

Page 41 ISN


- ▶ Pretend you are entering a contest for a free trip to a place with perfect climate. To win, write a description of your idea of the perfect climate in 25 words or less. Do you know of any real place where your dream climate really exists?

Climate and Weather

CC 3.1–3.2

Begin Taking Notes on Page 41

WEATHER & CLIMATE

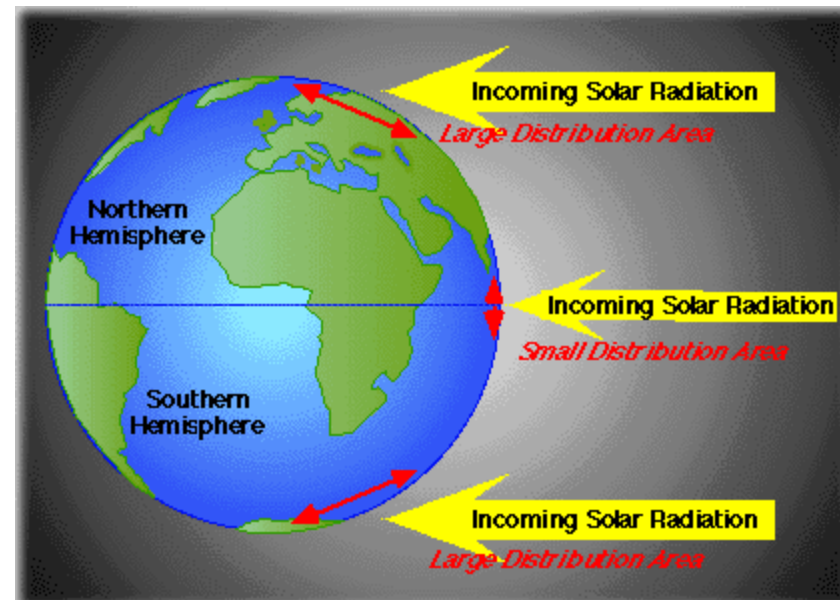
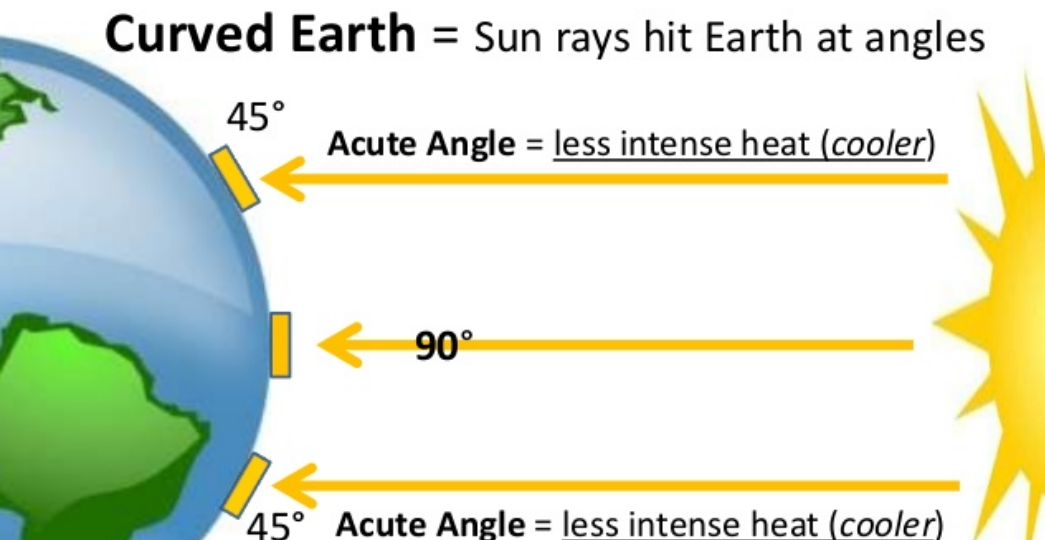
- ▶ **Weather**: Condition of the air and sky at a specific time.
 - ▶ **Climate** – Average weather over significantly longer periods (30+ years).
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CLIMATE

- ▶ The two most important aspects of climate are **temperature** and **precipitation**.

Why do we have climate?

