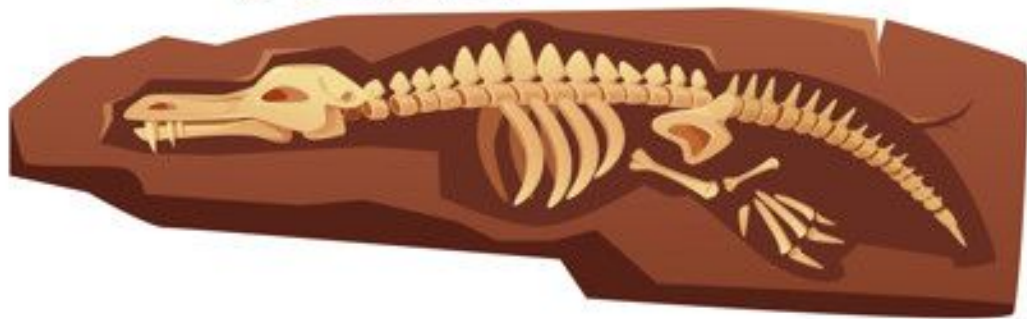


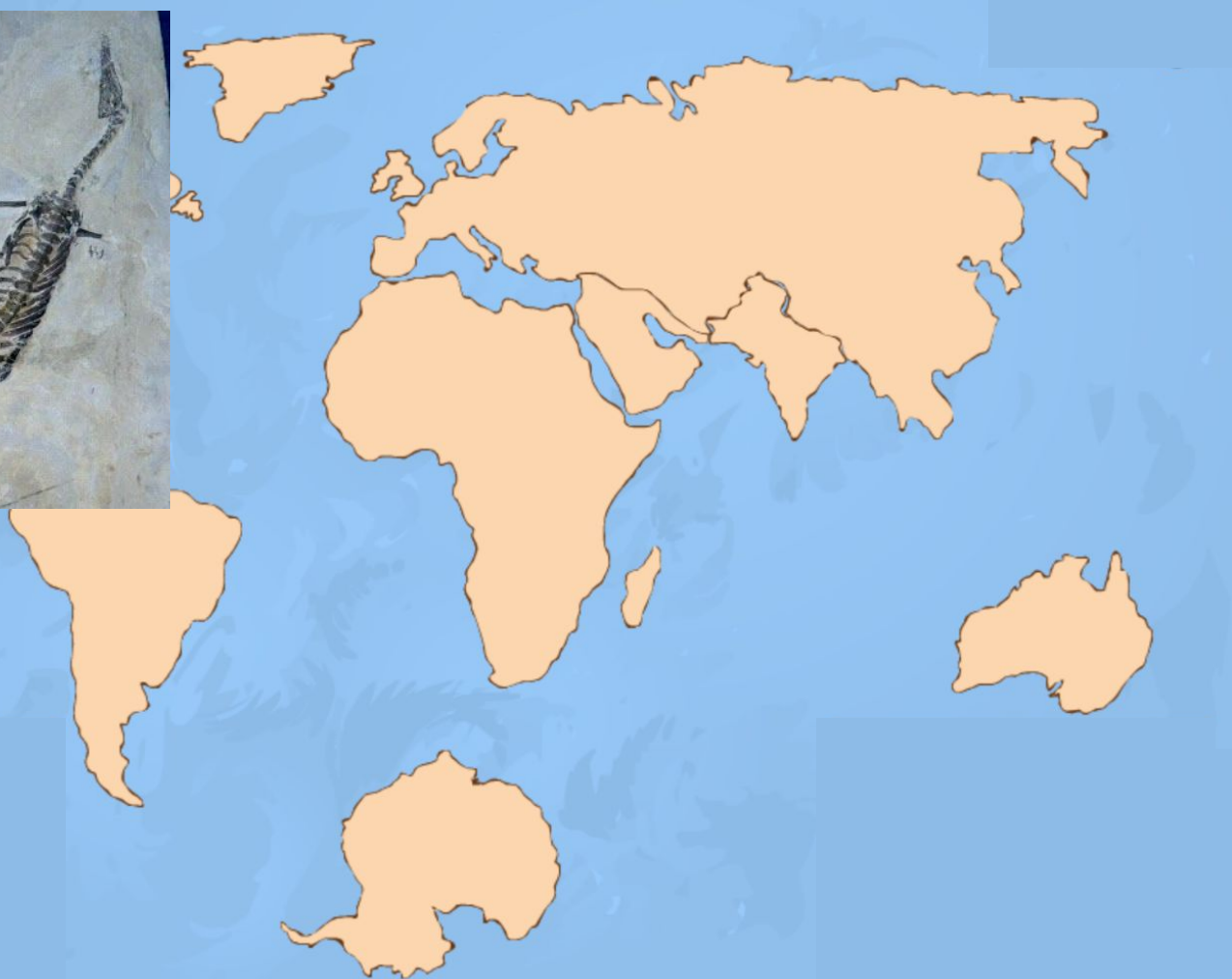
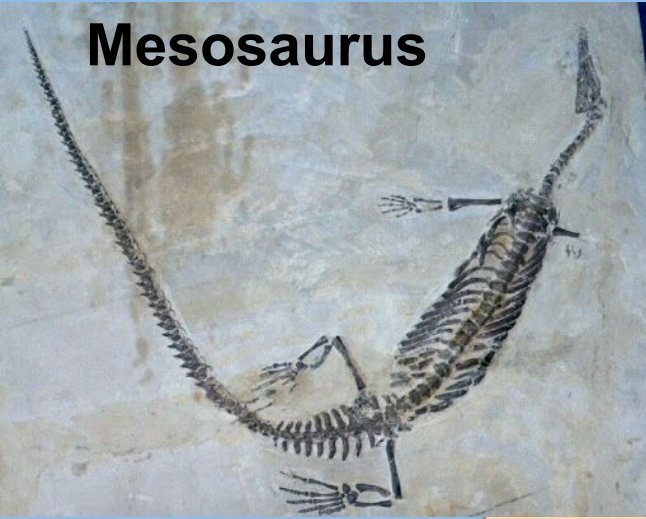
Science Explorers!!!
Earth & Environmental Science
Week 2



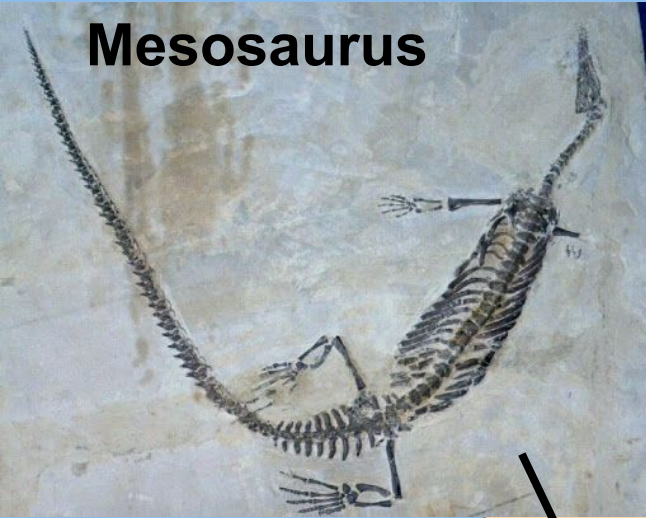




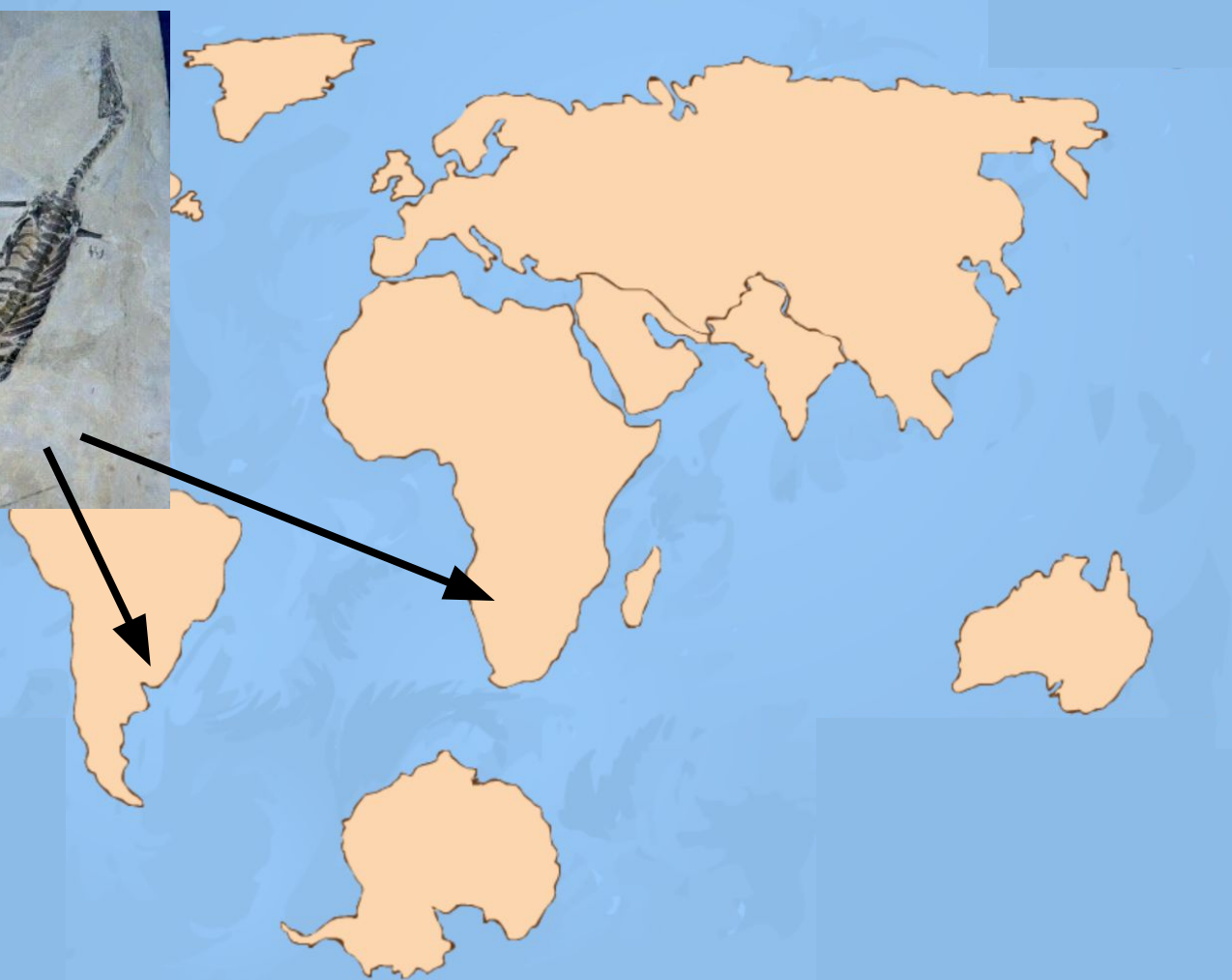
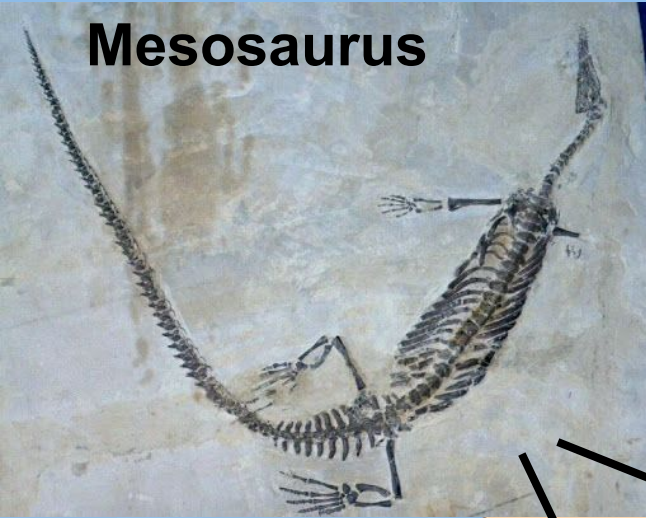
Mesosaurus



