

1. Explain the difference between a seismograph and a seismogram.
2. Order the three kinds of seismic waves from fastest to slowest.
3. An Earthquake's magnitude is a measure of the size of its S _____ W _____.

“Earthquake Destruction”



Q: What affects the amount of Destruction?

1. How **big** the seismic waves are.
2. How **long** it **lasts**.
3. **Composition** of ground.
4. **Design** of buildings.

Hazard - Liquefaction



Niigata, Japan 1964

Hazard – Ground Shaking



Northridge, CA 1994



Loma Prieta, CA 1989

Hazard – Surface Faulting



Landers, CA 1992

Hazard - Landslides

Q: What type of **soil** would be the **safest** during a **major earthquake**?

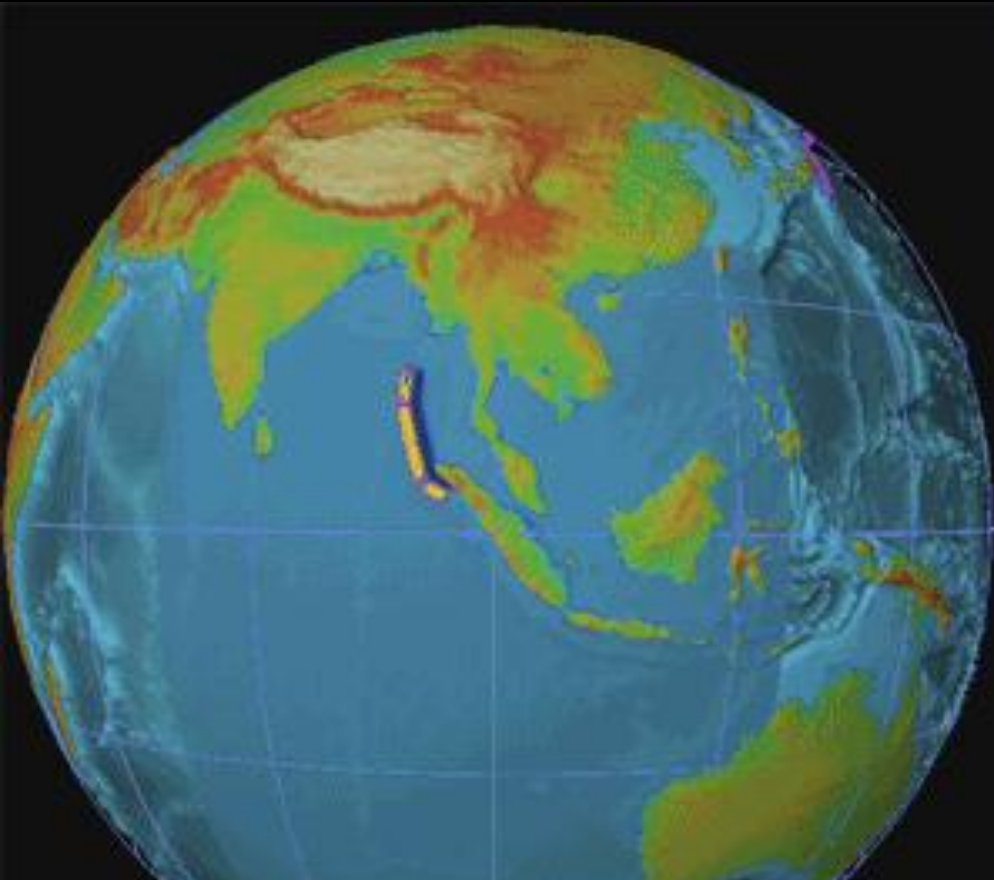
- a.) Loose Soil
- b.) Steep slopes
- c.) Granite bedrock
- d.) Area with structures built on a landfill

