2012

Making and Interpreting Line and Bar Graphs in Geography

Cathy Kruse
Forest City High School, Forest City, Iowa

Elaine Schultz
Forest City High School, Forest City, Iowa

Making and Interpreting Line and Bar Graphs in Geography

Cathy Kruse and Elaine Schultz – Forest City High School, Forest City, Iowa

<table>
<tr><td>Grade Level (Req.): 9th grade</td><td>Content Area (Req.): World Geography, Human Geography</td><td>Unit (Opt.):</td></tr>
<tr><td colspan="3">Connections to Other Disciplines (Opt.):</td></tr>
<tr><td rowspan="2">Time Frame (Req.): 3 days</td><td colspan="2">Goal (Req.): Students will know the difference between line and bar graphs.</td></tr>
<tr><td colspan="2">Objective (Req.): Students will construct both a line and bar graph. Students will be able to interpret a line and bar graph. Students will compare Forest City temperatures and precipitation graphs to Iowa's temperature and precipitation graphs.</td></tr>
<tr><td colspan="2">Materials Needed (Req.):
Information about yearly temperature and precipitation for Forest City and Iowa (http://countrystudies.us/united-states/weather/iowa/forest-city.htm
Graph paper and colored pencils
Comparison worksheet for Forest City and Iowa</td><td>New Vocabulary (Opt.):
Bar graph: a chart with bars that show values that they represent; used for comparing two or more values.
Line graph: uses points connected by lines to show how something changes in value</td></tr>
<tr><td colspan="3">Anticipatory Set/Introduction [Inquiry Question is required] (Req.): What are the different kinds of graphs? The teacher and students will review prior knowledge of different types of graphs and their uses. The teacher will explain how each type of graph is used, where graphs are used and found, and preview how this information will help them read and interpret various kinds of graphs in the future.</td></tr>
<tr><td colspan="3">Instructional Sequence/Procedure (Req.):
Day 1: What are graphs used for? Show the students graphs for the U.S. and Iowa to compare temperature and precipitation.
Discussion and comparing the two graphs.
Day 2: Make a graph that shows what the temperature and precipitation is for Forest City.
Day 3: Compare our local temperature and precipitation to Iowa's temperature and precipitation using the graphs and worksheets with specific questions.
Wrap-up (5 minutes): Review each day's learning activity and give anticipatory set for tomorrow's activity.</td></tr>
</table>

11.
12.
13.
14.
15.
16.
17.
18.
19.
20.

Formative Evaluation (Req.): Discussion on day 1, student-made graphs on day 2 checked for understanding.	Assessment (Req.): Comparison between Forest City and Iowa using graphs and worksheets.

Iowa Core Curriculum Standards Used (Req.):

- Geography, grade 9-12: Understand the use of geographic tools to locate and analyze information about people, places, and environments.
-
-
-
-
-
-
-
-
-

Common Core Curriculum Standards Used (Opt.):

-
-
-
-
-

NGS Standards Used (Req.):

- How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective
-
-
-
-
-
-
-
-
-

Five Themes of Geography Used (Req.): • Location • Place • Region	School District Standards and Benchmarks (Opt.): • • •

• •	
21st Century Universal Constructs (Opt.):	
Other Disciplinary Standards (Opt.): • • • • •	
Other Essential Information (Opt.): Resource room teacher	
Other Resources (Opt.): • • • •	

Compare Iowa's temperature and precipitation to Forest City

1. Does the line graph (temperature) follow the same for both Iowa and Forest City?

2. Compare Iowa's high and low temperature with Forest City's. What is the difference for the high and low?

3. Name a month where Forest City's temperature is below the state average.

4. Name a month where Forest City's temperature is above the state average.

5. What conclusions can be reached by looking at the graph?

6. Does the bar graph (precipitation) follow the same for both Iowa and Forest City?

7. Compare Iowa's high and low precipitation amounts with Forest City's. What is the difference in the high and low amounts?

8. Name a month where Forest City's precipitation is below the state average.

9. Name a month where Forest City's precipitation is above the state average.

10. What conclusions can be reached by looking at the graph?