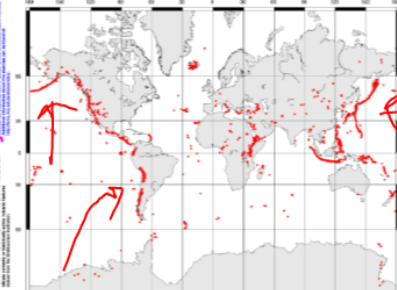
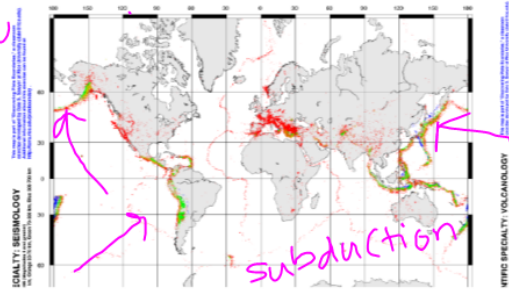


iEEL 1: I can summarize how earthquakes, volcanoes, and continental boundaries reveal plate tectonics.

Earthquakes Volcanoes

shallow = red
green = deep

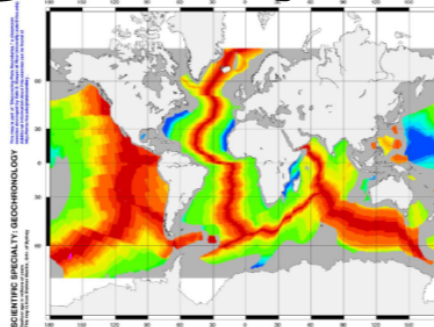


oceanic + continental
subduction zone

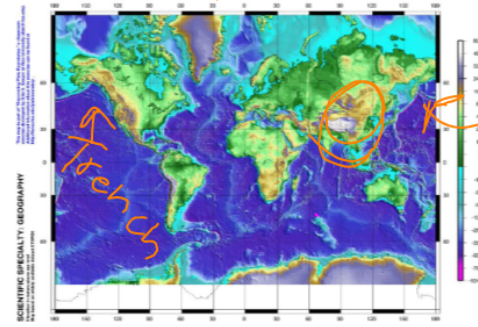
converging plates

Sea Floor Age

red = young
blue = old

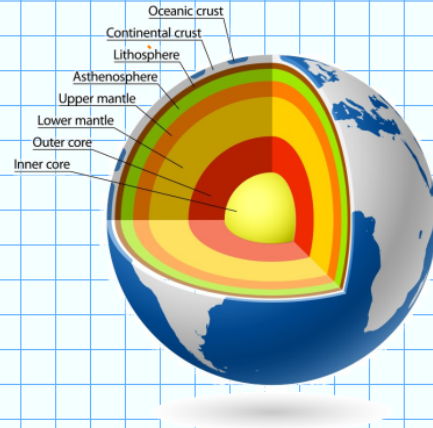
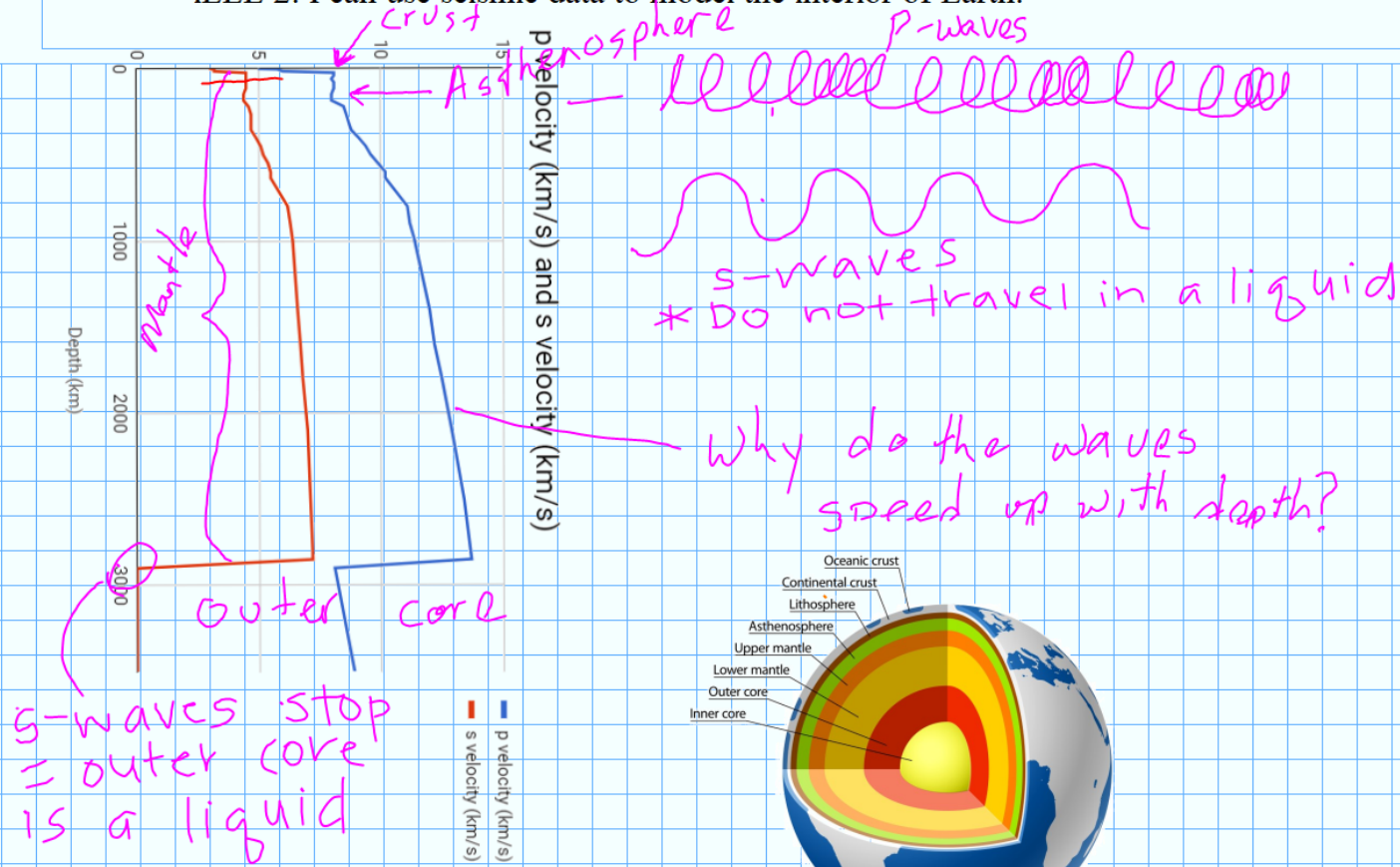


Elevation

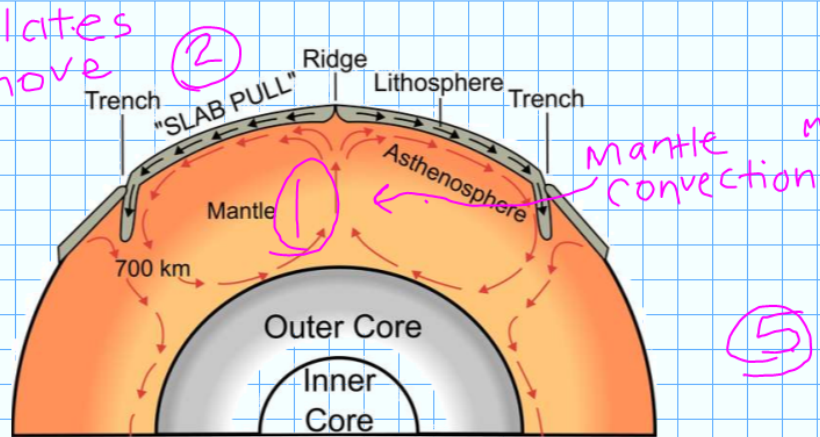


Types of crust:
continental → thick, not as dense
oceanic → thin, dense

iEEL 2: I can use seismic data to model the interior of Earth.



iEEL 3: I can connect natural forces (mantle convection, plate motion, weathering, erosion) to land and seafloor geologic features.



movement of sediment

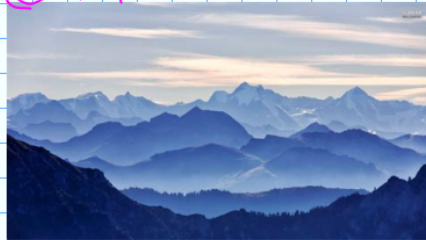


⑤

erosion



③ mountains form



④



mechanical

chemical

Weathering

⑥



sediment

iEEL 4: I can experimentally determine the age of a rock, fossil, or

How many half-lives have gone by if a sample yields 3.5 picograms of parent and 11.5 picograms of daughter?

