Culturally Divide and Conquer the Balkans
Using statistics about the Balkan Republics, students will create circle graphs.

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<th>National Geography Standards</th>
<th>Arizona Geography Strand 4</th>
<th>Arizona Math Standard</th>
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<td>ELEMENT ONE: THE WORLD IN SPATIAL TERMS 1. How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective.</td>
<td>CONCEPT 1 World Spatial Terms GRADE 6, 7, and 8 PO 1 Construct maps, charts and graphs to display geographic information.</td>
<td>STRAND 1 Number and Operations CONCEPT 1 Number Sense GRADE 6 PO 1 Convert between expressions for positive rational numbers, including fractions, decimals, percents, and ratios.</td>
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<td>CONCEPT 2 Places and Regions GRADE 6 PO 1 Identify regions studied using a variety of criteria (e.g., climate, landforms, culture, vegetation).</td>
<td>CONCEPT 2 Numerical operations GRADE 7 PO 3 Solve problems involving percentages, ratio and proportion, including tax, discount, tips, and part/whole relationships.</td>
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<td>GRADE 7 PO 1 Describe the human and physical characteristics of places and regions.</td>
<td>GRADE 8 PO 3 Solve problems involving percent increase, percent decrease, and simple interest rates.</td>
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<td>GRADE 8 PO 3 Examine the relationships and interactions among regions.</td>
<td>STRAND 2 Data Analysis, Probability and Discrete Mathematics CONCEPT 1 Data Analysis (Statistics) GRADE 6 PO 2 Formulate and answer questions by interpreting, analyzing, and drawing inferences from displays of data, including histograms and stem-and-leaf plots.</td>
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<td>CONCEPT 4 Human Systems GRADE 7 PO 1 Discuss the implications of the demographic structure of places and regions.</td>
<td>GRADE 7 PO 1 Solve problems by selecting, constructing, and interpreting displays of data including multi-line graphs and scatterplots.</td>
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<td>PO 8 Explain how cooperation and conflict contribute to political, economic, and social activities.</td>
<td>GRADE 8 PO 1 Solve problems by selecting, constructing, interpreting, and calculating with displays of data, including box and whisker plots and scatterplots.</td>
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Divide and Conquer the Balkans

Overview
To analyze the great diversity of people in the Balkan Republics, circle graphs can be utilized to understand facts about the countries more clearly.

Purpose
In this lesson students will learn how to create circle graphs utilizing various statistics on the Balkan Republics. By analyzing these statistics, students will understand how conflict might occur when such a diversity of people inhabit the area.

Materials
• Sample Graphs (made into overheads)
• Ticket Out the Door closure activity
• Chart on Balkan Countries (group or individual student copies)
• Balkan Basic Circle Graph Questions
• Calculating the Number of Degrees for Each Percentage (overheads and/or individual student copies)
• Circle Graph Questions Answer Key
• compasses
• protractors
• paper, colored pencils, markers
• glue
• butcher paper
• Pie Chart Template—only if not using protractors and compass

Objectives
The student will be able to:

1. Demonstrate synthesis of geographic information about the Balkan Republics.

2. Construct circle graphs when given statistical information on the Balkan Republics.

 procedures
Prerequisite Skill: It is recommended that students complete the Balkan Basics lesson by

Barbara Stout on the Arizona Geographic Alliance GeoLiteracy CD prior to this lesson.

SESSION ONE
1. Discuss with students the subjects of circle graphs they may have seen. Then tell the students that today we will be using circle graphs to understand geography.

2. Display sample circle graphs of Bosnia/Herzegovina that are provided with this lesson. Demonstrate how to calculate the number of degrees for each percentage by going through the steps shown on the overhead of Calculating the Number of Degrees for Each Percentage. Then show the Bosnia/Herzegovina Land Use overhead so students can see a finished product.

3. Now explain how to draw a circle graph utilizing the compass and protractor. Use a compass to draw a circle approximately 4” in diameter. Next, use a protractor to mark the radius of the circle. Then, use the protractor to mark a line every 5 degrees. Lastly, color the proper degrees for the statistics on the graph. Stress to the students that it is very important to have a key with percentages and statistics. Explain that by making circle graphs, it is easier to compare statistics of various countries. If compasses are not available, use the template of a pie chart provided with this lesson. (Note: this pie chart uses percents instead of degrees.)

4. Divide students into groups of 5 students. (If there are more than 30 students use the statistics for language and add an extra student to the Croatia, Macedonia, Slovenia, and Yugoslavian groups.) Pass out the Chart on Balkan Countries to each group of students.

5. Assign each group of students one of the six republics: Bosnia/Herzegovina, Albania, Yugoslavia, Macedonia, Croatia, or Slovenia.
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6. Assign each student in the group a category to graph: land use, age structure, ethnic groups, religion, and GDP.

7. Put the overhead of Calculating the Number of Degrees for Each Percentage back on the projector so students can refer to the process. Students should now calculate the number of degrees for each percentage in their category.

8. Distribute paper, compass, protractor, pencils, and colored pencils or markers.

9. Each group will use their compasses to draw a circle approximately 4” in diameter.

10. They should utilize the protractors to mark the radius of the circle.
11. Then utilize the protractor to mark a line every 5 degrees.

12. The students will refer to their Chart on Balkan Countries to color in the proper degrees for their graph. The circle graph should have a title and proper labels.

13. When groups are finished they will glue the graphs to butcher paper and write the name of their republic using markers or colored pencils. Optional: Each group can cut pictures that represent their country from magazines or draw their own pictures.

14. The papers should be displayed around the room.

If you think the graphs will be too hard to see, you can allow the students to use the Chart on Balkan Countries in order to answer the questions.

2. Closure: Hand each student a “ticket out the door,” and have him or her write three ways they can use circle graphs to display information. They can hand in the ticket as they walk out the door or discuss them in class if time permits.

Assessment

The Balkan Basic Circle Graph Questions 1-15 can be assessed for math comprehension. A score of 80% or higher is considered mastery.

Geography comprehension can be assessed with Balkan Basic Circle Graph Questions #15 and #16. Assign 6 points to the first paragraph (#15) (2 points for every reason why the Republics might not get along with each other) and assign 4 points for a reasonable answer to #16. The paragraphs now equal 10 points. A score of 80% or higher is considered mastery.

Extensions

Make computer circle graphs using a computer spreadsheet.

Sources