Literacy Limbo: Graphing Literacy Rates

Students will then compare the literacy rates of men and women and make some conclusions based on the differences.

Author
Heather S. Terlecki

Grade Level
6-8

Duration
1 class period

National Geography Standards

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.

Overview
Based on student-created graphs, students will infer that men’s literacy rates are higher in most of the countries on the graph. Students will also think critically about the effects the literacy rates have on the occupations of men and women in the region. They will complete bar graphs, stem and leaf plots, and line graphs in this lesson.

Purpose
Students will place information on various graphs. They will interpret the data that is provided and think critically about the disparities shown in the data. Students will use

Arizona Geography Strand 4

CONCEPT 1
World in Spatial Terms
GRADE 6, 7, and 8
PO 1 Construct maps, charts and graphs to display geographic information.
PO 3 Interpret maps, charts and geographic databases using geographic information.

CONCEPT 4
Human Systems
GRADE 6
PO 5 Identify cultural norms that influence different social, political and economic activities of men and women.
GRADE 7
PO 9 Identify cultural aspects (e.g., literacy rates, occupations, property rights) based on social and political factors.
GRADE 8
PO 6 Describe the aspects of culture related to beliefs and understandings that influence the economic, social and political activities of men and women.

Arizona Math Standard

STRAND 2 Data Analysis, Probability, and Discrete Mathematics

CONCEPT 1 Data Analysis
GRADE 6
PO 1 Solve problems by selecting, constructing, and interpreting displays of data, including histograms and stem-and-leaf plots.
PO 4 Compare two or more sets of data by identifying trends.
GRADE 7
PO 1 Solve problems by selecting, constructing, and interpreting displays of data including multi-line graphs and scatterplots.
PO 2 Interpret trends in a data set, estimate values for missing data, and predict values for points beyond the range of the data set.
GRADE 8
PO 1 Solve problems by selecting, constructing, interpreting, and calculating with displays of data, including box and whisker plots and scatterplots.
PO 2 Make inferences by comparing the same summary statistic for two or more data sets.
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their knowledge of the importance of literacy to make inferences regarding the lives of the people depicted in the graph.

Materials
- Literacy Limbo Worksheet
- Literacy Limbo Worksheet Answer Key
- Asia map
- Colored pencils
- Atlas
- Rulers
- Graph paper (optional)

Objectives
The student will be able to:

1. Place data regarding literacy rates on graphs and interpret the data.

2. Make inferences about the lives of men and women in the cultures being graphed and how the differences in the graphs can relate to differences in their lives.

Procedures

Students should have experience with graphing and with different types of graphs including stem-and-leaf.

SESSION ONE

1. Introduce the map of Asia to the students and ask them to name some countries that they know in Asia.

2. Ask students to use an atlas to find and label China, Pakistan, Nepal, India, Myanmar, and Bangladesh on their map of Asia.

3. Pass out Literacy Limbo Worksheet. Review the graph with the students and ask students what they notice just from looking at the graph.

4. Ask students which country they think has the largest differences between men and women’s literacy rates. Ask for ideas on how to actually find the country that has the largest difference between men and women’s literacy rates. After a brief discussion explain to subtract the men and women’s percentages to find the differences. For example: 99% - 97% = a 2% difference.

5. Go over the remaining questions with the students and review how to create the different graphs to ensure that they understand what they are to do. Highlight to them that they will need to create a double bar graph for number 5 and review what the term double bar graph means.

Assessment

Geography Assessment: Questions 7, 8, 9, and 10 are all worth 5 points each or 20 points total. Mastery will be considered 16 points out of 20.

Math Assessment: Questions 1, 2, 3, 4, 5, and 6 measure math skills or concepts. Each question can be scored with 5 points or 30 points total. Mastery will be considered 24 points out of 30.

Extensions

Students can research literacy rates in different parts of the world and compare the men and women’s literacy rates in those countries.

Students can research a country and compare the lives of women and men in that country to their own country.

Students could research literacy rates and what effect they have on a country’s economy and way of life.

Sources

United Nations Department of Economic and Social Affairs
http://millenniumindicators.un.org