Warm Up 11/12

Complete the Afterschock Documentary Reflection on Google Classroom. Make sure you have sufficient evidence (2-3 examples) from the documentary. You have until 1:00pm to work on this and turn it in.

Navigate

Turn and Talk

What do you notices about these two models: plate maps and topographic map?

Esri, HERE, Garmin, FAO, NOAA

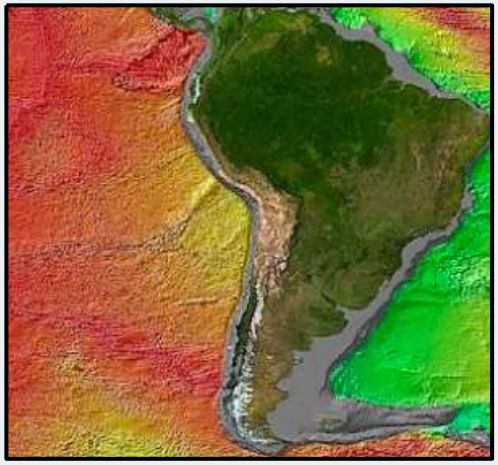
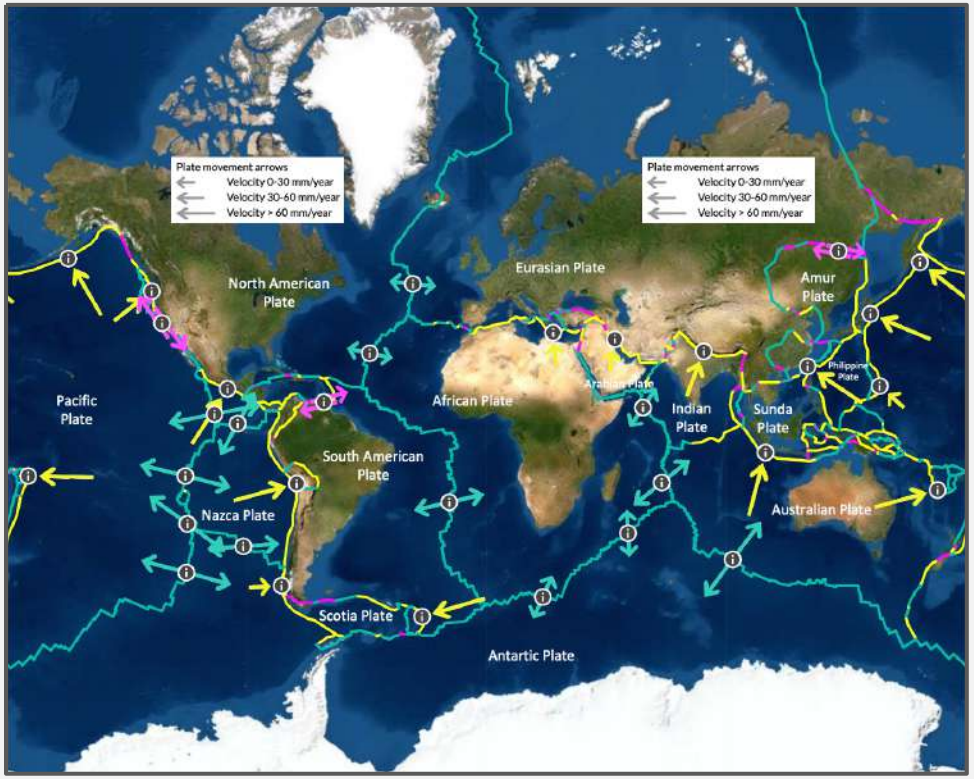
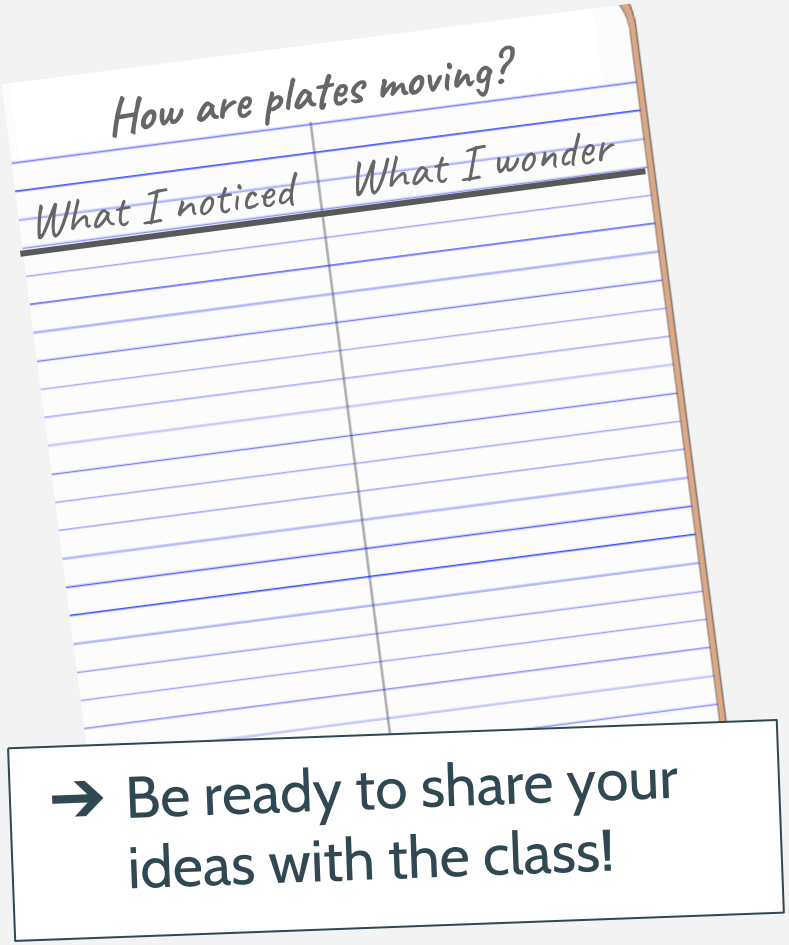


