EARTHQUAKES!
What is an earthquake?

The movement of Earth’s crust resulting from the release of built up potential energy between two stuck tectonic plates!

It’s like when you’re teacher loses their marbles because you’ve asked them the same question 7 times in a row!
SEISMIC WAVES

• P waves - P stands for primary

• These waves arrive first

• Move with a push-pull motion
SEISMIC WAVES

• S waves - S stands for secondary

• These waves arrive second

• Move with a side-to-side motion
SEISMIC WAVES

- Surface waves - **slowest**
- Cause the most **damage**
- Move with an up and down and **side-to-side** motion
Locating an epicenter

- You need at least 3 seismic stations to locate an epicenter
- The P and S waves help determine where the epicenter is located
- Where all three circles meet is the location of the epicenter
Locating an epicenter

- The **farther** you are from the epicenter, the **greater the S-P Interval** (the time between when the P wave hits and the S wave hits).
What is an epicenter anyway?

- By definition: A point on Earth’s surface that is directly above the focus of an earthquake, where the shaking is strongest and most damage occurs.
Focus?

- By definition: point below Earth’s surface where the rock breaks along a fault and energy is released.
A fault is a region on Earth’s surface that is broken into 2 pieces.

There can be three types of movement.

In these diagrams, the “hanging wall” is the side that moves up or down.
Normal fault - pulling apart

The hanging wall moves down - follow the dark layer
Reverse Fault -

Here the hanging wall moves up - follow the bronze colored layer
Strike-slip or lateral
See how the road is not continuous?
Off-set crops in CA
Another example
S Nevada

Can you find the fault?