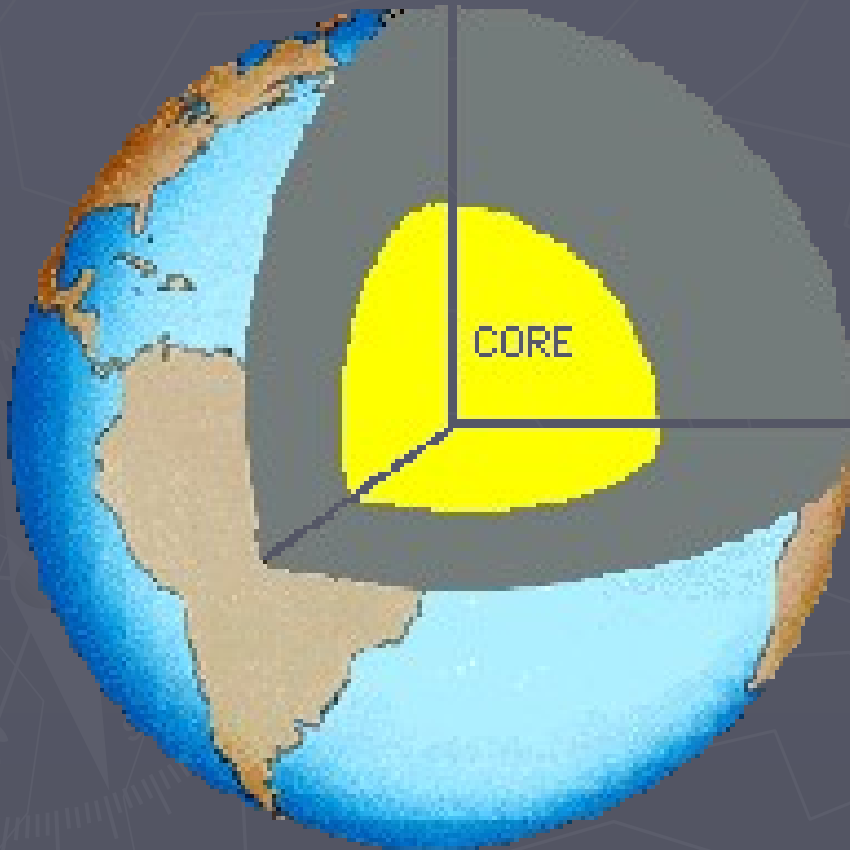


What are the three Chemical layers of the Earth?

Crust,
mantle,
core



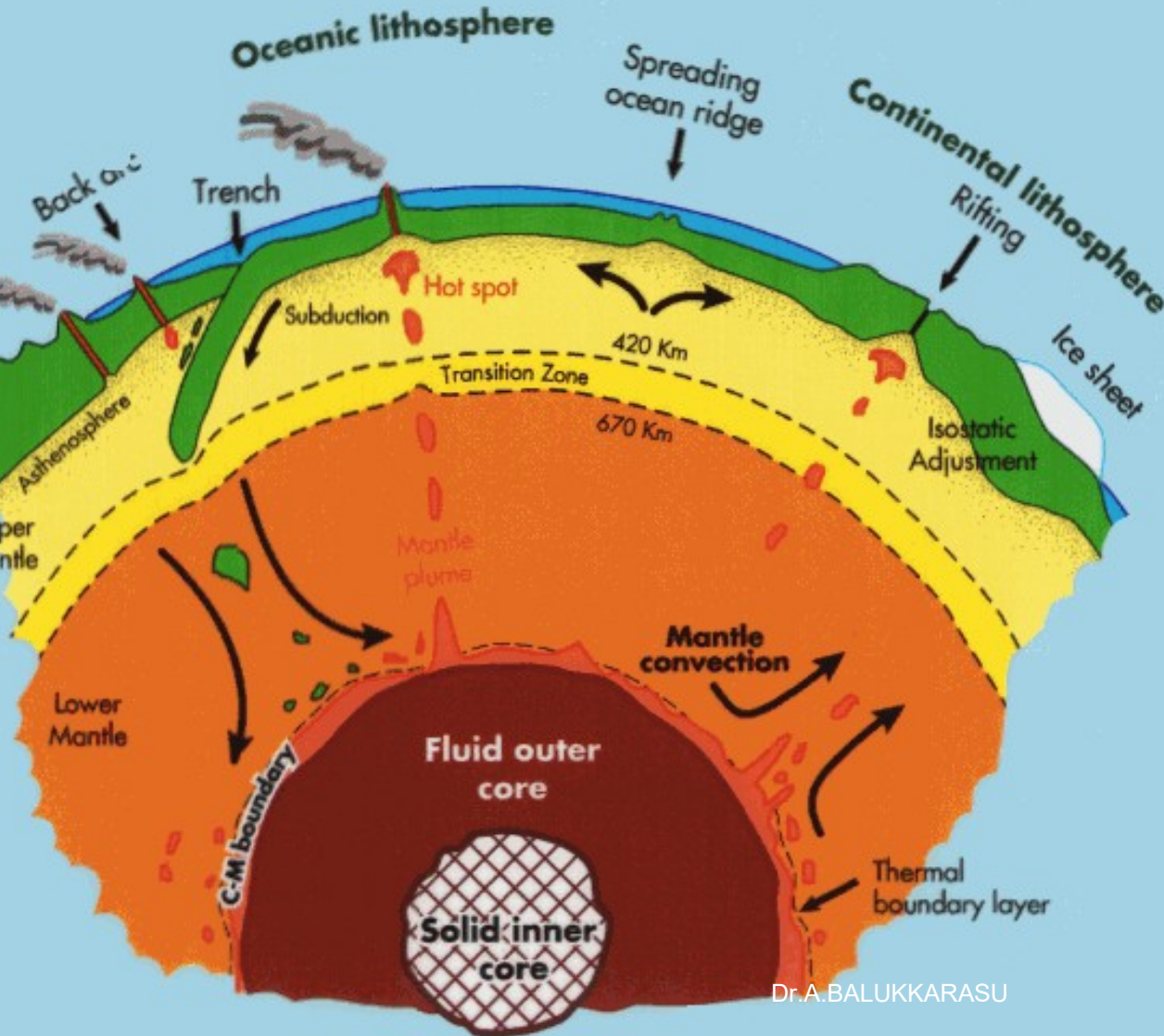
Each of these 3
layers is COMPOSED
of same types of
CHEMICALS

