

Name: _____ Date: _____ Period: _____

Climograph Activity

Please turn in this assignment

Objectives:

- Construct climographs for coastal cities
- Describe how ocean surface currents affect climate on land

Background Information:

Climate can be defined as the long-term behavior of weather over time, including the average and extreme conditions for a region. Surface currents affect climate by moving cold and warm water around the globe. In general, currents carry warm water from the tropics toward the poles and bring cold water back toward the equator. A surface current warms or cools the air above it, influencing the climate of the land near the coast.

Winds pick up moisture as they blow across warm water currents. This often brings mild rainy weather to the coastal regions. In contrast, cold water currents cool the air above them and since cold air has less of an ability to hold moisture than warm air, these currents tend to bring cool, dry weather to adjacent land areas. Fog is often found along the land-sea borders where cold ocean currents exist. An example is the west coast of South America where fog is found off the coast and the driest desert in the world, the Atacama, exists!

A climograph is a special type of graph that displays the monthly average precipitation and temperature for an area over the course of a year. By studying climographs, you can see how precipitation and temperature differ from one community to another.

Procedure:

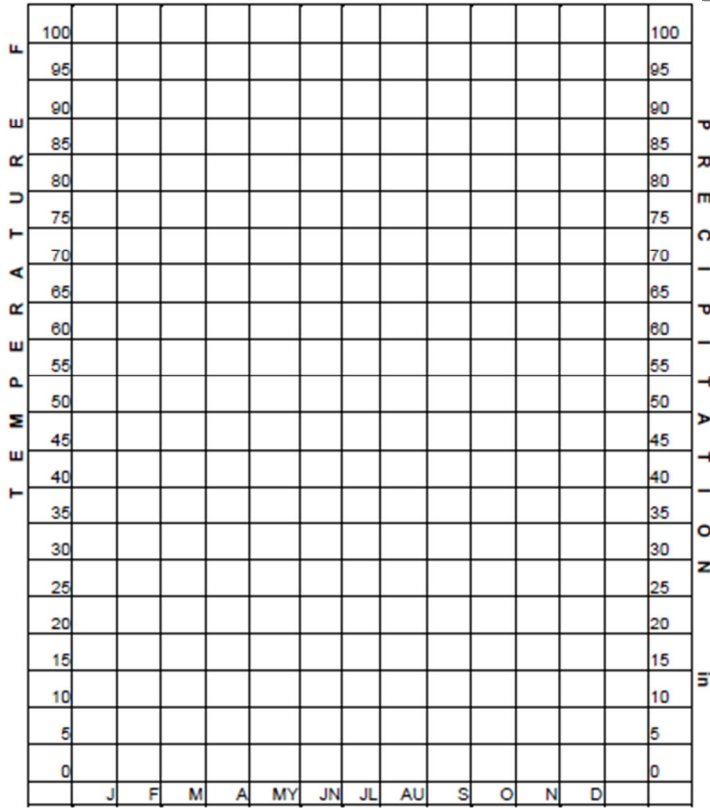
1. Use the climate data from Fact Sheet A to create four climographs for each of the four cities. **Use a line graph for temperature and a bar graph for precipitation on the same graph.** Climograph paper is located on reverse side of this paper.
2. Answer the conclusion and analysis questions
3. Turn in your finished assignment

Conclusion & Analysis Questions:

1. Examine your climographs. What is the difference between the highest and lowest temperatures in the climograph for each of the four cities?
2. Which city is in a dry desert? How can you tell?
3. Take a closer look at the Arica, Chile climograph. During which months does Arica experience summer? Why? [Review: Think back to our unit on Astronomy]
4. What is the relationship between the temperature of the ocean current (Fact Sheet B) and the amount of precipitation?
5. In general, on which side of the ocean [East or West] are the cold currents? Where are the warm currents? (Fact Sheet B)

