the last century, we have a greater impact on the earth's development than any other species in the history of the planet. The amazing thing is that we may be the only species to ever try to understand the inner workings of the earth, and that gives us a chance to change our impact for the better.

### **MAP 7**

#### *Pangaea Ultima*

In another 250 million years, scientists believe that the continents will collide into another supercontinent, which they call "Pangaea Ultima." We can only imagine what kind of life forms will evolve on earth by then!