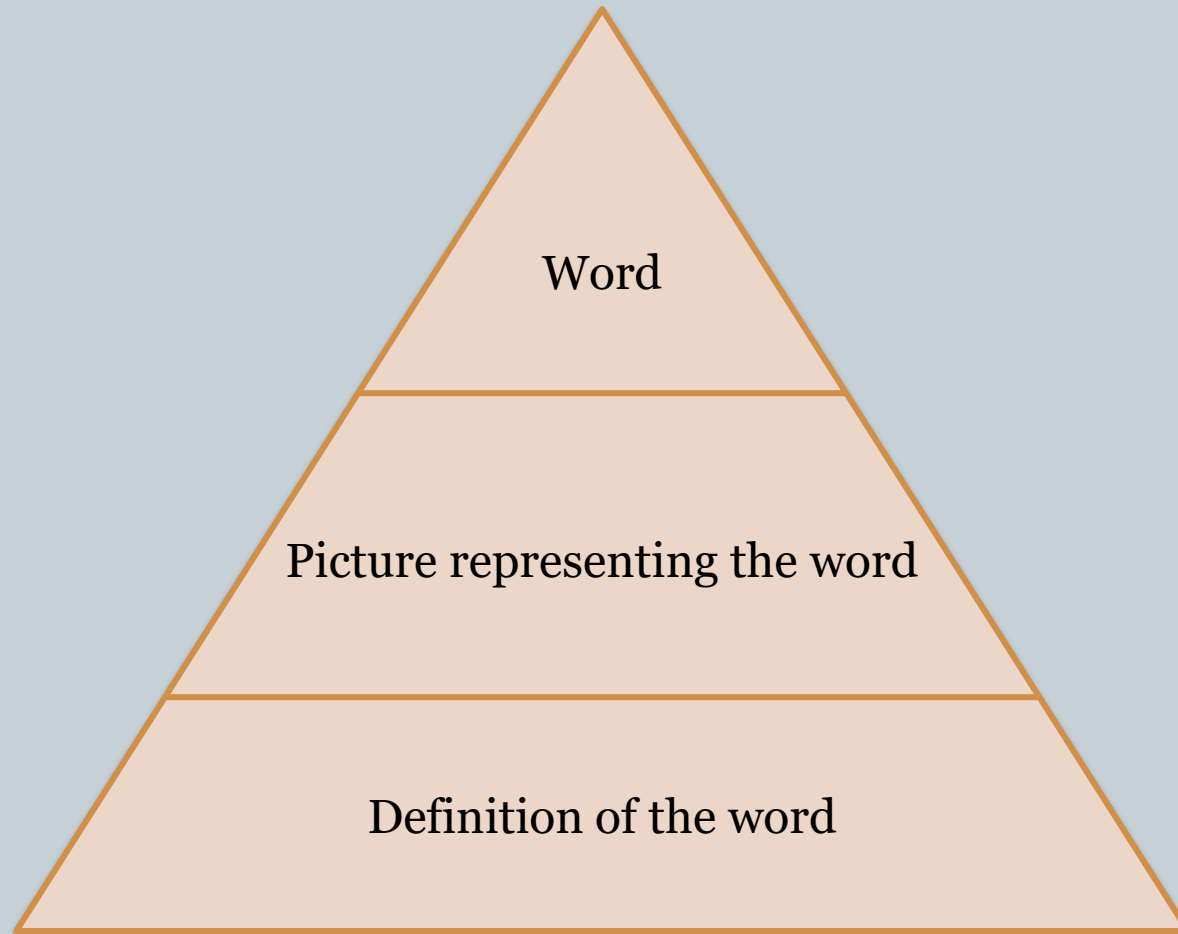
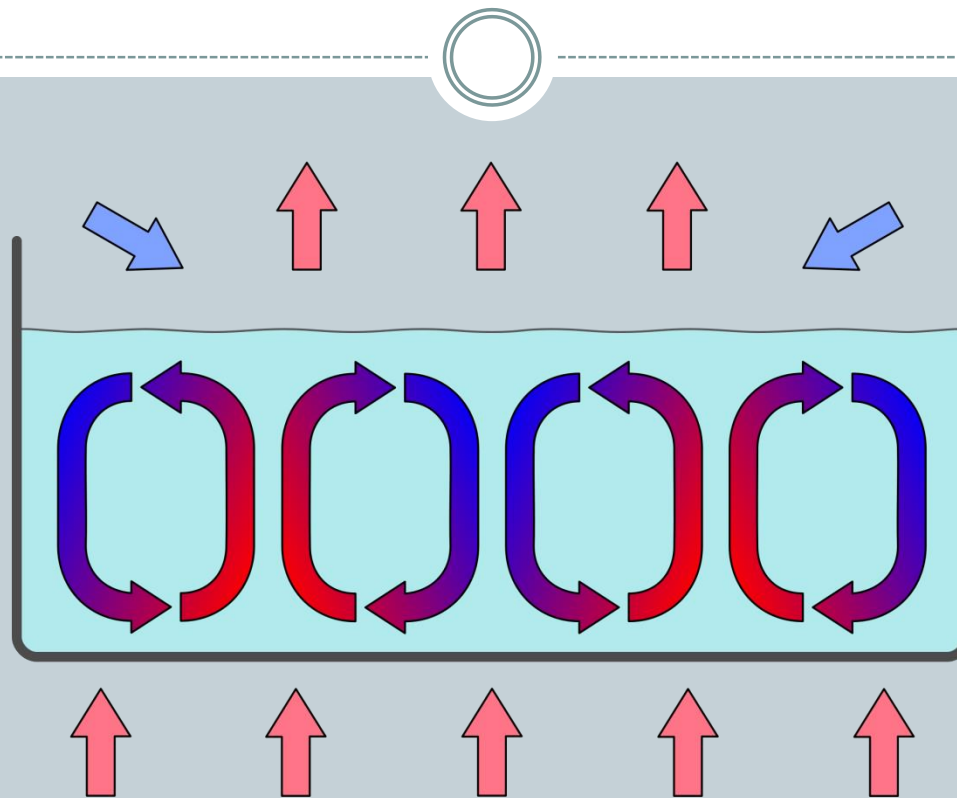


