Climate Cheat Sheet

by Eunicornz via cheatography.com/33171/cs/11252/

Factors

Equator	Hottest area
Poles	Coolest Area
At the equator,	the sun rays hit the Earth at the 90 degrees
Latitude is the most important factor	
High pressure = cool air	Low pressure = warm
Difference in pressure makes wind	
Doldrums	air rises&cool:lots of precipitation
Subtropical Highs	little precipitation
45 to 60	greater precipitation
Subpolar Lows	precipitation is low
Specific heat	energy needed to change the temperature of 1g of a substance by 1 degrees Celsius
land heats up faster than ocean	land heats up more than ocean(hotter)
ENSO	El Nino or El Nina
El Nino - every 3-10 years	warm-water phase, moist America, and dry Asia
temperature differences between land and ocean causes...	the winds to shift seasonally
Monsoon	Summer: wind moves toward land Winter: Wind moves toward water
Temperature decreases as elevation increases	

Factors (cont)

Rain Shadows	when air mass meets mountain, air mass rises (cools and dry) and falls back down (warm and dry)
Foehn	rain shadows of the Alps
Chinook	Rain shadows of the Rocky Mountains

Temperature and Precipitation

Climate	average weather condition in are over long period of time
Daily average	(high + low)/2
Monthly average	(∑daily averages)/#of days
Yearly average	average the monthly averages
However, yearly temperature range is better	

Climate Zones

Tropical Climates

Climate	Temp/Precipitation	Describe
Rainforest	small temp range; annual 200cm	lush vegetation with broadlp
Desert	large temp range; annual 25cm; no sibling	no vegetation
Savanna	small temp range; annual 50cm; alternative wet/dry	open grassland with drought-uk

Climate Zones (cont)

Savanna	small temp range; annual 50cm; alternative wet/dry	open grassland with drought-uk
Middle Latitude	low tmep range; frequent rain	deciduous trees; forests
Marine West Coast	low tmep range; frequent rain	deciduous trees; forests
Steppe	large temp range; annual 40cm	drought-resistant vegetation and ome
continental	large temp range;<75cm	evergreen teas
subtropical	large temp range; annual is 75-165cm.	broadleaf and evergreen trees
Mediterranean	low temp range; annual 40cm	broadleaf and evergreen; long summers
Polar	large temp range(-63C);annual 25-50cm	Evergreen Trees, brief, cool summers, long winters
Subartic	large temp range(-63C);annual 25-50cm	Evergreen Trees, brief, cool summers, long winters
Tundra	average temp is below 4C; annual 25cm	treeless plains; 9 months of temp below freezing
Polar Icecaps	average temp is 0C; low annual	little or no llife; temp is going to stay as below freezing.

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Climate Zones (cont)

Microclimate	climate of a small area	vegetation, elevation, proximity to water
Local Climates: Elevation	elevation increase, temperature decreases	
Highland	Cities in the mountains or tropical areas	higher precipitation
Local Climates: Water	precipitation, smaller temp range	higher precipitation

Climate Change

Method	Measured	Indicated	time
ice cores	concentration of gases in ice and meltwater	CO2 indicate warm climate; ice ages follow decrease in CO2	hundreds of thousands of years
sea-floor sediment	concentration of 18O shells of micro organisms	High levels of 18O=cool water; less 18O = warm water	hundreds of thousands of years
Fossils	pollen type, leaf shape, animal body adaptations	flower pollens&broad🍃= ☼; 🌲 pollens&waxy 🍃 = ☁; animal fossils show changes to climate change	millions of years

Climate Change (cont)

Tree rings	ring width	thin = cool weather and less precipitation	hundreds to thousands of years

Climate Change

General circulation models (GCM)	incorporate millions of pieces of data
GCMS simulate change in only one variable at a time	
GCMS are prediction machines	
Potential Cause of Climate Change	
Plate tectonics	change in position of continents changes wind flow and ocean currents
Orbital Change	Milankovitch theory
Milankovitch theory(Every 21,000-10-0,000 years)	changes in Earth's orbit, tilt, and axis
Orbit	Elliptical to circular causes different distances from sun
Tilt	Decreases temperature difference between each season
Axis	changes tilt and reverses the seasons
Human Activity	pollution and burned trees
Volcanoes	erupts sulfur and ash; decreases temperature by reflecting sunlight into space
Potential Impacts	

Climate Change (cont)

Global warming	dry: extinction, crop suffer; ice poles melt: sea-level change
Sea-level change	Coastal cities are wiped out
What Can We Do?	
Individual	Less energy usage
Transportation	hybrid cars or consistent speed

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