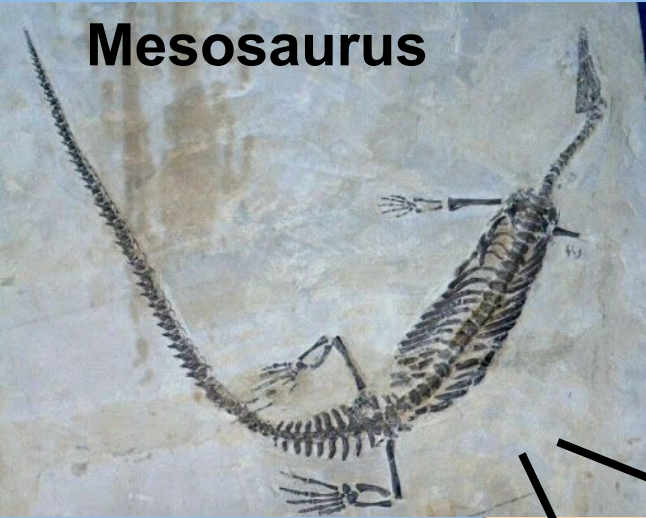
Mesosaurus



Mesosaurus

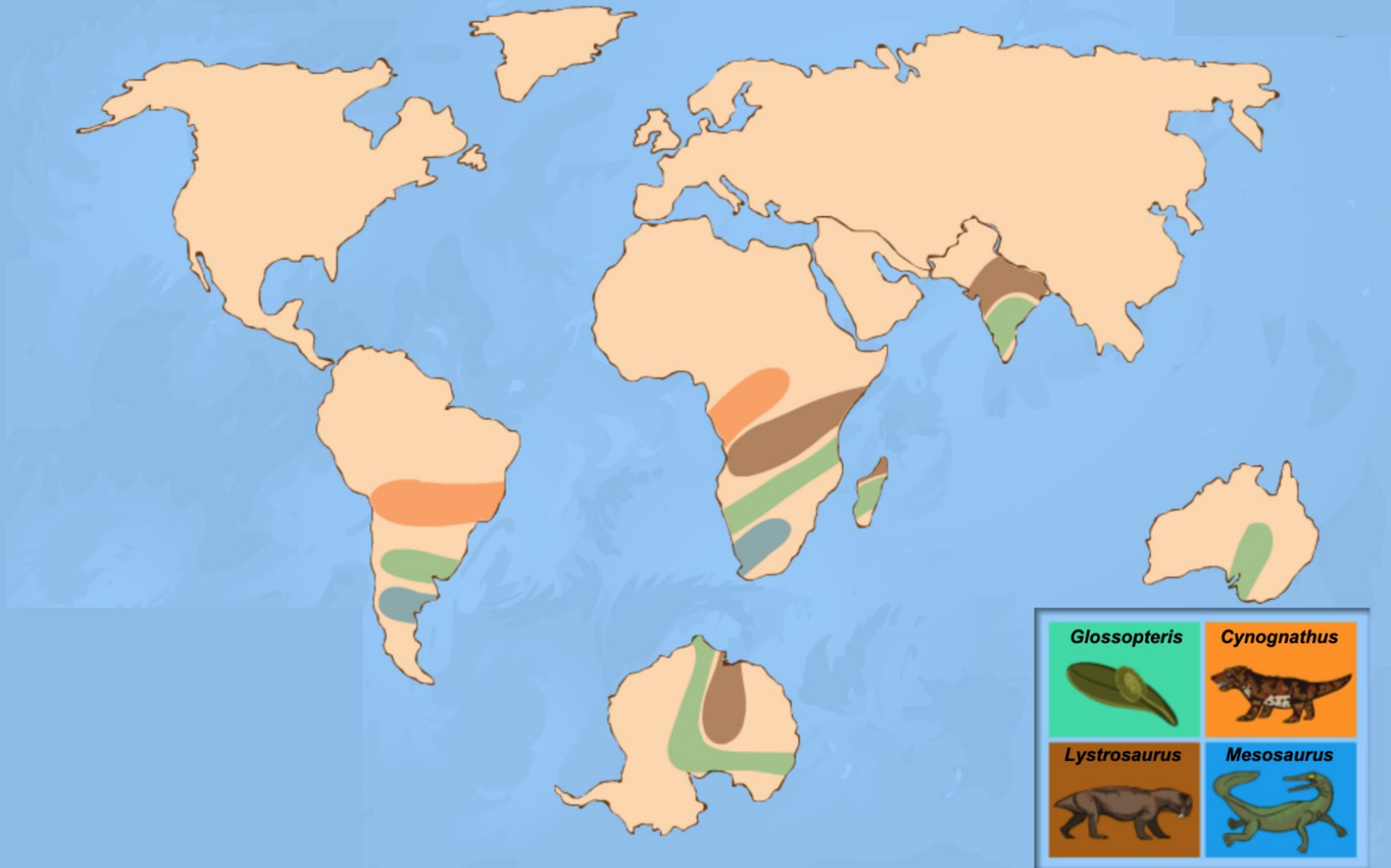


Mesosaurus



Question:

How did the Mesosaurus fossil end up on different continents?