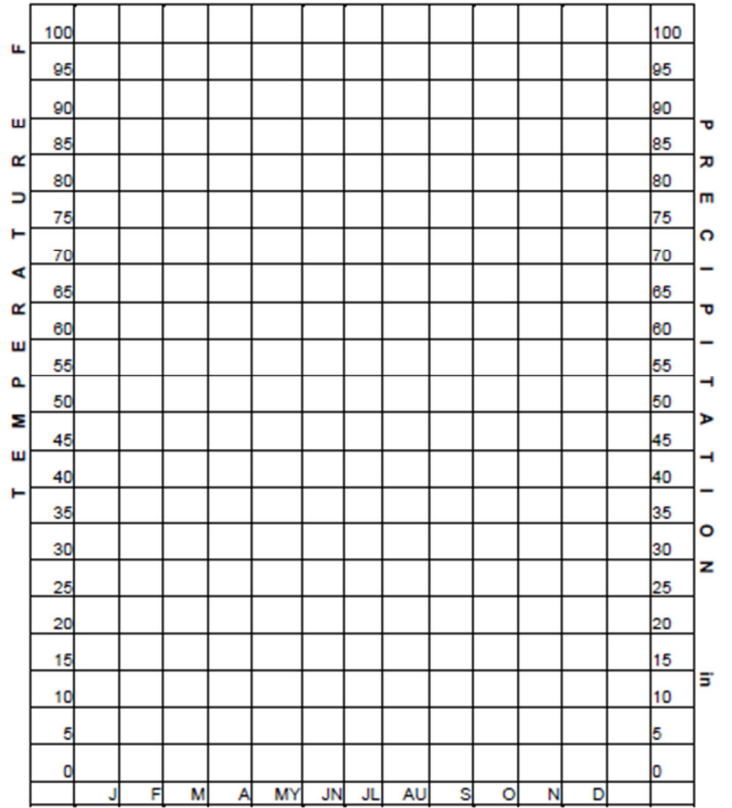
Climographs for Four Cities

Arica, Chile



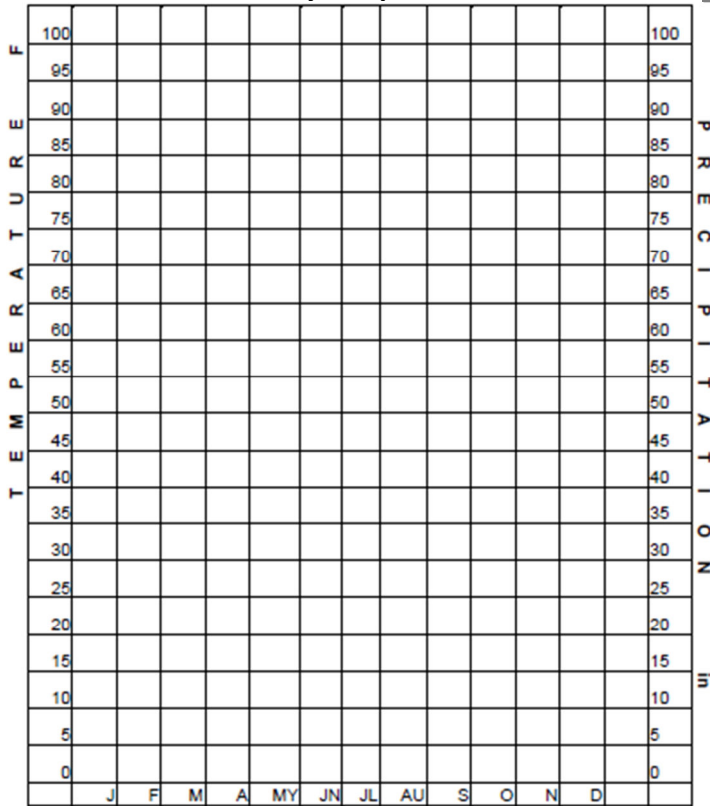
Months of the Year

Trondheim, Norway



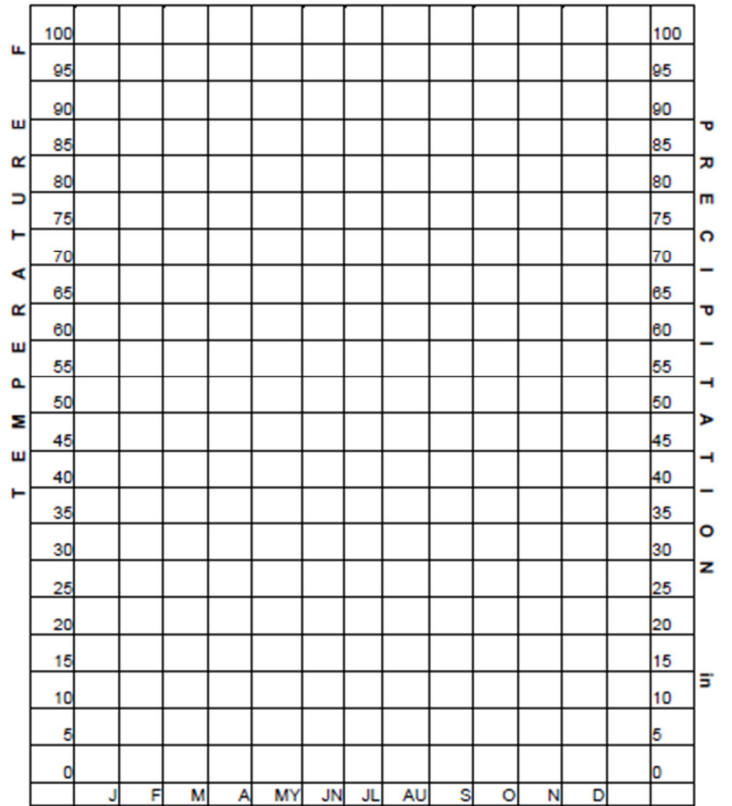
Months of the Year

Tokyo, Japan



Months of the Year

Seattle, USA



Months of the Year