

Daily Routine

- Sit in your appropriate seat quietly
- Make sure you are wearing your ID's
- Have all necessary materials out
- All back packs on the floor
- All cell phones on silent and away in backpacks
- All iPods off and headphones out of your ears
- Hats off
- No food or drink except for water

Earth Science Announcements

- Volcano Project: Due 10/6
- Volcano Quiz Tomorrow
- Midterm 10/9 or 10/10

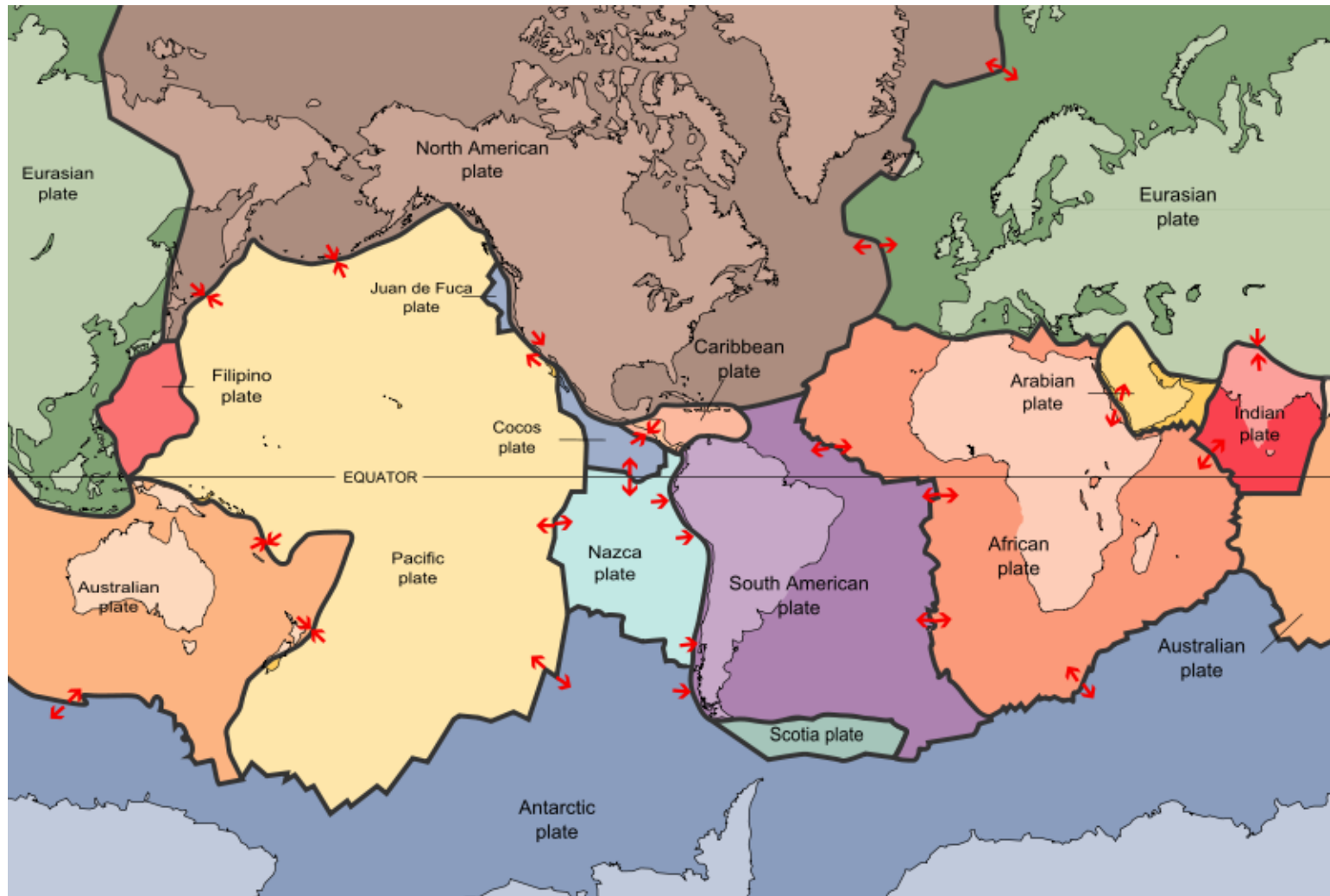
Introduction to Earthquakes

How does earthquakes affect our
lives?