South America



Africa



Glossopteris



Cynognathus



Lystrosaurus



Mesosaurus





Glossopteris



Cynognathus



Lystrosaurus



Mesosaurus





Glossopteris



Cynognathus

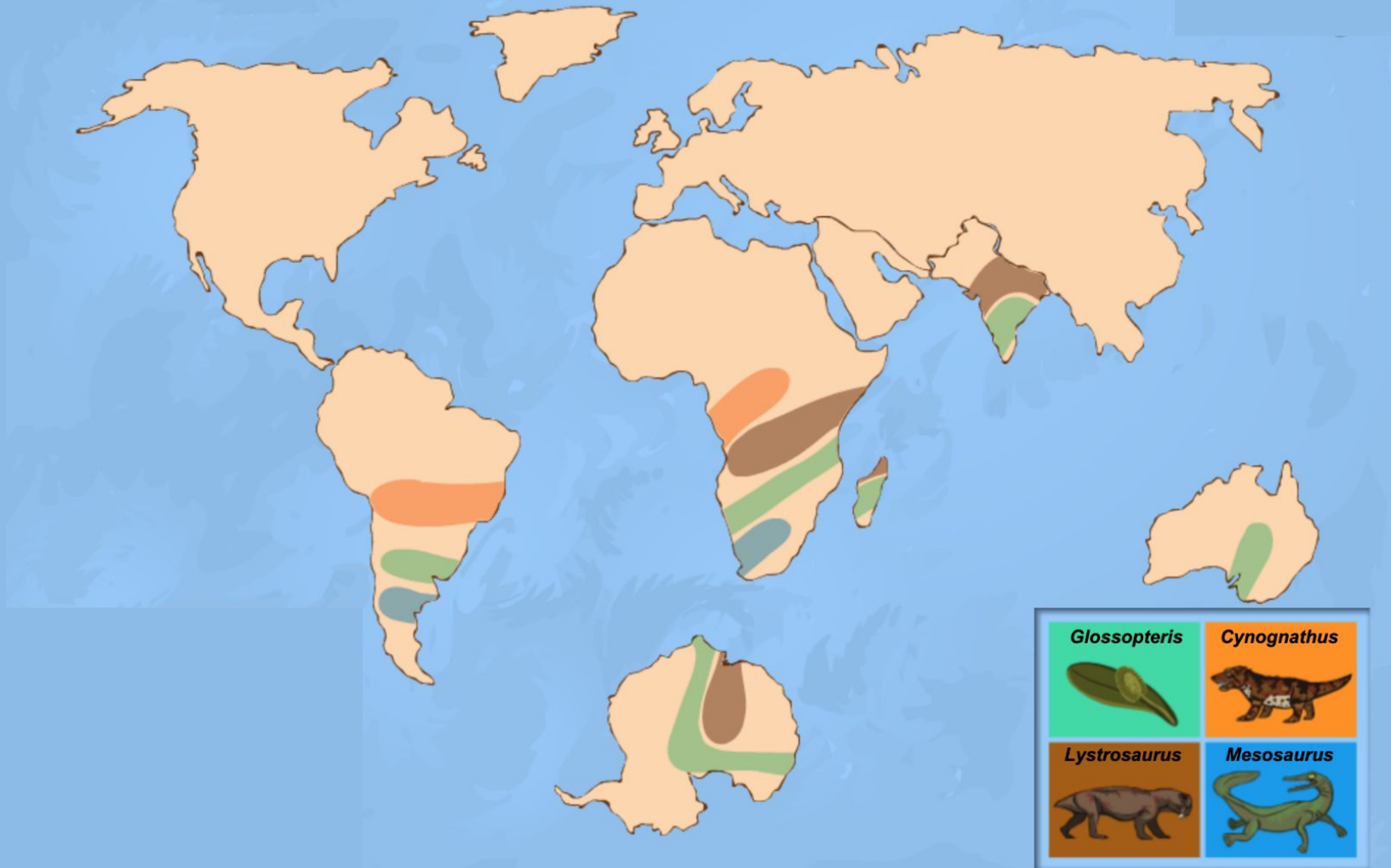


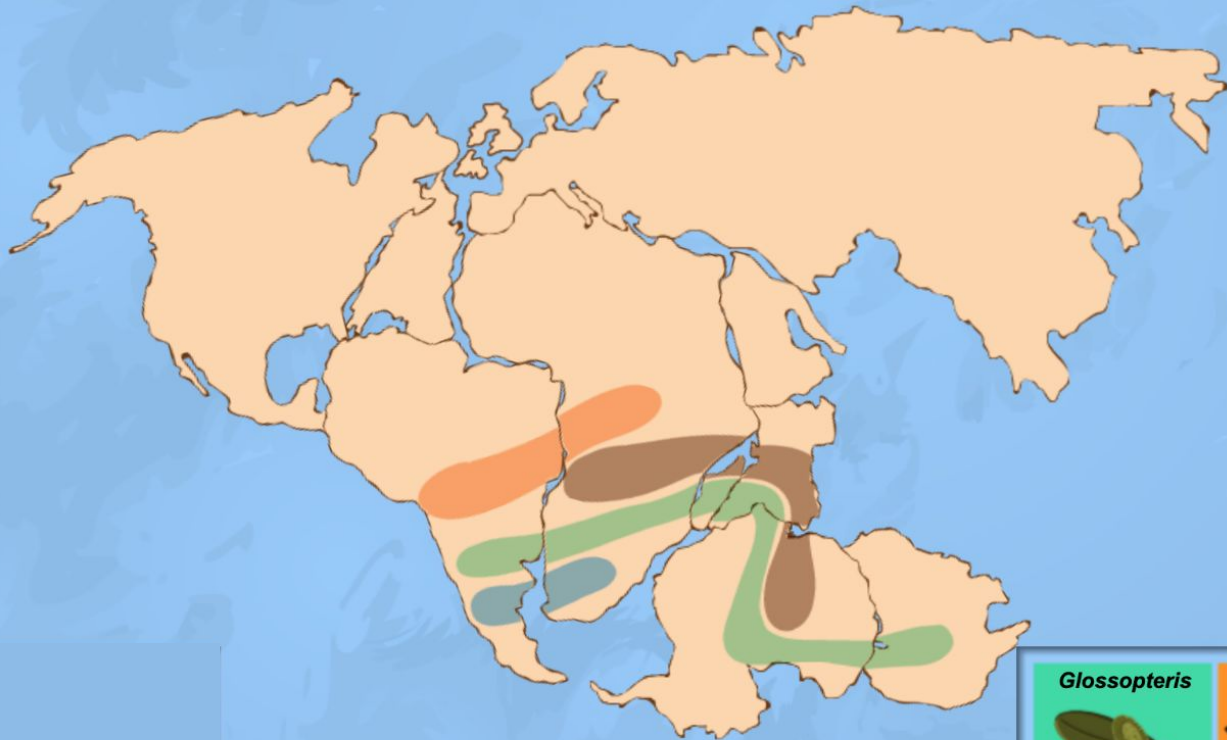
Lystrosaurus







Mesosaurus

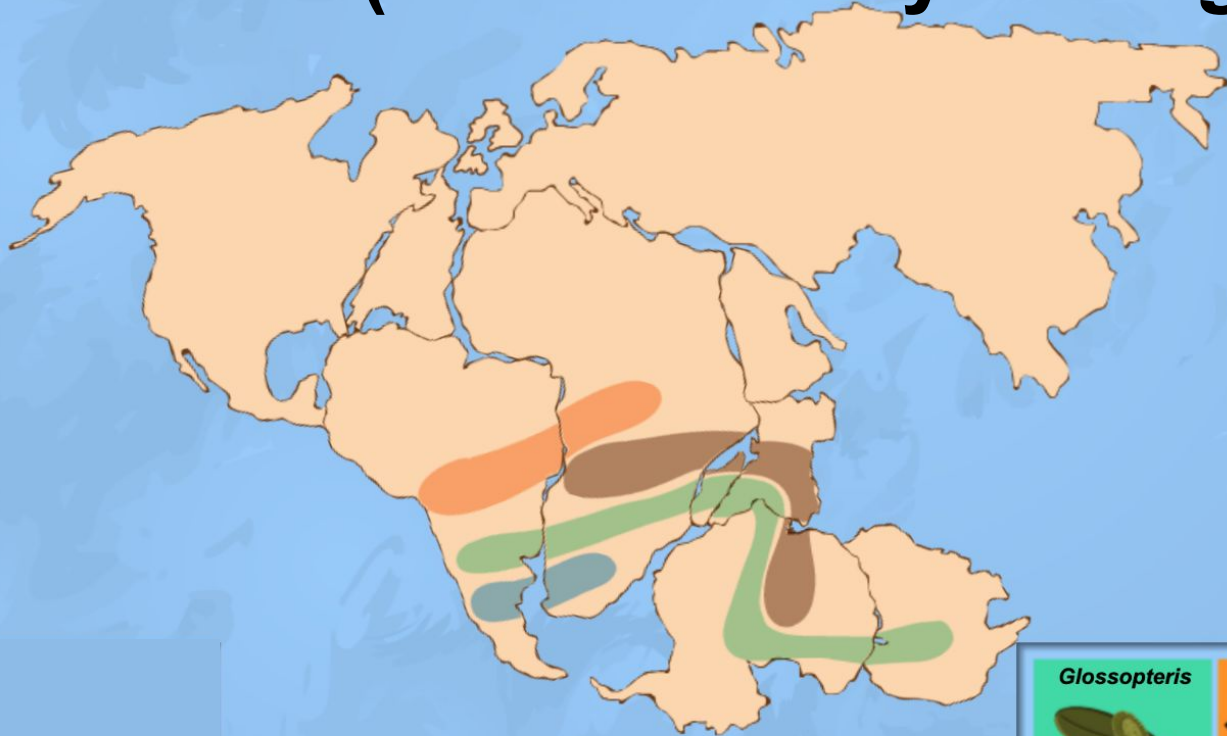






Glossopteris 	Cynognathus 
Lystrosaurus 	Mesosaurus 

PANGAEA (~250 million years ago)



Glossopteris



Cynognathus



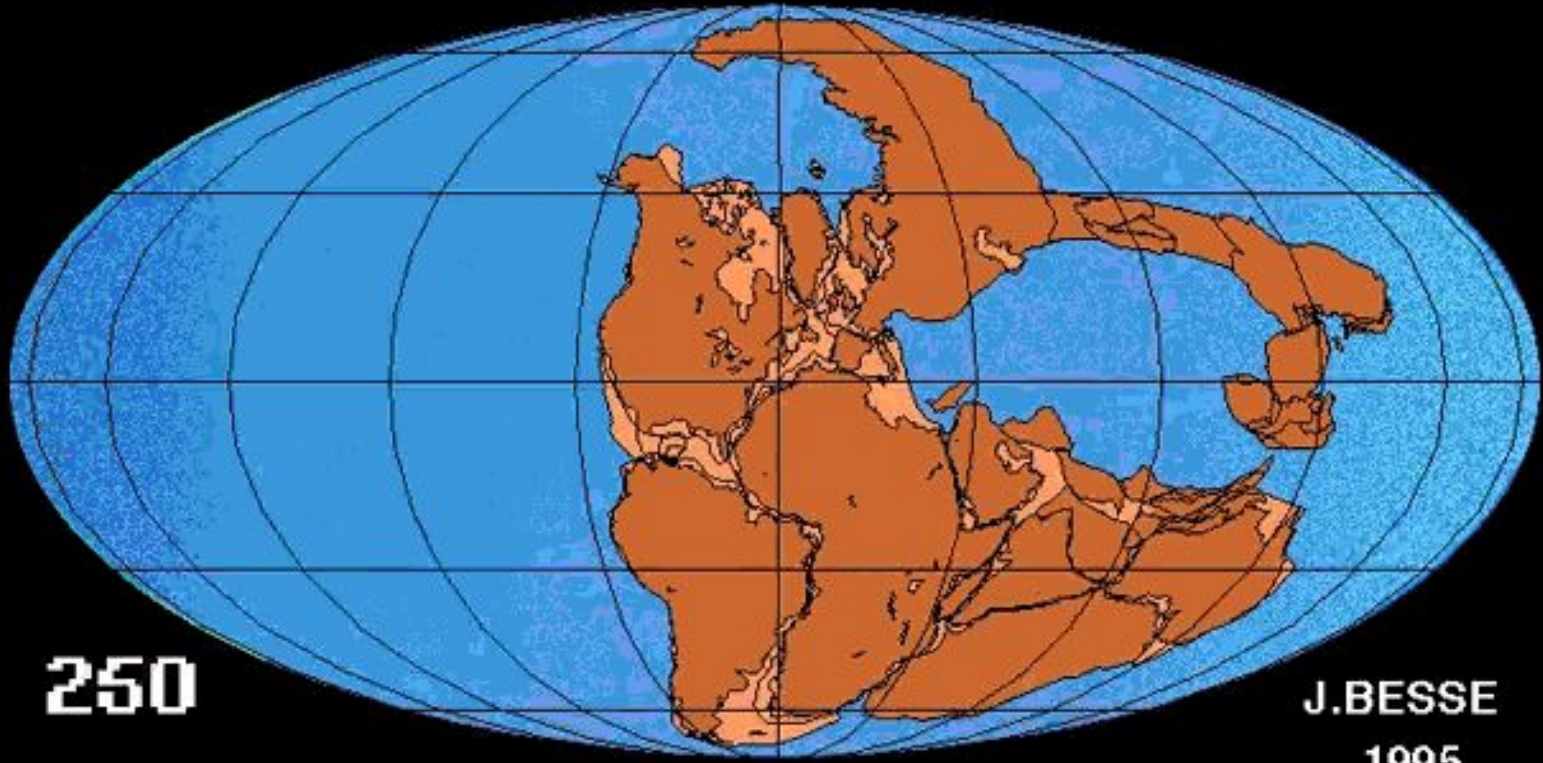
Lystrosaurus



Mesosaurus



Land on Earth is constantly moving



250

J.BESSE
1995

Question of the day: How does land on Earth move???

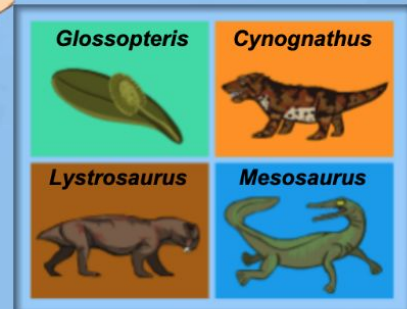
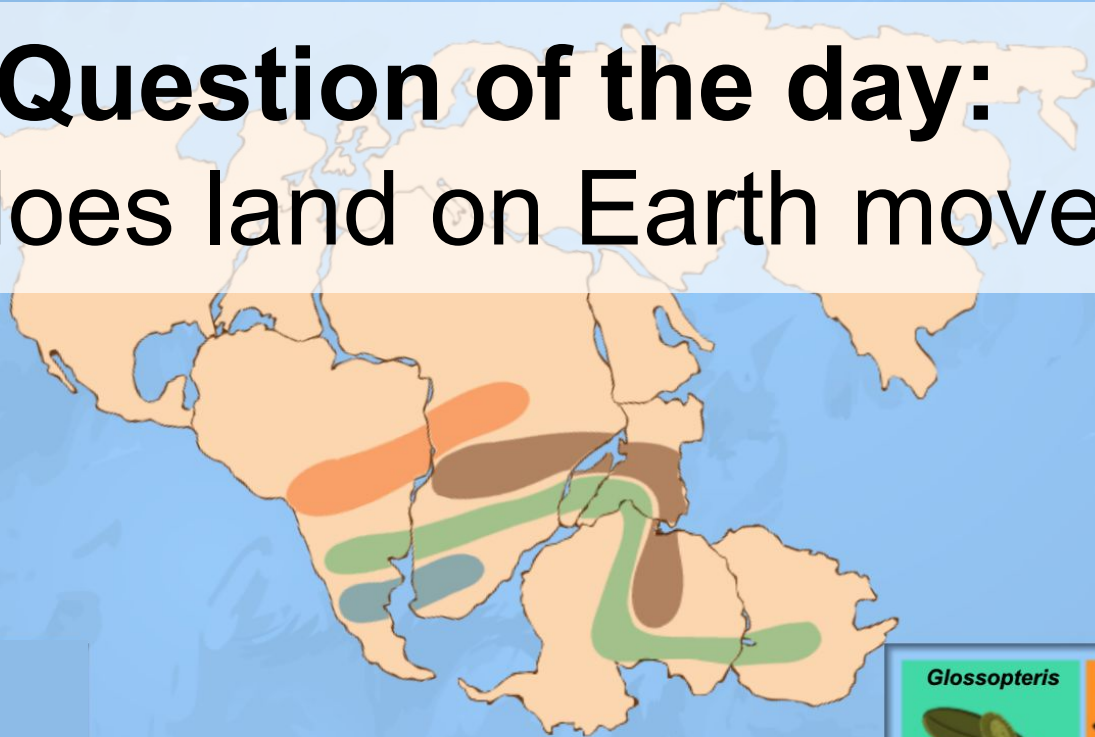


Plate Tectonics!

