Name _____ Date _____

Earth Movement Project

Activities

A. Class groups are going to be divided into the following plates:

1. **North American**
2. **South American**
3. **Pacific**
4. **Indian and Australian**
5. **African**
6. **Arabian**
7. **Cocos/Nazca/Caribbean**
8. **Eurasian**
9. **Antarctic (optional)**

Which plate did your group get? _____

B. In each team these four jobs need to be done:

1. Volcanologist
2. Seismologist (earthquakes)
3. Geographer (elevation)
4. Geochronologist (sea-floor age)

How did you divide the jobs?

Team member 1 (_____): _____
Team member 2 (_____): _____
Team member 3 (_____): _____

SUMMARIZING OBSERVATIONS

Name _____ Date _____

Observations of Scientific Data for the World

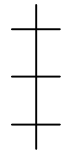
Seismology Observations	Volcanology Observations	Geography Observations	Geochronology Observations

Draw and Define Plate Boundary Types

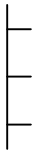
Name _____ Date _____

- From your Summarizing Observations sheet, find patterns among the world's plate boundaries.
- Any plate boundaries that share the same pattern we will call a plate boundary type.
- Define 2 to 6 plate boundary types in the world.
- Create a symbol for each plate boundary type. Each symbol should have its own color and shape.

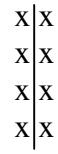
Examples of Symbols



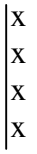
Symmetric Earthquakes



Asymmetric Earthquakes



Symmetric Volcanoes



Asymmetric Volcanoes

- Create a key that includes the symbol and a detailed description and definition of each boundary type.

Example of a key for a volcano specialty map

Plate Boundary Types for Volcanology

Symbol	**Description**
	Type 1 Boundary: the blue line is the plate boundary and the X's locate a line of volcanoes that are asymmetric (off to one side) to the plate boundary.

- On your original plate boundary map, for each plate boundary type, color the plate boundaries using the symbols and colors you came up with.

Name _____ Date _____

Plate Boundary Types

Seismology Plate Boundary Types	Volcanology Plate Boundary Types	Geography Plate Boundary Types	Geochronology Plate Boundary Types

Classification Schemes for Plate Boundary Types

Name _____ Date _____

Plate Boundary	Scientific Specialty	Description
Type A	Geography	
	Volcanology	
	Seismology	
	Geochronology	

Plate Boundary	Scientific Specialty	Description
Type B	Geography	
	Volcanology	
	Seismology	
	Geochronology	

Plate Boundary	Scientific Specialty	Description
Type C	Geography	
	Volcanology	
	Seismology	
	Geochronology	

Worldwide Plate Boundary Classification Scheme

Name _____ Date _____

Scientific Specialty	Plate Boundary Type 1	Plate Boundary Type 2	Plate Boundary Type 3
Geography			
Volcanology			
Seismology			
Geochronology			

Scientific Specialty	Plate Boundary Type 4	Plate Boundary Type 5	Plate Boundary Type 6
Geography			
Volcanology			
Seismology			
Geochronology			