Hazard – Fires



Loma Prieta, CA 1989

Hazard – **Tsunami:**

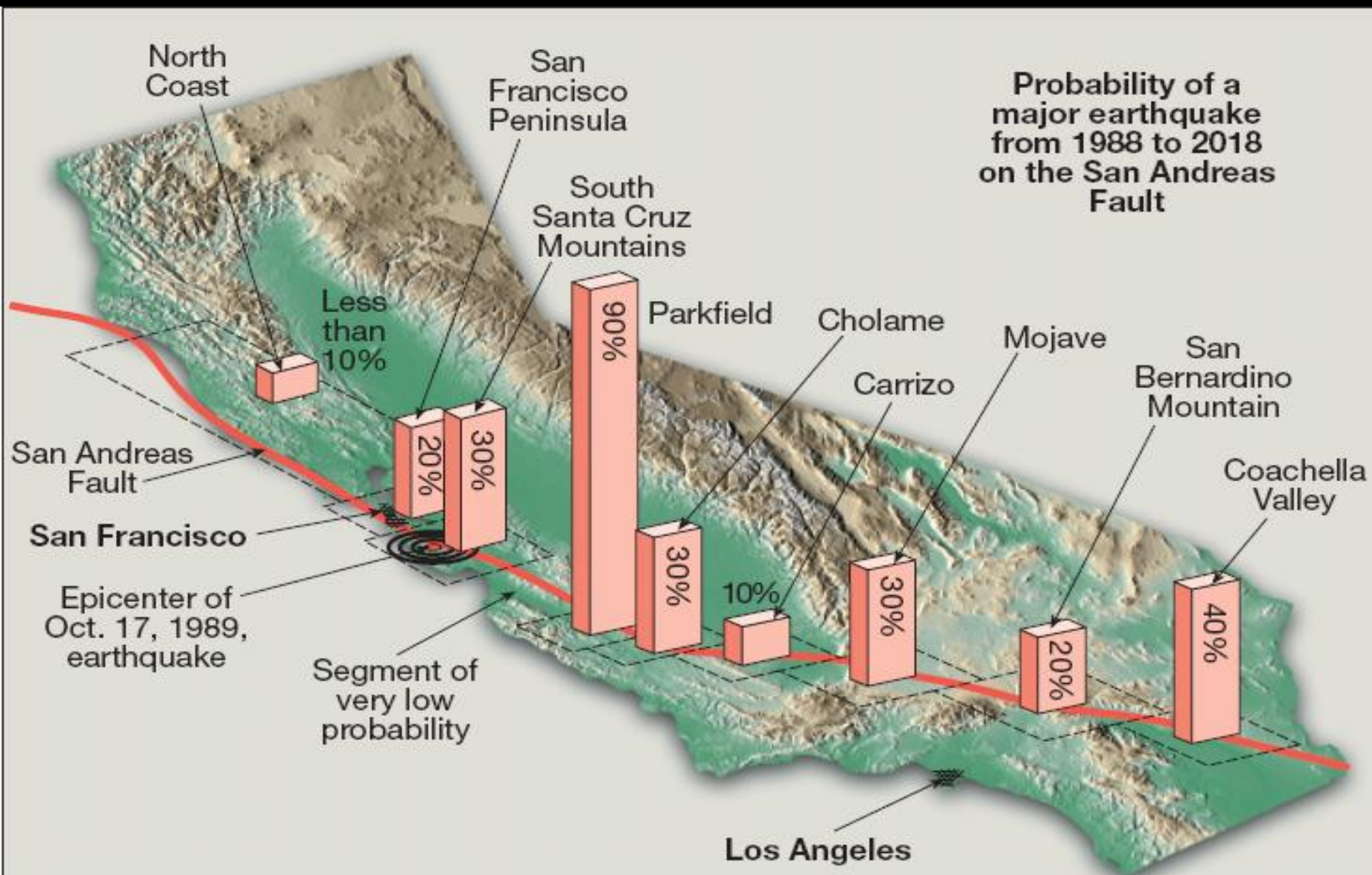


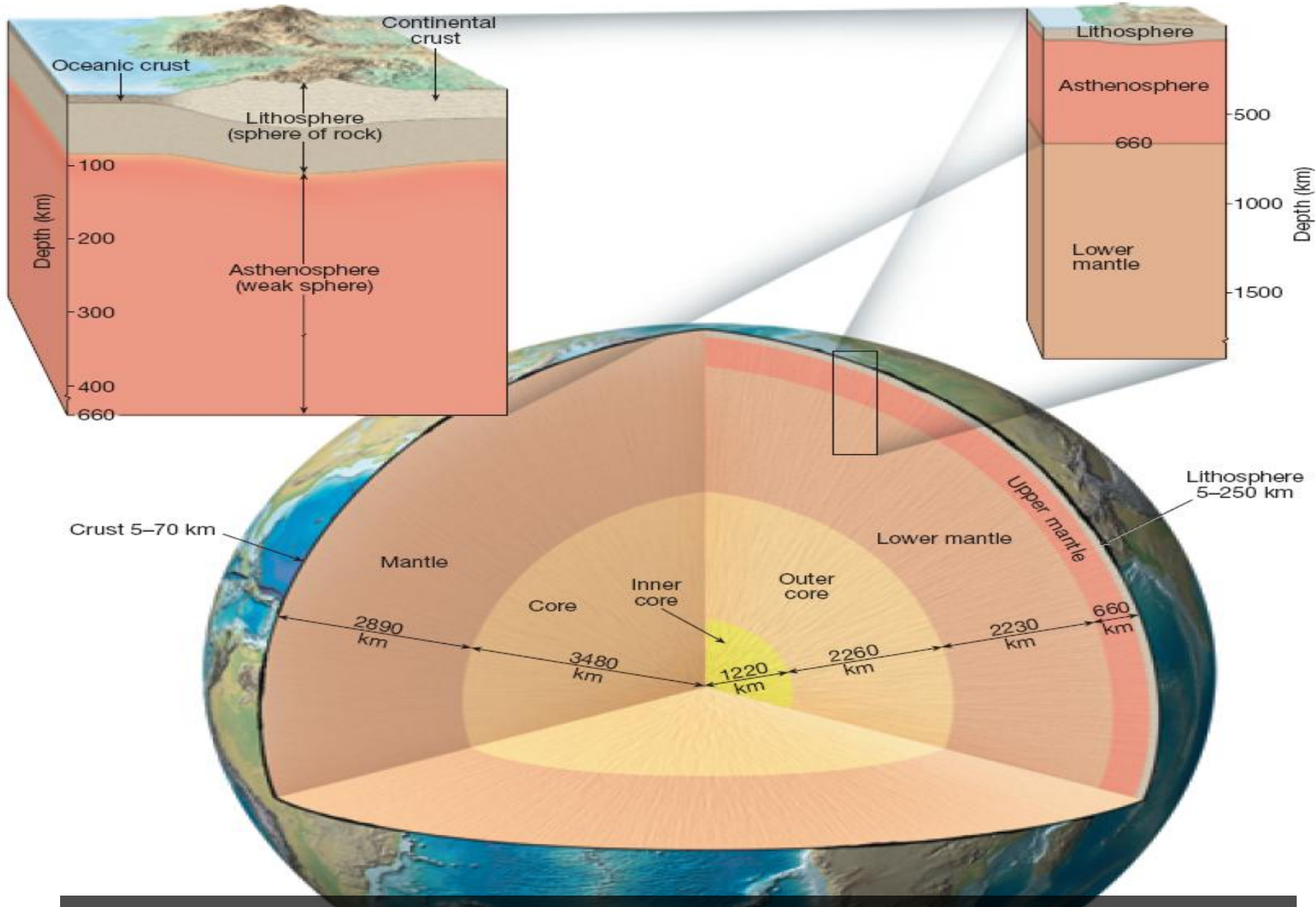
Earthquake **under ocean** floor.

Predicting Earthquakes?

- **Goal:**
 - EARLY WARNING.
- **Long range forecast...**
 - Idea that **earthquakes** are **repetitive.**
- **Success?**
 - NO. ☹️
- **“Seismic gap”**
 - **Place** on a **fault** that is **“overdo.”**

Chance of Earthquakes Near Us...





Earth's Layered Structure...