Today's experiments

Experiment #1:

Look at the layers
of the Earth

Experiment #2:

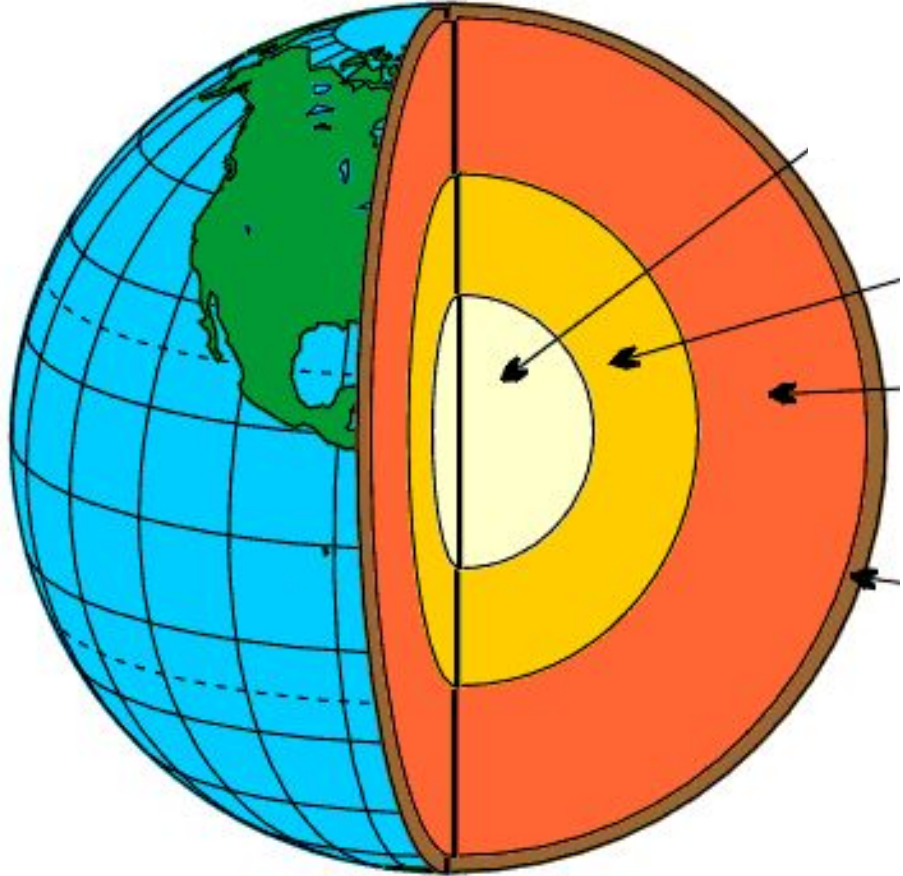
Look at tectonic plate
boundaries

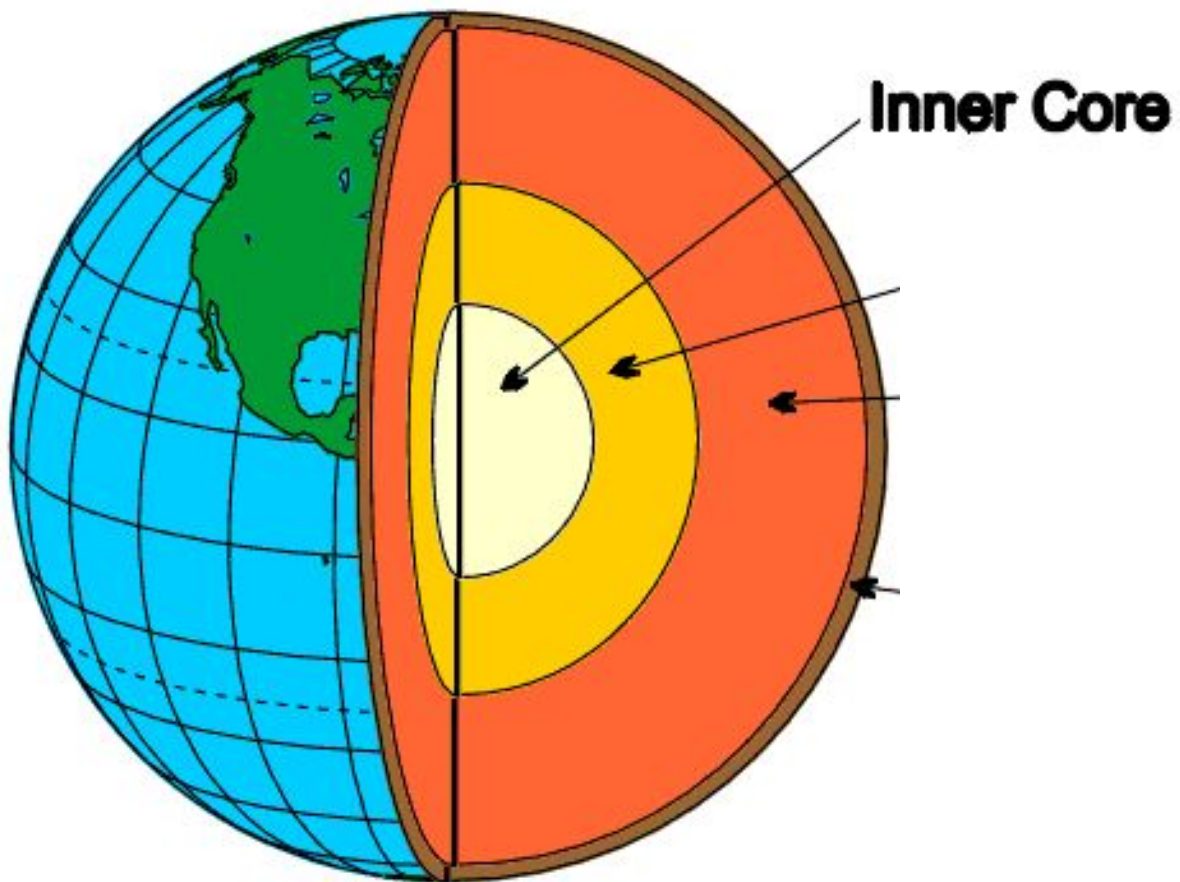
Earth has layers