- ▶ Because the Earth's axis is tilted, sunlight hits different parts of Earth at different angles, different latitudes and different intensities.
 - higher latitudes have a lower angle of incidence, which results in less heating than at lower latitudes nearer the equator.



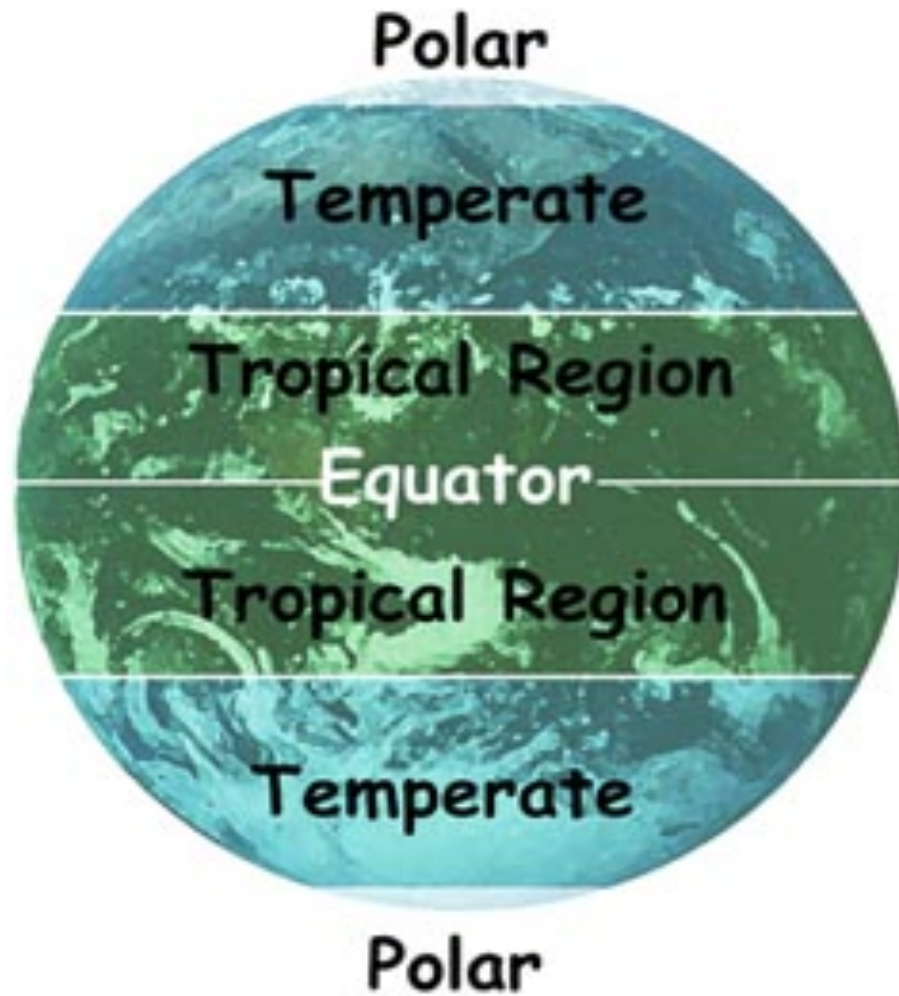
Polar Zones aka High Latitude

The area north of the Arctic Circle and south of the Antarctic Circle.


The sun is below the horizon for part of the year and near the horizon for the rest of the year.

Temperatures are cool to bitter cold.







Temperate Zones aka Middle Latitude

- ▶ Areas between high and low latitudes.
 - ▶ Lie between Tropic of Cancer and Arctic Circle in Northern Hemisphere and between the Tropic of Capricorn and Antarctic Circle in Southern Hemisphere.
 - ▶ Hot summer, cold winter, moderate spring and fall.
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Tropics aka Low Latitudes

- ▶ Area between the Tropic of Cancer and the Tropic of Capricorn.
 - ▶ Sun is overhead or nearly overhead all year long.
 - ▶ Usually hot
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Seasonal Changes in Temperature