Crust- Silica, Oxygen

Mantle- Magnesium, Oxygen

Core- Iron, Nickle

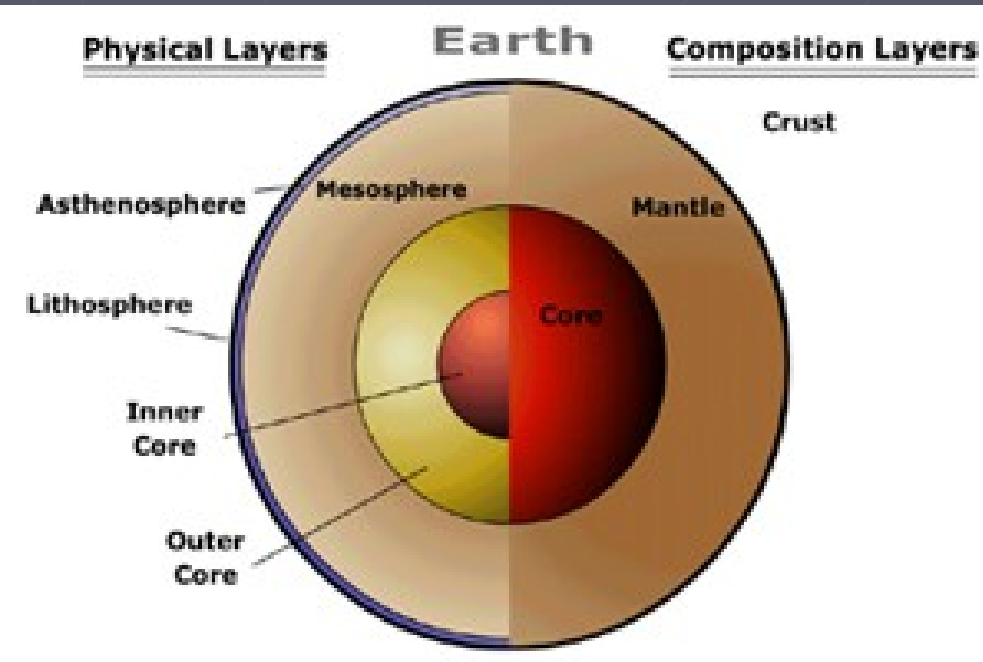
Scientists think about the layers of the Earth in **2** different ways.



1- By
**CHEMICAL
COMPOSITION**

2- By
PHYSICAL
Properties
such as
density and
state of
matter.

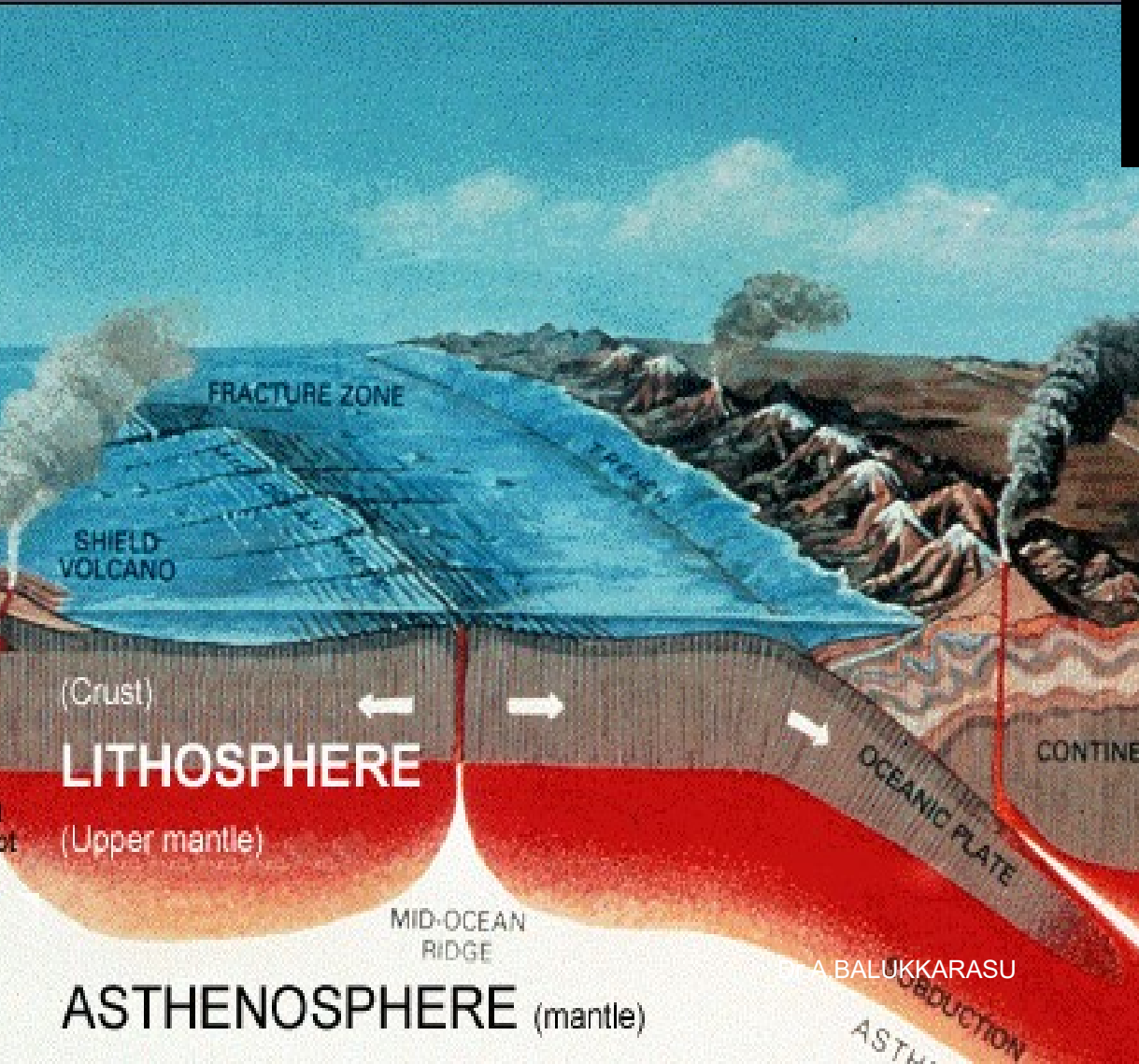
What are the five physical layers of the earth?



- ▶ 1. Lithosphere
- ▶ 2. Asthenosphere
- ▶ 3. Mesosphere
- ▶ 4. Outer core
- ▶ 5. Inner core