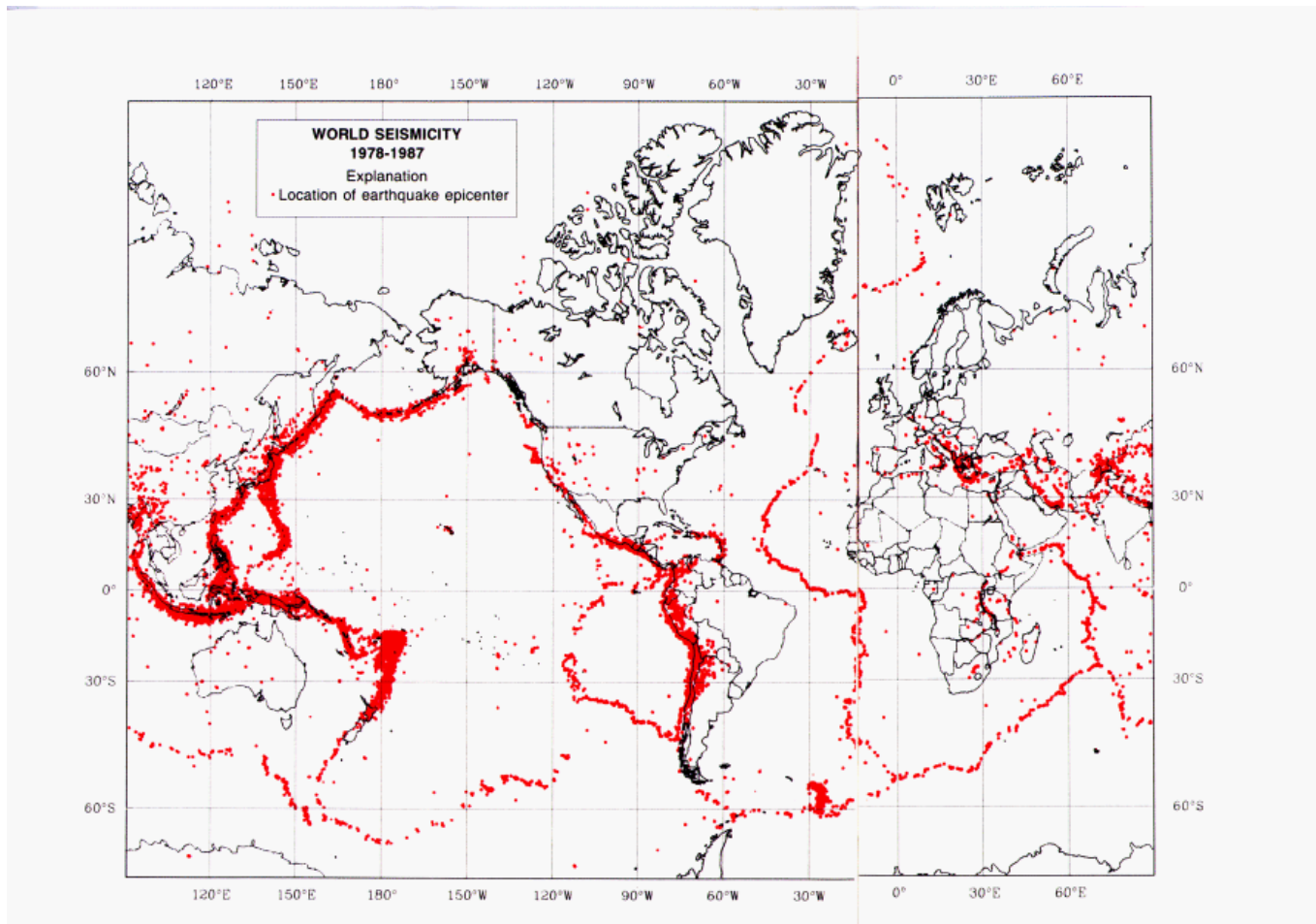
I will be able to...

- Define what an earthquake is
- Interpret a graph referring to elastic and plastic deformation
- Diagram and explain what the three types of faults are and the anatomy of a fault