Vocabulary Triangle



Conduction, Convection, and Radiation



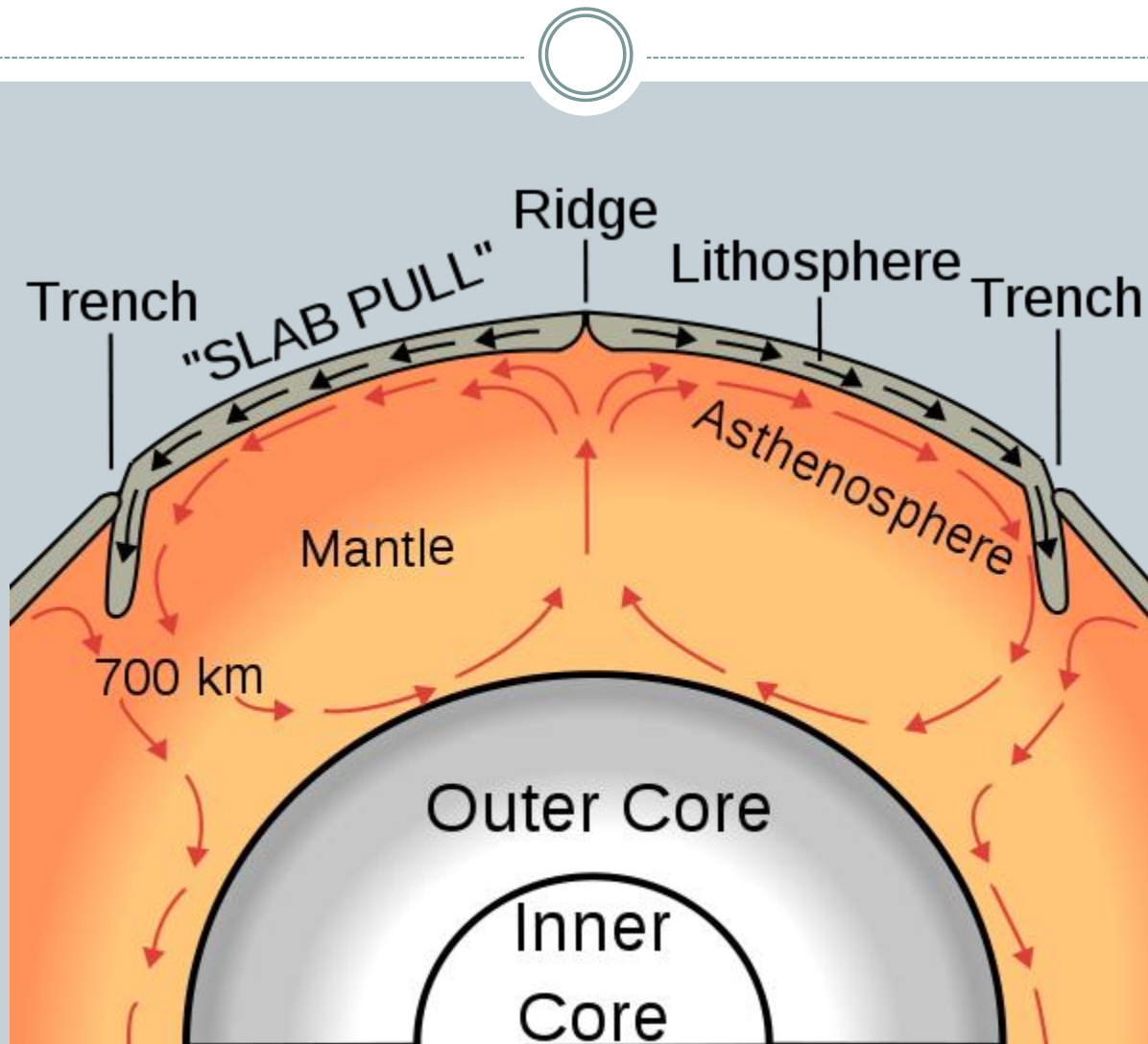
Conduction



Convection



Convection in the Earth's Mantle



Radiation



Comparing the Three Forms of Energy Transfer



Conduction	Convection	Radiation
Direct contact	Particles move through a medium	Particles do not move through a medium

Conduction



Conduction: Exchange of heat by direct contact

- Air warmed on the pavement
- Making popcorn on the stove
- Meat on a frying pan

Convection



Convection: Transfer of heat in liquids and gasses through rising and falling currents

- Air near the ceiling is warmer than air near the floor
- Some large birds ride rising air currents when they fly
- Water molecules rising and falling as a kettle boils

Radiation



Radiation: Transfer of heat by electromagnetic waves

- A hamburger staying warm under a glowing heat bulb
- Toasting a marshmallow by a campfire
- Getting a sunburn after laying out in the sun

Closure



Exit question:

- Explain the main differences between the three types of heat transfer.