Whoa! Slow down—some of you!

OVERVIEW & OBJECTIVES	GRADES

GRADES

9th – 12th

TIME

4 days

REQUIRED MATERIALS

Students will analyze demographic data from the Population Reference Bureau and determine which areas of the world contain the fastest and slowest population growth rates. Students will determine that the fastest growth rates are in Northern and Eastern Africa and the slowest growth rates are found in Eastern Europe. Students will write an editorial on the best means to control population.

Students will be able to...
- Identify the major demographic indicators that indicate a high or low population growth rate.
- Compare/contrast the regions of the world using demographic indicators such as growth rate, natural increase, fertility rate, crude birth rates, and crude death rates
- Identify the regions of the world with the highest and lowest birth rates.
- Analyze the three means to control population growth: increase death rate, decrease birth rate and government laws.

✓ Population Data Sheet from the Population Reference Bureau
✓ Computer Internet access for students
✓ World map
✓ Atlas

MINNESOTA SOCIAL STUDIES STANDARDS & BENCHMARKS

Standard 5. The characteristics, distribution and migration of human populations on the earth's surface influence human systems (cultural, economic and political systems).
9.3.3.5.3 Compare the population characteristics of places at a range of scales using population pyramids, birth and death rates, and other key demographic variables.

SUGGESTED PROCEDURE

Day 1
The students will begin by playing a game. All the students will have a copy of the Population Reference Bureau's Population Data Sheet. The students will be looking at countries with the highest populations and the fastest areas of growth. Students will be awarded prizes for the correct response in the fastest time. Students should find and record the top 15 countries in total population. Once they have completed the task, they should find and record the top 15 countries in natural increase. Once they have these two lists, students should organize them into continents. They will find that Asia has the most countries in the top 15 of total population, but Africa and the Middle East have the most countries in the top 15 of population growth rate. Students will analyze why this is the case. Questions to be asked of students include:
1. What factors would contribute to Gaza doubling time of only 15 years?
2. Why do China and India dominate the world in terms of population? What factors have allowed their growth?
3. What countries were in the top 15 of total population and close to the top 15 in natural increase?

4.   What countries did you notice had no growth or little growth?
5.   What are the effects if these trends continue in the next 50 years?

Day 2
Students will be using the information from the previous day while examining population pyramids. Students will go to the Census Bureau website with population pyramids for every country in the world at http://www.census.gov/population/international/data/idb/informationGateway.php. Students will use their two top 15 sheets to identify the shape of the pyramid based on high population growth and low population growth. A high growth country will have a pyramid with a wide base and a narrow top. A low growth country will have a pyramid with a skinny top and bottom (a pillar shape).

Students will identify and label five countries on each continent using the world map. Students will then compare the findings of the five countries based on the population pyramids and the Population Data Sheet from the previous day. Students will then compare/contrast the regions of the world formed by the five representative countries using demographic indicators including growth rate, natural increase, fertility rate, crude birth rates, and crude death rates and the shape of the population pyramid.

Day 3
Students will write an editorial for the Population Times on how to best control population. The three means or strategies to control population are to increase the death rate, decrease the birth rate, and regulate population through governmental laws. Students will be split into three groups. Each group will analyze one of the three strategies of controlling population. Students will have 30 minutes to identify reasons why their strategy is the best strategy to control population. Students will then have another 15 minutes to discuss their reasons with the other groups and evaluate the other groups' strategies to control population. Students will write a one-page editorial expressing their particular point of view. Students will access the following resources to develop their arguments for the editorial:
- "Solutions" at Negative Population Growth
http://www.npg.org/
- "Countdown" from The New York Times: Sunday Book Review at:
http://www.nytimes.com/2013/10/13/books/review/countdown-by-alan-weisman.html?_r=0
- "Alan Weisman Asks: Can we voluntarily reduce world population growth" from The Star: Insight at
http://www.thestar.com/news/insight/2013/10/04/alan_weisman_asks_can_we_voluntarily_reduce_world_population_growth.html
- "Nine Population Strategies to Stop Short of 9 Billion" from WorldWatch Institute at
http://www.worldwatch.org/nine-population-strategies-stop-short-9-billion
- "Campaigns" from Population Matters at
http://www.populationmatters.org/

Advantages and Disadvantages to the Three Means:
Increase Death Rate:
Advantage - Although it sounds cruel, it is better to have one die today then ten die twenty years from now.
Disadvantage. – You are not assisting people who need immediate help. You are letting them die.
Decrease Death Rate:
Advantage – It is the most fair and freedom orientated method. People can choose to use birth control.
Disadvantage – It is not working in certain areas. People are not using it although it is offered to them at no cost.
Governmental Laws:
Advantage – It works most of the time. China has lowered their population growth rate by enforcing their one child policy.

Disadvantage – It limits the freedom and the choice to have more than one child.

Day 4
Students will be assigned with one other person from each of the viewpoints to form a trio. Students will each read their editorial to the other two people. Once all three have read their editorials they will have one minute to refute any information that was given during the other two presentations.

Students will determine which of the three means to control population they feel is the most effective upon completion of the editorial readings and rebuttals. The teacher should lead a discussion of the major points that the students initiated during the readings.

The teacher will administer an oral quiz asking students population questions using the Population Data Sheet and students' understanding of population pyramids.

Extension
The teacher can use this lesson at the local level as well as the global scale. Students can find data at the block or city level and determine the fastest growth rates found in the metropolitan area or city itself.

Assessments
- Class Discussions
- World Map and Population Data Comparisons
- Editorial

Definitions
Taken from James Rubenstein's book "An Introduction to Human Geography: The Cultural Landscape" (2005); Pearson Prentice Hall; Upper Saddle River, New Jersey.

1. Crude Birth Rate – The total number of live births in a year for every 1,000 people alive in the society.
2. Crude Death Rate – The total number of deaths in a year for every 1,000 people alive in the society.
3. Natural Increase Rate – The percentage growth of a population in a year, computed as the crude birth rate minus the crude death rate.
4. Doubling Time – The number of years it will take a population to double its population.

Website Resources
United States' Census Bureau
http://www.census.gov/population/international/data/idb/informationGateway.php

Population Data Sheet 2013 from the Population Reference Bureau
http://www.prb.org/Publications/Datasheets/2013/2013-world-population-data-sheet.aspx

"Solutions" at Negative Population Growth
http://www.npg.org/

"Countdown" at The New York Times: Sunday Book Review
http://www.nytimes.com/2013/10/13/books/review/countdown-by-alan-weisman.html?_r=0

"Alan Weisman Asks: Can we voluntarily reduce world population growth" at The Star: Insight
http://www.thestar.com/news/insight/2013/10/04/alan_weisman_asks_can_we_voluntarily_reduce_world_population_growth.html

"Nine Population Strategies to Stop Short of 9 Billion" at WorldWatch Institute
http://www.worldwatch.org/nine-population-strategies-stop-short-9-billion

"Campaigns" at Population Matters
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