Earth's Plates

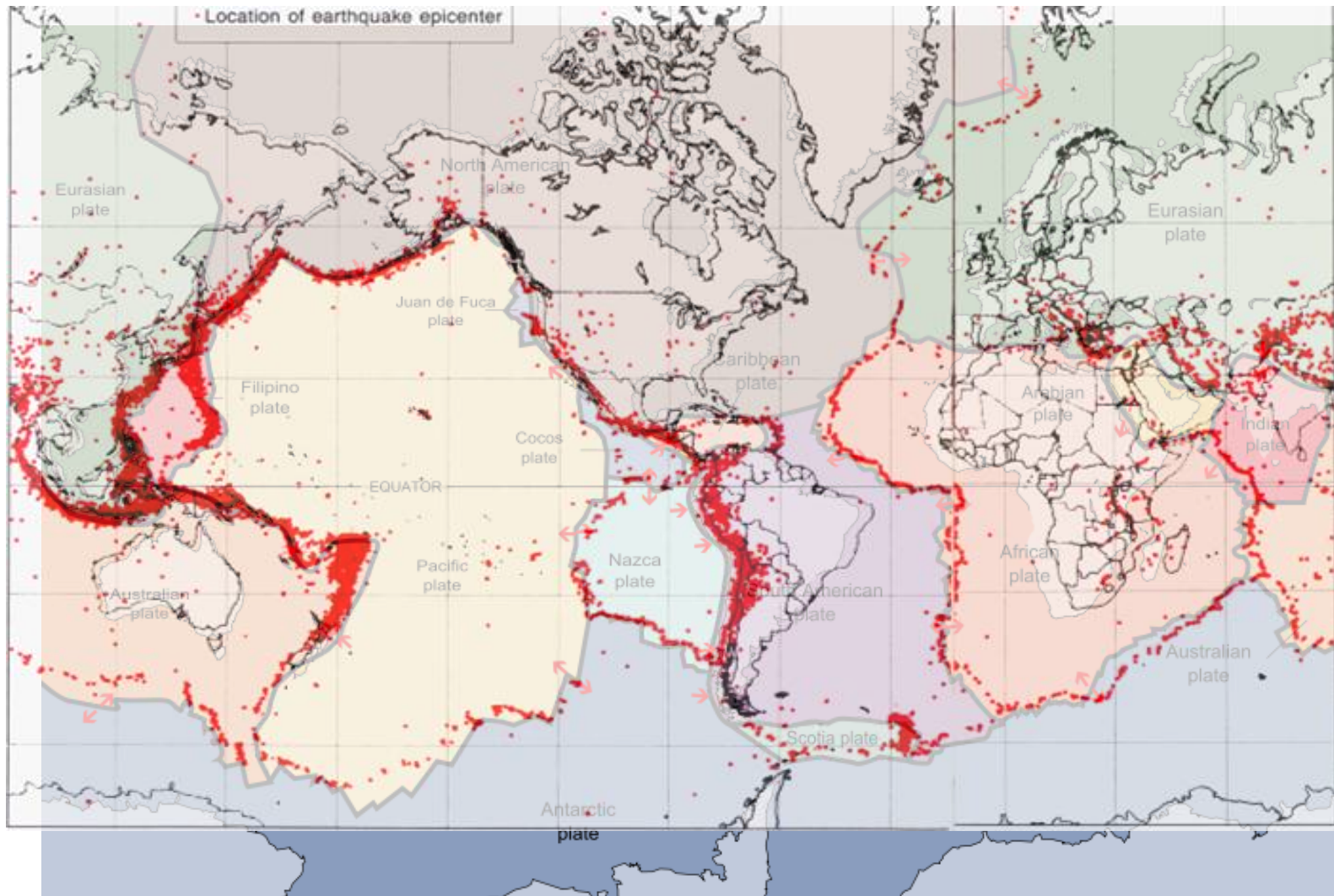


Earthquake Map



Are they similar?

Earth's Plates



Are they similar?



**OH
YEAH!!!**

What are Earthquakes?

- A sudden movement or offset from a release of energy and stress in Earth's crust

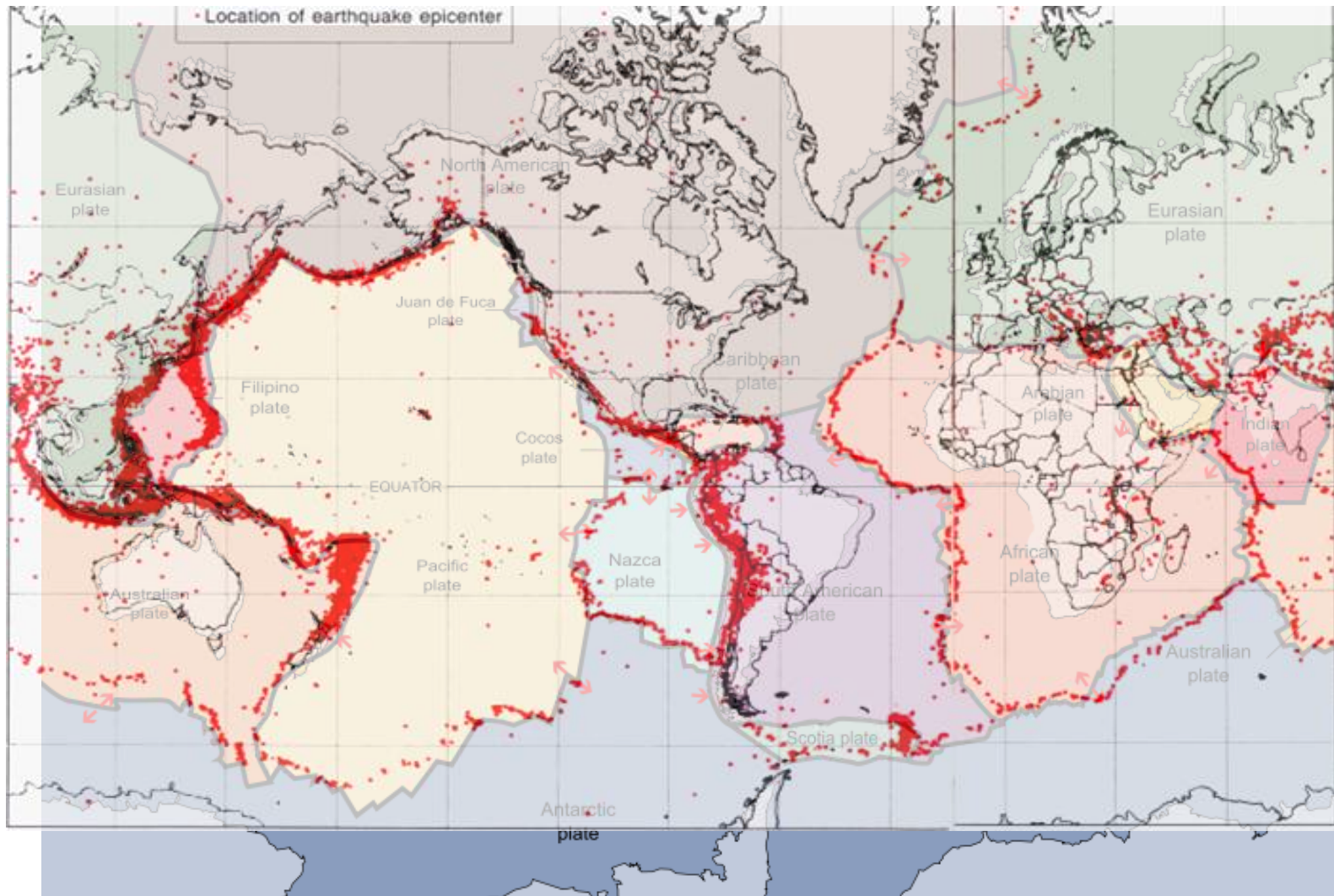


What are Earthquakes?