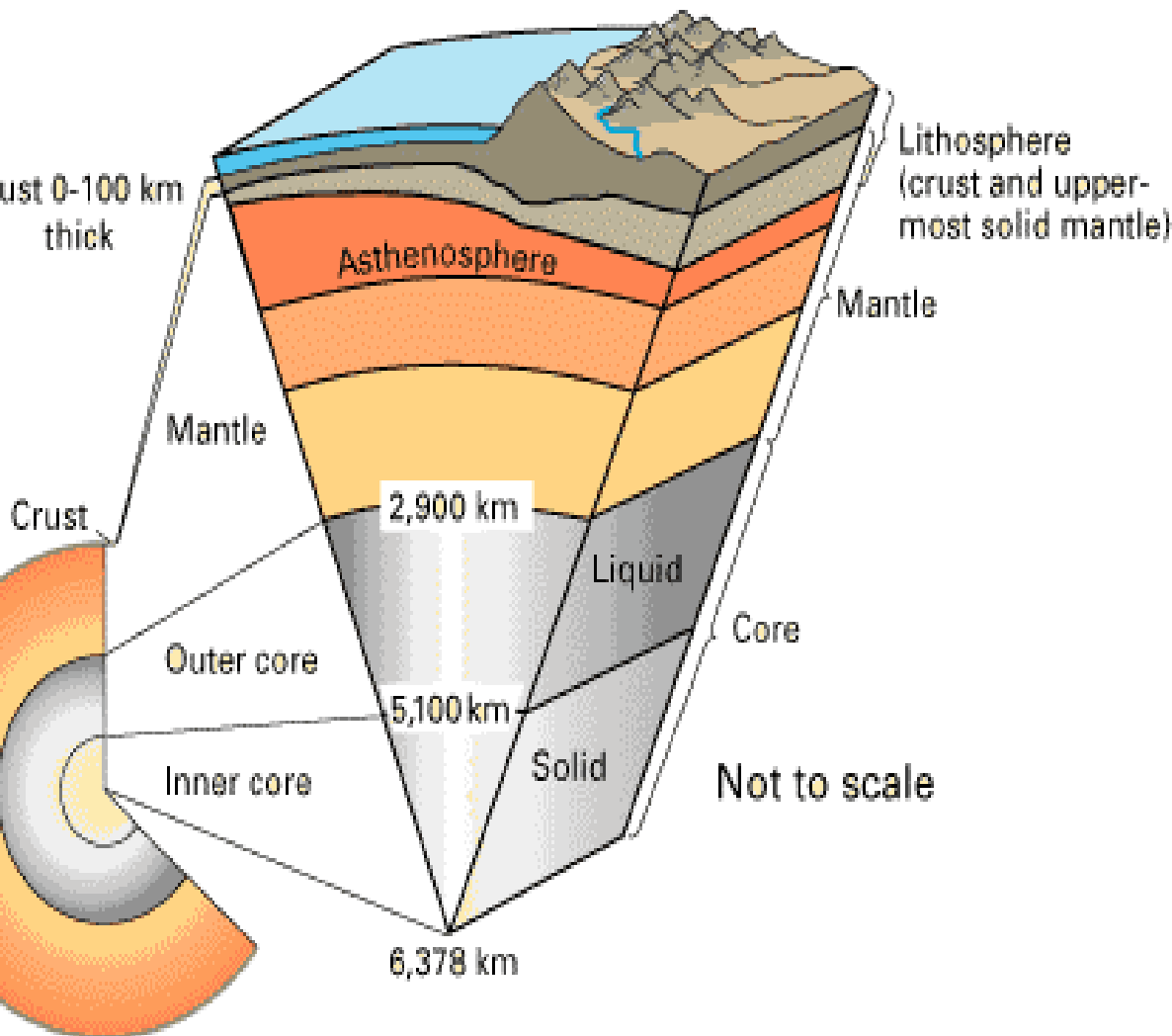
1. Lithosphere

- The solid top layer of the Earth.



- Includes the crust and the upper part of the mantle.

2. Asthenosphere



- Thin layer of mantle under the lithosphere.

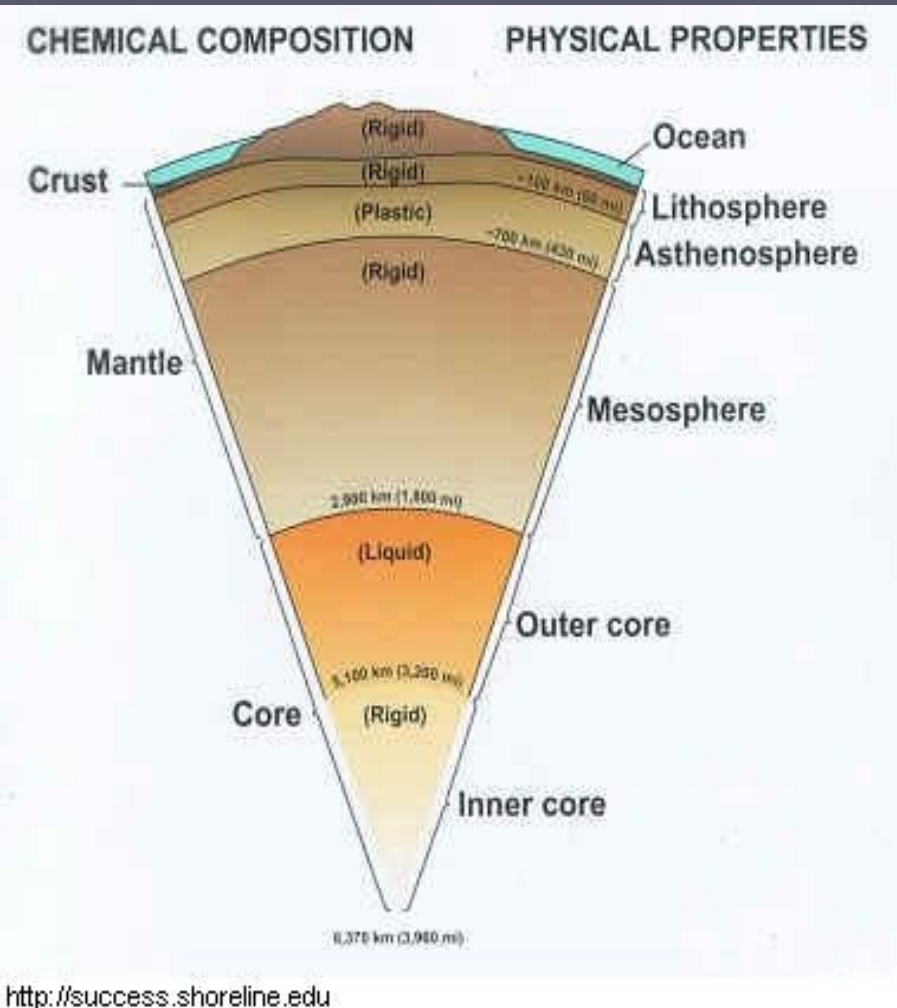
- More liquid than rest of the mantle-“low viscosity”

