

Oceanology 4

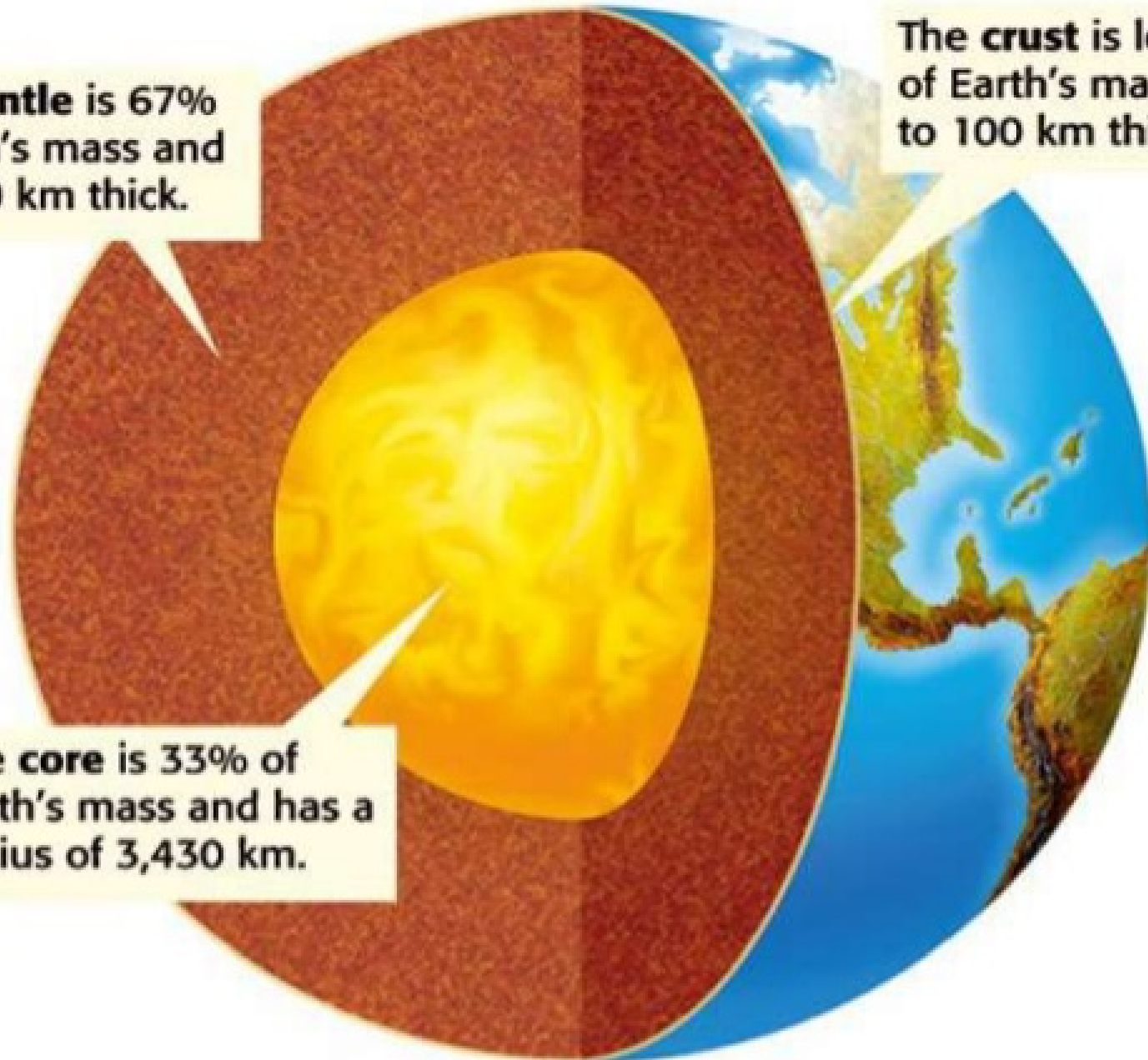
Prof. Dr. Nilsun Demir

The Composition of the Earth

The **mantle** is 67% of Earth's mass and is 2,900 km thick.

The **crust** is less than 1% of Earth's mass and is 5 to 100 km thick.

The **core** is 33% of Earth's mass and has a radius of 3,430 km.



