

Climate Zones Activity

Planet Earth has three main types of climate zones: A. tropical, B. midlatitude and subtropical, and C. high latitude. In this activity you will investigate the differences among these climate zones and their subzones and determine where they are located throughout the world.

- Your instructor will provide you and your team members with a set of locations. You will need to find each location on the world map.

Sticker Key

Climate subtype	dot	star
A. Tropical Climates		
Tropical Rainforest	dark green	green
Tropical Monsoon	dark green	blue
Tropical Wet and Dry	dark green	red
Tropical Desert	dark green	gold
Tropical Steppe	dark green	silver
B. Midlatitude and Subtropical Climates		
Humid Subtropical	light green	gold
Humid Continental	light green	green
Mediterranean Dry Summer	yellow	red
Marine West Coast	yellow	blue
Midlatitude Desert	yellow	gold
Midlatitude Steppe	yellow	silver
C. High Latitude Climates		
Subarctic	dark blue	gold
Tundra	dark blue	green
Ice cap	dark blue	silver
Currents		
Warm currents (red arrows)	red	
Cold currents (blue arrows)	blue	
Currents (black arrows)	black	

2. Label each location on the world map with the indicated sticker. The star sticker is placed on top of the dot sticker.
3. Using the World Currents diagram below, label each current on the world map with a dot sticker.
4. What patterns can you identify on the map? How are those patterns related to latitude and ocean currents?
5. How do oceans affect the climates of nearby cities on large land masses?
6. Why don't islands in the middle of oceans experience large temperature changes?

A. Tropical Climates

Tropical Rainforest

- Constant high temperatures
- "Equal" day length
- Lowest annual temperature range of any climate
- Evenly distributed, heavy precipitation
- Much cloud cover and high humidity

Tropical Monsoon

- Heavy high-sun rain; short low-sun drought
- Highest temperature just before rainy period

Tropical Wet and Dry

- High-sun wet season, low sun dry periods
- Rainfall less than monsoon
- Highest temperature ranges of low latitude wet climates

Tropical Desert

- Among the driest places on earth
- Mean annual temperature above 64.4°F (18°C)
- Low relative humidity
- Irregular and unreliable rainfall
- Highest percentage of sunshine of any climate
- Large diurnal temperature range
- Highest daytime temperature of any climate
- Annual precipitation less than half the annual potential evapotranspiration

Tropical Steppe

- Semiarid
- Annual rainfall distribution similar to nearest humid climate
- Annual precipitation more than half, but less than annual potential evapotranspiration
- Mean annual temperatures above 64.4°F (18°C)

B. Midlatitude and Subtropical Climates

Humid Subtropical

- High humidity; summers like humid tropics
- Frost with polar air masses in winter
- 25 to 100 in of precipitation, decreasing inland
- Monsoon influence in Asia

Mediterranean Dry Summer

- Mild, moist winters, hot dry summers inland
- Cool, often foggy coasts
- High percentage of sunshine
- High summer diurnal temperature range
- Frost danger during winter

Humid Continental

Warm Summer Subtype:

- Hot humid summers; occasional winter cold waves
- Large annual temperature ranges
- Weather variability

Cool Summer Subtype:

- Moderate summers; long cold winters
- Large annual temperature ranges
- Variable weather
- Less precipitation than warm summer subtype

Marine West Coast

- Mild winters, mild summers
- Low annual temperature range
- Heavy cloud cover; high humidity
- Frequent cyclonic storms, with prolonged rain, drizzle and fog

Midlatitude Desert

- Aridity; low relative humidity
- Irregular rainfall
- High percentage of sunshine
- Larger temperature range than Tropical Desert
- More precipitation than Tropical Desert

Midlatitude Steppe

- Semiarid
- Rainfall distribution similar to nearest humid climate
- Temperatures vary with latitude, elevation, and continentality
- Larger temperature range than Tropical Steppe
- More precipitation than Tropical Steppe

