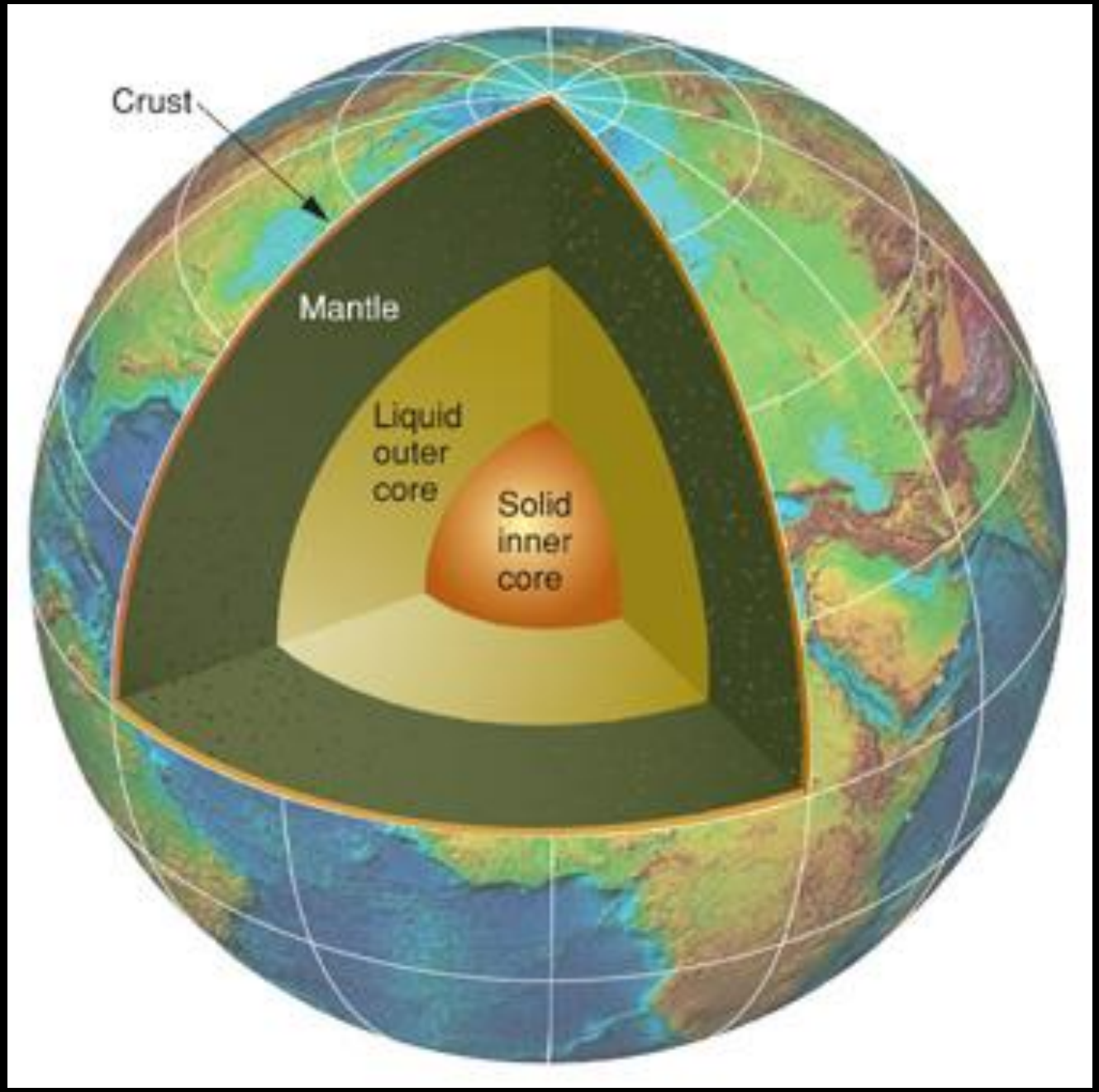


The Insides of Earth!!

