

KOREA'S CLIMATE

GRADE LEVEL: Middle School

SUBJECT: Geography

TIME REQUIRED: Two class periods

OBJECTIVES:

1. Neatly and accurately graph the climate data for an assigned location.
2. Label the cities and color the Korean map according to its climates.
3. Use acceptable map and graph-making techniques.
4. Use climate graphs in groups of three or four to answer teacher designated questions.

MATERIALS REQUIRED:

- Climate data on selected South Korean cities (included)
- Climate graph and climate graph directions (included)
- Map of South Korea (included)
- Colored pencils

PROCEDURE:

1. Explain to the students that Korea has four distinctive seasons.
2. Also explain that there are many regional differences in climate even though the Peninsula is small.
3. Point out that Korea is affected by the wet summer monsoons that impact South, Southeast and East Asia.
4. If students have not previously made climate graphs, distribute one climate graph to each. The teacher should complete the climate graph on the overhead while the students complete it at their desk. Use the climate data for a local community or some place other than the sites they will graph.
5. When the students understand how to make a climate graph, distribute the climate data for South Korea and as many climate graphs to each student as you want them to make.
6. Also distribute a map of South Korea that has dots for each location on the climate data sheet. The teacher might want to trace in the climate patterns before photocopying the map. If the text or another source available to the students has a climate map showing Korea, it is a good exercise to have the students determine the "boundaries" for the climates.
 - a. Students should label all of the cities.
 - b. The map should be colored or shaded according to the climates of Korea.
 - c. The map should include a title, key and compass rose.
7. Divide students into groups so that each climate site is represented.
 - a. Distribute a set of questions to be answered by using the completed climate graphs and the climate map. [Do not permit them to use the climate data sheet; answers should be based on student work, not the data sheet.]
 - b. **Sample questions:**
 1. Which location has the greatest temperature range?
 2. Which location has the smallest temperature range?
 3. What do you think accounts for the differences between these two temperature ranges?
 4. Which location has the greatest amount of precipitation?
 5. Which location has the smallest amount of precipitation?
 6. What do you think accounts for the differences between these two precipitation levels?

7. Which location has the longest growing season?
 8. Which location has the shortest growing season?
 9. What differences would you expect in the crops grown in these two areas?
 10. Compare the climates of the locations with the highest and lowest elevations.
 11. Does elevation seem to be a climatic factor? Explain.
 12. Is there one month that is usually the hottest? The coldest? The wettest? The driest?
 13. Which is the northernmost city and which is the southernmost city?
8. Summarize findings with whole class.

EVALUATION:

- Graphs and maps can be evaluated on their neatness and accuracy.
- Group effort can be evaluated based on the cooperation displayed and the accuracy of the answers obtained.

ENRICHMENT:

- Graph cities in the U.S. that have similar latitudes and elevations. Choose both coastal and interior locations. Compare with the Korean locations. What are the conclusions?

CLIMATE GRAPH DIRECTIONS:

1. Using the numbers on the right side of the graph as a guide, lightly trace a line across each monthly column showing the amount of precipitation for each city. Use a bright color, such as red, orange, green, etc. to color in each vertical column up to the line you have traced so that when you are finished you will have a series of bar graphs that show the yearly precipitation pattern for this location.
2. Using the numbers on the left side of the graph as a guide, in the center of each monthly vertical column, place a dot showing the average temperature for that month.
3. Using a dark color, connect each dot with a straight line to the dot in the next column so that when finished, you will have line graph showing the temperature pattern for the year.
4. Complete the rest of the information at the top of the climate graph.

STATION = Location [city]

ELEVATION = Altitude [height above sea level]

AVERAGE TEMPERATURE = Average yearly [annual] temperature

TEMPERATURE RANGE = Differences, in degrees, between the warmest and the coldest months.

GROWING SEASON IN MONTHS = The number of months when the temperature is fifty degrees or warmer