- A sudden movement or offset from a release of energy and stress in Earth's crust
- Most earthquakes occur around plate tectonic boundaries



Earth's Plates



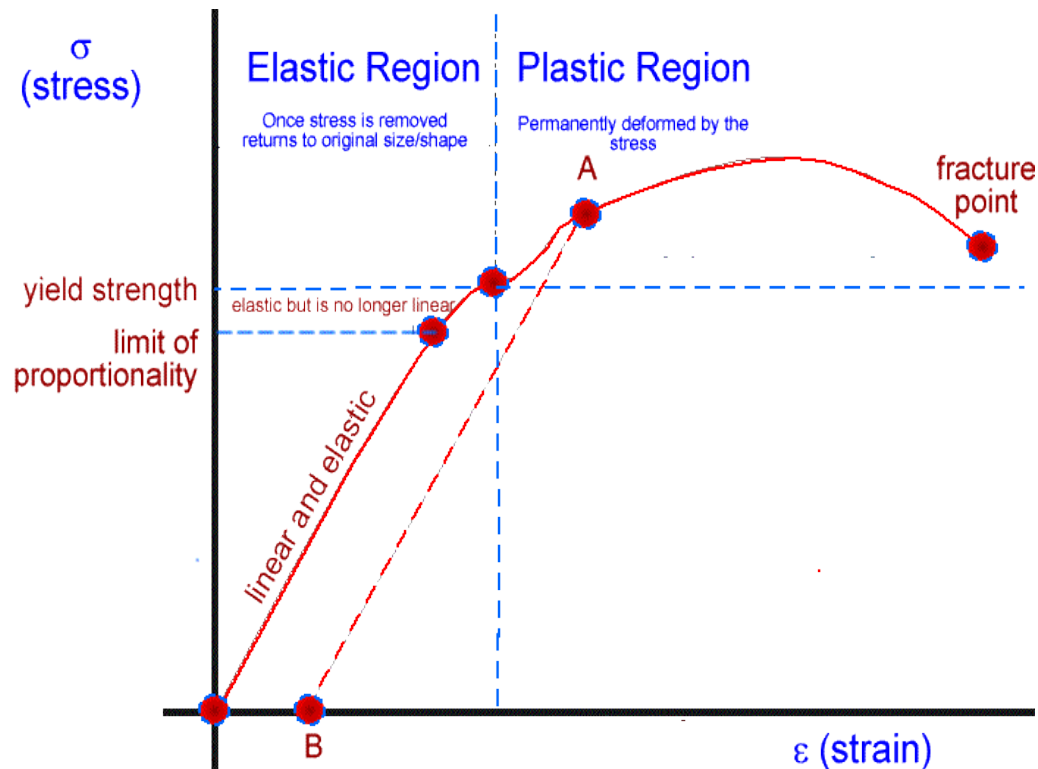
What are Earthquakes?

- Most earthquakes occur around plate tectonic boundaries
- Stress vs. Strain relationship



What are Earthquakes?

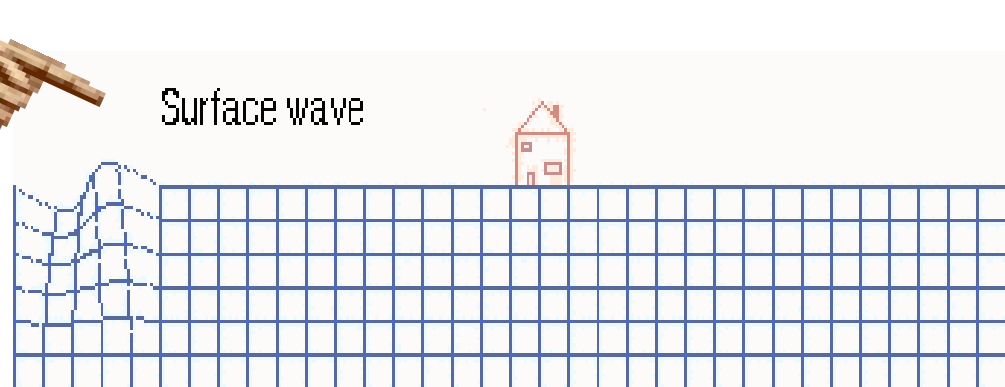
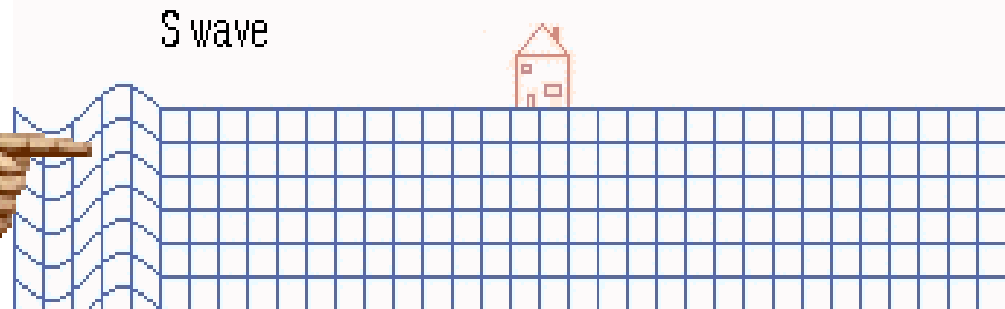
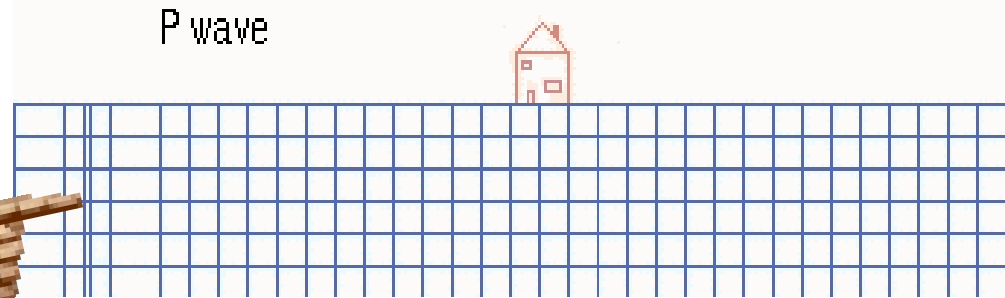
- Most earthquakes occur around plate tectonic boundaries
- Stress vs. Strain relationship
 - Elastic Deformation = bounces back
 - Plastic Deformation = deformed and breaks





