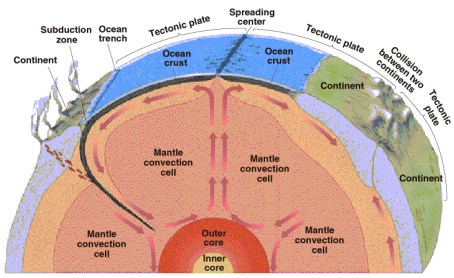
Title: Plate Tectonics Evidence

- To takes notes, first put your title at the top of the page (page number, date, ToC)
- Turn your notebook sideways and use a ruler to create the chart (next slide)

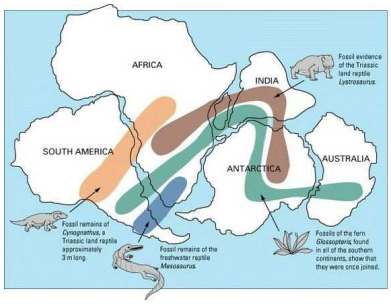
	About 3 cm	About 6 cm	Rest of the paper
About 2 cm	**Part of Theory**	**Definition**	**Evidence**
About 4.5 cm each	**Mantle Convection**		
	Continental Drift		
	Sea-Floor Spreading		

Mantle Convection



- Definition: heat transfer by fluid movement (air, water, plastic rock)
- Evidence from Rock Samples (direct): samples of crust and mantle rock gives clues to how it formed
- Evidence from Seismic Waves (indirect): as waves travel through Earth, they change speed and direction when moving into a new material or state of matter

Continental Drift

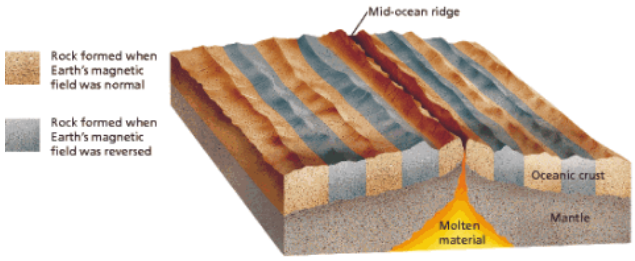


Gondwana

- Definition: continents slowly move across Earth's surface
- Evidence from Land Features (direct): mountains and other landforms on different continents match up
- Evidence from Fossils (indirect): plant & animal fossils found on different continents match up

- Evidence from Climate (indirect): fossil climate evidence shows colder areas used to be tropical, and vice versa
- Evidence from Satellites (direct): our satellites orbiting the Earth track the continental movements

Sea-Floor Spreading



- Definition: the sea-floor spreads apart at ocean ridges and new sea floor is always being created
- Evidence from Magnetic Stripes (indirect): Earth's magnetic field reverses every 450,000 years (*roughly*)
- new molten material "lines up" towards the N Pole during "normal" polarity, and towards the S Pole during "reverse" polarity

- Evidence from Molten Material (direct): samples of volcanic rock found at ocean ridges
- Evidence from Drilling Samples (direct): able to study and date rocks from ocean floor