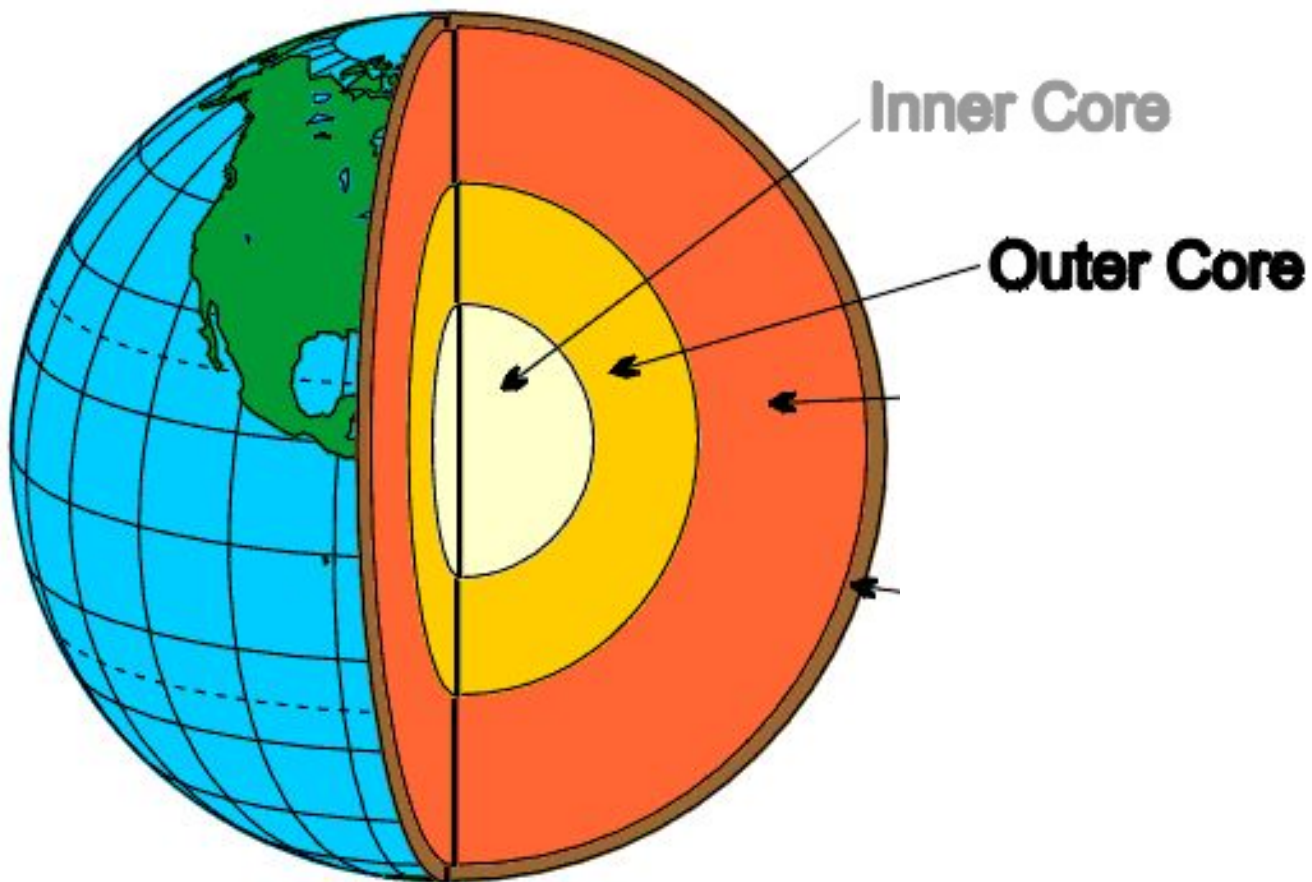


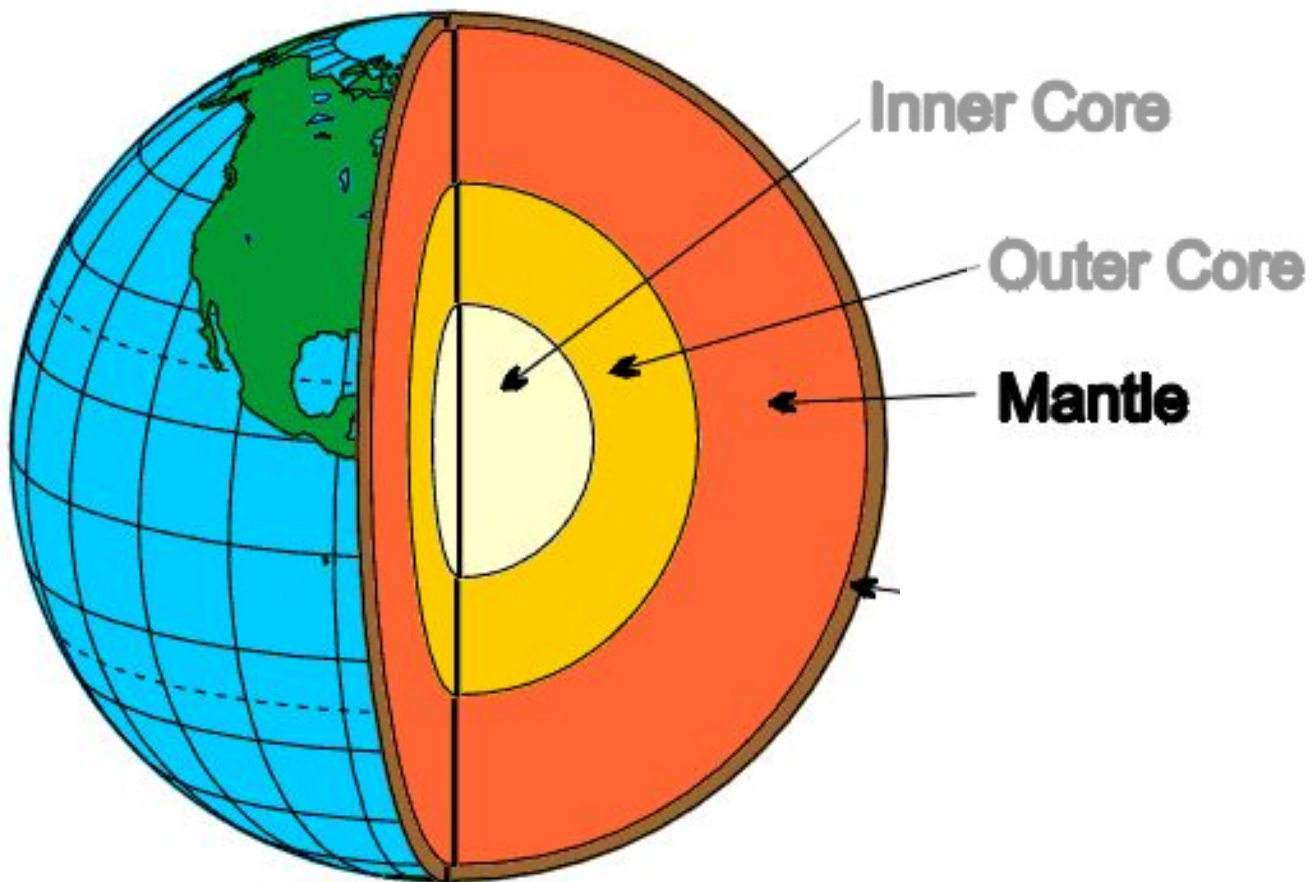
Earth has layers











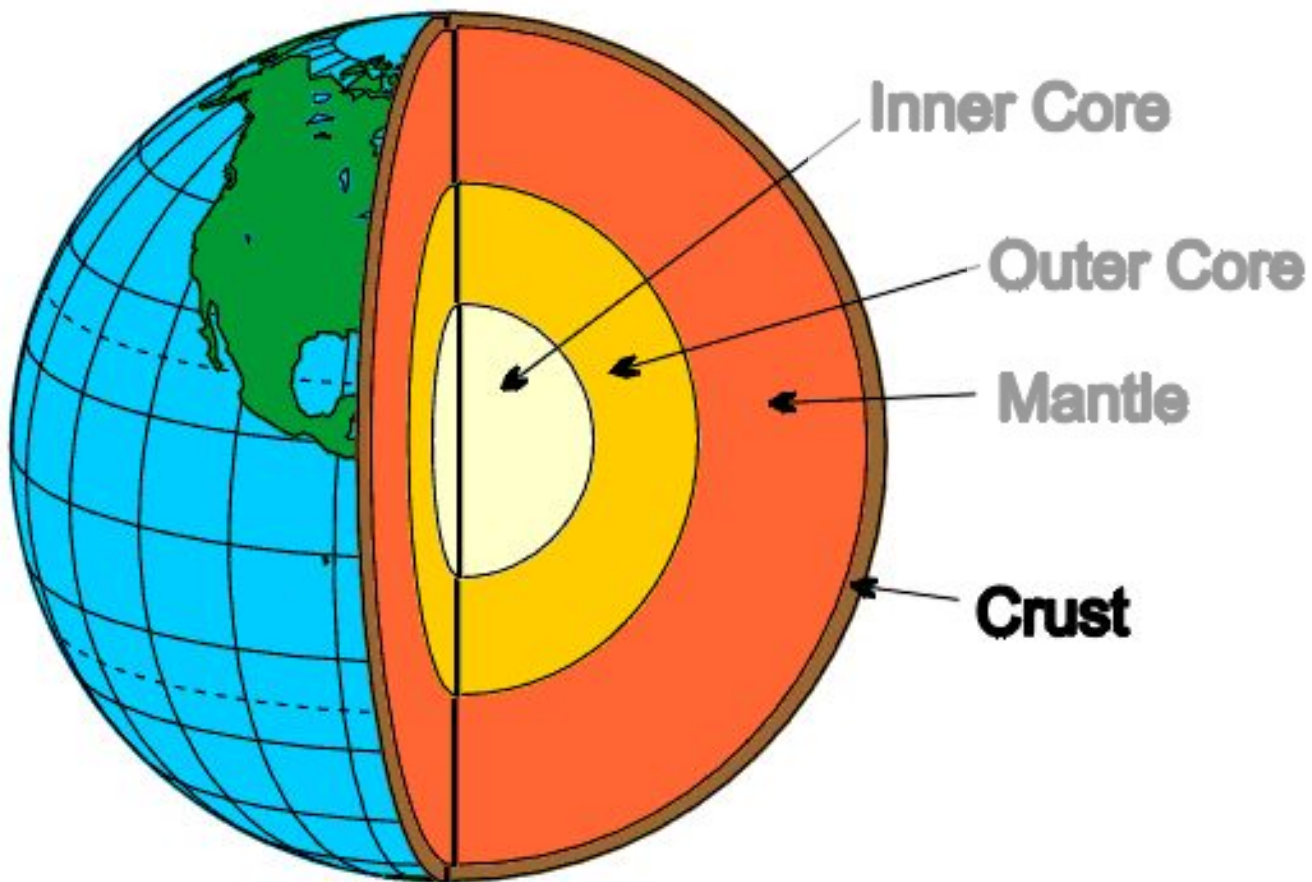


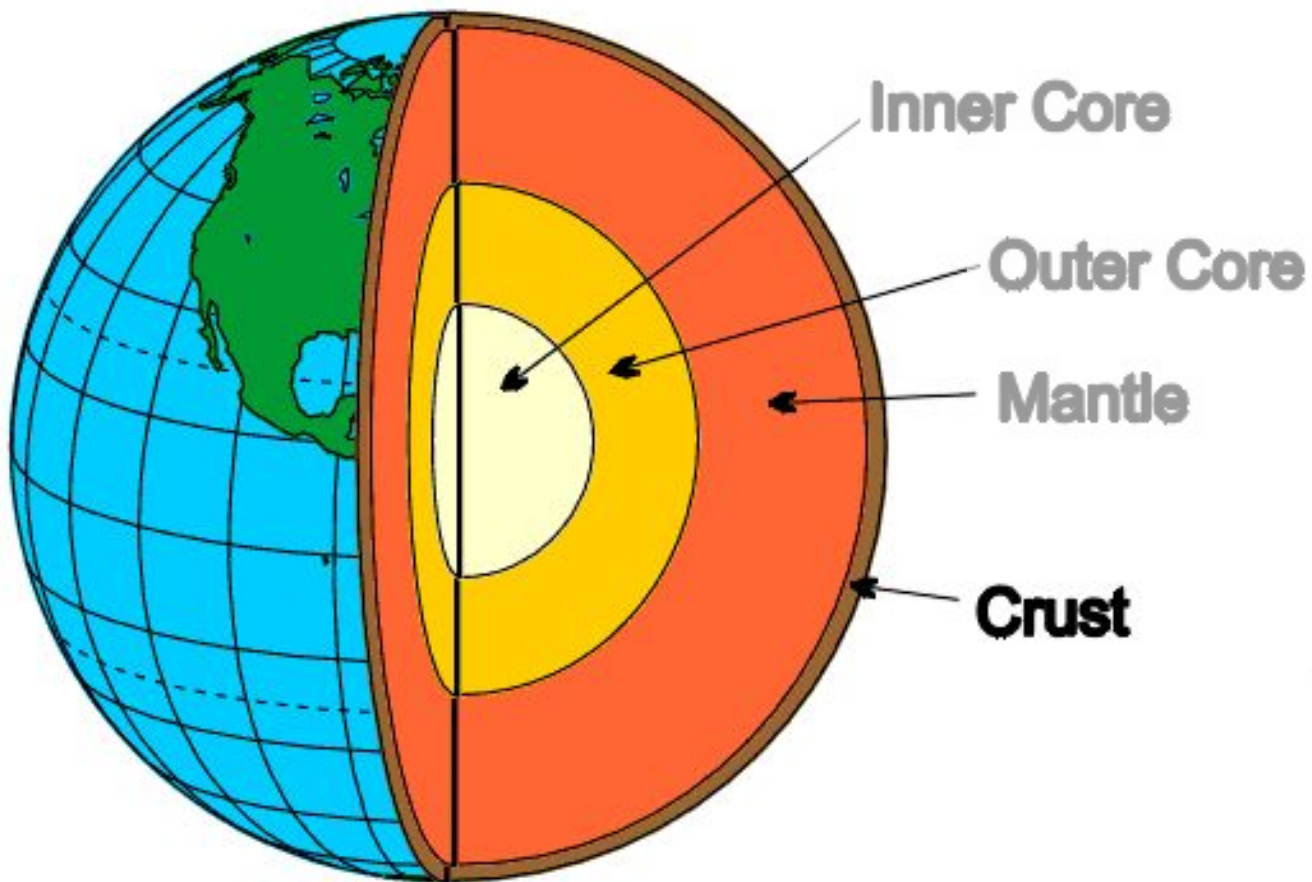
The mantle is full of
melted rock (**Magma**)