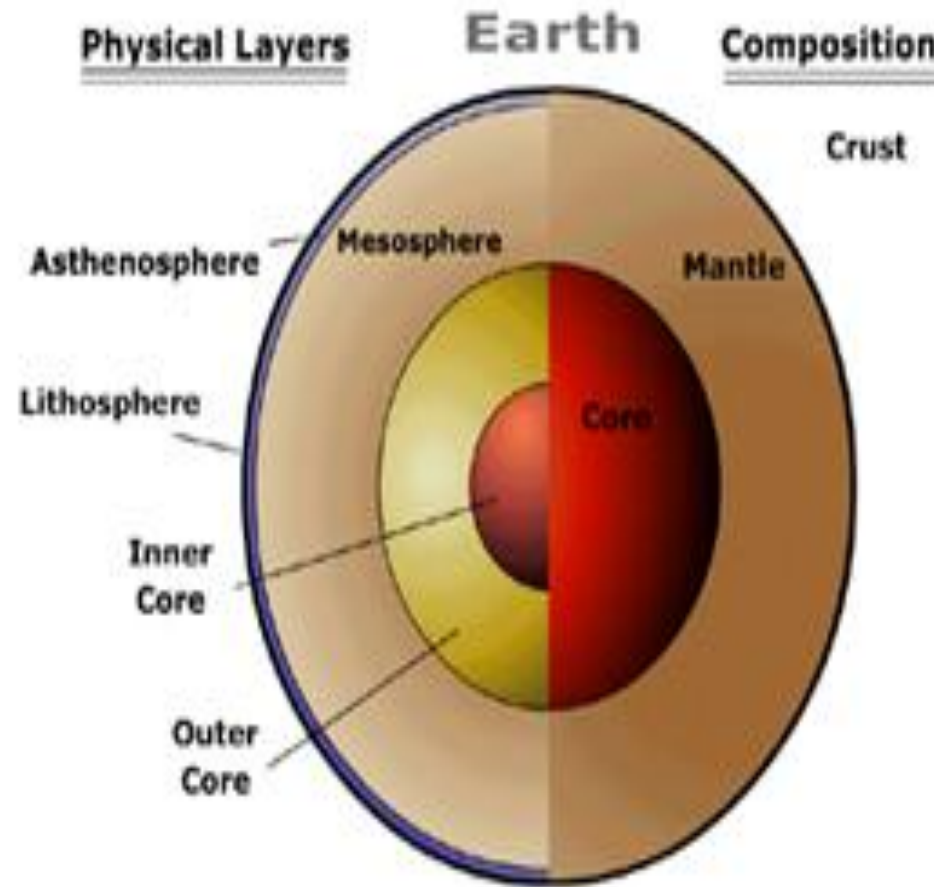
Crust & Mantle

Crust:

- Rocky, top layer
- **Divided!**
 1. **Oceanic** crust
 2. **Continental** crust