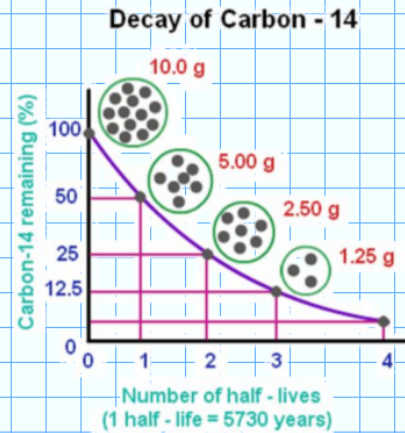
18.5 start w 1147g

2 half-lives

If the parent is C-14, how old is the sample?

$$\begin{array}{r} 5730 \\ + 5730 \\ \hline \end{array}$$

11,460 years old



$$\begin{aligned} 1 \text{ half life} &= \frac{1}{2} \\ 2 &= \frac{1}{4} \\ 3 &= \frac{1}{8} \\ 4 &= \frac{1}{16} \end{aligned}$$

...

iEEL 5: I can place events in Earth's history on a timeline and explain the

Geologic History

What is the scale of a timeline if we make it 2 meters long?

4,600,000,000 yrs
200 cm

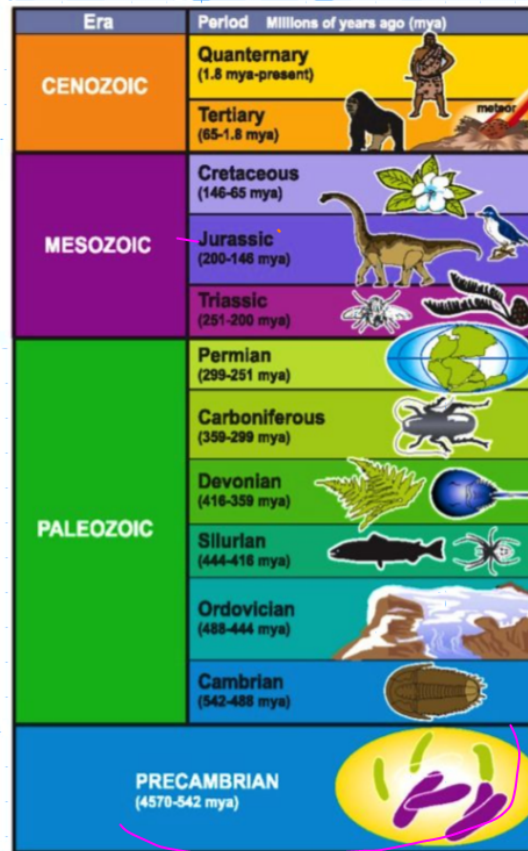
23,000,000 years
cm

Where would the extinction of the dinosaurs, 65 Mya, be

~ 3 cm

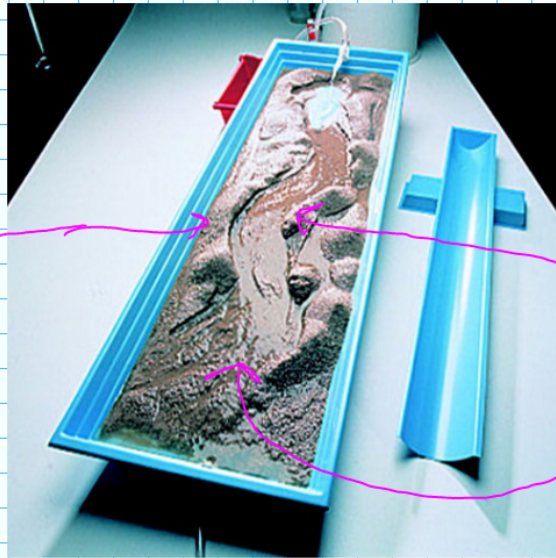
Where are all the precambrian fossils?

~ single-celled
~ rocks old → not many fossils



iEEL 6: I can use a stream table to show the formation of an erosional or

Expect a stream table set up and running. Can you point to places where erosion and deposition are happening?



Erosion
*water moving
fast here
= more energy

Deposition
*water moving
slow here
= less energy

iEEL 7: I can explain the formation of a stream feature.

Examples: delta forms at the mouth because velocity drops to zero and sediment is deposited.

Cutbank forms on outside of meander due to faster water swinging around the outside of the bend.

Oxbow lakes form when a meander is cut off by a new channel, usually during a flood.