3. Mesosphere

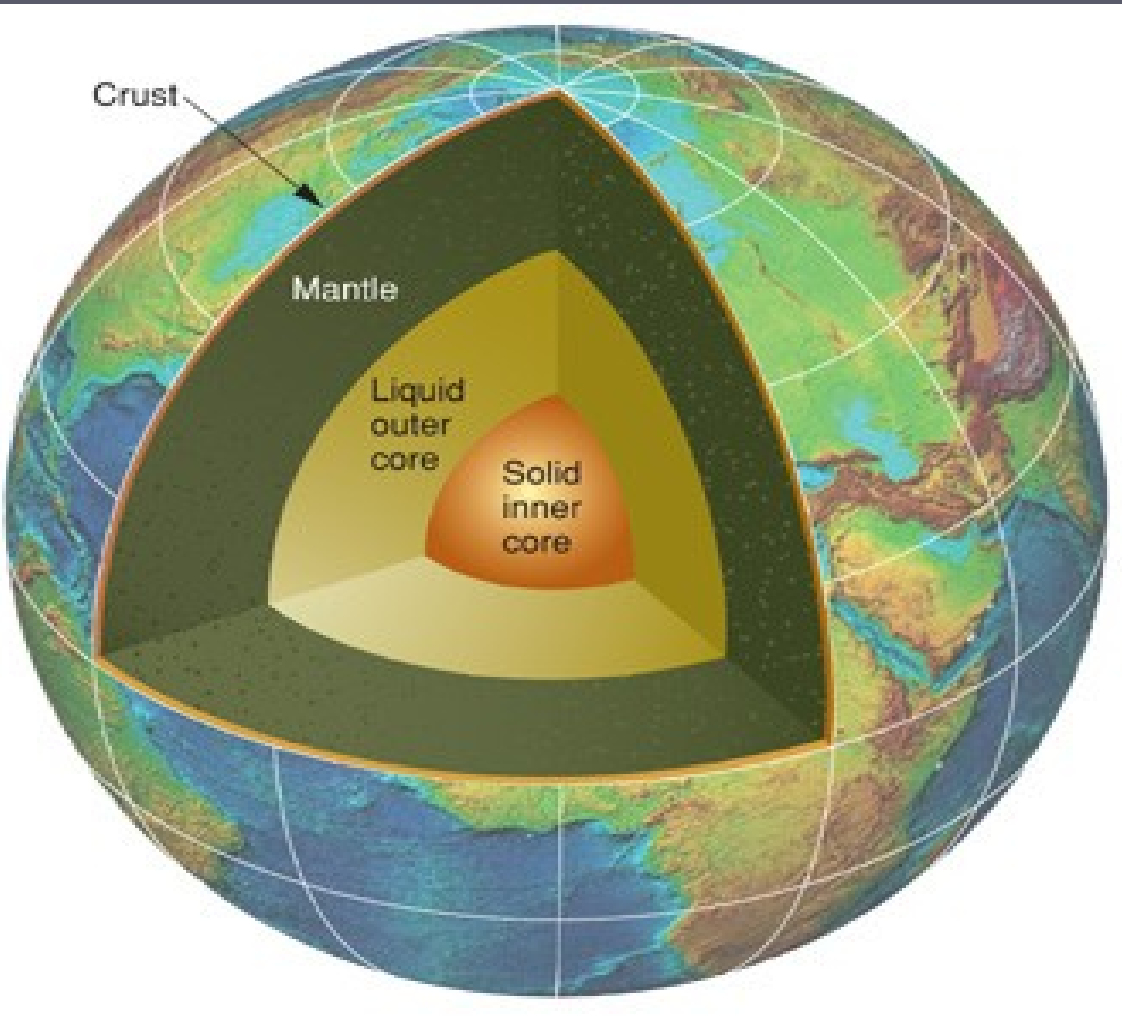
► The rest of the **mantle**

► **Hotter, but higher pressures keep this layer more rigid.**

► **“high viscosity”**



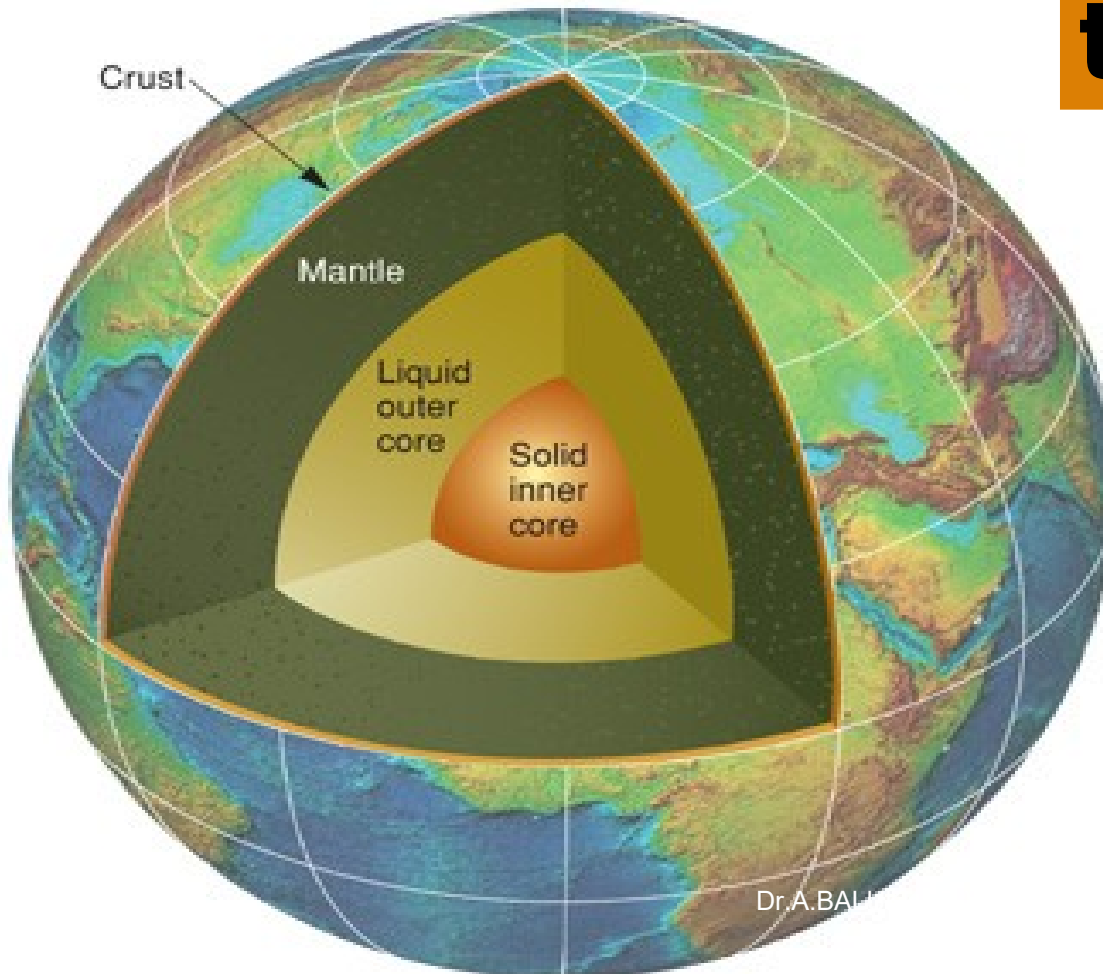
4. Outer Core



- **Liquid-low viscosity**
- **Believed to be the cause of Earth's magnetic field.**