- ▶ Due to Tilt of the earth: seasons
 - ▶ Some areas experience changes in temperature due to **altitude**.
 - ▶ **Altitude**: height above sea level
 - ▶ As altitude increases, temperature drops.
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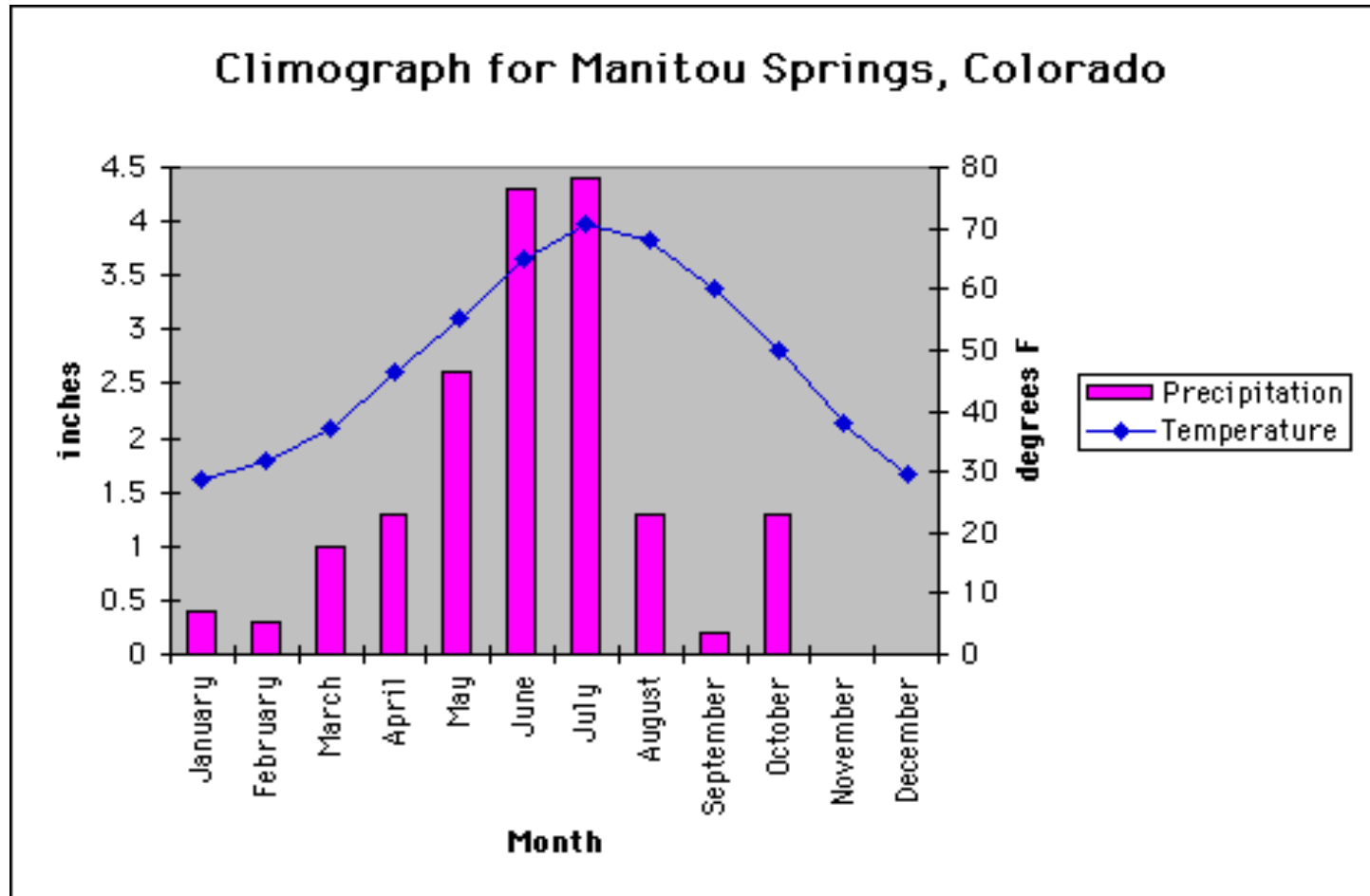
Checks For Understanding

1. Why are most of the tropics warm all year?
 2. What is the relationship between temperature and altitude?
 3. Who would be more concerned about heating their home, people in low or middle latitudes?
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Climate Graph

