Precipitation in Arizona varies from 3 inches to more than 35 inches in any one location in a year. The high elevations like the north rim of the Grand Canyon, the San Francisco Peaks, the Central Highlands, and the highest of the sky islands get the most rainfall. The driest places exist along the Colorado River on the western border of the state and in the lowest elevations extending out from Yuma where annual rainfall is no more than 3 inches a year.

Precipitation varies from one side of the state to the other, mostly due to elevation differences. Precipitation is highly variable across Arizona due to topography and seasonal weather patterns. This is especially true during the monsoon season, when thunderstorms can produce localized heavy rainfall.

Most of Arizona receives less than 12 inches of rain a year. This makes areas with higher precipitation, like the White Mountains, critical areas for the state. Arizona water managers monitor snow pack closely because it is responsible for generating surface water that supports streamflows and fills reservoirs.

Rain gauges, both electronic and manually read, are used to track precipitation across the state. Large gaps exist over many parts of the state though. Filling in the gaps would provide valuable information for climate and drought monitoring and for resource management decision-making.

Students will:
- Compare Annual Precipitation Map to the Physiographic Provinces Map (Graphic 2)
- Interpret two maps
- Describe the areas that receive the most precipitation in a year
- Describe the areas that receive the lowest precipitation in a year
- Assess the reasons for the variation in precipitation across the state
- Explain how precipitation data is collected

Join Rainlog.org (http://rainlog.org/), a cooperative rainfall monitoring network for Arizona. Data collected through this network is used for a variety of applications, from watershed management activities to drought planning at local, county, and state levels. All participants need is a rain gauge and access to the Internet. Volunteers select a rain gauge, install it at home or school, collect daily total rainfall amounts and report the data through the online data entry form.

Use rainlog data to analyze the distribution or uniformity of the rainfall in your area of the state. (see The Thunderstorm (PW p. 196))

Write a report about Arizona that compares and contrasts the annual precipitation map, the average annual maximum temperature map and the vegetation map for Arizona.