Globally Aware: We’re all Part of the Same Village
Students calculate the impact of population growth on the world’s limited resources.

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Grade Level
6-7
Duration
2 class periods

National Geography Standards
ELEMENT FIVE: Environment and Society:
16. The changes that occur in the meaning, use, distribution, and importance of resources.

Arizona Geography Strand 4
CONCEPT 5 Environment and Society
GRADE 6
PO 3 Explain how changes in the natural environment can increase or diminish its capacity to support human activities.
GRADE 7
PO 6 Describe the ways human population growth can affect environments and the capacity of environments to support populations.

Arizona Math Standard
STRAND 1 Number Sense and Operations
CONCEPT 2 Numerical Operations
GRADE 6
PO 2 Multiply multi-digit decimals through thousandths.
GRADE 7
PO 3 Solve problems involving percentages, ratio and proportion, including tax, discount, tips, and part/whole relationships.

Overview
We began the Twentieth Century with a population of less than 2 billion people, and we ended it with more than 6 billion. This increase put enormous pressure on the environment, and projected increases will cause even more stress. Earth is home to us all; we are all part of a global village. We need to ensure that future generations in all corners of our global village will have the resources to meet their basic needs.

Purpose
In many nations around the world, some of the natural resources on which life depends (fresh water and cropland) are increasingly becoming depleted or strained. Population is a critical factor influencing the availability of these natural resources. In this lesson students will measure the human-environmental stress in fresh water and cropland availability.

Materials
- If the World Were a Village by David J. Smith
- World Population and the Environment Data Sheet
- The World at Six Billion Fact Sheet
- Calculators
- Handout 1
- Handout 1 Answer Key

Objectives.
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The student will be able to:

1. State why population growth is putting stresses on our natural resources.
2. Interpret data to determine that the largest population growth and the largest human-environment stresses are projected to occur in less-developed countries.
3. Solve problems to determine percentage of change.

Procedures

Prerequisite Skills for Math: Students should have experience in using calculators to compute decimals and percentage change.

Teacher note: 1 hectare = 2.47 acres and 100 hectares = 1 square km.

Prerequisite Skills for Geography: Student should know the difference between developed and developing countries.

SESSION ONE
1. The teacher will read to the class If the World Were a Village. Discussion should focus on various aspects of living in the global village and some of the impacts of the population growth.
2. Students will read “The World at Six Billion Fact Sheet,” and the teacher will lead a class discussion about which of the facts cause concern.
3. Give the students the World Population and the Environment Data Sheet. The teacher should be certain of the understanding of the terminology of each of the headings for the various countries.
4. Assign questions #1 through 4 for homework.

SESSION TWO
1. Check for understanding of the homework.
2. Students will then complete questions #5 and #6 for assessment.

Assessment

Question #5 assesses math standards. Students are not given a formula to follow.
EXAMPLE: A country had .63 hectares of cropland available per capita in 2025 and had 1.09 hectares available in 1996.
100 x (1.09 - .63)/1.09 = 42.2%
Mastery is considered a score of 80% or higher on the math computations.

Question #6 assesses the geography standard. Evaluate according to the 6 Trait Writing Rubric for ideas and content. Mastery is considered 4 or higher on the rubric.

Extensions
The Population Reference Bureau website has many lesson plans and resource guides for educators. See their URL in the sources section below.

Sources