



## Getting Geographic: Constructing/Interpreting Climate Graphs

### Martha's Study Corner

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Earth's surface is a patchwork of climates, but the pattern is not random. There is an order to climate zones: students just need a key to unlock this climate puzzle.

Climate is not the same as weather. Weather is the day to day, even hour to hour condition of Earth's lower atmosphere, but climate is the long-term average of atmospheric conditions at a particular place on Earth's surface.

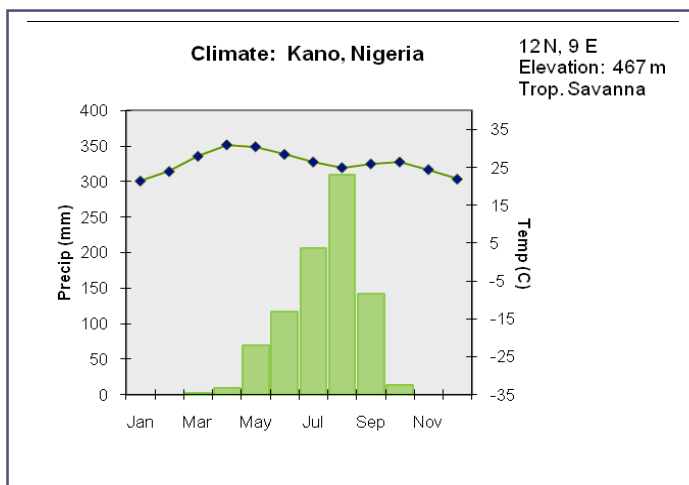
Certain factors interact to determine the climate of a particular place: latitude, elevation, prevailing winds, ocean currents, landforms, and location relative to water.

### Constructing a Climate Graph

a) Make copies of the [climate graph template](#) for each student. Have students examine the template, observing that the left axis shows precipitation in millimeters; the right axis shows temperature in degrees Celsius; and the base identifies a column for each month of the year.

b) Look at the sample climate graph shown above. Point out that precipitation is represented by bars, while temperature is represented by points connected by a line. The color used relates to the climate zone in which the location is found. Access a map of climate zones with a color key at [http://www.srh.noaa.gov/jetstream/global/climate\\_max.htm](http://www.srh.noaa.gov/jetstream/global/climate_max.htm).

c) Precipitation and temperature data for thousands of locations worldwide can be found at <http://www.worldclimate.com/>. Assign each student a different state in the US. Have students identify the largest city in that state. Then have them use the World Climate web site to find data for that city in order to plot precipitation bars and



temperature points to create a climate graph. Remind students to use the correct color on their graphs (see the climate zone map referenced in step b, above). Also ask them to label the climate station, absolute location, and elevation of their assigned city.

### Thinking Critically

a) When students have completed their climate graphs, have them locate each station on a map of the USA.

b) What climate characteristics does each location have? How are the locations similar? ...different?

c) How do factors such as latitude, elevation, prevailing winds, ocean currents, landforms, and location relative to water help explain these similarities or differences?

### Extending the Activity

a) Repeat the activity using cities from major world regions. Use a search engine to find images that are representative of each climate type.

b) To learn more about climates, visit <http://www.blueplanetbiomes.org/climate.htm>.

# National Geographic Bee

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Station: \_\_\_\_\_

Climate type: \_\_\_\_\_

Latitude: \_\_\_\_\_

Longitude: \_\_\_\_\_

Elevation: \_\_\_\_\_

Temperature Range: \_\_\_\_\_

Total Precipitation: \_\_\_\_\_