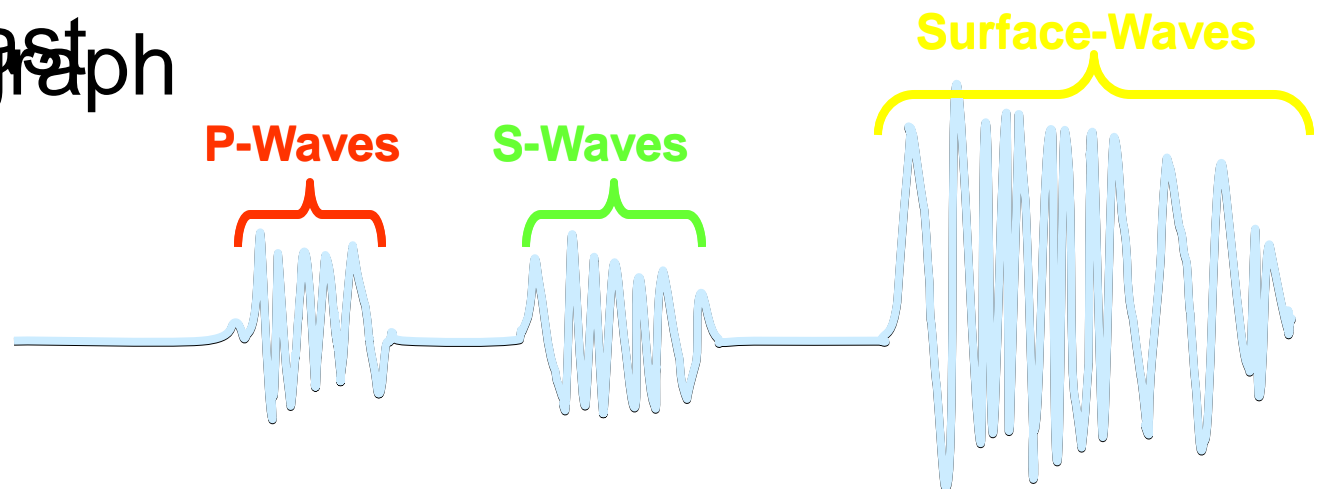
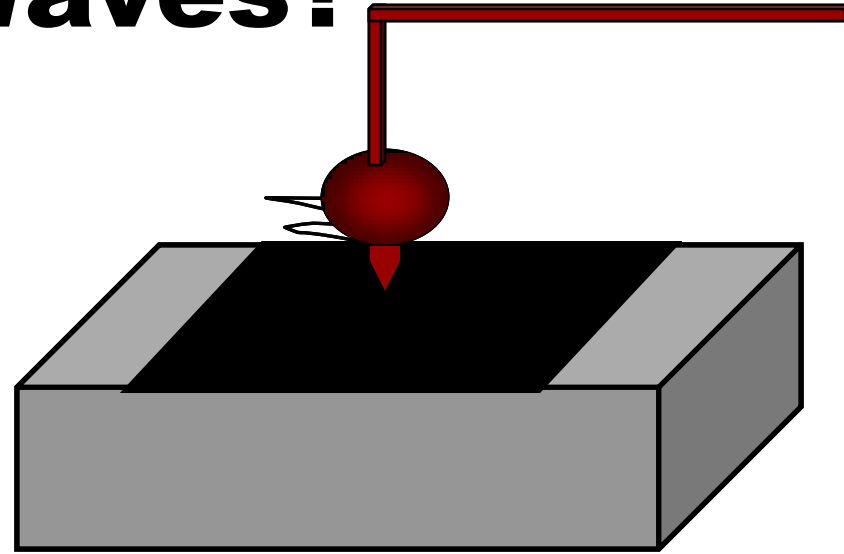
What are Seismic Waves?

