

Plate Tectonics

The Earth's Crust is not just a single piece of rock on the outside of the Earth. It is broken up into pieces called **tectonic plates that are able to move around on top of the Mantle.**

The place where two tectonic plates meet is called a **fault. At a fault, the two tectonic plates can do one of three things**

- 1) They can push together, forming mountains or volcanoes
- 2) They can pull apart, forming volcanoes
- 3) They can rub against each other, generating earthquakes

When they push together, the boundary between the two plates is called a **convergent boundary. When they pull apart, the boundary between the two plates is called a divergent boundary. When they rub against each other, the boundary between the two plates is called a transform boundary. The idea of a transform boundary came from a Canadian scientist named Tuzo Wilson (1908 - 1993), and was a key idea for the development of the theory of Plate Tectonics.**

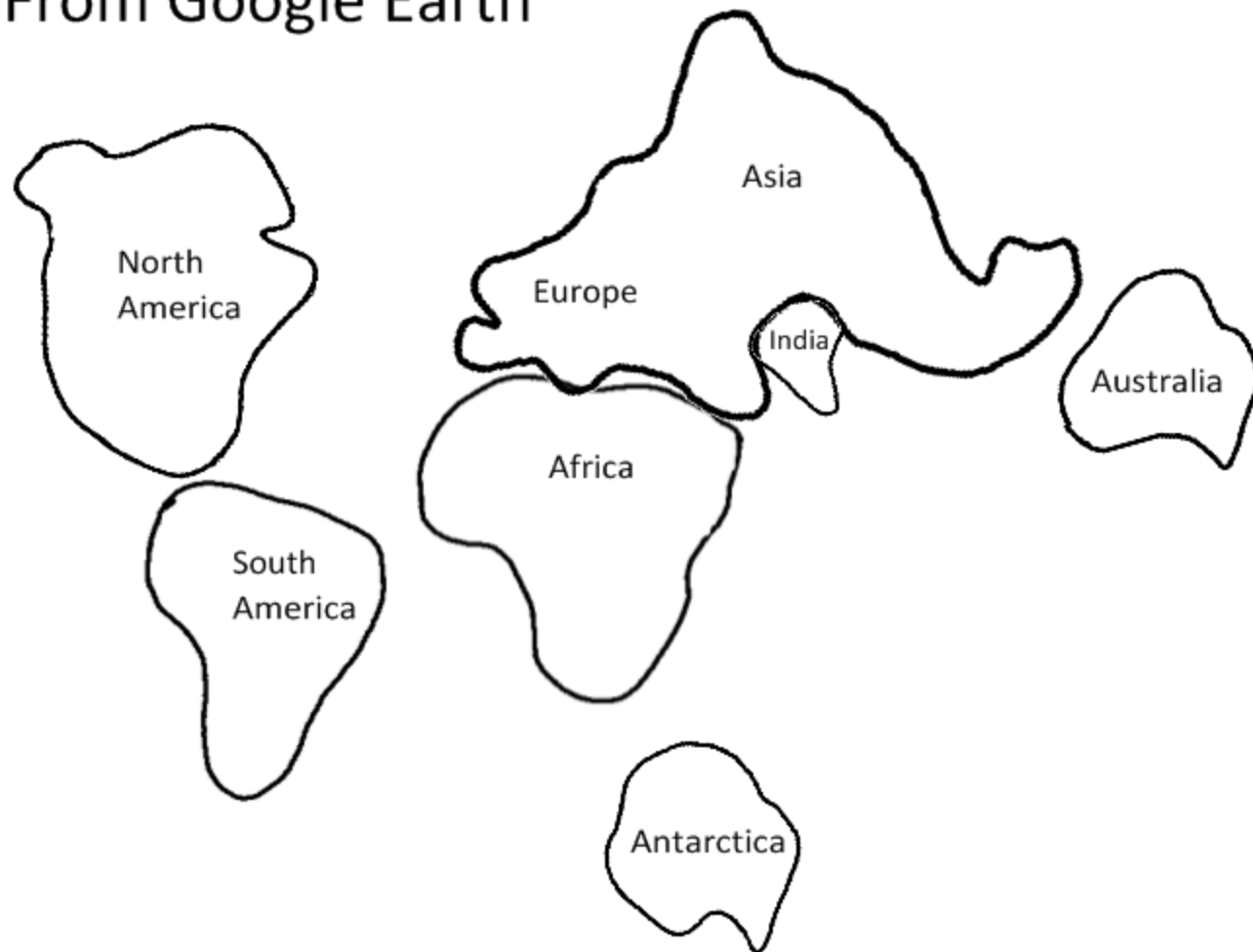
Pangaea

The tectonic plates that make up the Earth's Crust are constantly moving. For example, people have been able to observe that North America is moving away from Europe by about 2cm every year!