Magma acts like a liquid







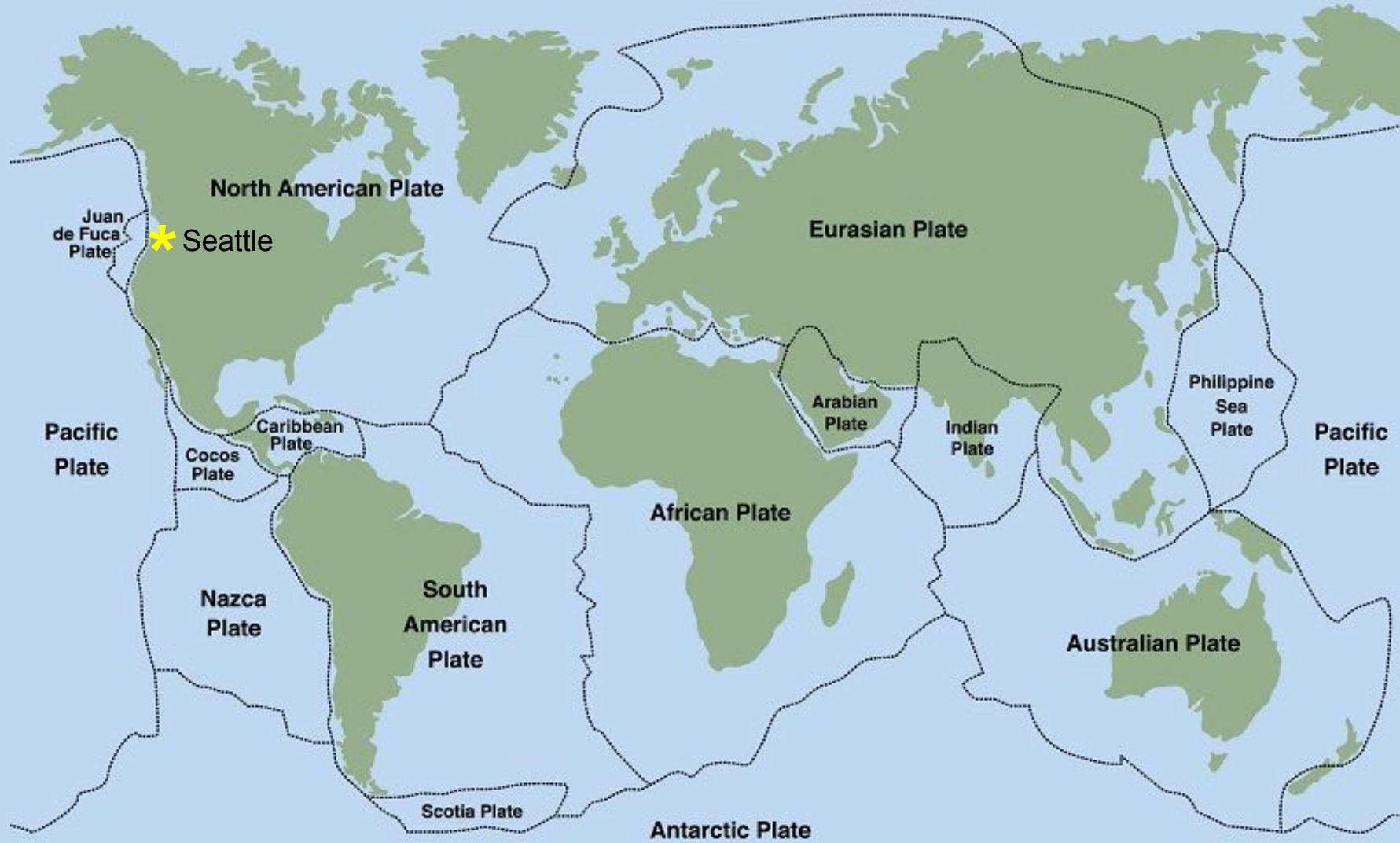




The Earth's crust is
not one piece!



The Earth's surface
is broken up into
tectonic plates



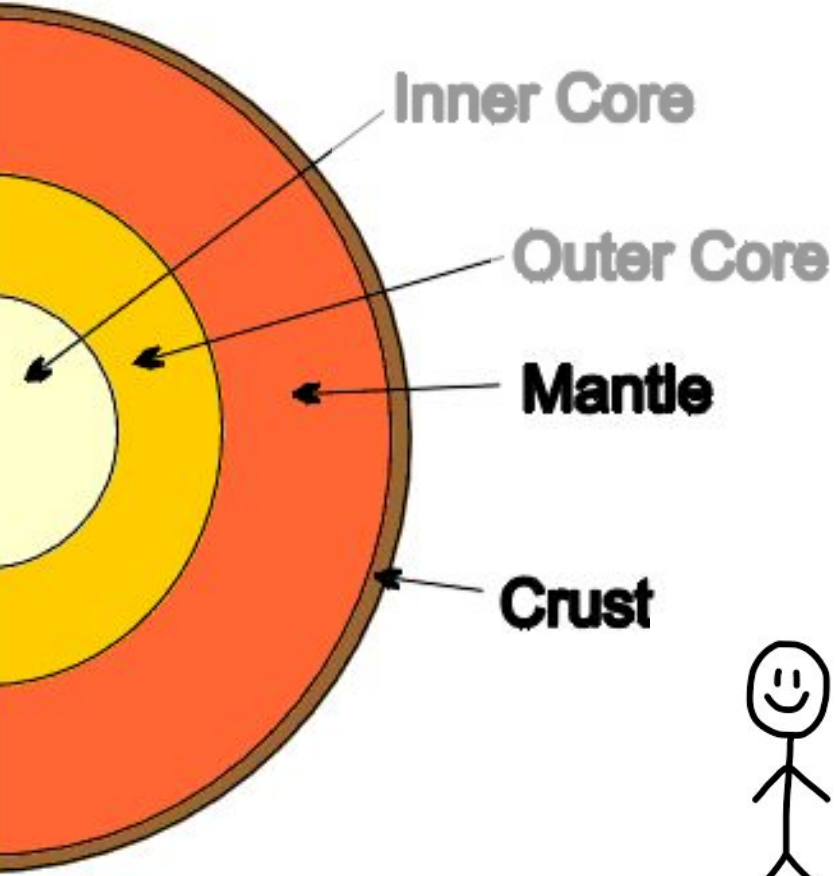


1. The Earth has **layers**
2. The **crust** is broken up into **tectonic plates**



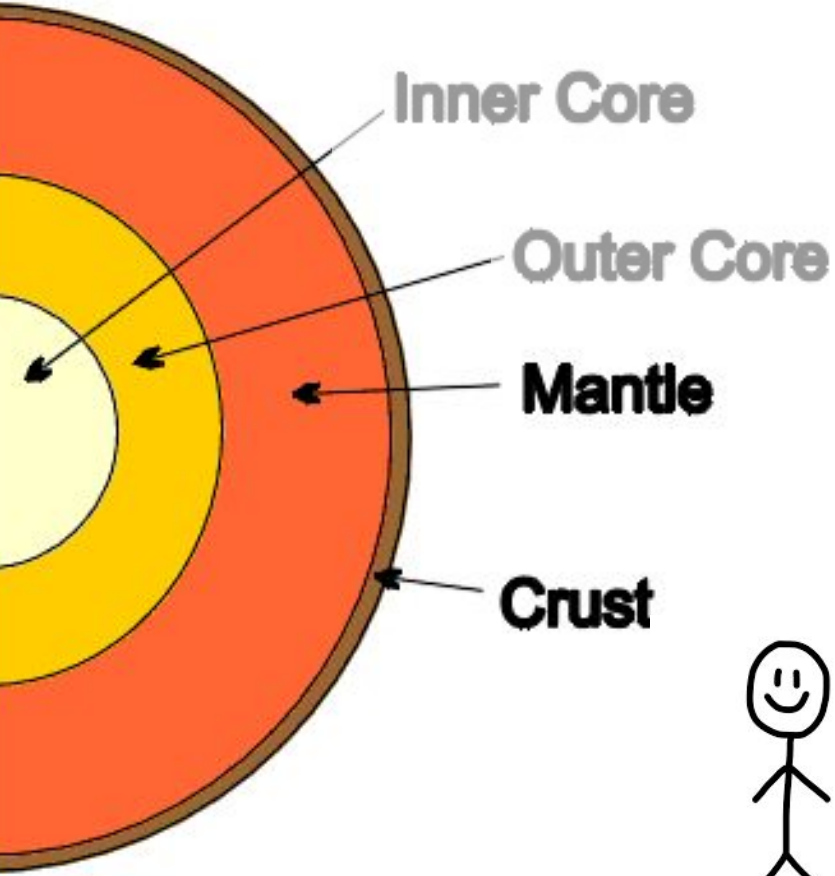
1. The Earth has **layers**
2. The **crust** is broken up into **tectonic plates**

How does land on Earth
move???