C. High Latitude Climates

Subarctic

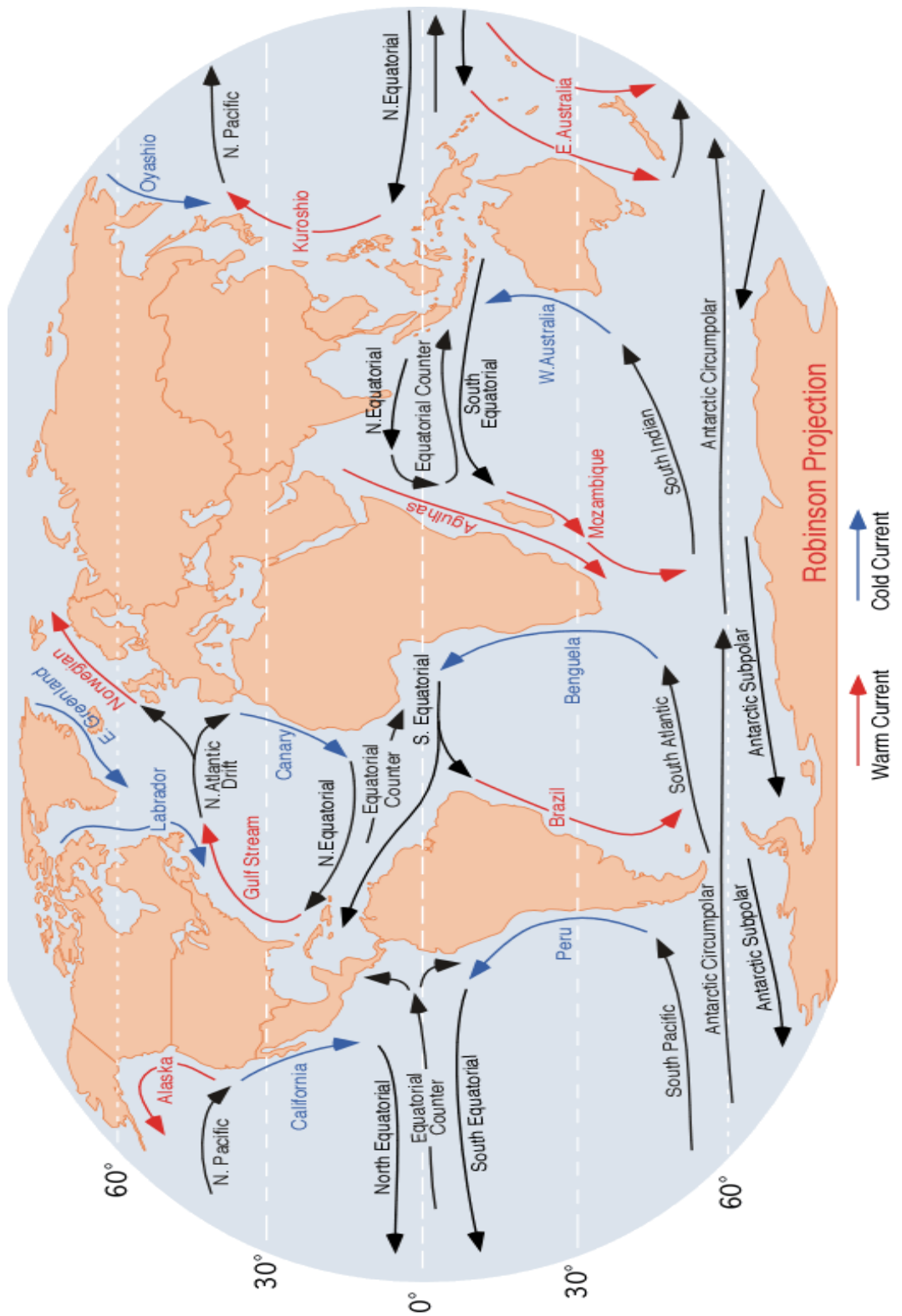
- Brief, cool summers; long, bitterly cold winters
- Largest annual temperature ranges
- Lowest temperatures outside of Antarctica

Tundra

- "Summer-less"; at least 9 months average below freezing
- Low evaporation; precipitation usually below 10 inches

Ice Cap

- Summerless; all months below freezing
- World's coldest temperatures
- Extremely small amount of precipitation
- Wind



World Currents (Source: http://www.geni.org/globalenergy/library/renewable-energy-resources/world/sources_world/Ocean%20Current%20Map_files/oceancurrents.gif)