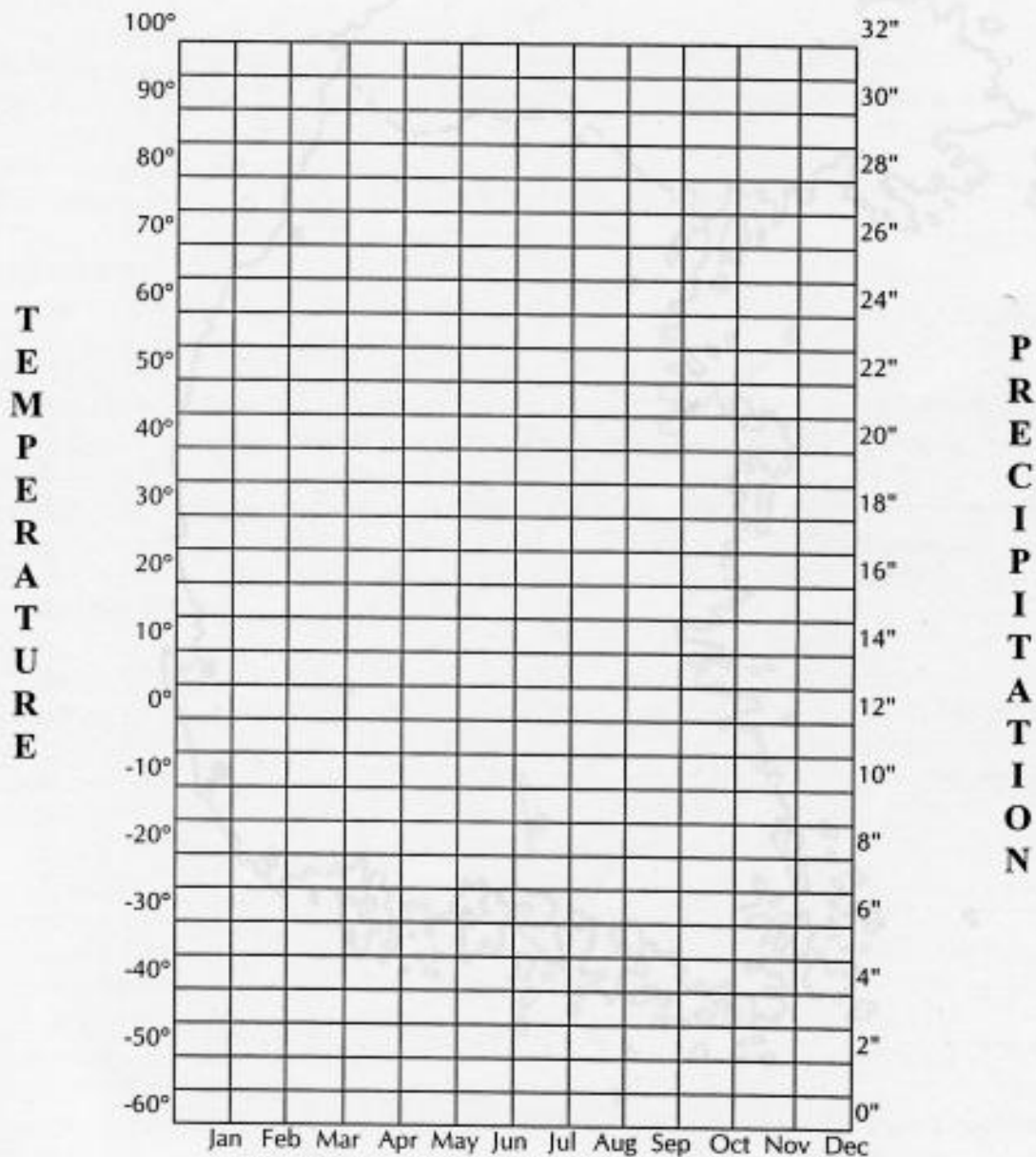
DISTANCE FROM THE EQUATOR IN MILES = One degree of latitude is about 70 miles, so multiply the number of degrees of latitude by 70.

Climate Data on Selected Korean locations

City		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average! Total
Seoul (37.34° N	Temperature Precipitation	24 1.2	28 0.8	38 1.5	51 3	61 3.2	70 5.1	72 14	78 10	68 4.7	56 1.6	41 1.8	28 1	52 49
Mokp'o (34.47° N	Temperature Preci	34 1.4	36 1.5	42 1.6	53 3.7	62. 3.6	70 5.6	77 8.7	80 6.5	72 4.6	62 2	50 1.7	39 1.5	56 42
Pusan (35.06° N	Temperature Precipitation	36 1.7	38 1.4	45 2.7	54 5.5	62 5.2	68 7.9	76 11	79 5.1	71 6.8	62 2.9	51 1.6	40 1.2	57 55
P'ohang (36.03° N	Temperature Preci	33 1.2	36 1.6	43 2.2	54 2.6	62 3	68 5.5	75 6.2	77 5.3	69 6.8	59 2.3	50 2.4	38 1.4	55 40
Taegu (35.53° N	Temperature Precipitation	29 0.6	33 1	42 1.8	54 2.5	64 2.6	71 5.2	78 7.9	79 6.5	69 6.4	58 1.7	46 1.2	35 1	55 38
Ulsan (35.33° N	Temperature Precipitation	33 1	36 1.8	43 2.7	53 3.5	61 4.2	68 6	76 8	77 6.6	69 8.2	59 2.6	48 1.8	38 1.6	55 48
Cheju (33.31 ° N	Temperature Precipitation	41 2.3	41 3	46 2.9	54 3.2	61 3.5	69 6.2	77 8.3	78 8.9	71 9.9	62 3.5	54 2.7	46 2.4	59 56
Kangnung (37.45° N	Temperature Precipitation	30 1.5	33 2.9	41 2.9	53 2.8	62 2.5	68 5.3	74 8.4	76 7.5	68 7.8	58 3.5	48 3.5	36 2	54 50
Ch'orwon (38.14° N	Temperature Precipitation	18 0.6	24 0.7	36 3.3	49 2.8	60 3.9	68 5	75 15	76 11	66 5.2	53 2.2	40 1.6	26 1.1	49 52
Sources: World Climate Data. F.L. Wernstedt. Climatic Data Tables of Temperature, Relative Humidity and Precipitation for the London: Her Majesty's Stationery														

CLIMATE GRAPH

Station _____ Country _____ Elevation _____
 Latitude _____ Longitude _____ Climate Type _____
 Yearly Precipitation _____ Average Temperature _____ Temperature Range _____
 Growing Season in Months _____ Distance from Equator in Miles _____



South Korea