Image created by Elliot Lim, Cooperative Institute for Research in Environmental Sciences, NOAA National Geophysical Data Center Marine Geology and Geophysics Division

Interpret GPS Data





➔ Be ready to share your ideas with the class!

Class Conclusions

- South america on west side it is much younger than the east side
- Arrows show plates are moving away from each other
- Oldest unchanged area is in the middle of a plate
- As you get closer to the coastline the rocks get younger in some areas
- Middle of the oceans is new compared to the other ones

Consider Boundary Types

With your class

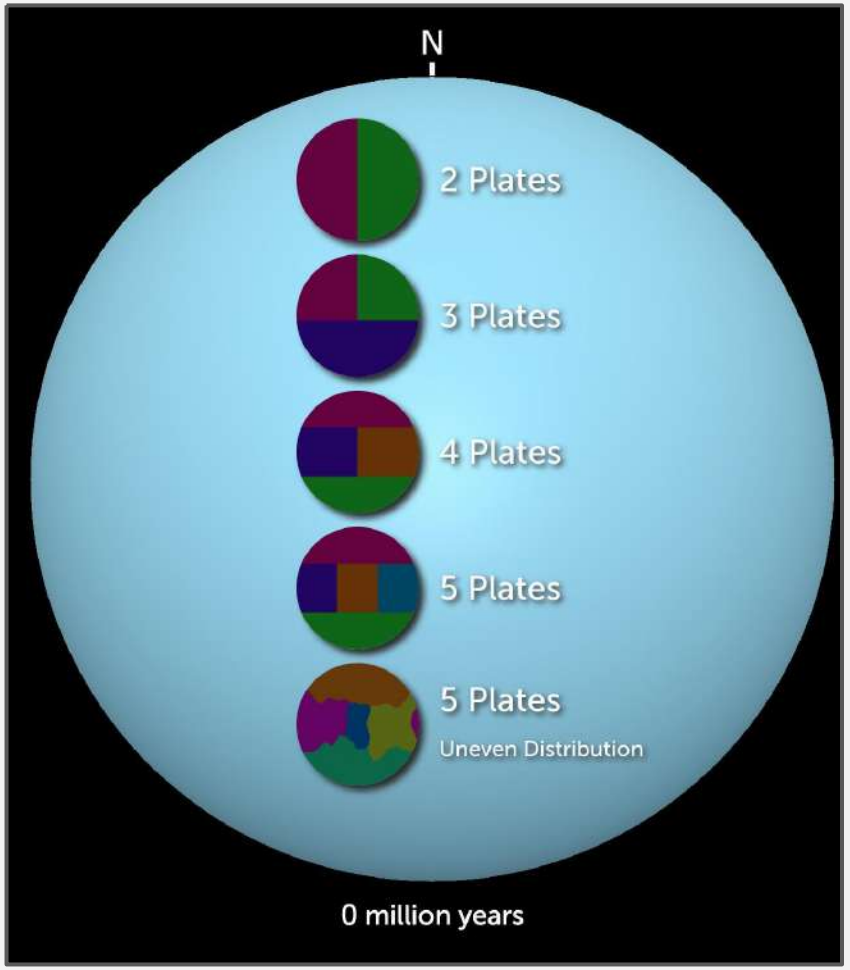
Let's co-construct definitions for the following types of plate boundaries:

- Convergent
- Divergent
- Transform

Explore Simulation Functionalities

With your class

Let's use the simulation together to explore some of the variables we can investigate.



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https://www.openscied.org/general/tectonic-explorer/

Share Global-Scale Observations

With your group

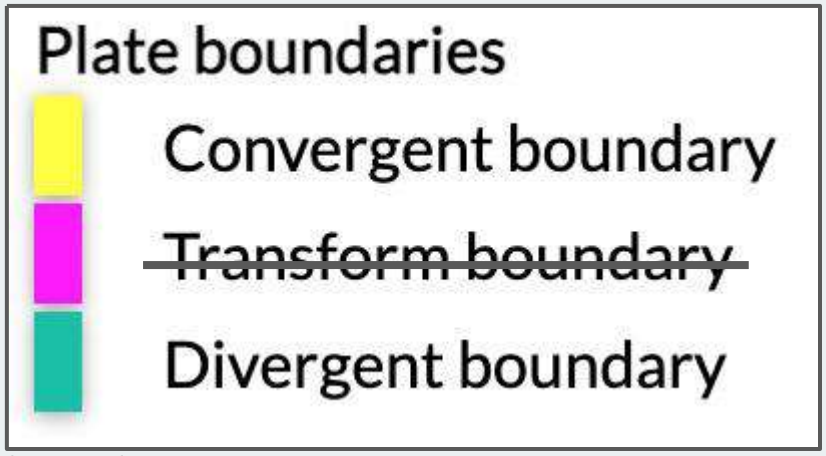
Use the simulation to explore changes on the plates at the global scale.

➔ Be ready to share your findings with the class!

Carry Out an Investigation

With your group

- Use the reference map to identify a convergent boundary and a divergent boundary.



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- Follow the handout guidelines to investigate each plate boundary.

Warm Up

Complete Investigation Plate Interactions on Google Classroom

Identify Similarities in Plate Boundaries

With your class

What did convergent and divergent plate boundaries have in common?

Draft an Explanation

On your own

Develop an explanation for what is going to happen at Afar. Use evidence from the simulation and the reading to support your ideas.

Prepare for the Scientists Circle

With your group

Use your findings and key points from the reading to be ready to share ideas about:

- the movement of the plates at convergent and divergent boundaries
- the relationship between the movement of the plates and the observed changes in the crust at each boundary
- the movement of matter we observed between the mantle and the plates at each boundary

Make Sense of Plate Boundaries

Scientists Circle

Come to consensus as a class around a model of how plate interactions help us explain the surface features we see on the planet.

Explain Patterns of Radiometric Data

With your group

- What patterns did we identify in the ages of oceanic and continental crusts?
- How does our consensus model help us explain how the flow of matter through and between Earth systems creates these patterns?

→ Be ready to share your ideas with the class!

Revise an Explanation

On your own

Revise your explanation for what is going to happen at Afar. Add or modify any information that will improve your prediction or your evidence-based explanation for what will happen to this region in the future.

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