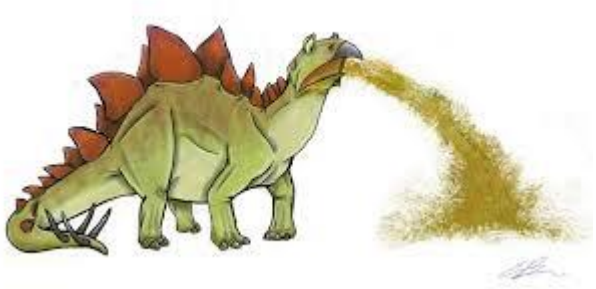
Heat of Formation

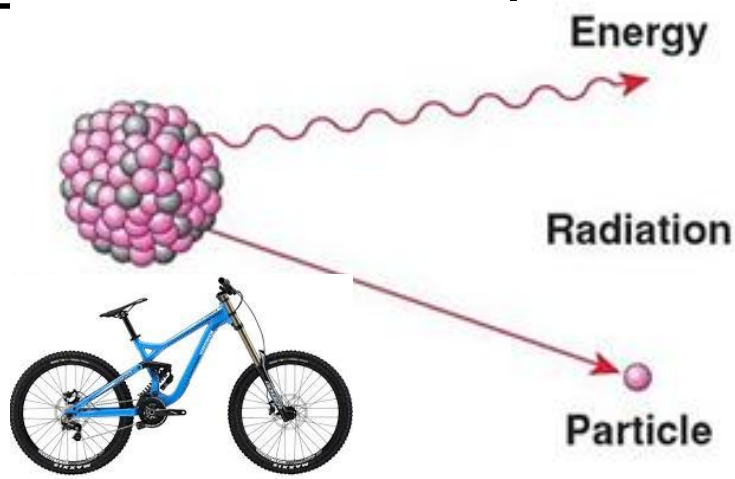
The Earth is hot because when it formed bigger and bigger pieces of matter collided (clumping/accretion) until it was super hot. Friction.

Accretion: When pieces of matter collide to form bigger and bigger chunks.

Radioactive Decay

- The earth would have cooled down by now if it weren't for radioactive decay.
- Unstable atoms (like Uranium) are under pressure inside Earth and shoot off high energy particles. These heat up the insides of Earth.

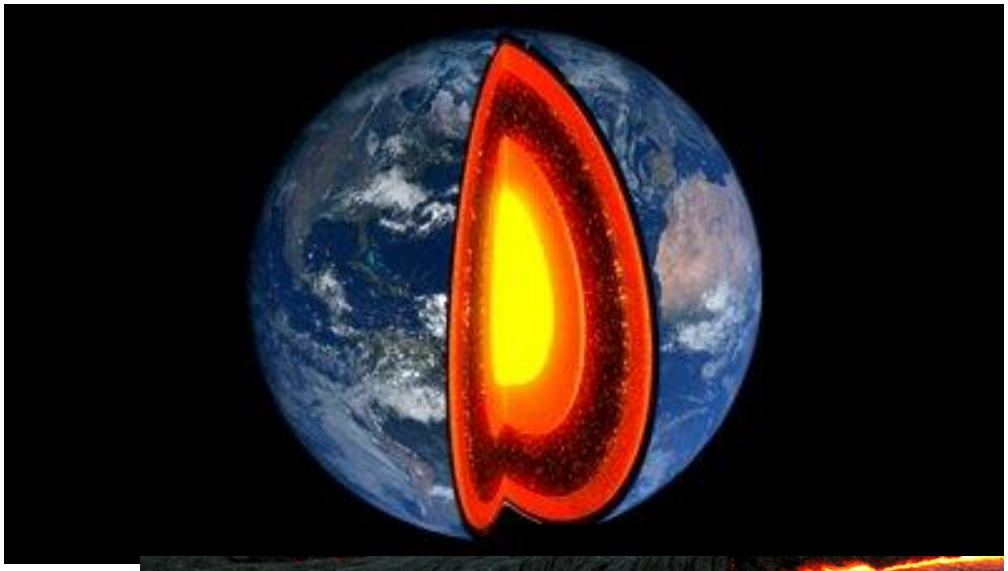




Radioactivity

- https://www.youtube.com/watch?v=dY10s71rv80

Radioactive decay keeps Earth's insides Hot!

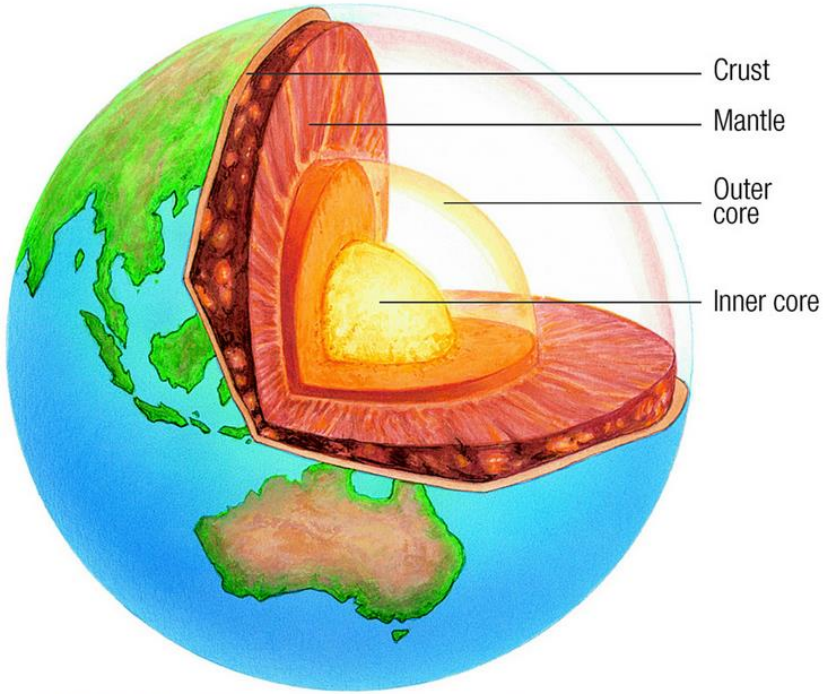


Earth's Layers

- There are two ways to organize the insides of Earth – by composition and by physical properties.
- Composition: What something is made of (types of materials, kinds of rock or metal, density)
- Physical properties: How something behaves (liquid, solid, semi-solid)

