# HINTS for matching CLIMAGRAPHS with PLACES

**FIRST,** look at the curving line (or dots) that shows temperature through the year.

**1) Hemisphere.** If July is colder than January, the place is probably south of the Equator.
The "low sun season" is in June and July for places in the southern hemisphere.

**2) Latitude.** If it's hot in every month, the place is probably close to the Equator.
As you go either north or south from the Equator, average temperatures go down.
Summer temperatures remain roughly the same, but winter temperatures go down.
They drop below freezing by the middle latitudes.

**3) Continentality.** If winter temperature is very different from summer, the place is probably far from any ocean or large lake.
Places at the same latitude and elevation tend to have the same average temperature.
Water heats and cools more slowly than land, and therefore a place near an ocean has less difference between winter and summer than a place that is inland.

**NEXT,** examine the bars that show precipitation in every month.

**4) Quantity.** If it rains every month, it's near the Equator or about 45 degrees from it.
The earth has three major rainy belts -- a thunderstorm area near the Equator, and two airmass-collision zones about 45 degrees north and south of the Equator.
Between the rainy zones, the earth has four dry areas -- at the poles, where the air is too cold to have much water, and near the Tropics of Cancer and Capricorn, where sinking air makes deserts such as the Sahara, Australian, Kalahari, and Mojave.

**5) "Summer" monsoon.** If summers are hot and rainy and winters are hot and dry, the place is between the Equator and the Tropic lines.
Distinct rainy seasons are caused by a north-south shift of the Equatorial Rainy Belt.
The number of rainy days decreases as you go north or south from the Equator.

**6) "Winter" rains.** If summers are dry and winters are rainy, the place is on a west coast.
The Tropical desert climate shifts toward the poles in the high-sun season.
This makes summers dry on the west coasts about 35 to 55 degrees of latitude (remember, summer is in January and winter is in July in the southern hemisphere).

**THIRD,** look at another map (a real one, or just a "sketch" that you have in your mind).

**7) Elevation.** If the place is colder than you expect, it may be on a mountain.
Mountains force air to rise, cool, and lose moisture. Temperature goes down about 3-5 Fahrenheit degrees for every 1000 feet you go up. A place that is near the top of a 10,000-foot mountain, therefore, will be 30 to 50 Fahrenheit degrees colder than a nearby place at sea level.

**8) Rainshadow.** If the place is drier than you expect, it may be "behind" a mountain.
Compared with a flat plain, a mountain will be rainier on the slopes that face toward the wind, colder on the summit, and drier on the side that faces away from the wind.
The dryness on the leeward side is called a rainshadow.

When you put all of these clues together, you should be able to tell roughly where a place is on the earth just by looking at its climagraph. This is actually a very useful skill – it means that you do not have to memorize a lot of facts about a place; you just have to know where the place is in order to make a good guess about what kind of weather it is likely to have!

And by reversing the logic, you can describe the climate of a place once you know where it is.