5. Inner Core

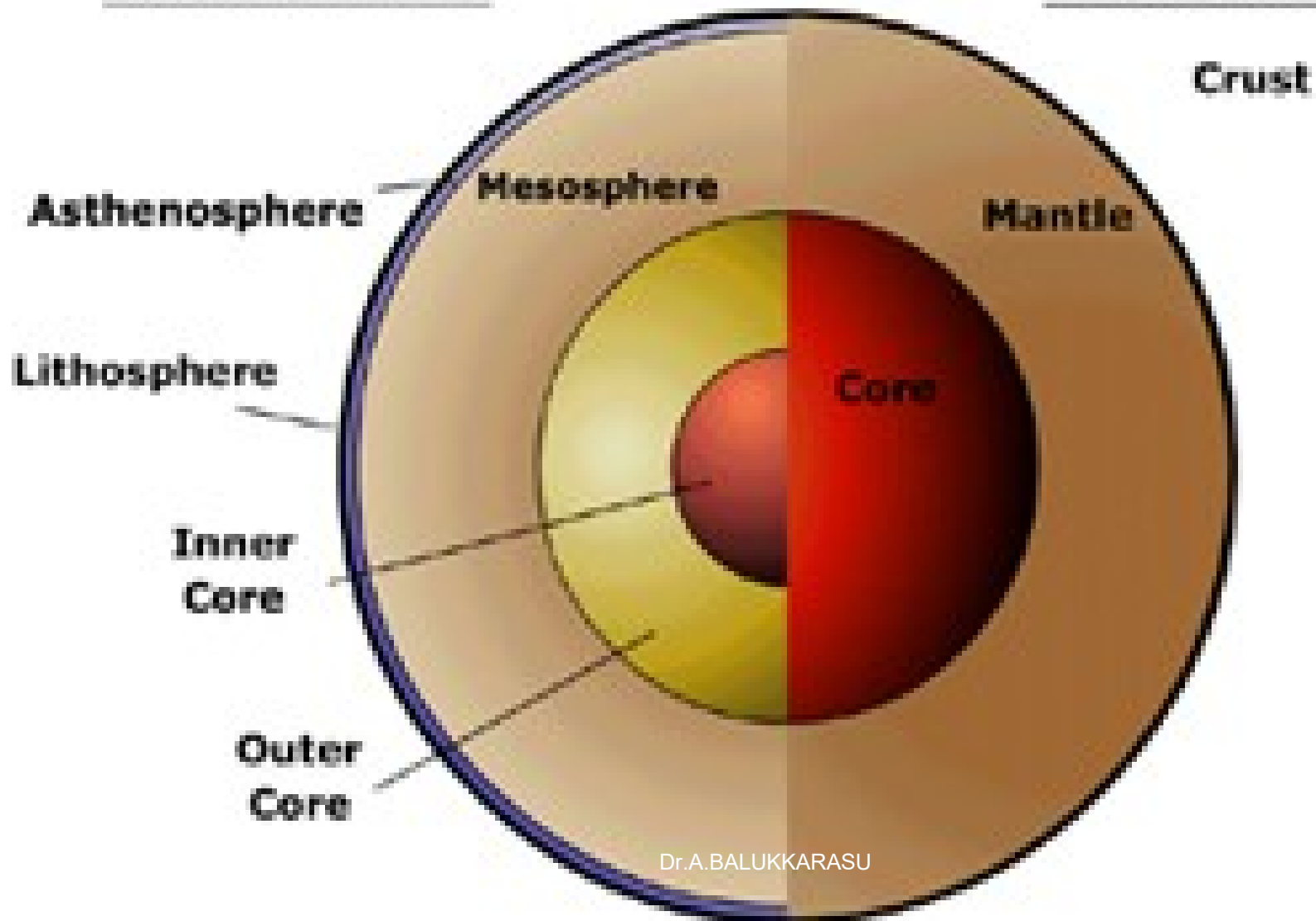
**Solid due
to pressure**



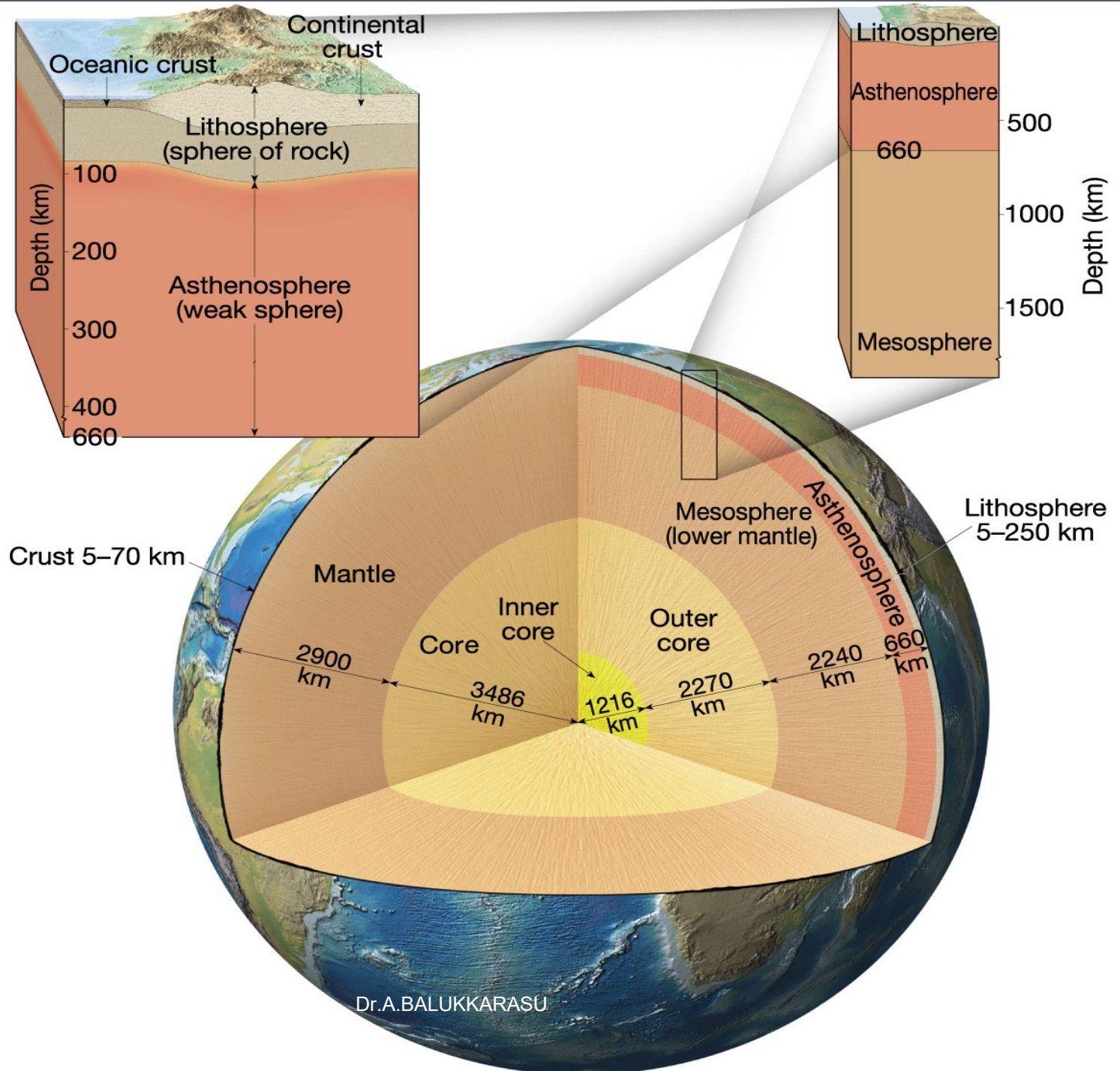
Physical Layers

Earth

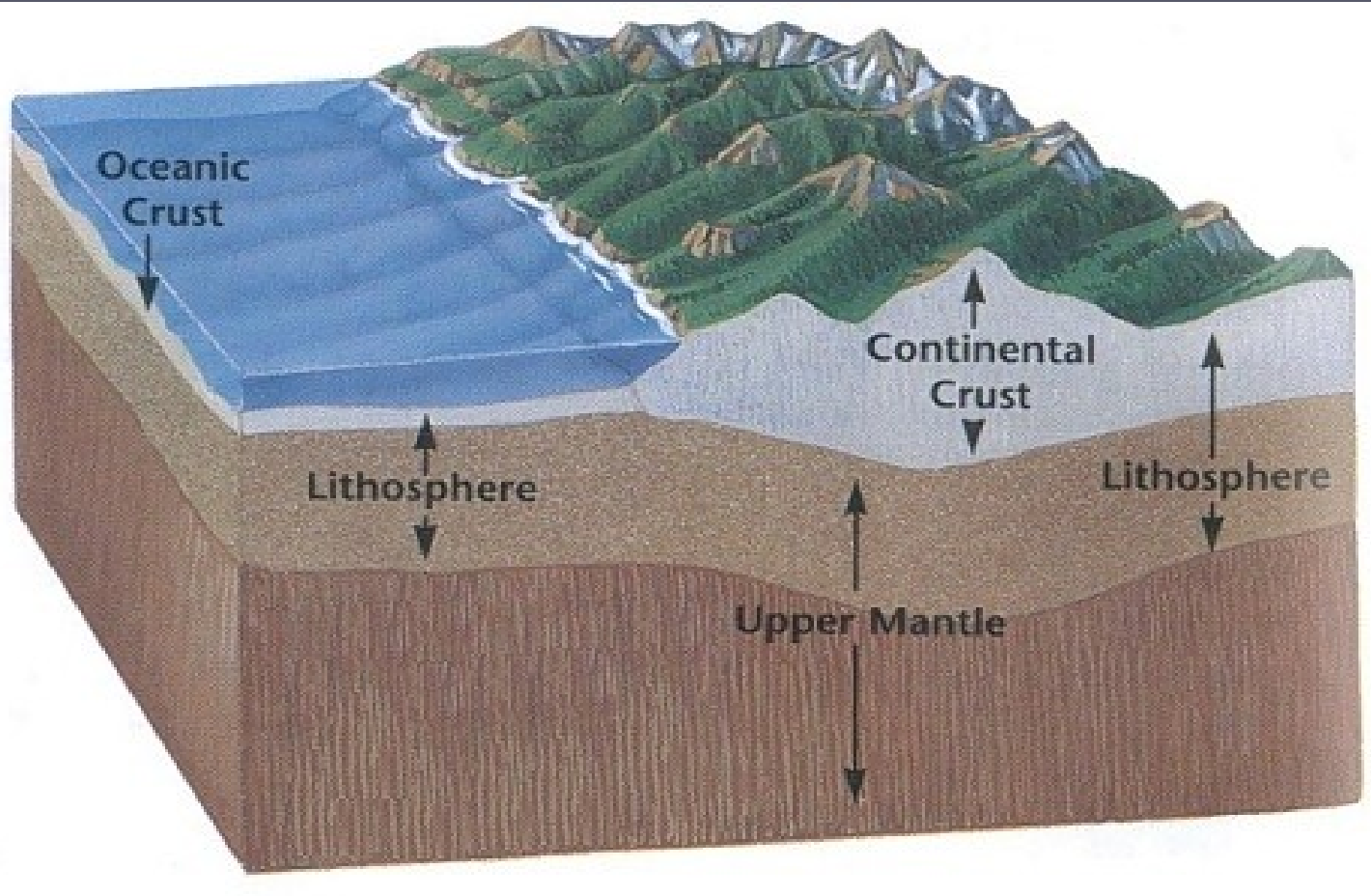
Composition Layers



