### 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.
2. How to analyze the spatial organization of people, places, and environments on earth's surface.

**ELEMENT FOUR:**
**HUMAN SYSTEMS**
9. The characteristics, distribution, and migration of human population on earth's surface.

**ELEMENT SIX:**
**THE USES OF GEOGRAPHY**
18. How to apply geography to interpret the present and plan for the future.

### Arizona Geography

**Grade 6**
- **Strand 4 Geography**
- **Concept 4 Human Systems**
- **PO 3 Analyze the causes and effects of settlement patterns**

**Concept 6 Geographic Applications**
- **PO 1 Describe ways geographic features and conditions influenced settlement (e.g., near waterways, on high terrain, with adequate fresh water, on good land for farming, in temperate climates) in different periods of time, places, and regions.**

**Grade 7**
- **Strand 4 Geography**
- **Concept 4 Human Systems**
- **PO 4 Analyze why human populations choose to live where they do (e.g., natural resources, farmland, water, mild climate, family, employment).**

**PO 5 Analyze the effects of settlement on places (e.g. quality of life, transportation, population density).**

### Other Arizona Standards

**ELA Common Core Standards**

6-8 Reading Standards for Literacy in History/Social Studies
- Integration of Knowledge and Ideas
  - **6-8.RH.7** Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

6-8 Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects
- **6-8.WHST.2** Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.
  - a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
  - b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
  - c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
  - d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
  - e. Establish and maintain a formal style and objective tone.
  - f. Provide a concluding statement or section that follows from and supports the information or explanation presented.
What are All the Lights? U.S. Population

Overview

Our country has an uneven population distribution. Using a nighttime map, students will examine where most of the people in the United States live based on the amount of lights visible at night around the country. They will recognize the geographic features that affect this settlement.

Purpose

In this lesson, students will use geographic tools to analyze information about the settlement populations of the United States. Students will also use cause and effect to interpret the map’s meaning and write an essay communicating what they observed.

Materials

- Classroom Atlases
- 2000 Population Distribution of the U.S. Map
- Pens and pencils
- Bright markers or transparencies
- Cause and Effect Worksheet
- Expository Essay Instructions

Objectives

The student will be able to:

- write an essay interpreting the Nighttime Map of the U.S. population based on the 2000 Census.
- recognize how physical features affect settlement patterns.

Procedures

SESSION ONE

Prerequisite knowledge: students should know how to write an expository essay

2. Have students describe the distribution of the U.S. population using the 2000 Population Distribution map.
3. Using a bright color marker or a transparency overlay, have students locate and label the largest metropolitan areas.
4. Have students circle the areas with the least density. (deserts and mountains—hard to farm and hard to live there) (interior regions—far from cities and transportation hubs)
5. Show students a physical map of the United States. Discuss and compare how the physical features correlate with areas of densely packed lights. (rivers, lakes, and oceans—transportation networks and a source of water) (coastal areas—immigrant arrivals and shipping/trade) (plains—good farmland) (metropolitan areas—more jobs, cultural activities, transportation hubs)
6. Have students fill out the Cause and Effect Worksheet. Remind students that every action, event or effect has a cause. Discuss possible causes for population settlement. They should also be able to show relationships with geographic features and population. (An example would be: Cause = Good flat farmland Effect = People settled there)

SESSION TWO

1. Review how to write an expository essay using the Expository Essay Instructions.
2. Have students write an essay discussing the reasons for low and high-density population. Have students include geographic features that might affect the distribution of people.

Assessment

Essay should include a variety of cause and effect relationships showing they understand why people tend to settle in certain areas. Score essay with
What are All the Lights? U.S. Population

the Six-Trait Writing Rubric for Content/Ideas and Organization. Students should receive a 4 or higher.

Extensions

Students could compare the population maps at www.census.gov/geo/www/maps

Sources

www.census.gov
The Nighttime Population Map is found at: www.census.gov/geo/www/mapGallery/2kpopden.html where a high-resolution .pdf file can be downloaded.