

# Climographs for South Carolina Cities

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## Overview

Every place on Earth has distinguishing characteristics that make it unique. Generally, places on Earth are described in terms of physical and cultural characteristics. Climate conditions in an area control many of the physical characteristics of that place. Climate can influence the prevailing lifestyle, types of vegetation, animal life, and cultural landscape.

Climographs are an easy way to describe the climate of a place. The climograph shows two important elements of climate - temperature and precipitation. Interpretation of the climograph can help determine many of the characteristics of a place.

## Connection to the Curriculum

Earth science, math.

## South Carolina Social Studies Academic Standards

None

## Social Studies Literacy Elements

- F. Ask geographic questions: Where is it located? Why is it there? What is significant about its location?  
How is its location related to that of other people, places, and environments?
- H. Construct maps, graphs, tables, and diagrams to display social studies information
- L. Interpret calendars, time lines, maps, charts, tables, graphs, flow charts, diagrams, photographs, paintings, cartoons, architectural drawings, documents, letters, censuses, and other artifacts
- M. Use tables and graphs to observe and interpret geographic trends and relationships

## Time

One fifty minute class period.

## Grade Range

Grades 5-8

## Materials Needed

SC: *An Atlas* (Maps 7-10)

SCIG CD-ROM

Computer

Handouts: Climate Data Sheet and Climograph Chart

Colored pencils or markers

## **Objectives**

1. Define geographic terms in relation to climate.
2. Describe a physical feature of a place through creating a climograph of the area.
3. Infer characteristics of an area by interpreting climograph data on it.

## **Procedures**

1. Teacher will discuss the definitions of climate and weather with the students along with other related terms. Definitions and terms are as follows:

*Climograph* - a chart that shows an area's yearly climate pattern

*Precipitation* - moisture in the form of rain, snow, sleet, or hail

*Weather* - the day to day atmospheric conditions (precipitation and temperature) in a given area for a short period of time

*Climate* - the average of precipitation and temperature patterns over a long period of time

2. Access SCIG, "Places and Regions." Click on "Regions - Why Study Regions?" This module explains how to make and interpret a climograph. It compares the climate of Charleston, SC, with that of Tokyo, Japan.
3. Give each student a copy of the data sheet and climograph chart. The climograph chart should be explained with the use of an overhead transparency. Tell the students that the "norm" is the average temperature for the month.
4. Students should plot the climate information. The transparency can be used to demonstrate the process. Different colors should be used to denote temperature and precipitation.
5. After completing climographs, students should analyze data and answer questions.

## **Suggested Evaluation**

1. Completion of Climate Data worksheet.

## **Lesson Extensions**

1. Students create climographs for other areas around the world that are of interest to them and compare the climate there to where they live in South Carolina.
2. How has El Nino and La Nina affected the climate in South Carolina?

## **Analyzing Climate Data**

Use the information on your climograph and the climate data sheet to answer the following questions.

1. What is the warmest month in your area? When would you need to turn on your air-conditioning?
2. In what month does your area receive the most rainfall?
3. What is the coldest month in your area?
4. If you were a farmer, in what month(s) would you plant your crops?
5. What crops do you think could be grown in your area?
6. Would citrus fruits be a profitable crop for this area? Why or why not?
7. What types of clothing would be needed in your area? Would you be a success if you owned a clothing store?
8. What sports could be played in your area?
9. What type of building materials would lend themselves to construction projects in your area? What type of roofs would be needed?
10. How can you tell that your area is in the Northern Hemisphere?
11. Add together all of the month's average temperatures. What is the average temperature for the year?
12. What is the average yearly rainfall for the area?

Climate Data Sheet

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec.
<b>Greenville, SC</b>												
High Temp	51	54.5	62.5	72.6	79.9	85.4	88.2	87.5	81.7	72.2	62.1	53.5
Low Temp	31.2	32.6	39.4	48.3	56.9	64.2	68.2	67.4	61.7	49.1	39.6	33.2
Norm Temp	41.1	43.6	51	60.5	68.3	74.8	78.2	77.5	71.7	60.7	50.9	43.4
Precipitation	4.21	4.39	5.87	4.35	4.22	4.77	4.08	3.66	4.35	3.49	3.21	3.93
<b>Columbia, SC</b>												
High Temp	55.3	59.3	68.2	76.5	83.5	88.8	91.6	90.1	85.1	76.3	67.8	58.8
Low Temp	32.1	34.2	42.2	49.4	58.2	66.6	70	69.2	63.2	50.1	41.5	34.9
Precipitation	4.42	4.12	4.82	3.28	3.68	4.8	5.5	6.09	3.67	3.04	2.9	3.59
<b>Charleston, SC</b>												
High Temp	58.8	61.2	68	76	82.9	87	89.4	88.8	84.6	76.8	68.7	61.4
Low Temp	36.9	38.4	45.3	52.5	61.4	68	71.6	71.2	66.7	54.7	44.6	38.5
Norm Temp	47.9	49.8	56.7	64.3	72.2	77.6	80.5	80	75.7	65.8	56.7	50
Precipitation	3.33	3.37	4.38	2.58	4.41	6.54	7.33	6.5	4.94	2.92	2.18	3.11

Sources: S.C. Water resources Commission; National Weather Service, Columbia and Greenville, South Carolina

Climograph Chart