Plate Boundary Types – Scientist's Ideas

Name _____ Date _____

1. At which plate boundary type is new plate created?

_____
_____
_____
_____

2. At which plate boundary type is old plate "removed" (subducted, recycled)?

_____
_____
_____
_____

3. What evidence is there that the sea floor is spreading?

_____
_____
_____
_____

4. How does subduction at deep ocean trenches account for or explain deep, mantle earthquakes?

_____
_____
_____
_____

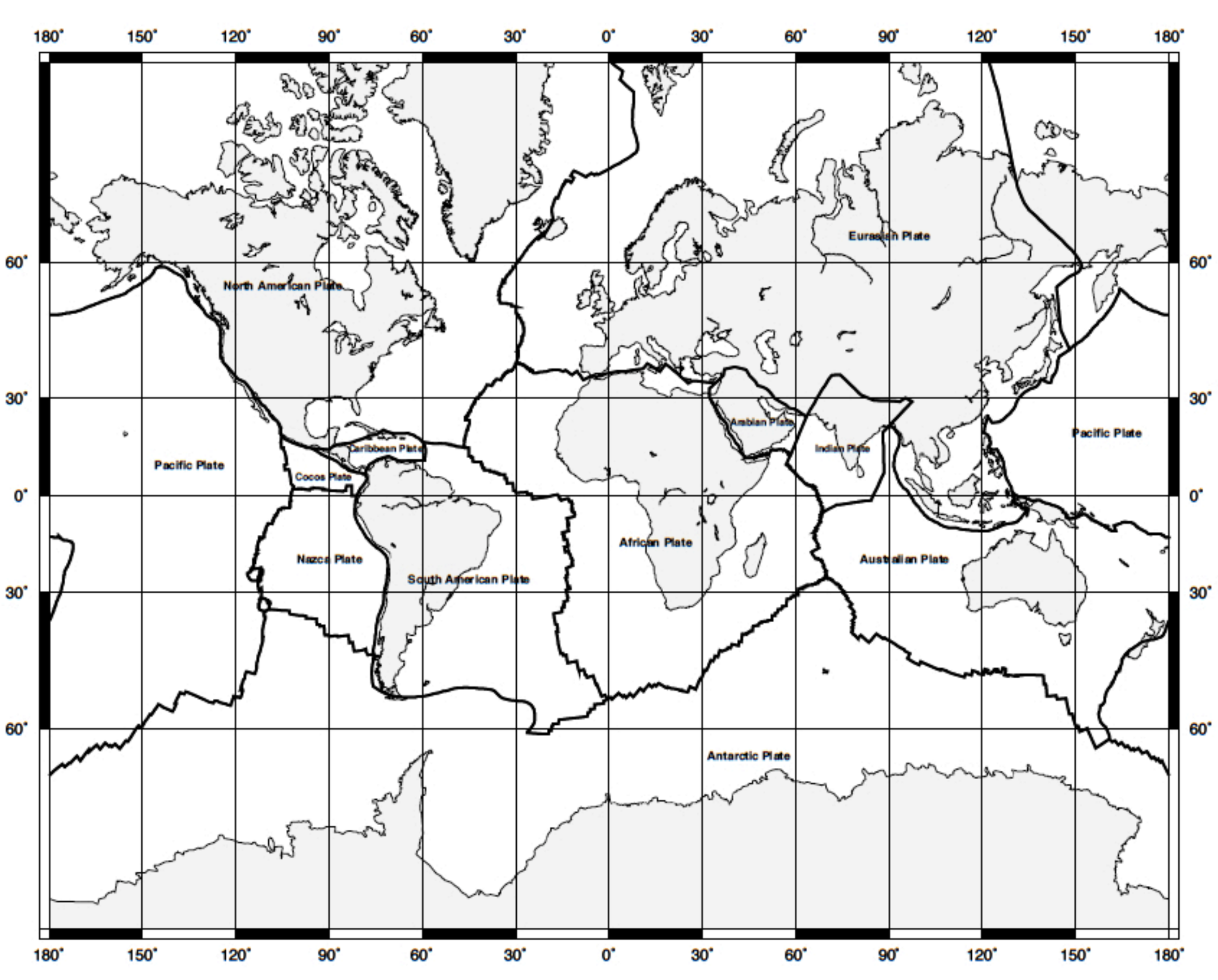
5. How can the Pacific Ocean be shrinking?

_____
_____
_____

6. How can the Atlantic Ocean be expanding?

_____
_____
_____

[On the back describe a transform boundary and tell where on the Earth it is.]


180° 150° 120° 90° 60° 30° 0° 30° 60° 90° 120° 150° 180°
60°
30°
0°
30°
60°
North American Plate
Eurasian Plate
Pacific Plate
Pacific Plate
Caribbean Plate
Cocos Plate
Arabian Plate
Indian Plate
Pacific Plate
Nazca Plate
South American Plate
African Plate
Australian Plate
Antarctic Plate