These Slides Accompany the YouTube Video Tutorial:
https://www.youtube.com/watch?v=Gt4hlld9z5o

NCERT Class 11 Geography

Chapter 4: Distribution of Oceans And Continents

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Continental Drift
www.youtube.com/watch?v=LgX2uCtfPyI

- Abraham Ortelius: Dutch map maker – 1st proposed possibility of joining America, Europe & Asia in 1596.
- Antonio Pellegrini: Drew a map showing 3 continents together
- Alfred Wegener: German meteorologist gave this theory in 1912 – Pangea & Panthalassa. 200 mya – Pangea spit into Laurasia and Gondwanaland

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Continental Drift - Evidences
www.youtube.com/watch?v=LgX2uCtfPyI

- Jigsaw fit of continents – best fit of Atlantic by Bullard in 1964 by computer program & was tried at 1000 fathom line
- Rocks of same age across oceans – radiometric dating – South America & Africa rock of Jurassic age (before that no oceans)
- Tillite – Gondwana sedimentary rock deposit of glaciers provide evidence of palaeoclimates and drifting of continents
- Placer Deposits – gold in Ghana but absence of source & gold bearing veins in Brazil
- Fossil distribution - India, Madagascar and Africa (called Lemuria) – Lemurs occurred & linked them. Mesosaurus - Southern Cape province of South Africa and Iraver formations of Brazil which are presently 4800 km apart

Continental Drift – Forces of Drifting
www.youtube.com/watch?v=LgX2uCtfPyI

- Pole Flee drift – rotation of the earth (bulged at equator)
- Tidal drift – attraction of moon & sun cause tides on ocean waters

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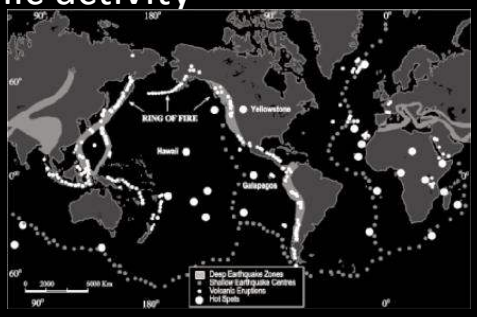
Post-Drift Studies

- Convection Current Theory: Holmes – convection in mantle caused by radioactive elements causing thermal differences in mantle
- Ocean Floor – submerged mountain ranges & trenches, mid-oceanic ridge had volcanic eruptions. Ocean crust is younger than continents.
  - Continental margin – includes shelf, slope, rise and trench
  - Mid-oceanic ridge – interconnected chain within mountain – rift system at crest is zone of intense volcanic activity
  - Abyssal plains – b/w margin and ridge



Sea Floor Spreading – Henry Hess (1961)
www.youtube.com/watch?v=IzFTD1Wxa9w

- Along mid oceanic ridge volcanic eruption were common & brought lava to surface (cause spread)
- Rocks equidistant from crest on both sides showed similarity, closer to mid-oceanic ridge ther are of normal polarity & youngest
- Ocean crust (200 mya) is younger than continental crust
- Ocean sediments were thin
- Deep trenches have deep seated earthquake but mid-oceanic ridge have shallow earthquake

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Plate Tectonics
www.youtube.com/watch?v=VnBFNNRNOJ4

- 1967: McKenzie and Parker & also Morgan
- Plate moves over asthenosphere as rigid units
- Lithosphere includes crust & upper mantle (5-100 km in oceanic parts & 200 km in continental areas)

Plate Tectonics
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- Divergent – pull away, spreading sites, Mid Atlantic ridge
- Convergent – destroyed, subduction zone
- Transform – Slide, perpendicular to mid-oceanic ridge

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Indian Plate Movement

- subduction zone along the Himalayas – continent convergence
- Rakinyoma Mountains of Myanmar towards the island arc along the Java Trench (Eastern – spreading site)
- Western - Kirthar Mountain of Pakistan & extends along Makrana coast – spreading site
- B/w India & Antarctica is divergent