The composition and physical layers of Earth



The oceanic crust is thinner than the continental crust.



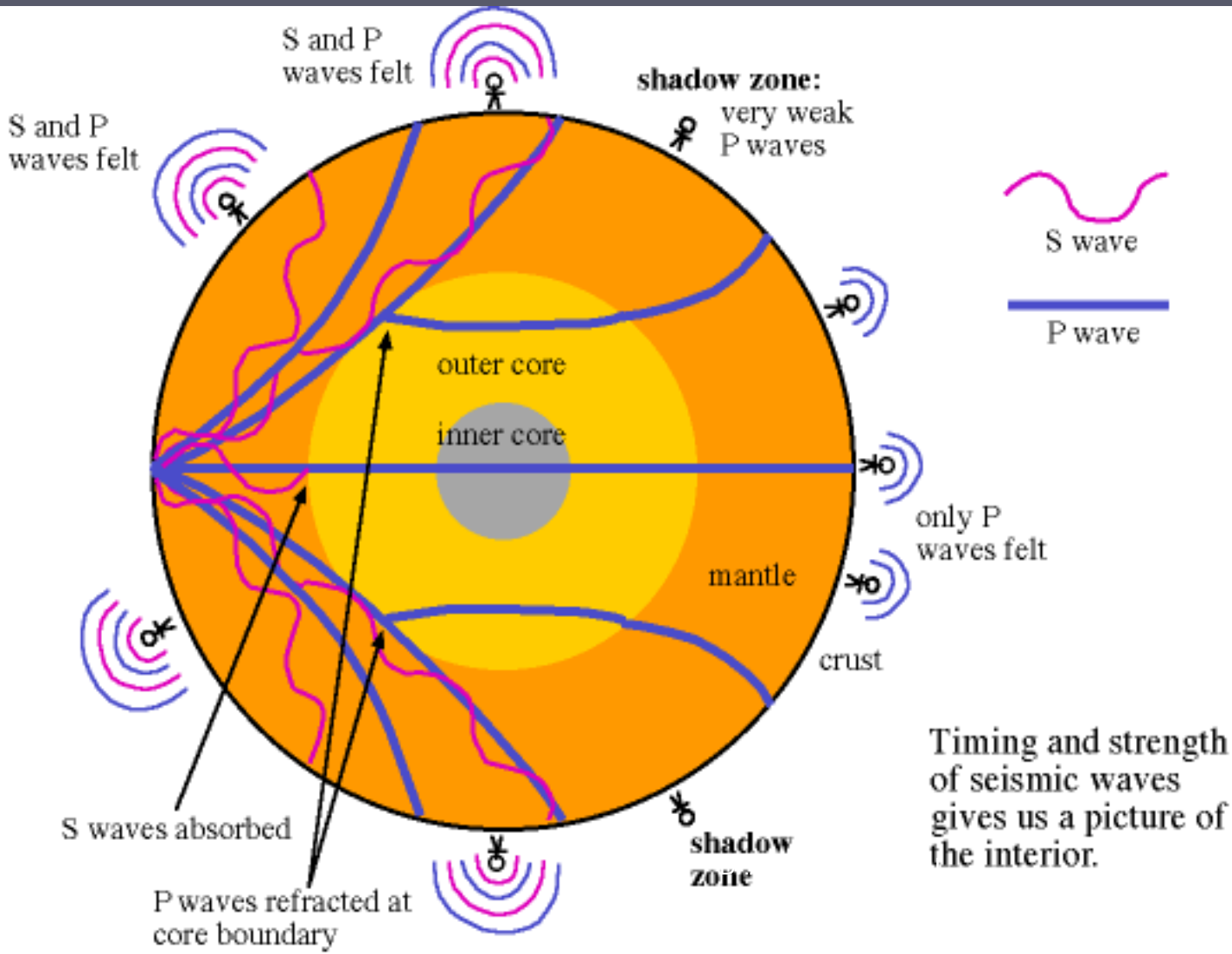
Oceanic crust is also denser than continental crust

