Glue this side into your notebook

Tectonic Plates

■	I could teach it
☒	I somewhat get it
☐	I need to learn this

The things I should know before 8th grade:

- ☐ Properties of materials can change
- ☐ Forces can change the motion of an object
- ☐ Rocks have characteristics related to the environment in which they form
- ☐ Thermal energy is a measure of the motion of the atoms and molecules in a substance and can be transferred through radiation, convection, and conduction
- ☐ Energy can be transformed, transferred, and conserved

The most basic things I should know after this unit:

- ☐ Earth's crust consists of major and minor tectonic plates that move relative to each other
- ☐ The theory of plate tectonics describes how the rigid tectonic plates move with the molten rock and magma beneath them in the upper mantle
- ☐ Convection currents in the crust and upper mantle cause the movement of the plates
- ☐ Energy that powers convection currents comes from deep within Earth
- ☐ There are 3 main plate boundaries: convergent, divergent, and transform
- ☐ Each plate boundary moves in a different way and causes events

I know…	
a.	❑ that tectonic plates are a part of Earth's lithosphere (Earth's rigid rock layer of crust and upper most part of the upper mantle) ❑ what Alfred Wegner's basic ideas were about continental drift ❑ the difference between continental drift and plate tectonics
b.	❑ what convection currents are ❑ the relationship between density and temperature of matter ❑ the role of density in the movement of plates and the resulting features or events
c.	❑ the different types of plate boundaries and how they move ❑ the different features or events that can occur at the different types of plate boundaries

I can…	
a.	❑ use historic evidence (*such as continental "puzzle-like-fit", paleoclimate data, paleomagnetic data, continental drift, convection theory, and sea floor spreading*) to describe how scientists first began to understand plate tectonics ❑ use current evidence (*seismic data, GPS/GIS data of plate movement and rates of change, robotic studies of the sea floor, and further exploration of Earth's interior*) to describe how scientists have changed understandings of Earth's interior to the current theory of plate tectonics
b.	❑ use major tectonic features (*like Hawaii hot spot, San Andreas fault, Ring of Fire, Mid-Atlantic Ridge, Mariana Trench, New Madrid Fault System*) as evidence to explain the relationship between Earth's thermal energy (*convection currents*) and the movement of plates
c.	❑ use data (*maps, cross-sections, models, and other data*) to categorize, identify, and predict the <u>type of plate boundary</u> and <u>the kind of movement</u> at the boundary ❑ use data (*maps, cross-sections, models, and other data)* to categorize, identify, and predict the <u>resulting feature or event</u> at a plate boundary

Vocabulary to Master			
❑ reference point	❑ relative motion	❑ convection	❑ magma
❑ tectonic plate	❑ continental drift	❑ convergent	❑ divergent
❑ paleomagnetism	❑ GPS/GIS	❑ transform	❑ subduction zone
❑ paleoclimate	❑ sea floor spreading	❑ continental plate	❑ volcano
❑ earthquake/seismic	❑ tsunami	❑ magma plume	❑ upper mantle
❑ geyser	❑ hot spring	❑ lithosphere	❑ asthenosphere
❑ oceanic vent	❑ island arc	❑ crust	❑ fault
❑ hot spot	❑ rift valley	❑ oceanic plate	❑ plate boundary