By composition

- Crust: 0-35 km
  - Continental Crust: igneous, metamorphic, sedimentary rock
  - Oceanic Crust is mostly Basalt (pretty dense)
- Mantle: 35-2890 km
  - Very dense rock
- Core: 2890-6360 km
  - Iron and Nickel



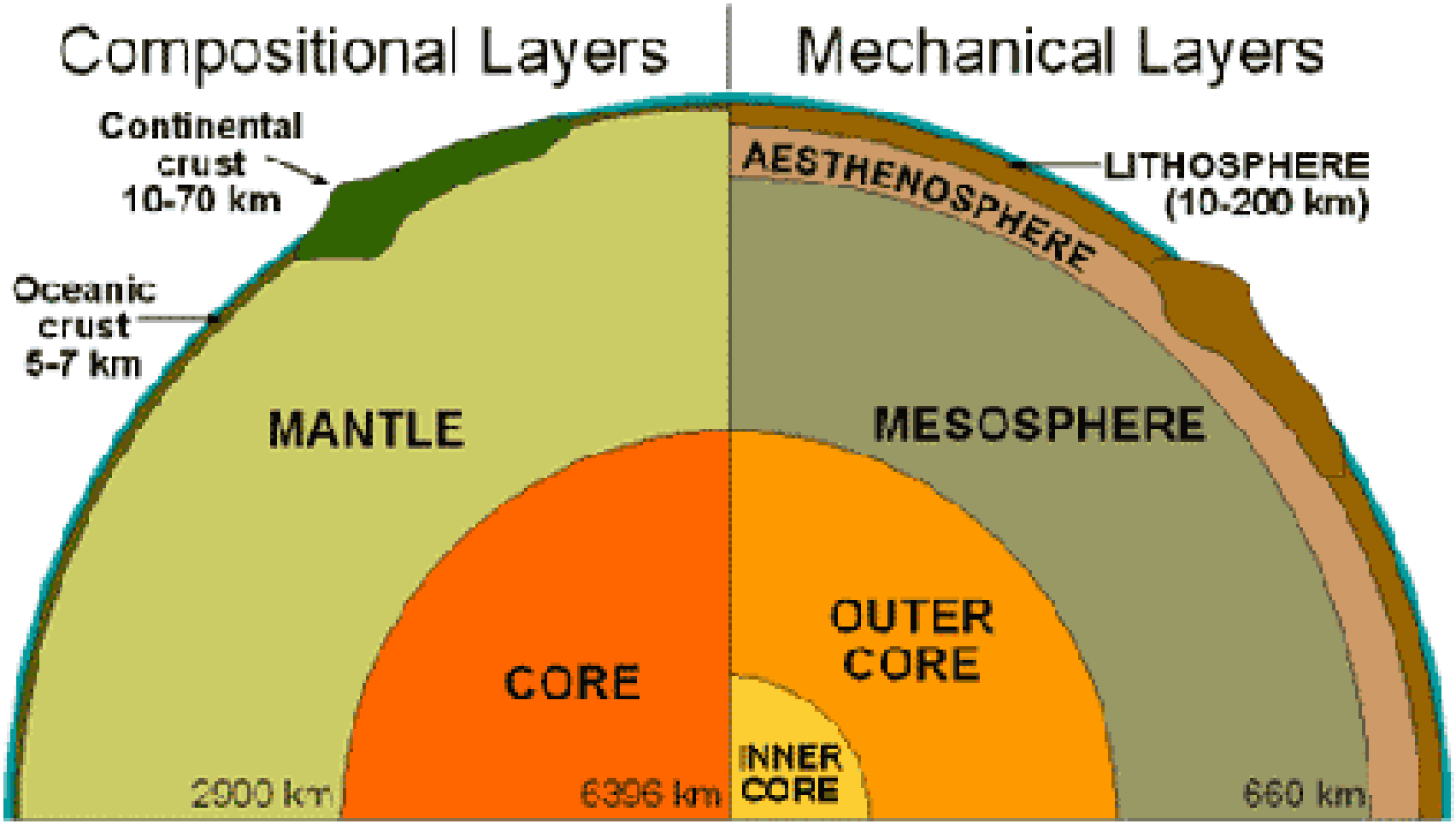
By physical Features (or mechanical features)

- **Lithosphere:** Solid, Brittle layer (includes crust and part of Mantle)
- **Asthenosphere**: Semi liquid/molten layer (Upper Mantle)
- **Mesosphere:** More solid layer (outside Outer core)
- **Outer core**: Liquid
- **Inner Core**: Solid

Why are the layers in a strange order? It's a balance of pressure vs. heat

Composition: What material it's made of (Type of rock or metal, etc…)
Physical Property: State of matter (liquid, solid, semi solid, etc…)

Physical Properties



Review

- https://www.youtube.com/watch?v=IWZky7mXoO0