

Earth from Space - video

- Sun's energy absorbed by oceans, causes water to be evaporated, causing storms
- As the Ocean water temperature increases the intensity of storms increase
- Water vapour goes from the equator to the poles
- When water vapour hits mountains
 - monsoons in India - fertile land - feeds billions
 - Tall mountains dry out the air creating deserts
- Antarctica is isolated and very cold - causes saltwater to freeze - increasing the saltwater density
- Antarctica - deep ocean currents - salt water more dense and sinks
- Carries dissolved oxygen and drives water back to the equator
- Ocean currents drive weather systems, regulate ocean temperatures
- Deep ocean currents and volcanic activity at ocean floor bring nutrients to the surface at upwellings
- Where upwellings occur large amounts of phytoplankton occur - algal bloom - food for other organisms
- Upwellings are sources of complex food webs
- When phytoplankton die they sink and eventually form sand that is found in the Sahara desert in Africa
- Desert sand (diatomite) rich in iron and phosphorus is blown across ocean
- The dust particles of the sand becomes nutrients for the rainforest in the rain
- Each soil on the planet is a result of erosion patterns by water
- Causes increase in plant growth
- The rainforest goes through photosynthesis, changing the Earth's atmosphere
- Pulse of oxygen during the day and carbon dioxide at night

- Sediment of rainforest creates plankton blooms - half of the oxygen - real lungs of the planet
- Atmospheric oxygen defines the size of the organism that can exist
- Oxygen also creates forest fires
- Forest fires release nutrients locked up in dead trees
- Allows seeds to be released and new growth to occur
- The sun's energy is released in forest fires - decomposition, regeneration
- Sun's Energy
 - Photosynthesis - cycles of life
 - Drives weather systems
 - Needed by humans for vitamin production
 - Modifies migration patterns
 - Causes the Aurora Borealis - Earth's magnetic field protecting us
- Lightning - caused by thunderstorms - caused by evaporation - caused by the sun
 - Maintains the balance of charge in the atmosphere
 - Turns nitrogen gas into nitrates - a fertilizer
- Human Race - large enough population to become a global force
 - Produce more gases that can affect weather patterns
 - Cities generate their own weather patterns
 - Need to make informed decisions because we have a global impact