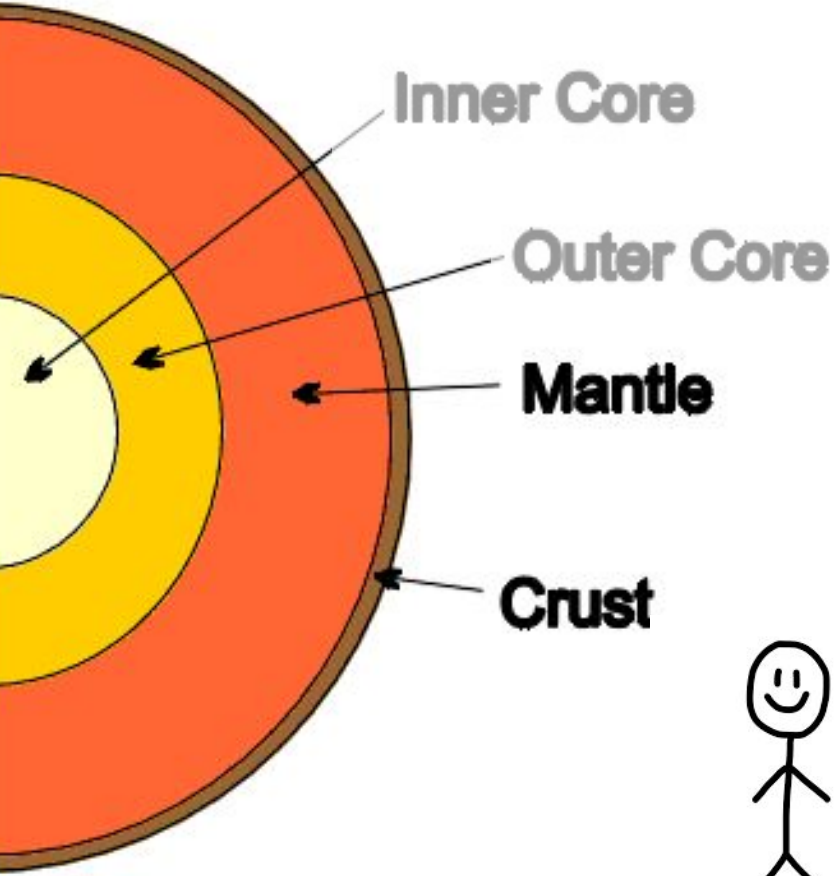
Underneath the
crust is the mantle



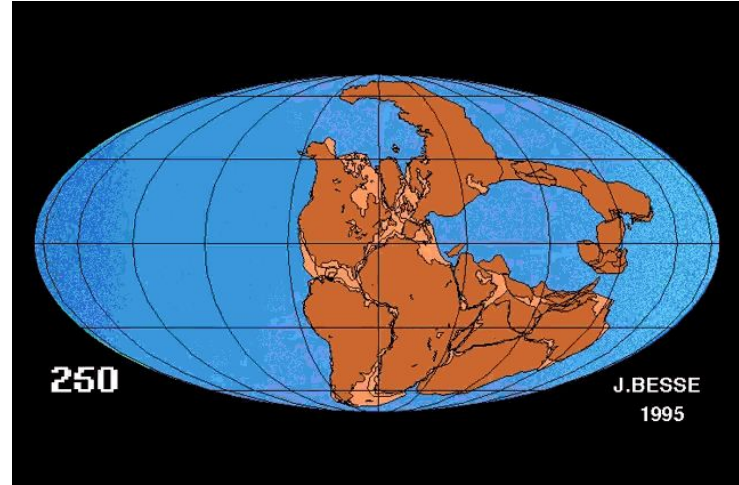


The mantle is FULL of hot hot magma

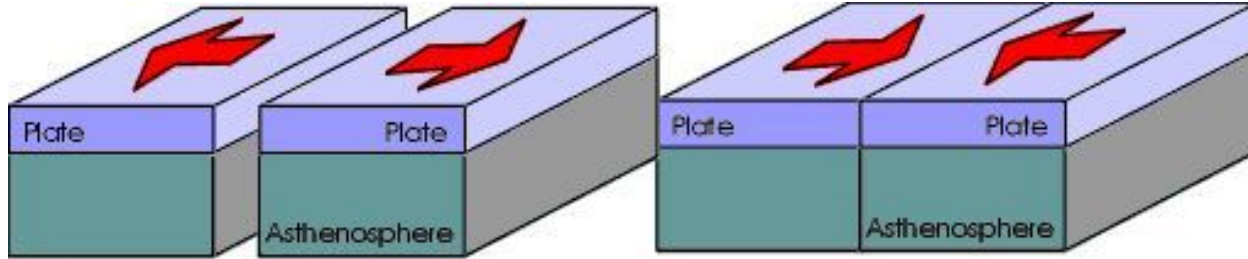




When the magma moves, so do plates

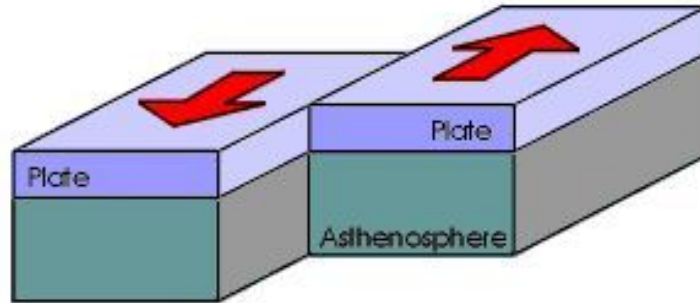


Three ways that plates move



Divergent

Convergent



Transform

Today's experiments

Today's experiments

Experiment #1: Build planet Earth



Today's experiments

Experiment #1: Build planet Earth



Experiment #2: Oreo cookie plate tectonics



Today's experiments

Experiment #1: Build planet Earth



If your play-doh is dry,
add 1-2 drops of water

Experiment #2: Oreo cookie plate tectonics



Today's experiments

Experiment #1: Build planet Earth

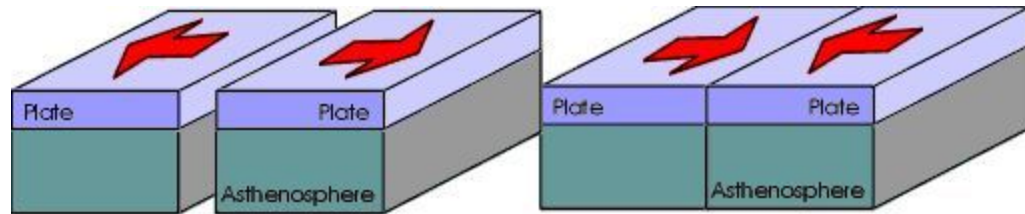