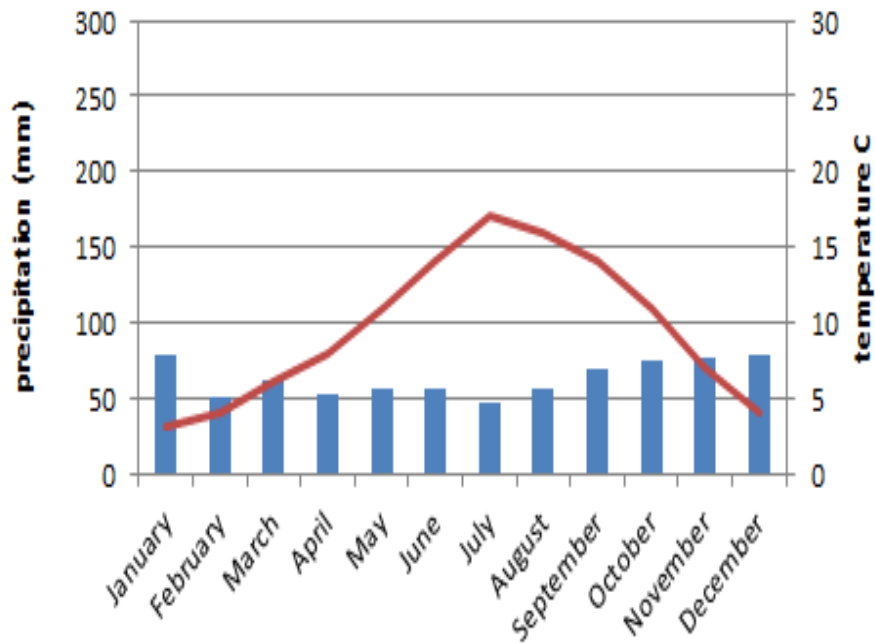
- ▶ **A climate graph shows the average climate for a place, for each month of the year.**
 - ▶ **Curved line shows average monthly temperature.**
 - ▶ **Bars show average monthly precipitation.**
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Climate Graph of Manitou Springs, CO

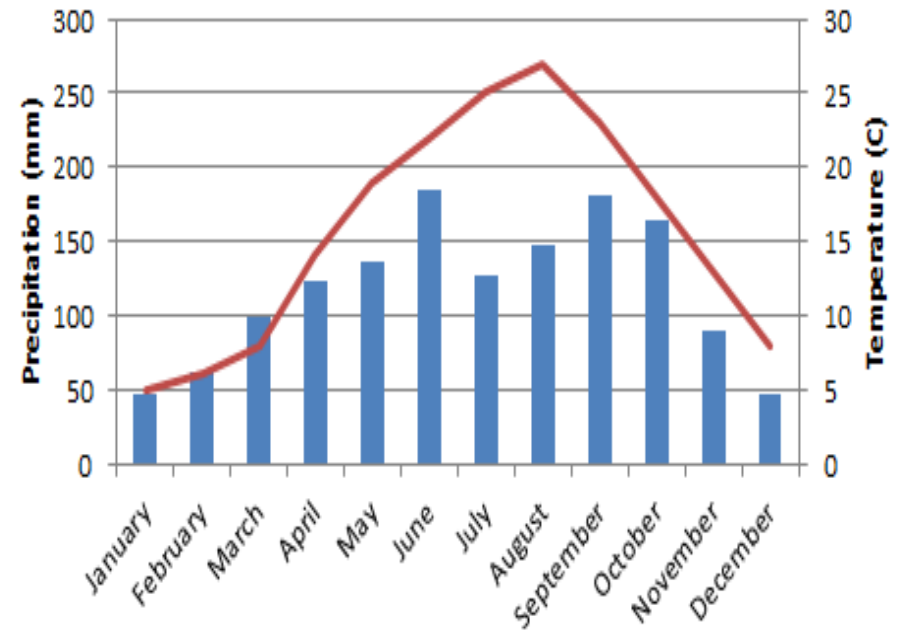


Which city has a rainier April?

London



Tokyo



London

Tokyo

Output Activity Page 42

On page 42, sketch a diagram of Earth's zones of latitude discussed today. Draw and color the low latitudes, high latitudes, and middle latitudes. Outline the N. Hemisphere and S. Hemisphere. Draw and label the Equator, Tropic of Cancer, Tropic of Capricorn and the subpolar circle lines.

