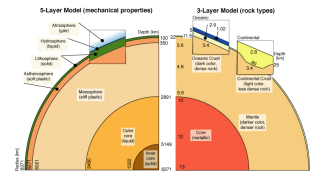


# SIO 15 LECTURE 04: CONTINENTAL DRIFT AND PLATE TECTONICS

Leftovers from Lecture 3  
Announcements

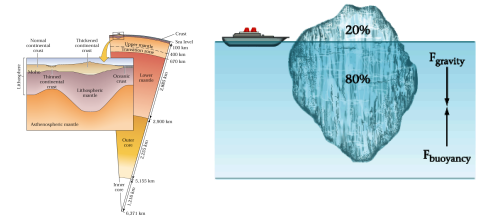
**Elastic, Ductile and Brittle Material and Earth's Layers see short video 4a;  
short videos are test material**

## The Layered Earth



## Isostasy and the Lithosphere-Asthenosphere System

**see short video 4b**



## Lithospheric Plates



## Mantle Convection (see Lecture 2 online notes)

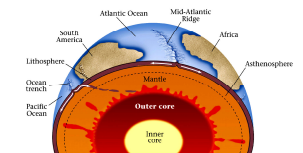
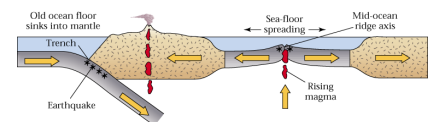


FIGURE 4.10  
Earth: Journal of a Planet, 2nd Edition  
Copyright 2010 W. H. Freeman & Company

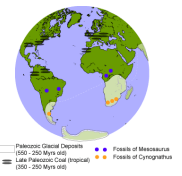
## Plate Tectonics - The Grand Unifying Theory



## The 2 Driving Forces:

## Continental Drift

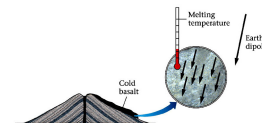
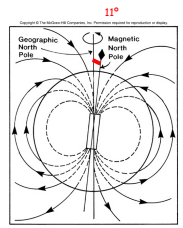
see short video 4c



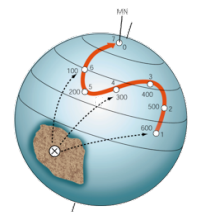
Alfred Wegener 1915

## Earth's Magnetic Field

### Recording Earth's Magnetic Field see short video 4c



### Apparent Polar Wander Curves see short video 4c

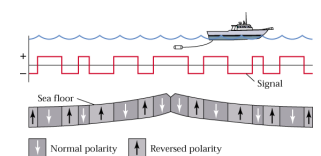


### Seafloor Observations see short video 4d

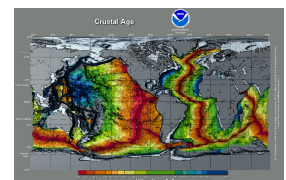
Harry Hess 1950s



## Seafloor Spreading



## Age of Oceanic Lithosphere



## The Cooling Oceanic Lithosphere

