Identifying Tectonic Plates

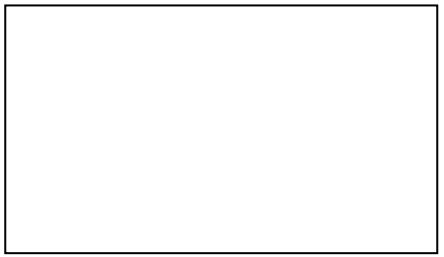
Engage

Materials: Milky Way fun size candy bar per student, paper towel

What To Do:

1. Carefully unwrap and take out your Milky Way.
2. Gently push your finger into the surface of your candy bar. Make sure you crack the chocolate layer.
3. Look down on the candy bar and draw what you observe in the box below.

4. Gently pull your Milky Way apart. Notice how the pieces of chocolate move on the caramel layer.
5. Now push the two pieces together and try to build your own little mountain range.
6. Look at the candy bar from the side and draw what you made in the box below.



8. Once you finished testing destroy your evidence.

Explore

Materials: Tectonic Plate map

What to Do:

1. Use the clues and the coordinates below to locate each of the following tectonic plates on your map.
2. Label them with the correct name.

Pacific Plate – While I am mostly crust under the ocean, I have a small piece of continental crust and can cause a lot of moving and shaking in California. I am found between 150°E longitude and 120°w longitude.

North American Plate - I rattle people's nerves when I collide with my pal the Pacific plate. I am home to the United States and Mexico. About half of me is under the Atlantic Ocean.

Indo-Australian Plate – I am located underneath the Indian Ocean and stretch from the land of the koalas to Iraq in the Middle East. I can be found between 40°N latitudes and 60°S latitude.

African Plate – I can be found with my "mummy" where 0°latitude meets 0° longitude.

South American Plate – I extend from 60°S latitude to 15°N latitude and am home to the Amazon rainforest.

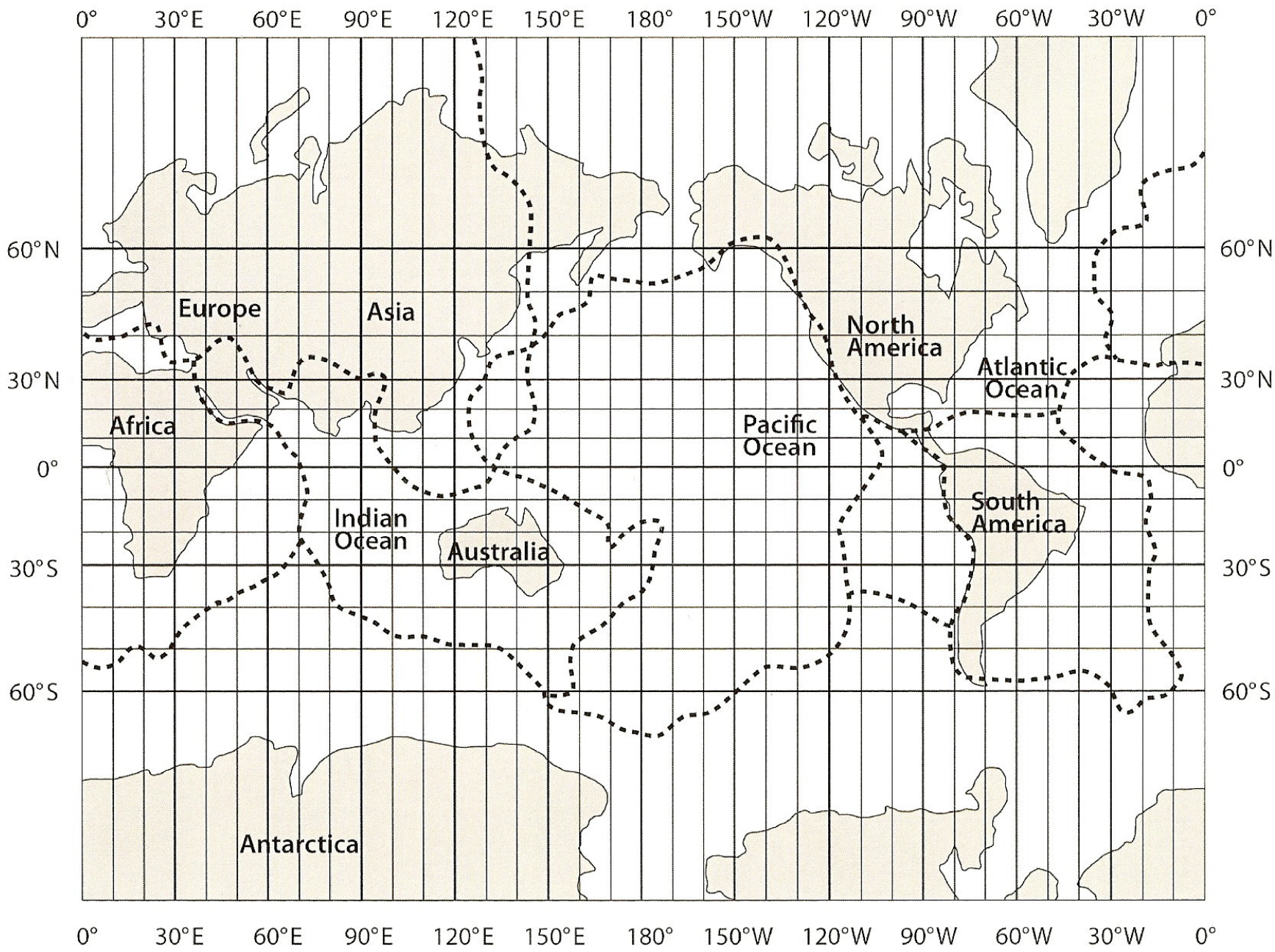
Eurasian Plate – Russia, China and Europe all call me home, which makes me rather large. I collide with the Indo Australian Plate quite often.

