

Chapter 2

Section 3

CLIMATE REGIONS

Effects on Climate

- _____ - temperature, wind, air moisture over a short period of time (a day or so)
- _____ - the usual, predictable patterns of weather over a number of years

Effects on Climate

- The Sun

- _____ - receive the most sunlight

- Air and water move heat from the Tropics around the globe

- Winds

- _____ - major wind systems that are similar over time

- _____ - east to west between Tropics and Equator

- _____ - west to east over N.A. between tropics and 60 degrees N latitude

Effects on Climate

- Storms

- Moist warm air rises, meets cold air- storms form

- Lightning, tornadoes (up to 450 mph)

- Blizzards in winter

- _____(western

- Atlantic/eastern Pacific) and

- _____ (western Pacific)

Effects on Climate

- Ocean Currents

- _____ - steadily flowing streams of water in the world's seas
- Follow patterns- if they carry warm water from Tropics to higher latitudes they can affect climates
 - Western Europe

Effects on Climate

- El Nino and La Nina
 - Every few years, prevailing winds in Pacific change- unusual weather
 - Ex 1: weakened winds let warmer air reach South America- El Nino (“the boy”)
 - S.A.- heavy rain and flooding; Aust. Southern Asia, and Africa- little rain; N.A.- severe storms
 - Ex 2: other years are the opposite- La Nina (“the girl”)
 - Unusually cool waters and low rainfall in eastern Pacific
 - Western Pacific sees heavy rain and typhoons

Landforms and Climate

- Landforms and Local Winds
 - Local winds
(

_____)
 - Land warms quicker than water- cool seas breezes onto land during the day, warm land breeze over ocean at night
 - Warm air in valleys move up mountains in breezes

Landforms and Climates

- Mountains, Temperature, and Rainfall
 - Mountaintop air is _____ - can't hold heat well- hence snow caps
 - _____ - warm moist breeze blow up a mountain side, cools, and condenses on top of the mountain. The air continues on the other side as dry air creating a desert

Climate Zones

– Climate zone

(_____)

– _____ - areas
where particular plants and animals have adapted
(rain forests, deserts, grasslands, tundras, atc)

Climate Zones

- Major Climates
 - 5: tropical, dry, midlatitude, high latitude, highland
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Climate Zones

- Urban Climates
 - Large city = urban area
 - Urban climates are different than surrounding areas
 - Cement soaks up and releases more heat than plants
 - A city can be 10-20 degrees hotter than countryside – causes different wind patterns and some scientists believe more precipitation