



Impacts of Elevation, Sun Exposure, and Precipitation

	<u>Elevation</u>	<u>Latitude</u>	<u>Annual Precipitation</u>
Boston, MA	140 ft.	42° N	44 in.
Denver, CO	5410 ft.	39° N	16 in.
Juneau, AK	60 ft.	58° N	62 in.
Kansas City, KS	869 ft.	39° N	34 in.
Springfield, IL	560 ft.	40° N	37 in.

- Using the information provided for each city, make a mark on the opposite page showing approximately where each city's *elevation* falls on the spectrum.
- Using the information provided for each city, make a mark on the opposite page showing approximately where each city's *latitude* falls on the spectrum.
- Using the information provided for each city, make a mark on the opposite page showing approximately where each city's *annual precipitation* falls on the spectrum.
- Transfer the three marks from each city onto the 'Predicted Temperature' spectrum line below. Find the average position of the three marks -- this is your predicted temperature for that city.
- Compare the actual average yearly temperature to the predicted temperature.

	<u>Predicted Temperature</u>	<u>Actual Temperature</u>
Boston, MA	_____	51° F
Denver, CO	_____	50° F
Juneau, AK	_____	42° F
Kansas City, KS	_____	53° F
Springfield, IL	_____	53° F

6. How can you explain any differences between your predicted and actual temperatures?

7. Kansas City and Springfield have the same average yearly temperature. Why?

8. Denver and Kansas City are located at the same latitude, but Kansas City is warmer. Why?

9. Boston and Juneau are located at similar elevations, but they have very different average yearly temperatures. Why?

10. The higher the elevation, the _____ the temperature.
 The further north in latitude, the _____ the temperature.
 The more water, the _____ the temperature.

11. The interaction of the factors we have learned about is much more complex than we have let on. Water, for example, doesn't always lower the temperature of an area. Large amounts of rainfall tend to lower the average temperature (heat is absorbed as water evaporates), but nearby bodies of water simply help maintain a relatively constant temperature. While wind itself is caused by differences in temperature and pressure, what other factors influence how air and water vapor move? What evidence or examples show these factors exist?