If your play-doh is dry,
add 1-2 drops of water

Experiment #2: Oreo cookie plate tectonics

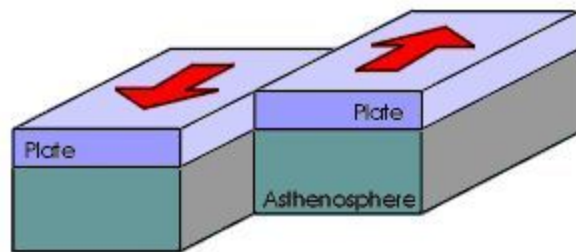


Extra slides

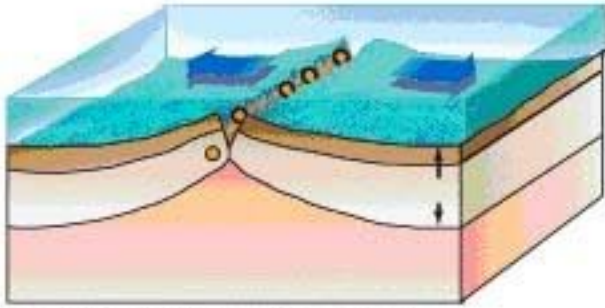


Divergent

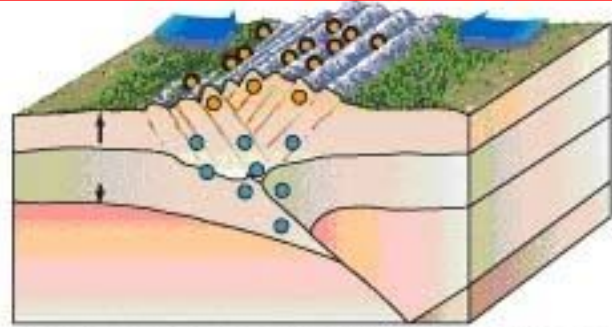
Convergent



Transform

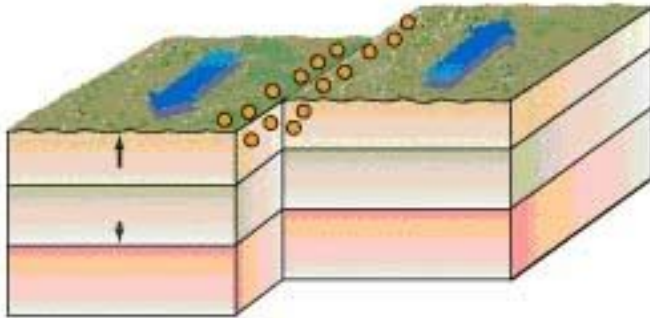


Divergent Boundary

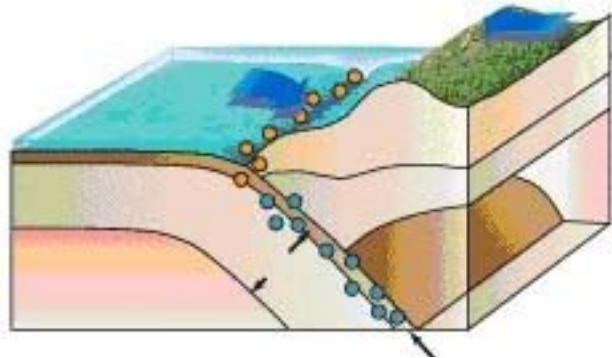


Continental Collision

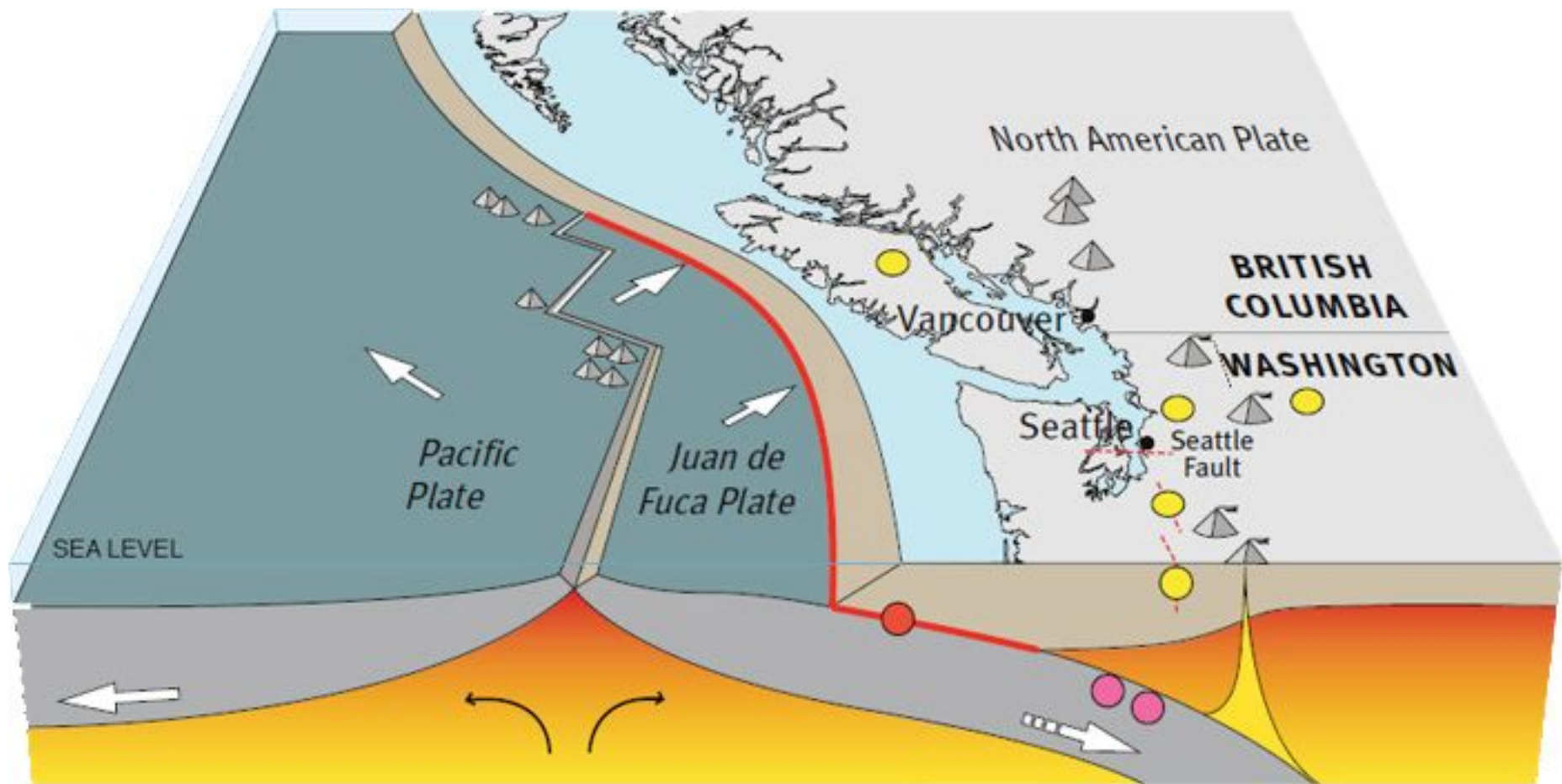
Convergent Boundary

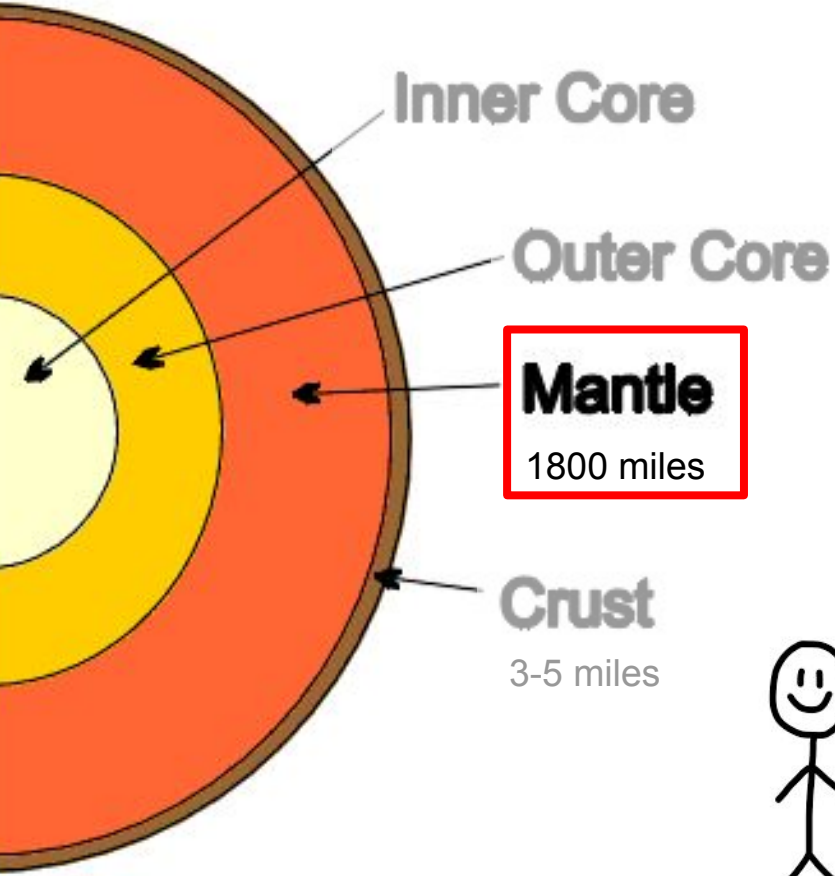


Transform Fault Boundary

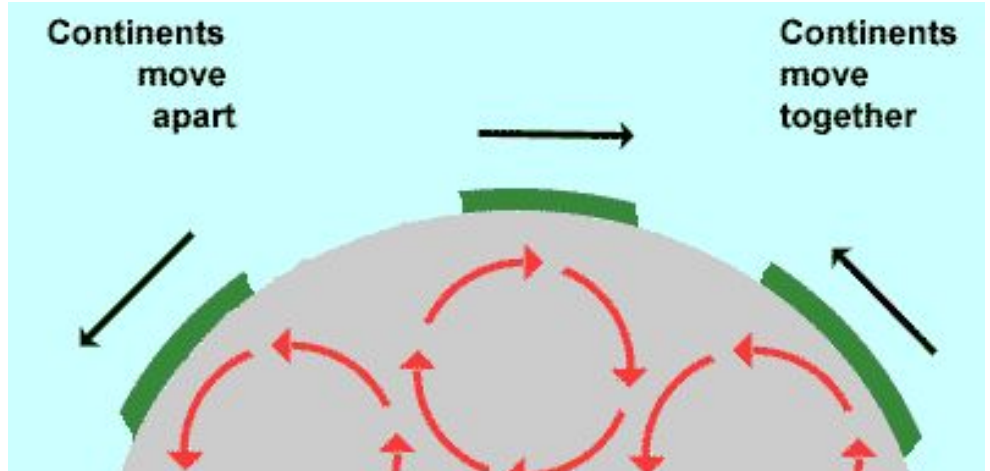


Subduction

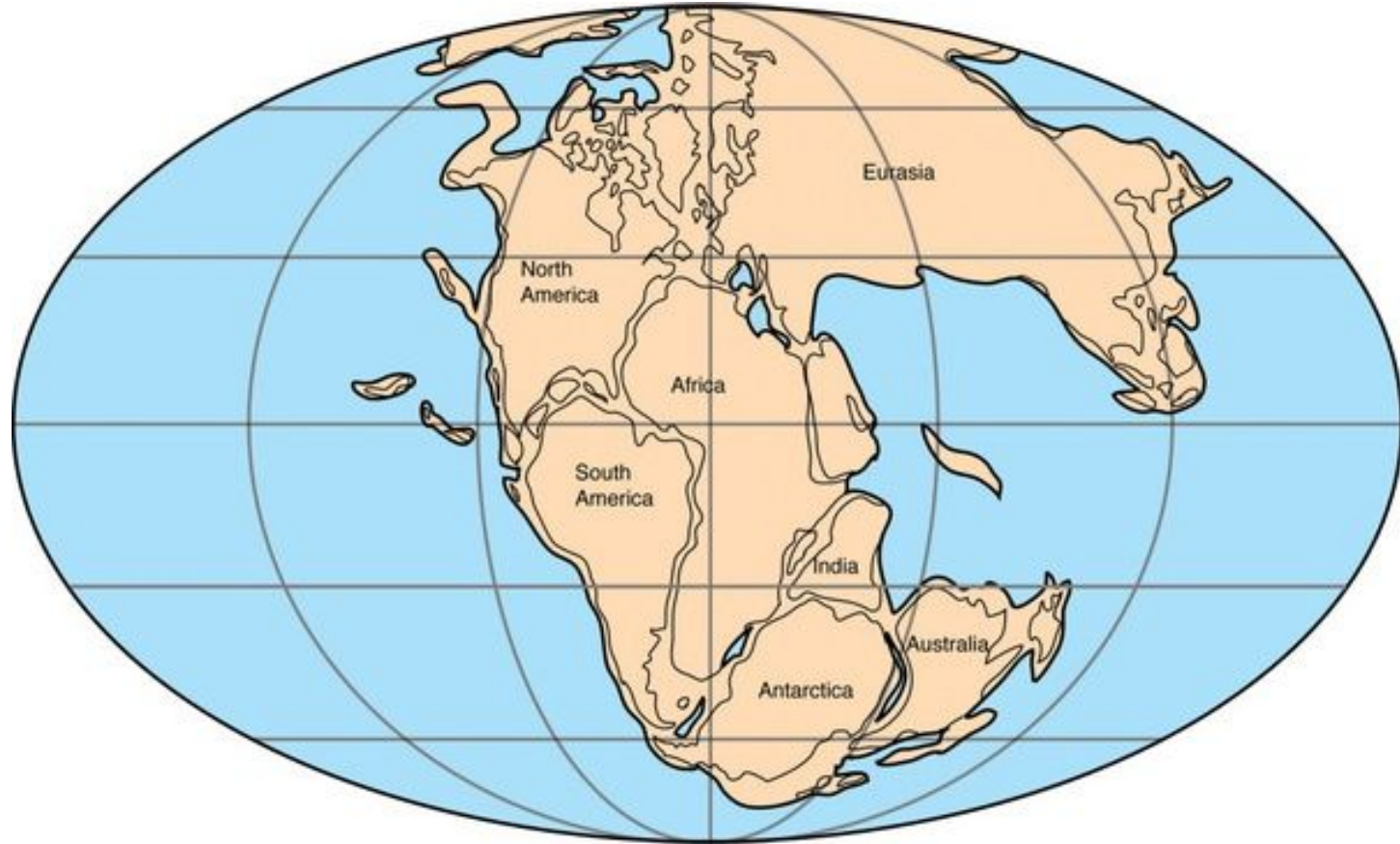




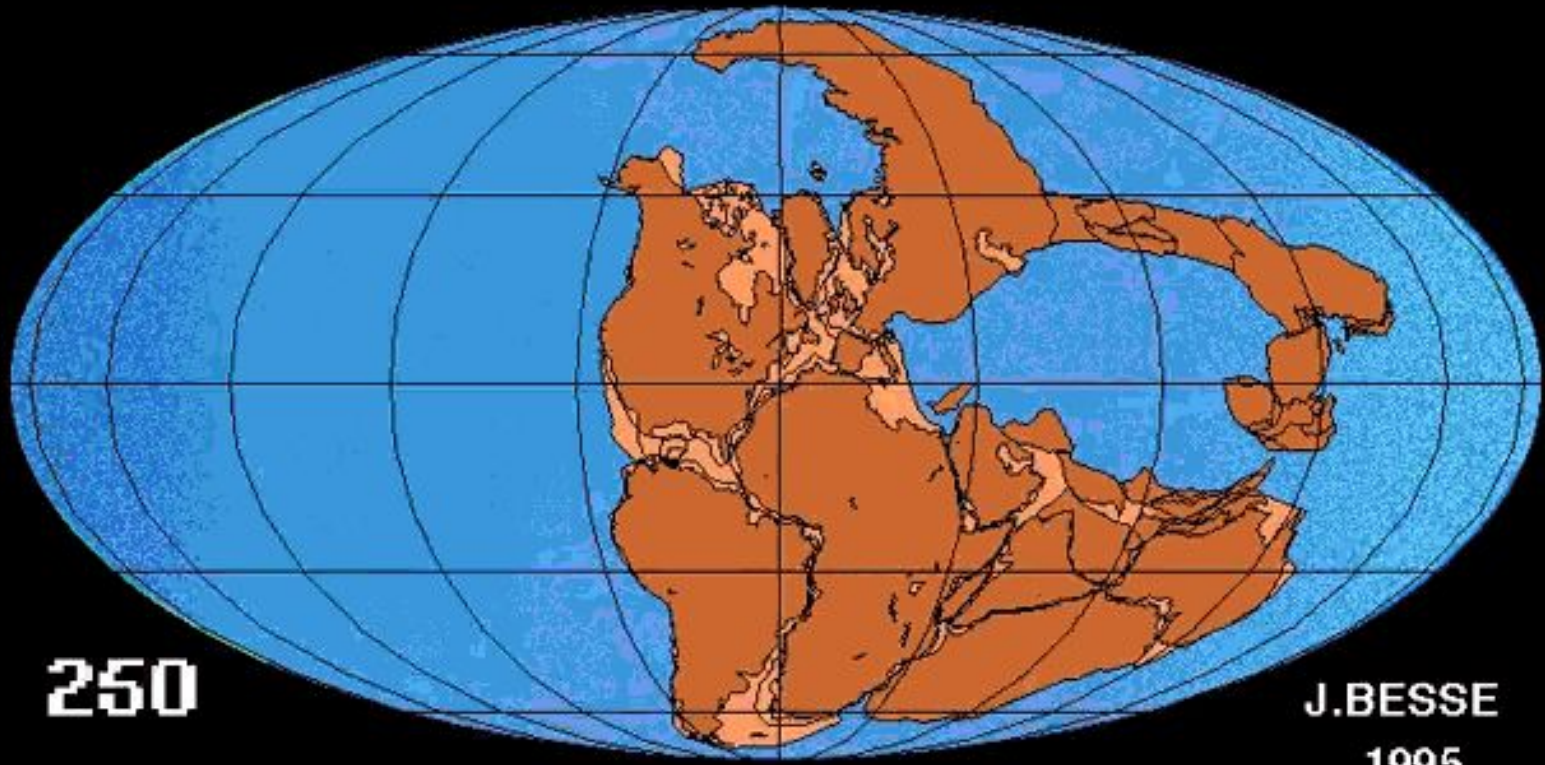
Magma can behave like a liquid



PANGAEA



Continents are constantly moving



250

J.BESSE
1995

1-2 inches per year