By looking at fossils and rock formations, scientists have been able to find evidence that all the continents used to be connected to each other about 350 million years ago. When connected, they made a supercontinent that Alfred Wegener (1880-1930), called **Pangaea**.

Pangaea however, was not the first supercontinent to form. The tectonic plates were moving even before Pangaea formed, and some scientists believe there were as many as 4 other supercontinents that formed earlier (though we do not know as much about them as we do Pangaea). The earliest one we have evidence for, Vaalbara, is thought to have existed about 3 billion years ago!

From Google Earth



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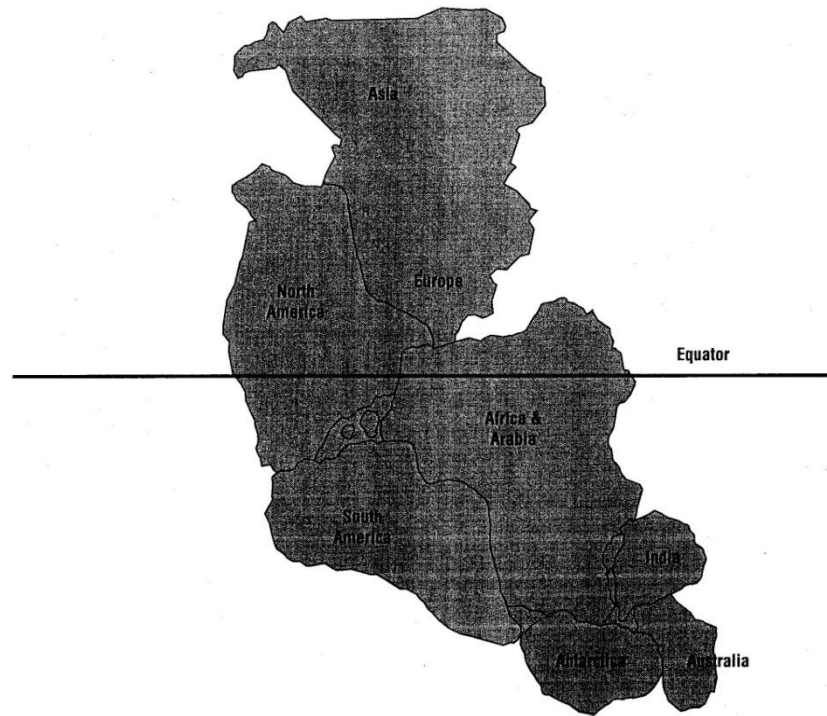
CLASS:

