

Studies of the Eastern Worlds: Population Graphing

by Aimee Burman & Elizabeth Seegers
Danville Middle School
Danville Community School Corporation

Population Graphing is a cooperative learning activity that students participate in at learning stations. Artwork from various eastern world countries will be posted in the front of the classroom with the names of the countries listed underneath the pieces. The classroom should be set up to accommodate 10 research stations. One almanac should be placed at each of the stations. Students should have been taught graphing skills prior to this lesson. Students will work cooperatively in groups to view artwork from various countries of the Eastern world and collect information on the populations of the Eastern countries. The students will use this information to create graphs.

Lesson Plan Title: Studies of the Eastern Worlds: Population Graphing

Keywords: Math/History/Geography/Interdisciplinary

Curriculum Area: Mathematics

Grade Level: 7

Appropriate Group Size: Whole Class

Time Expected to Complete Lesson: two days

Instructional Objectives:

1. Students will work cooperatively in groups.
2. Students will view artwork from various countries of the eastern worlds.
3. Students will be able to collect information on the populations of various eastern world countries.
4. Students will be able to graph information discovered.
5. Students will present and learn about populations of various eastern world countries from bar graphs created by classmates.

Indiana State Proficiencies:

Proficiency 1: Develop and practice effective communication using the language of mathematics.

Proficiency 2: Develop reasoning skills and apply them to problem-solving situations.

Proficiency 3: Recognize and make connections.

Proficiency 4: Develop strategies for solving problems through translating data into mathematical language.

Materials & Resources:

- Almanacs of the present and previous nine years
- Graphing paper

- Various pieces of artwork from eastern worlds:

Corbis Images:

1. 10th Century Nataraja Bronze
2. 19th-Century Japanese Woodblock
3. Baskets for Sale at Market
4. Bracelets and Earrings from Indus Valley Civilization
5. Buddha on Eight-Trigram Mountains
6. Buddhist Temple in Saging, Burma
7. Buddhist Temple in Saging, Burma
8. Indian Elephant Raising Trunk
9. Japanese Laborer
10. Lion and Horse Figures from Indus
11. Man Pushing Upper Class People in Rickshaw
12. Statue of the Hindu God, Vishnu

Internet Web Sites:

"ArtsEdNet" <http://www.artsednet.getty.edu>

A Royal Tiger Hunt artist Udaipur (Pakistan)

<http://www.artsednet.getty.edu>,

Los Angeles County Museum of Art, gift of Paul F. Walter

"Kameng" <http://www.art21.net/kameng/index.sht>

"Tauke" Is Not Coming Back Yet! artist Lim Ka Meng (Malaysia)

<http://www.art21.net/kameng/index.sht>,

"Hermes Alegre" <http://madeinthephilippines.com/hermesalegre/index.html>

Farm Nymphs at rest artist Hermes Alegre (Philippines),

Ad Infinitum Gallery

"VietTouch" <http://viettouch.com>

Village Well artist Le Thanh Son (Vietnam),

http://www.viettouch.com/art_cont/art_fs.htm

"Xoom.com" <http://xoom.com/home/>

Dewi Sri artist Soedibio (Indonesia),

http://members.xoom.com/_XOOM/abe_gallery

Preparation: Fourteen pieces of artwork from various eastern world countries should be posted in the front of the classroom with the names of the countries listed underneath the pieces. The classroom should be set up to accommodate 10 research stations. One almanac should be placed at each of the stations. Students should have been taught graphing skills prior to this lesson.

Student Instruction:

1. Review graphing procedure with students.
2. Discuss with students how the population of the United States is tabulated.
3. Ask volunteers to look up the population of the United States at each of the ten stations. This would work

quickly if ten students were asked to research the information at different stations simultaneously.

4. Record the students' findings on the chalkboard using a bar graph.
5. Discuss with the students the population increases and decreases within the years. Speculate the causes of fluctuation.
6. Team students up in pairs of two or three to create a total of 14 teams.
7. Ask each team to choose a piece of artwork displayed in the front of the classroom. Ask teams to choose different pieces so that each team will be working with a different country.
8. Assign one team to each of the 10 stations rotating them every few minutes.
9. Challenge teams to research the population of their chosen country (determined by artwork chosen).
10. Once each of the teams have accumulated the information needed from each of the 10 stations encourage them record their data in a bar graph, determine population increases/decreases, and speculate the causes of fluctuation if necessary.
11. Each of the 14 teams present their findings to their classmates using bright colorful presentation visuals including the artwork from the country and the graph mapping the population of that country over the past 1 years.

Student Assessment:

1. Students' participation.
2. Rubric based on:
 - Graphing skills
 - Population information
 - Analogy of population fluctuation and speculation of cause
 - Presentation

Extensions: This lesson is extended through an interdisciplinary unit with language arts, science, geography, cultures, health, and art. All of these lessons can be found under the title "Studies of the Eastern Worlds." Challenge students to try other graphing techniques using the accumulated data.

Teacher Notes: This is a new interdisciplinary unit developed on the idea of bringing visual arts into the classroom. This particular lesson has not yet been tested in the classroom. Its introduction will take place in the fall of 1999.