

Title: Moving On ... Up!

Brief Overview

In today's global society, mobility is often essential to achieve economic security. Many factors should be considered before relocating. This lesson will require the student to use the Internet, as well as other resources to gather information which is crucial to this decision making process.

Links to Standards:

- **Mathematics as Problem Solving**
Students will develop and apply techniques for analyzing data in order to understand real-world situations.
- **Mathematics as Communication**
Students will gather, organize, and interpret information collected from the Internet and other resources. Students will use written and oral communication skills to share and defend analysis.
- **Mathematics as Reasoning**
Students will draw conclusions, support their mathematical arguments, and justify their results.
- **Mathematical Connections**
Students will relate mathematics to geography, economics, and social sciences.
- **Statistics**
Students will organize and display data in numerical and graphical form.

Grade/Level:

Grades 6-12, Pre-Algebra/Applied Math

Duration/Length:

Depending upon information access and class size this activity may take up to one week.

Prerequisite Knowledge:

Students should have working knowledge of the following skills:

- Accessing information using the Internet
- Reading and constructing statistical graphs

Objectives:

Students will:

- ☐ work cooperatively in groups.
- ☐ collect and organize data from Internet web sites.
- ☐ analyze graphs to determine appropriate data.
- ☐ represent data collected using bar graphs.
- ☐ use written and verbal communication skills.

Materials/Resources/Printed Materials:

- ☐ Activity Sheet #1 (enough for each group to have 4 copies)
- ☐ Computer with access to the Internet
- ☐ Materials to create posters

Development/Procedures:

Arrange students into groups of two or three. Each group will choose one city from each of the four time zone regions of the United States (see USA map).

Activity Sheet #1 guides students through the data collection process using the Internet and other resources. After completing an activity sheet for each city selected, students will prepare the material for presentation by (1) creating a Weather Bar Graph which compares the average July and January temperatures and the average rainfall for each city, (2) creating a Housing Bar Graph which compares the median price of a 3-bedroom house for each city, (3) creating an Employment Bar Graph which compares the unemployment rates and per capita incomes for each city, (4) creating a Crime Bar Graph, and (5) creating a poster illustrating the quality of life in each city.

Each group will present the information used to complete Activity Sheet #1 and the bar graphs. In conclusion, their arguments for “best” city will be supported by the data in the activity sheet and bar graphs.

Performance Assessment:

Evaluation will be completed according to the “Moving On ... Up!” Scoring Criteria Worksheet.

Extension/Follow Up:

1. After verbal presentations, have students select the “best” city and support their choice in a one-page report.
2. Use the Internet to find the “best” car or athletic shoes.