Oceanic
Plate

3-5 miles thick

5-25 miles thick

Continental
Plate

1800 miles thick

Mantle

(Flows with the
consistency of asphalt)

1400 miles
Thick

Outer Core

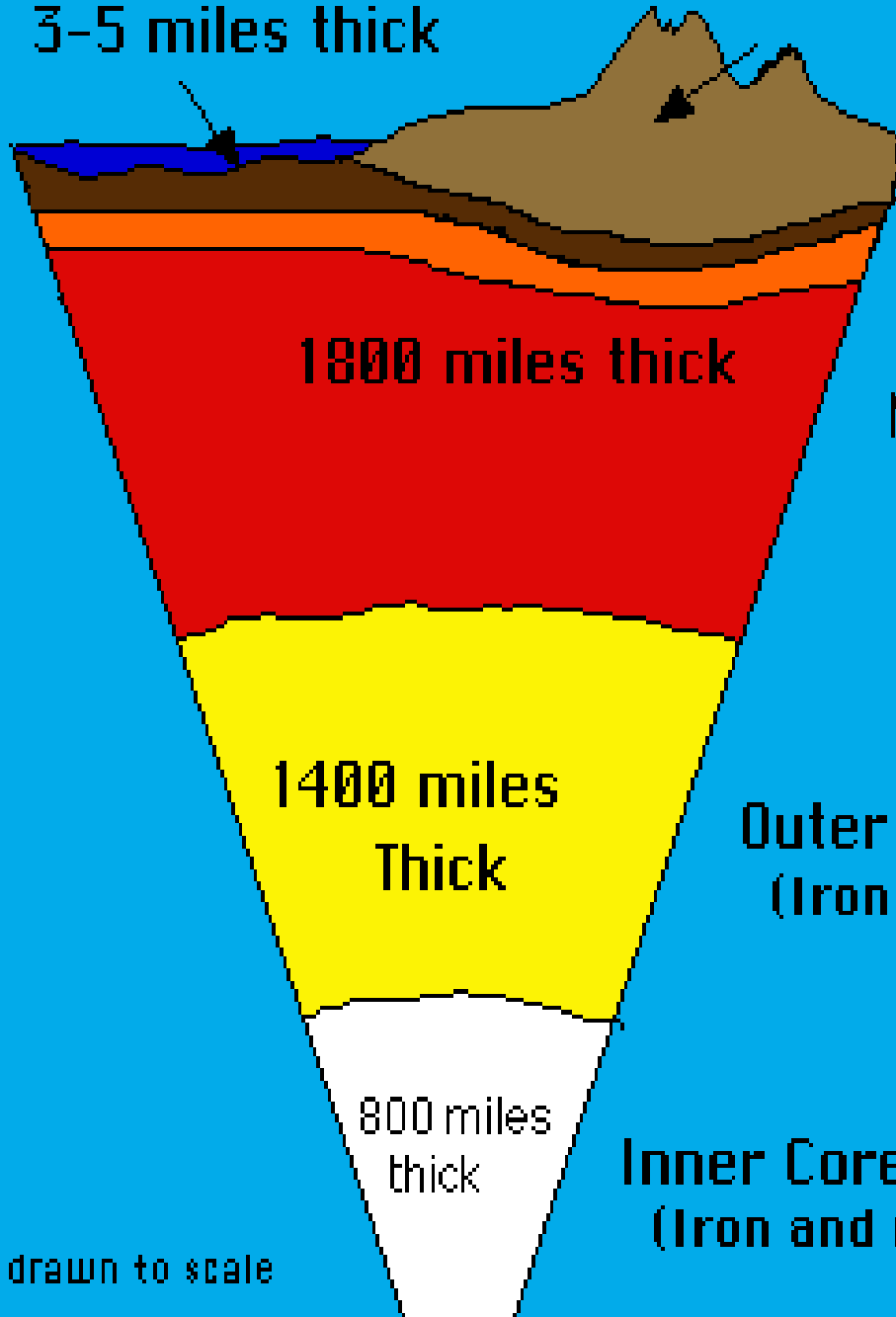
(Iron and nickel in the liquid state)

800 miles
thick

Inner Core

(Iron and nickel in the solid state)

Diagram not drawn to scale



Crust

- Surface layer
- Made of Aluminum and Magnesium silicate
- Thickness 55 km
- Density 2.70-298 g / cm³
- Temperature 500 C
- It constitutes 0.4% of the earth

Mantle

- It is a solid-elastic structure
- Magnesium and iron silicate
- Temperature 2500 C
- Thickness 2900 km
- Average density 4.5 g / cm³
- 68% of the Earth

Outer core

- Temperature 5000 C
- Liquid iron and nickel
- Thickness 2200 km
- Its density is 11.8 g / cm³
- It forms 31.5% of the Earth's surface with the inner core

Inner core

- Iron and nickel
- Thickness 1300 km
- Its density is 17 g / cm^3
- Temperature 6000 C