- When an earthquake goes off it releases seismic waves
- 3 types of seismic waves exist: Primary, Secondary, and Surface
- **Primary waves** are the fastest waves and cause rock to compress and stretch rock
- **Secondary waves** are slower than primary waves and move rock up and down
- **Surface waves** are the most destructive because they travel through rock at the surface causing rock to move up and down and side to side

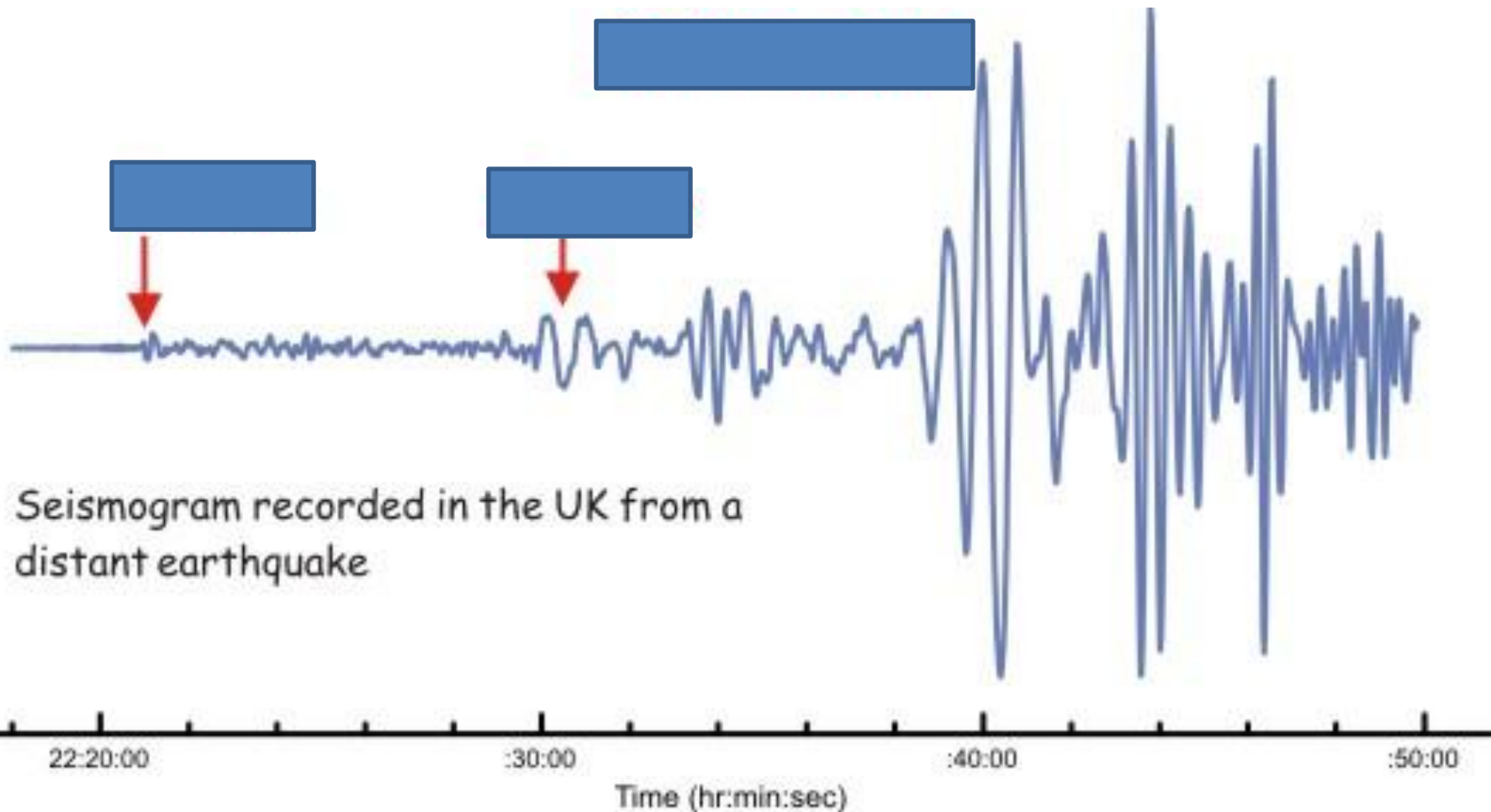


How do we recording Seismic Waves?