Nazca Plate- I am sliding towards and under my neighbor, the South American plate. I am a smaller plate covered by the Eastern Pacific Ocean.

Antarctic Plate – I am the 5th largest plate and am located at the bottom of the world. I include the entire continent and a large portion of the surrounding Southern Ocean floor.

Do Not Glue into your notebook until finished with the next two lessons. Then fold in half and glue to only one page

Tectonic Plate Map



Explain

TECTONIC PLATE

LINES OF LATTITUDE

LINES OF LONGITUDE

Elaborate

Materials: Tectonic Plate Map, colored pencils

What To Do:

1. Draw a dot on your map where 35°N and 70°E intersect with a green colored pencil.
2. Draw another dot where 30°N and 90°E intersect.
3. Connect the dots with a line and write "Himalayan Mountains" as close to the line as possible.
4. Draw two arrows pointing toward each other, with one arrow on either side of the Himalayan Mountains.

5. Using a blue colored pencil draw a small square at the intersection of points 60°N and 30°W.
6. Draw another square at the intersection of 40°N and 30°W.
7. Draw another square at the intersection of 15°N and 45°W.
8. Draw another square at the intersection of 45°S and 20°W.
9. Draw a line to connect the squares in the order they were drawn. Label this line: Mid-Atlantic Ridge."

10. Draw 10 small red triangles on the west coast of South America, starting at 0° latitude and ending at 50°S.
11. Draw a line connecting all the triangles and label it "Andes Mountains."

12. With an orange colored pencil, write the letter F, for Fault, at the intersection of 30°N and 120°W.
13. Write another letter F at the intersection of 40°N and 123°W.
14. Connect the Fs with a line and label it "San Andreas Fault."

Questions:

1. Which two plates are crashing into each other to create the Himalayan Mountains? _____
2. Name the four plates that make up the boundaries of the Mid-Atlantic Ridge. _____

_____

3. Which two plates are sliding past each other to create the San Andres Fault? _____

Name _____ period _____

EXIT TICKET

Identifying Tectonic Plates

Use the map on the right side of this paper to answer the following questions.

1. Label any two of the tectonic plates in the map.

2. Which tectonic plate is found where 0°latitude meets 0° longitude?

   A. North American Plate
   B. Antarctic Plate
   C. African Plate
   D. Pacific Plate

3. Which tectonic plate extends from 60°S latitude to 15°N latitude?

   A. South American Plate
   B. Antarctic Plate
   C. African Plate
   D. Pacific Plate

4. Which tectonic plate has very little landmass on it?

   A. South American Plate
   B. Antarctic Plate
   C. African Plate
   D. Pacific Plate

5. Which tectonic plate is located at the bottom of the world?

   A. Australian Plate
   B. African Plate
   C. Antarctic Plate
   D. Asian Plate