What are tectonic plates?

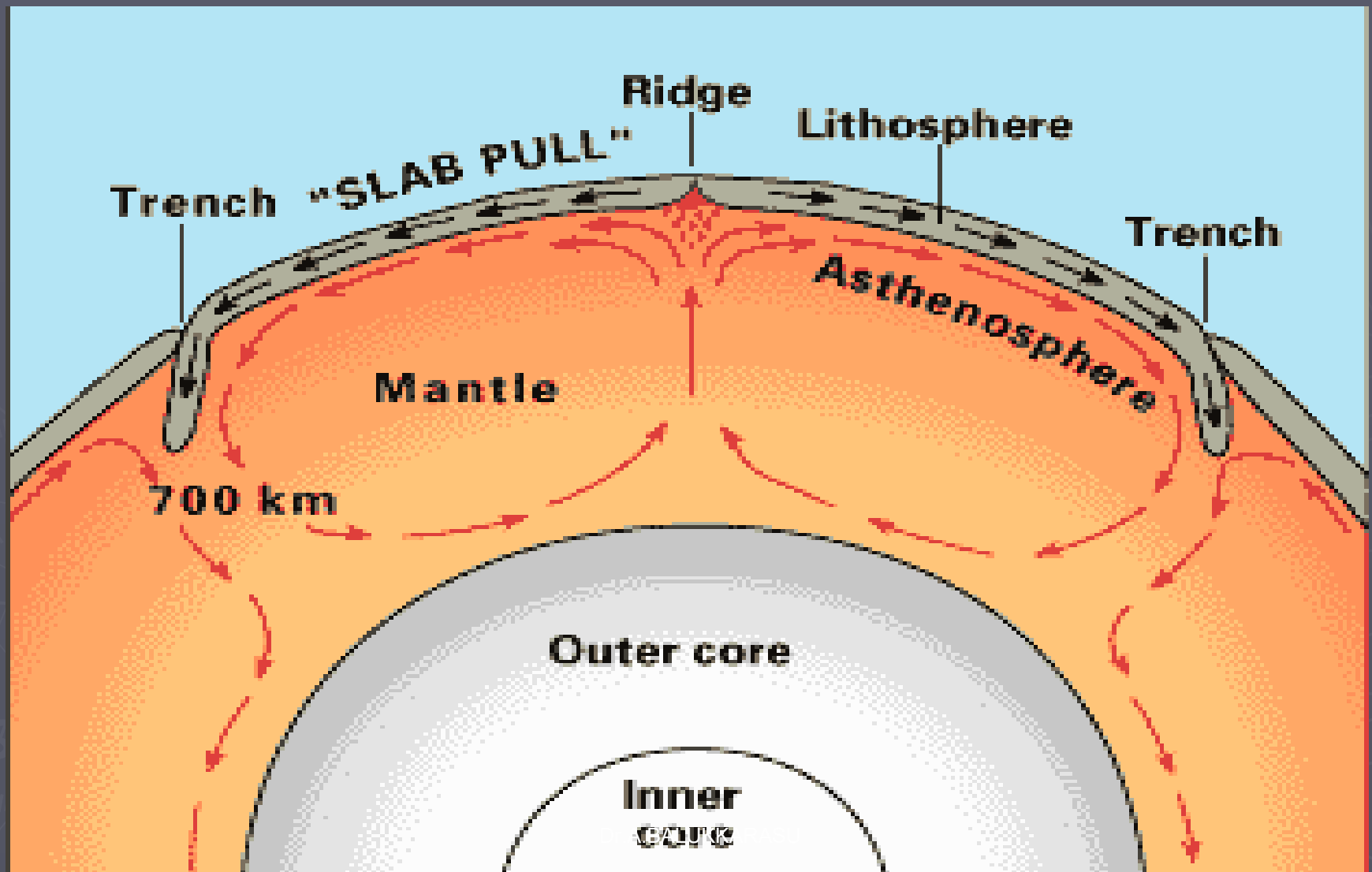
Large sections of lithosphere that move on top of the asthenosphere