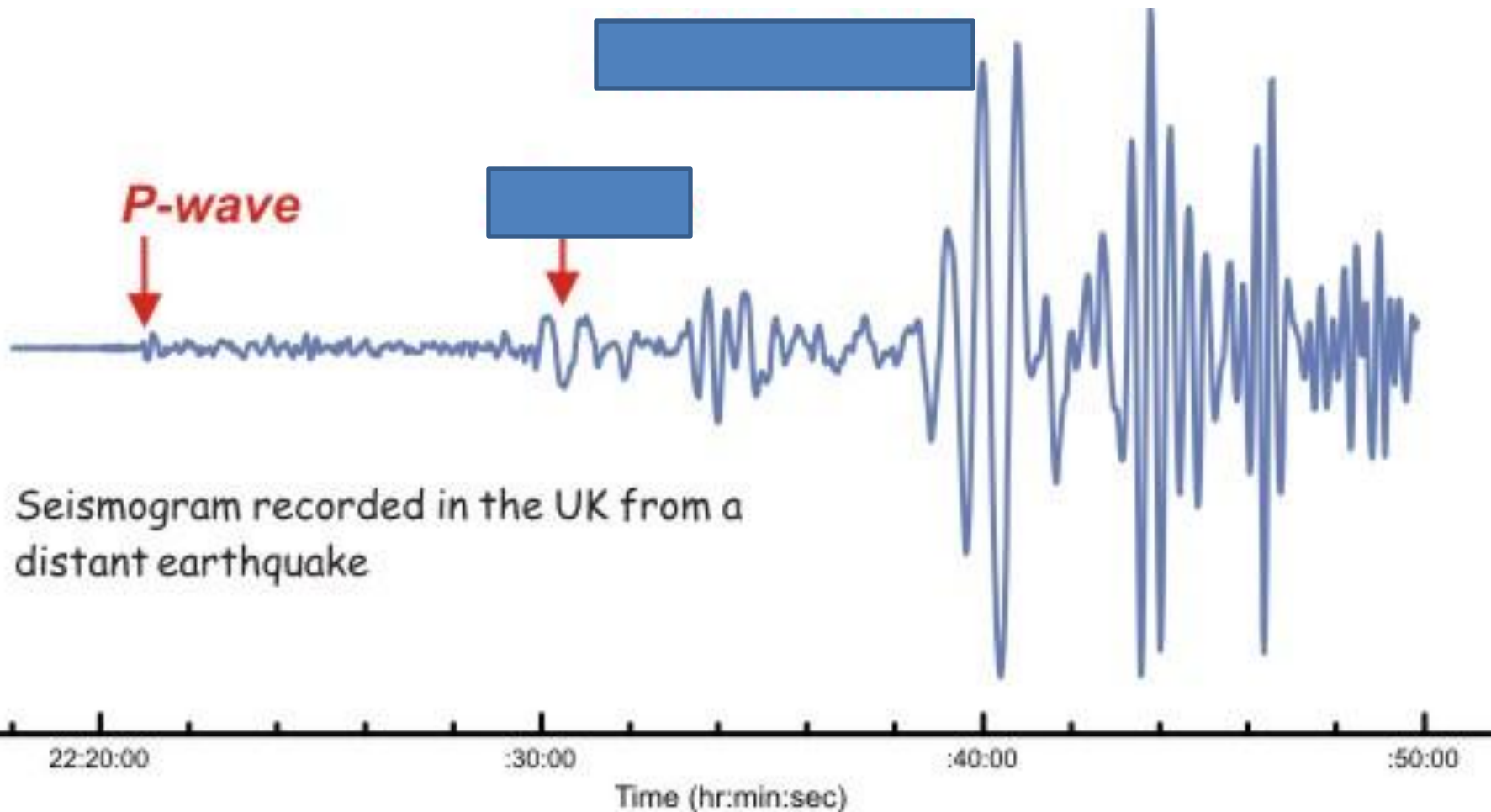
- After an earthquake, seismic P waves arrive first since they are the fastest.
- Seismic stations record these destructive surface waves last.



