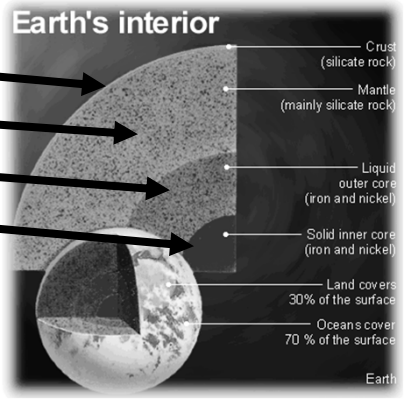
The Inner Forces of the Earth

Plate Tectonics

1

Earth's Structure

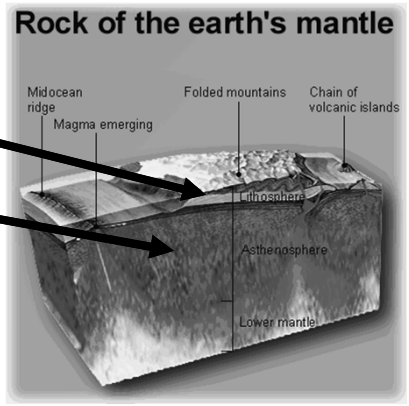
- Crust
- Mantle
- Outer Core
- Inner Core



2

Earth's Mantle

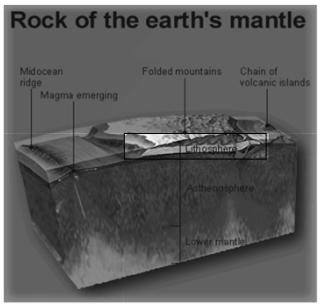
- Lithosphere
- Asthenosphere



3

Lithosphere

- _____ but broken plates that move with respect to one another
- Approximately 100 km thick



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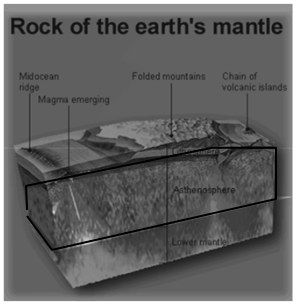
Asthenosphere

- Layer between lithosphere and mantle
- Thought to cause plate movement
- The molten property allows the asthenosphere to flow slowly due to _____ _____



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Origin of Plate Tectonic Theory

- Theory of _____ _____, first proposed by Alfred Wegener, in 1912.
- Theory stated that the continents were once one major super continent and have slowly moved to their present positions over time.
- Jigsaw puzzle fit of continental plates especially South America and Africa

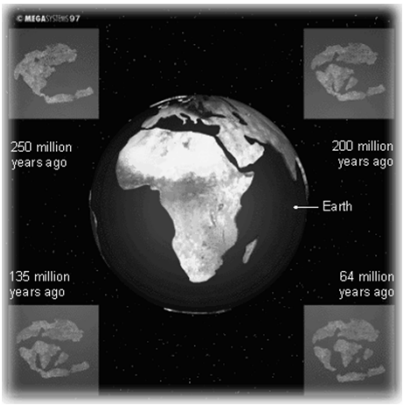

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Plate Tectonics

- The study of the formation and movement of the rigid plates that make up the Earth's outer layer
- The _____ plates move on the aesthenosphere
- There are both continental and oceanic plates

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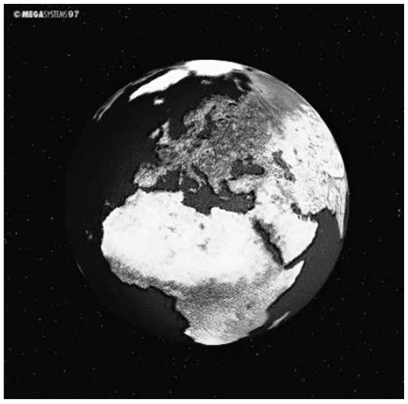
Plate Boundaries



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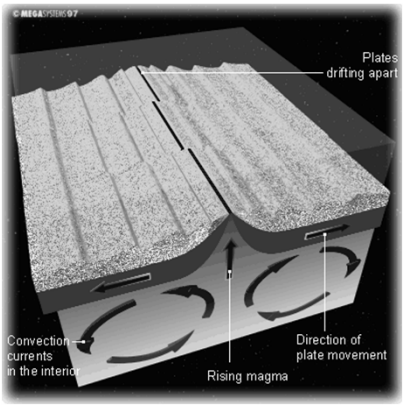
Diverging Boundaries

- A.k.a spreading centers
- Where two plates _____ _____



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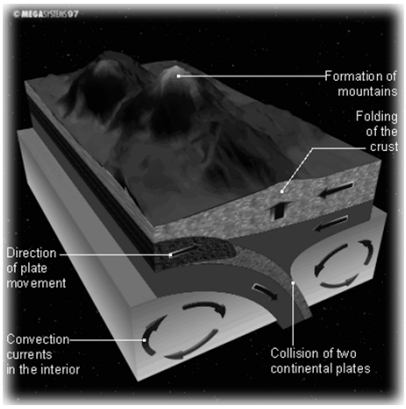
Converging Boundaries: Collision

- Where two continental plates _____ and _____
- Forms a mountain range



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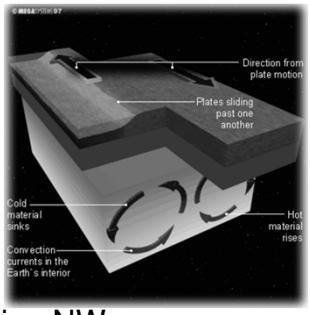
Sliding Boundaries



- Also known as _____ boundaries.
- Plates slide past each other
- Ex: San Andreas Fault
  - SW California on Pacific Plate and is moving NW
  - Rest of CA and US on North American Plate moving past Pacific Plate
  - Average rate of movement = 5 cm / year

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