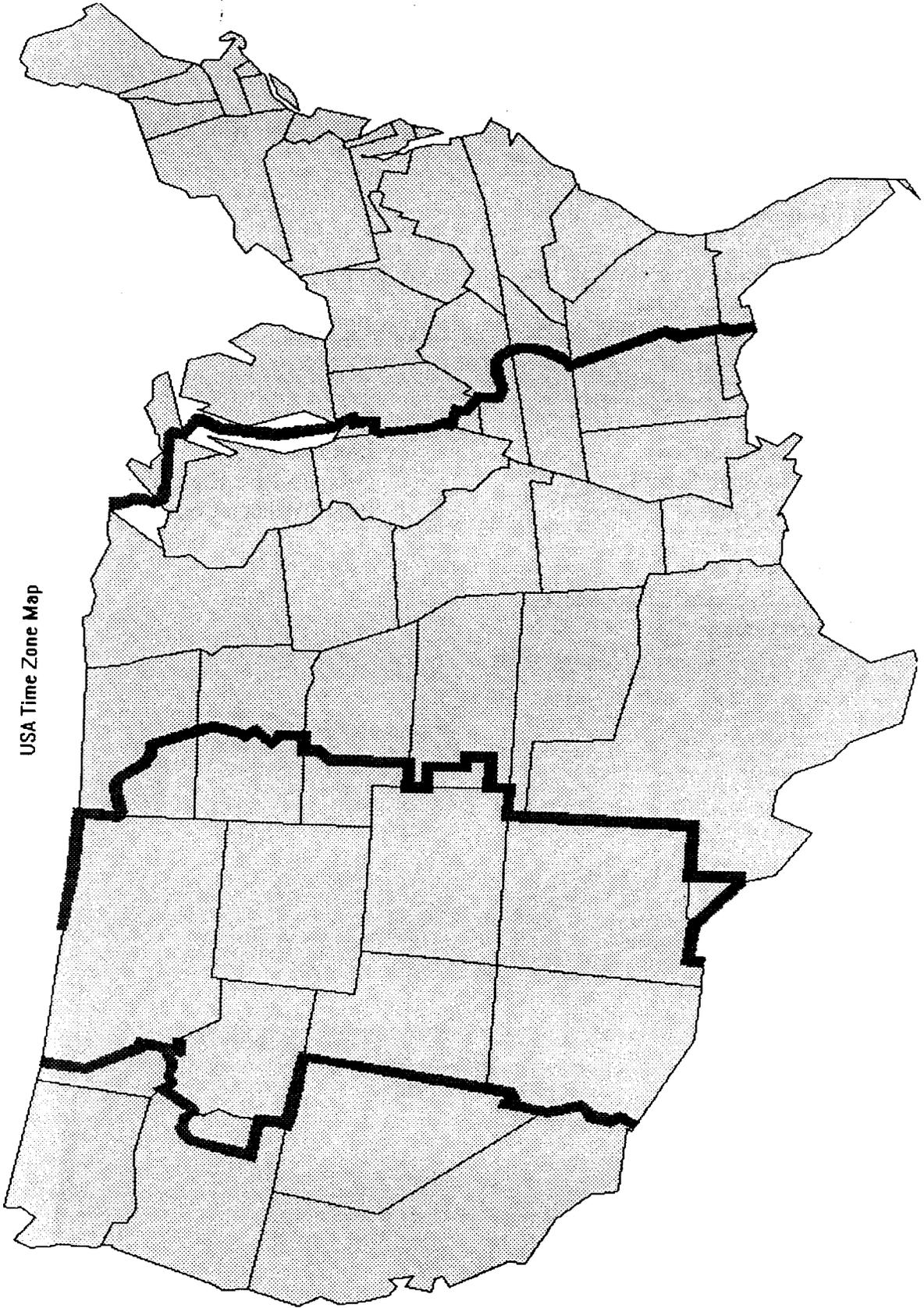
Authors:

Harold W. Andersen
Yorktown High School
Arlington County, VA

Lisa Breidenbach
Osborn Park High School
Prince William County, VA

Barbara M. Carter
Douglas S. Freeman High School
Henrico County, VA

USA Time Zone Map



Moving On ... Up!
Activity Sheet 1

Region: _____

City: _____ **State:** _____

Population: _____ **Geographic Size (square miles):** _____

Weather

Average July High: _____

Average January High: _____

Average Annual Rainfall: _____

Economy

Cost of Living Index: _____

Median Price of a 3-bedroom single family house: _____

Income

Unemployment Rate: _____

Median Salary: _____

Taxes

State: _____

Local: _____

Property: _____

Crime

Annual Property Crimes per 100,000 people: _____

Annual Violent Crimes per 100,000 people: _____

Quality of Life

Types of Recreational and Leisure Activities Available: _____

Schools

Per Pupil Expenditure: _____

Graduation Rate: _____

Teacher/Pupil Ratio: _____

Types of Mass Transportation Available: _____

Other Information

Moving On ... Up!
Scoring Criteria

Activity Sheets (4 @ 10 points each) _____(40)

- Sheets are completed for each city.
- Web sites are given.
- At least three types of recreational activities are listed.
- All types of mass transportation are given.

Bar Graphs (4 @ 10 points each) _____(40)

- Graphs are titled.
- Horizontal and vertical axes are labeled.
- Increments are appropriate.
- Graphs are creative and neat.

Quality of Life Poster (1 @ 5 points) _____(5)

- Poster is creative and neat.
- Poster represents positive qualities of cities.

Presentation _____ (15)

- Presentation is organized.
- Speakers use good verbal communication skills
 - eye contact with audience
 - speak loud enough
 - use visuals in presentation
 - avoid “uhs” and “you knows”
- Group supports “best” city choice with data

Total _____(100)