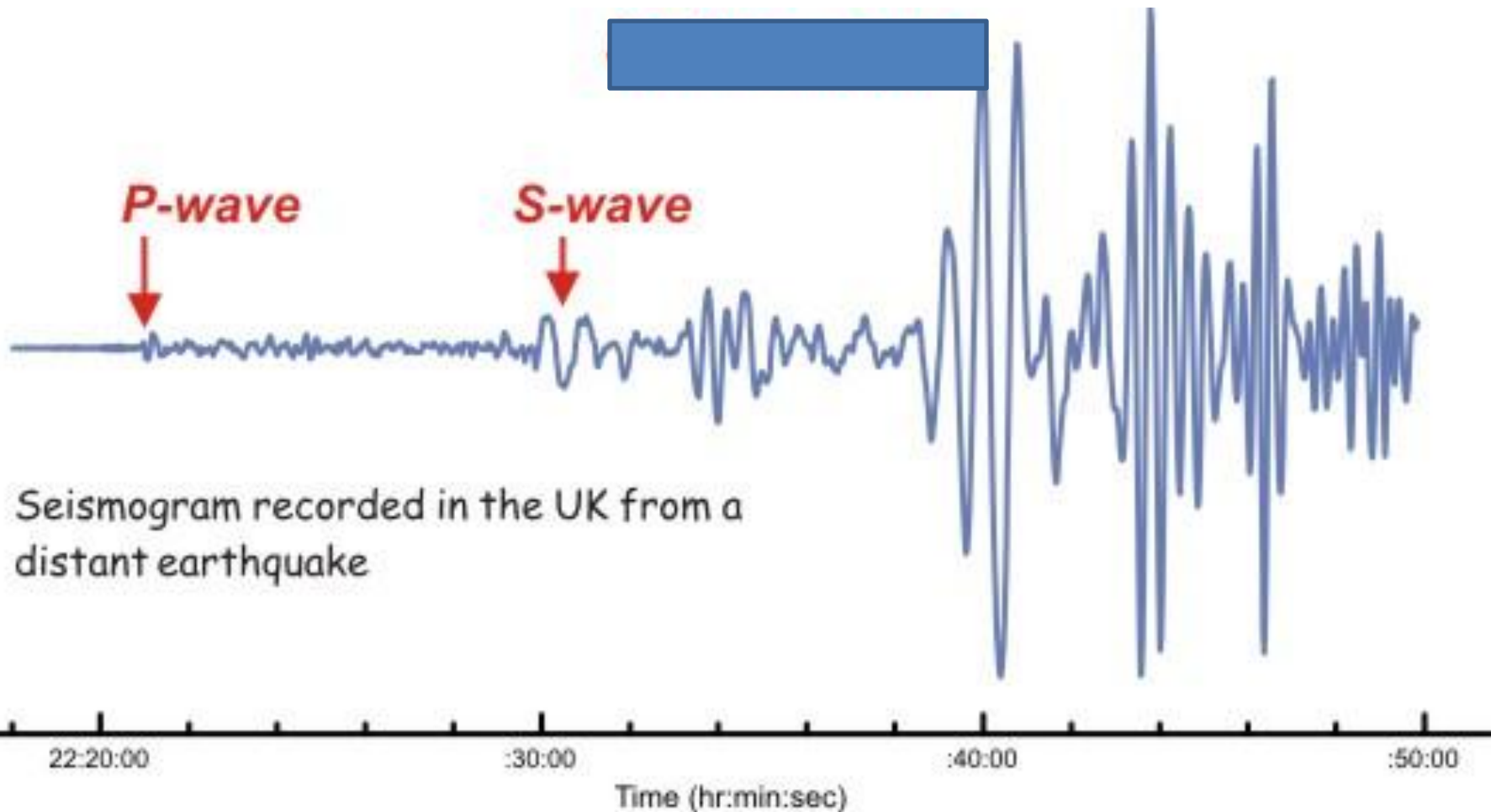
Earthquake Seismograph



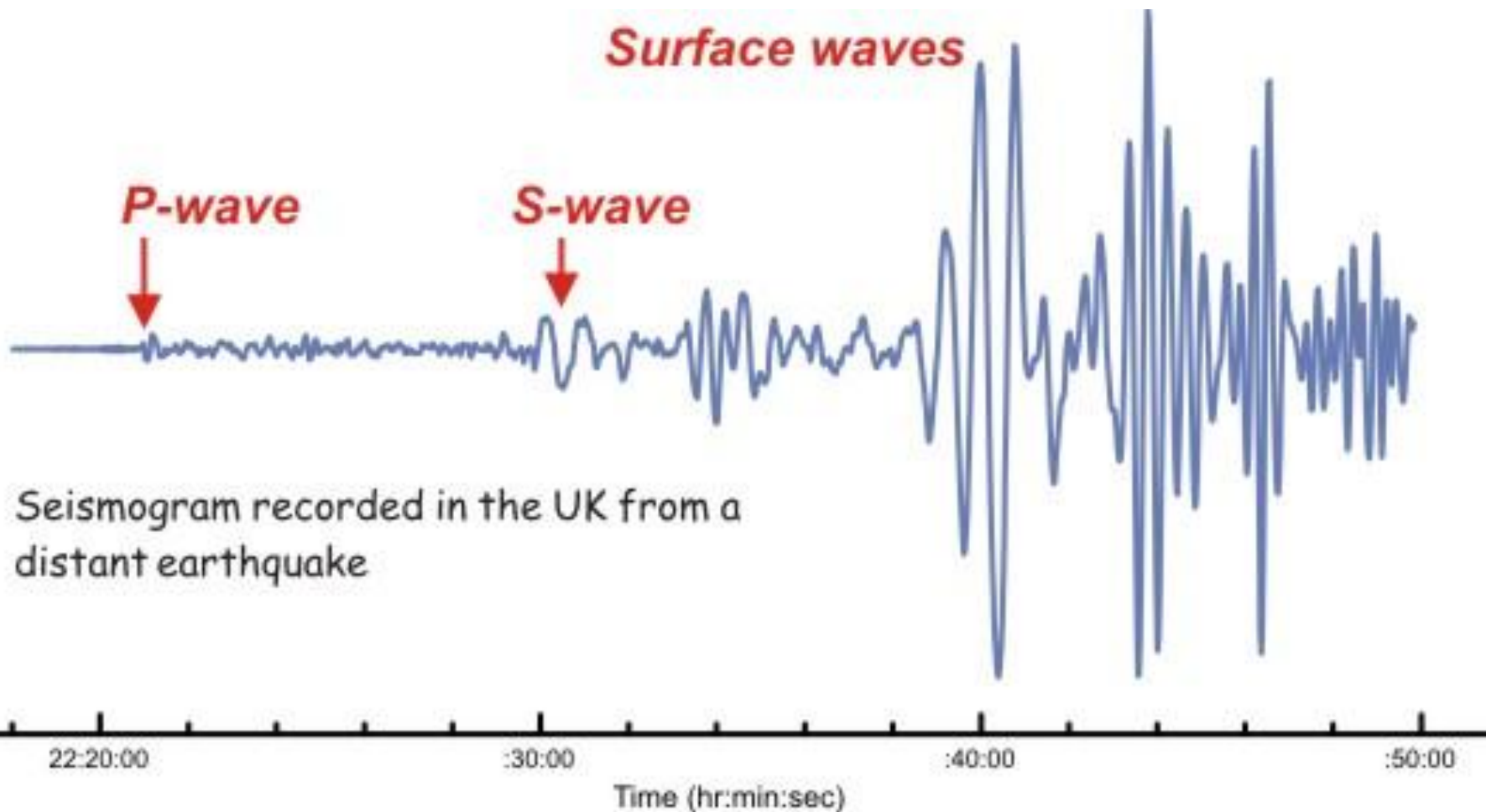
Earthquake Seismograph



Earthquake Seismograph



Earthquake Seismograph



Slinky Lab