CHAPTER 12
SCIENCE INQUIRY

Pangaea Map

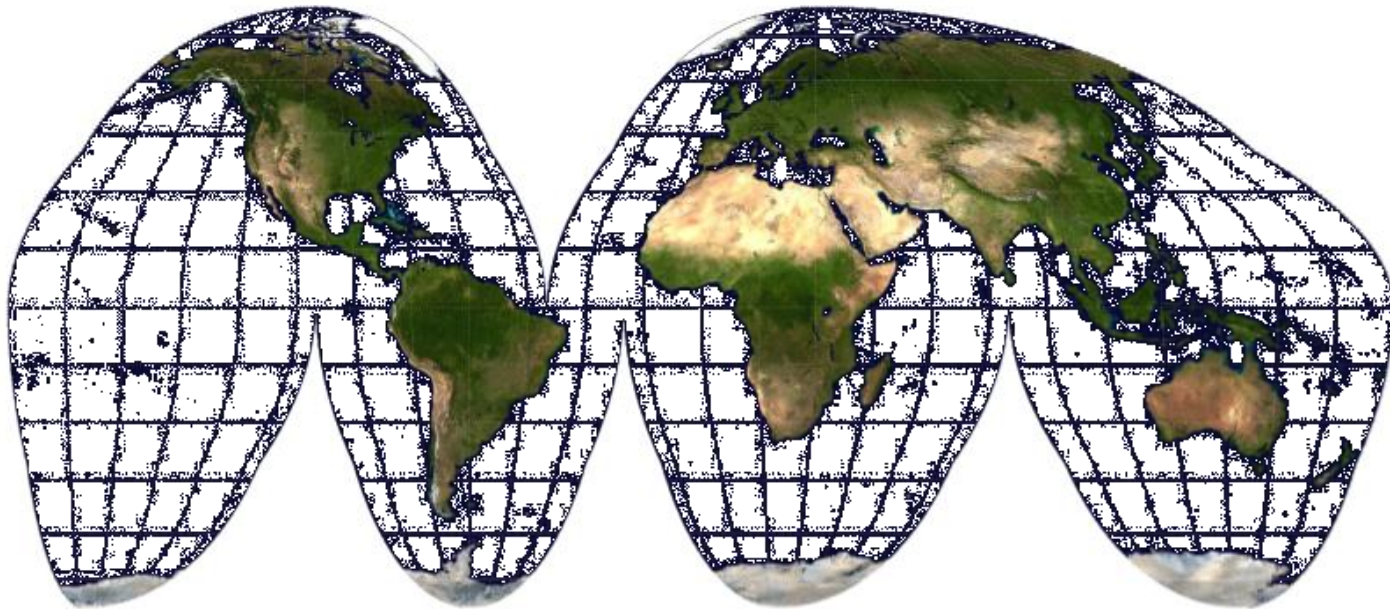
BLM 12-10

Goal • Use this map of Pangaea for Conduct an Investigation 12-A: Give Me a Clue!

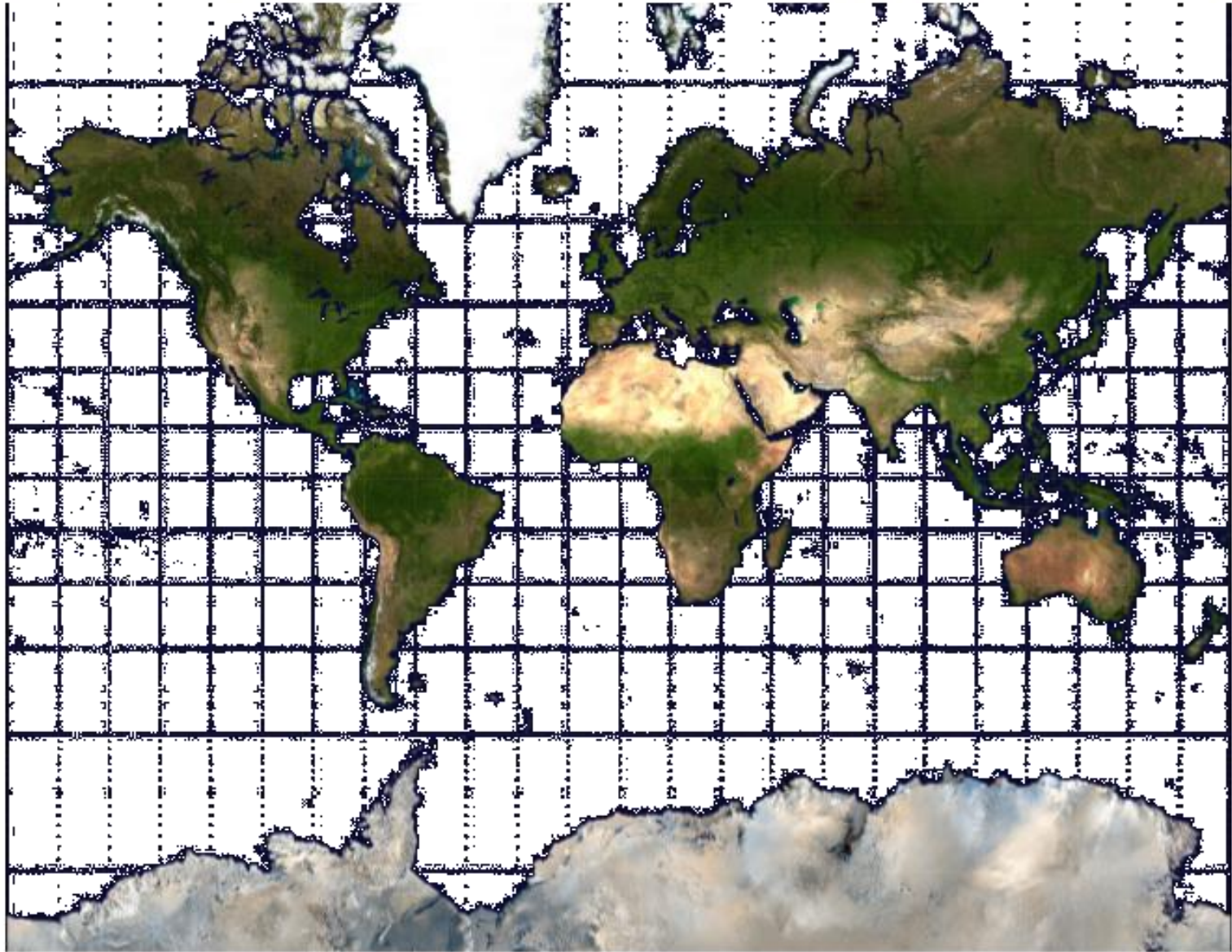


Use the space below, or a separate page, to write the answers to the Investigation questions from your textbook.

Goode-Homolosine Projection (Wikipedia)



Mercator Projection (Wikipedia)



Map of Tectonic Plates

SciencePower 7 pg. 356