Mantle

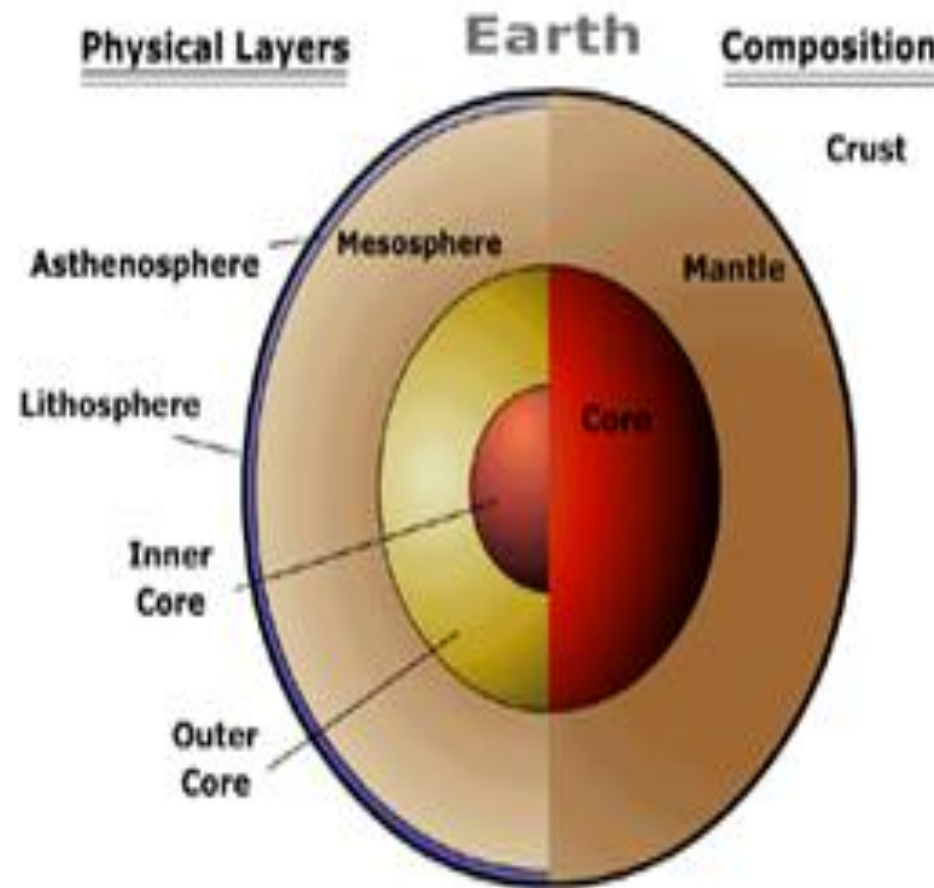
- Solid, rocky

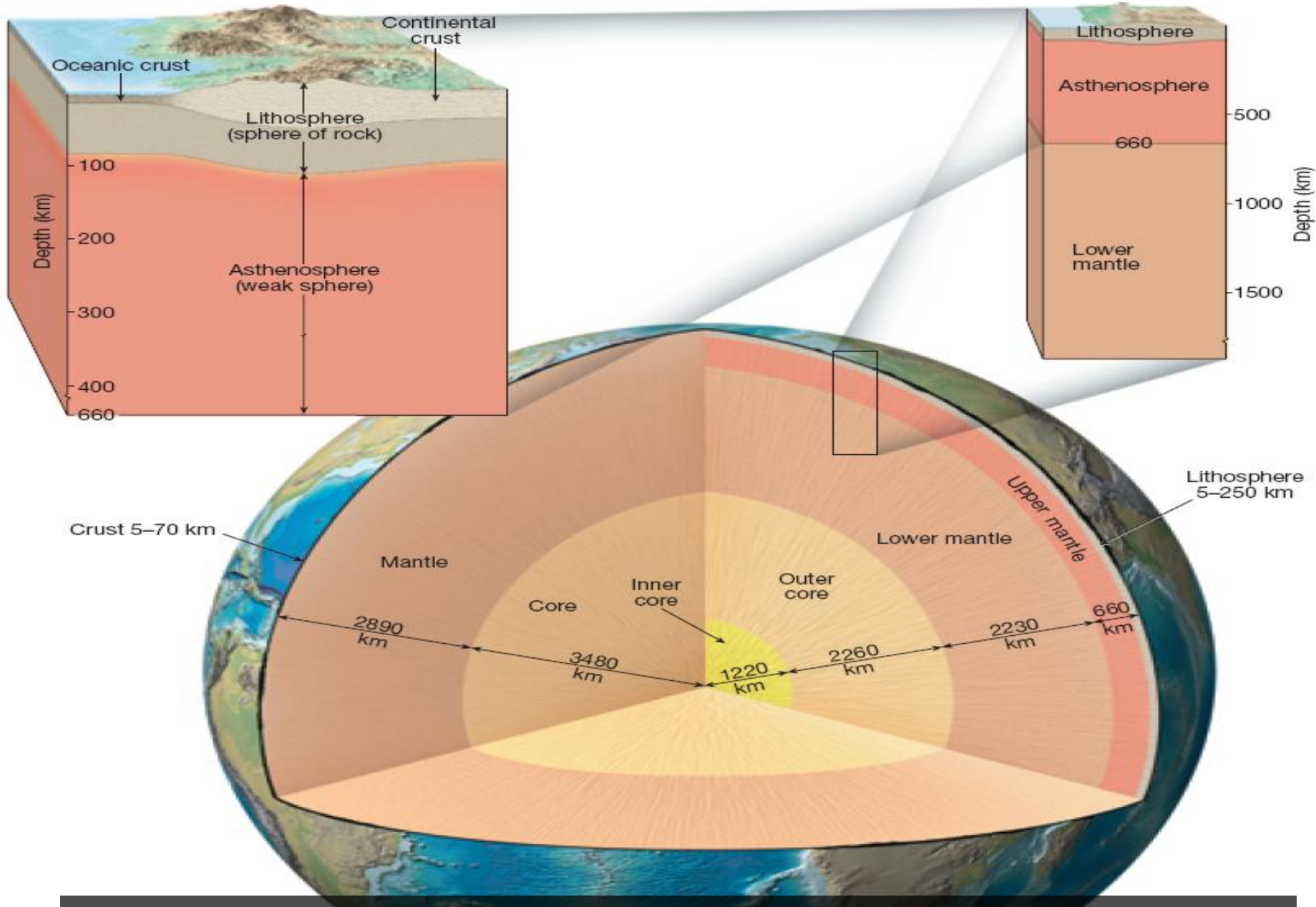


The Core

Core:

- High Concentration of Metals
- Divided!
 1. Outer = Liquid
 2. Inner = Solid
 - Deeper = ↑ Pressure.





Earth's Layered Structure.

STUDY GUIDE Review Contest!

Research Phase (10pts)

1. **Break into assigned teams**
2. **15 min to work together to EACH complete the study guide.**
3. **Write answers in complete sentences.**
4. **Everyone must have a copy.**

Competition Phase...

Competition Phase

Write your team number and all your names on a sheet of paper for keeping score.

1. **Whiteboards.**

2. **Choose a writer.**

3. **Write answer in a sentence**

4. **Work quietly...because...**

– 1st = 3 extra credit points on test!

– 2nd = 2 pts

– 3rd = 1 pts

NO TIES FOR 1st or 2nd!