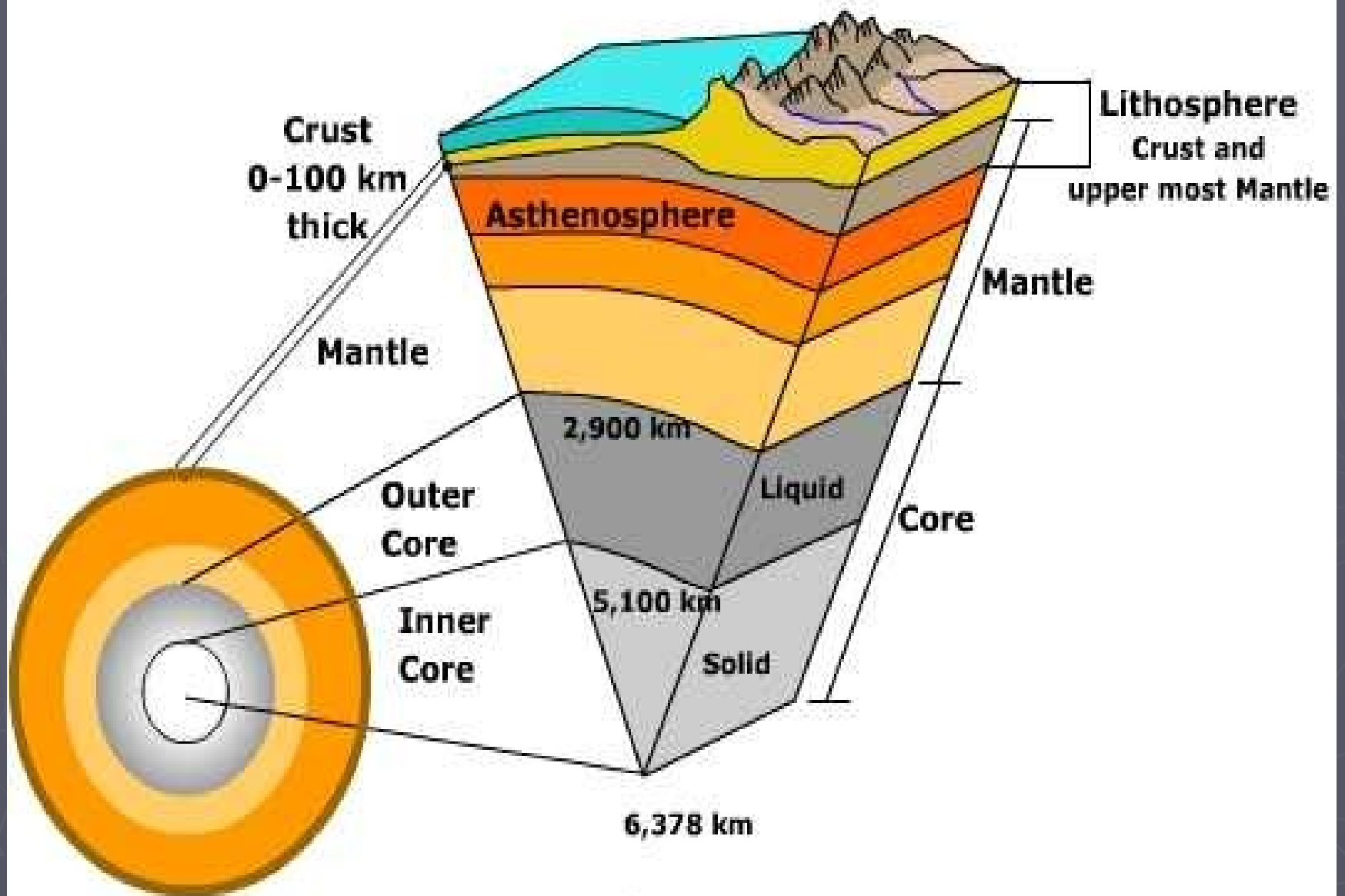


How do we know about the inner layers when no one has been there?

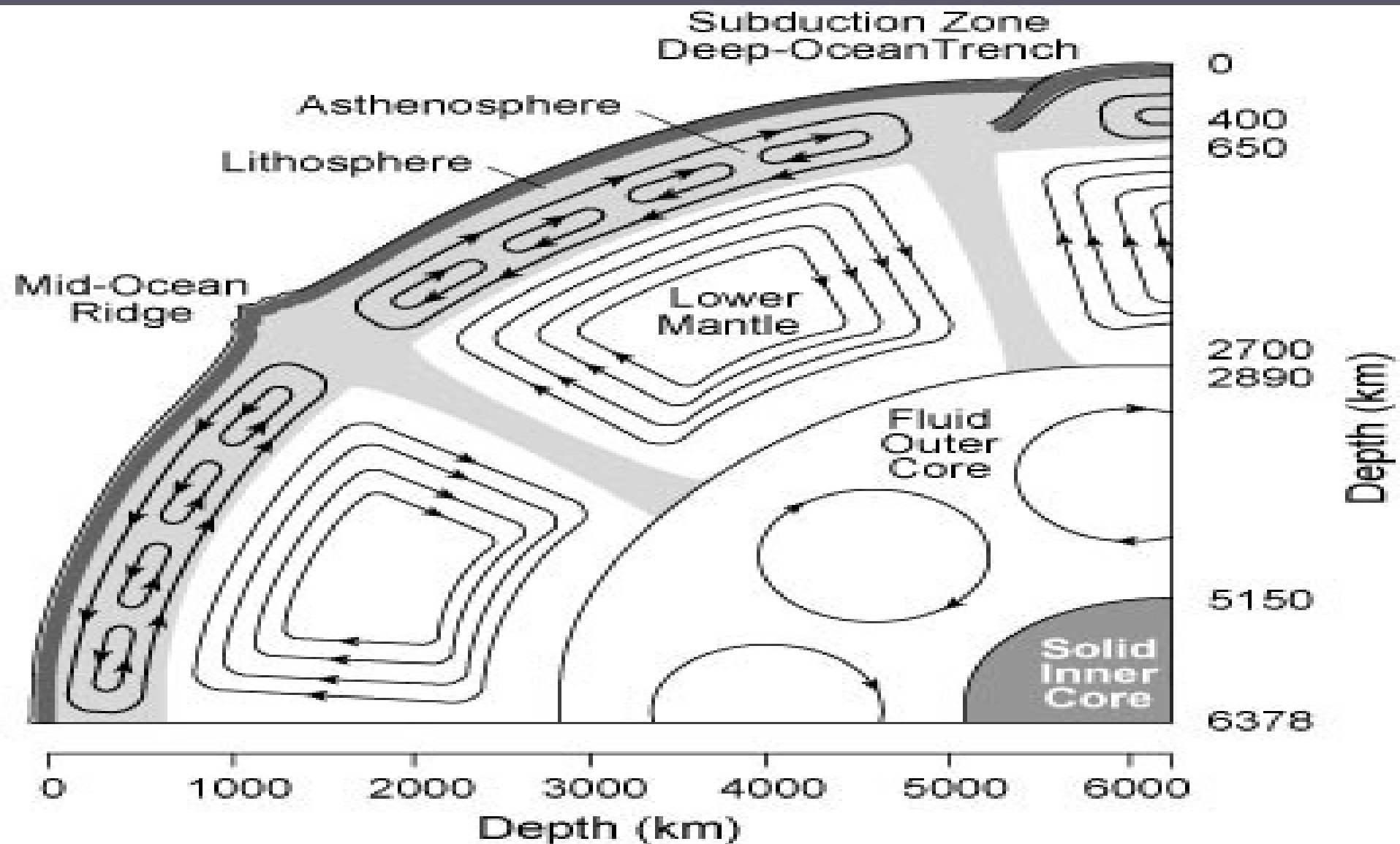


When an earthquake happens, **vibrations called seismic waves** travel through the earth at different speeds as the waves hit the different layers.





Earth Structure
(Not to Scale)



What is the difference
between the PHYSICAL
and CHEMICAL
COMPOSITION parts of
the EARTH?

