Name _____ Date _____ Period _____

PANGAEA

Activity 1 – Introduction

Read through the introduction information about Pangaea. Then complete the analysis questions below.

The Earth's crust is not a solid shell. It is made up of large, interconnecting pieces called tectonic plates that fit together like a puzzle. They move atop the underlying mantle, a thick layer of hot flowing rock called magma. By examining evidence such as rock layers from different continents, the distribution of ancient fossils, and the physical shapes of continents, scientists have concluded that the Earth's continents were once all connected to form a "supercontinent" called Pangaea. This supercontinent was surrounded by an enormous ocean called the Panthalassa Sea which existed about 300 million years ago. The name Pangaea comes from the ancient Greek words "Pan" meaning "whole" and "Gaia" meaning "land". Although Pangaea existed millions of years ago, it wasn't until 1915 that a German scientist named Alfred Wegener described the idea of "Continental Drift". In his theory, Wegener proposed that all the existing continents once formed one giant supercontinent and have since drifted apart to form their current arrangement. Although Wegener's theory was not widely accepted at the time, he did have supporting evidence for his new ideas. The shapes of South America and Africa appeared as if they could fit together like a puzzle. Next, Wegener matched rock formations in North America and Europe, two continents that are now separated by the Atlantic Ocean. Last, Wegener documented numerous fossils that only appear at specific locations, such as Africa and South America, two more continents which are today separated by the Atlantic Ocean. Since Wegener's theory of continental drift in 1912, scientists have collected more information and research to support his idea of Pangaea. Wegener's theory of continental drift allowed scientists to develop our modern Plate Tectonic Theory, which is the foundation of many geologic processes on the earth.

Analysis Questions

1- The earth's crust is broken into large pieces called _____ plates.

2- The thick layer of hot magma is called the _____.

3- Once all the continents were connected to form a giant _____.

4- _____ is the name given to the Earth's ancient supercontinent.

5- The Greek word "Pan" means _____ .

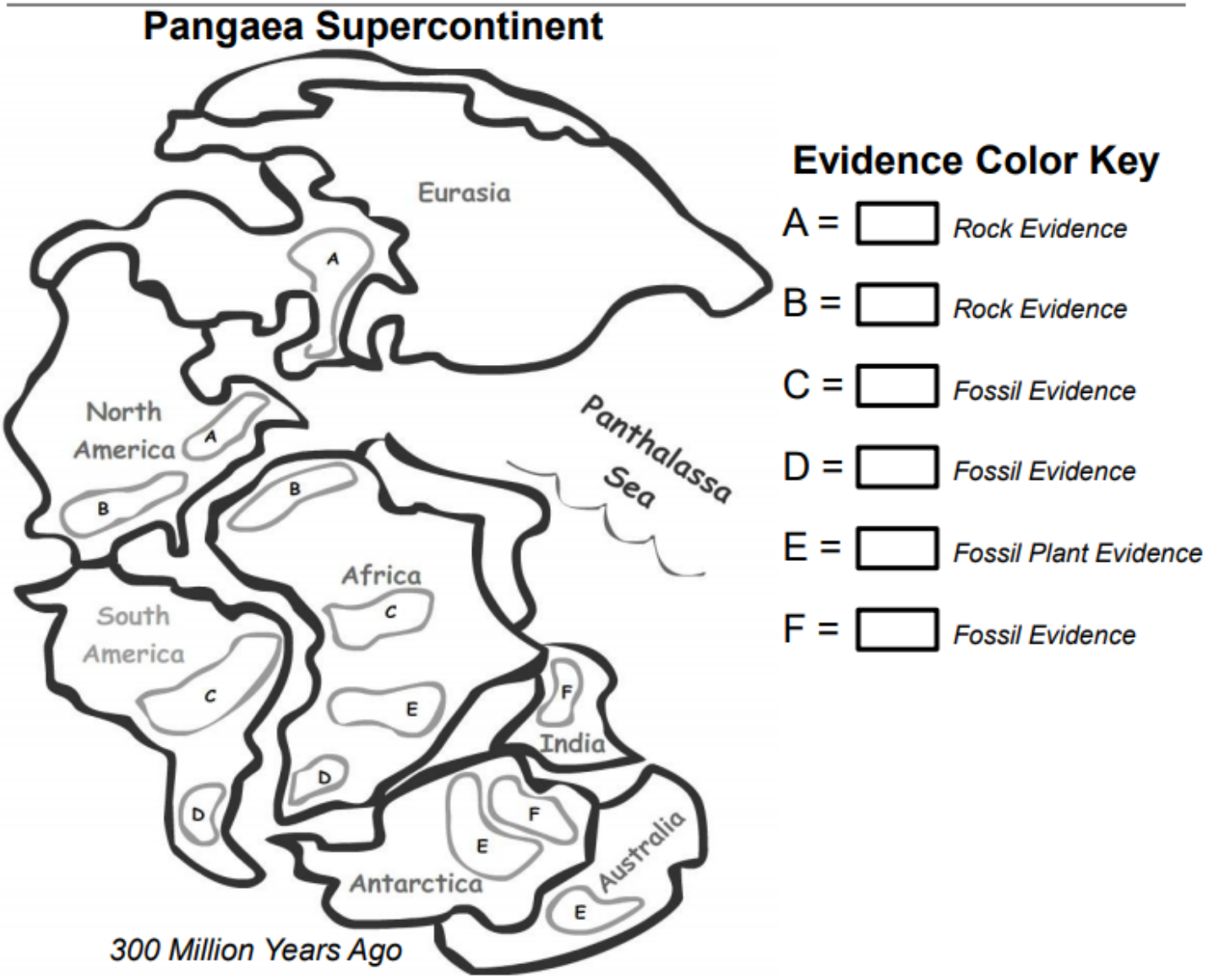
6- The ancient landmass of Pangaea was surrounded by a giant sea called _____

7- Alfred Wegener was a German scientist who proposed the Theory of _____ Drift.

8- The modern idea of Continental Drift is now referred to as the _____Theory.

Activity 2 – Continental Drift Evidence

Create your own color key by selecting colors for your evidence color key below. Then color the Pangaea lettered sections by using your evidence color key as a guide.



Analysis Questions

1- Which continents contain Rock evidence examples?

2- Which lettered fossil evidence is on 3 different continents?

3- Which continents contain Fossil Plant Evidence?

4- Which continent contains 4 different lettered evidence examples ?