√GE◯MATH

Smaller, Happier, Harmonious Families: China's One Child Policy

Students learn basic demographic concepts of China's population
policy through population graphs and guided notes.

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Grade Level	8
Duration	3 class periods

National Geography Standards

ELEMENT ONE: THE WORLD IN SPATIAL TERMS:
3. 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 Strand

Concept 1 World in Spatial Terms
PO 1 Construct maps, charts and graphs to display geographic information
PO 3 Interpret maps, charts and geographic databases using geographic information.
Concept 2 Places and Regions
PO 2. Explain the factors that contribute to political and social change in various world regions (e.g., USSR, Israel, European Union, China, Korea, Germany).
Concept 6 Geographic Applications
PO 3 Use geographic knowledge and skills when discussing current events.

Other Arizona Standards

Strand 2 World History
Grade 8
Concept 1 Research Skills for History
PO 2. Interpret historical data displayed in graphs, tables, and charts.
Concept 9 Contemporary World
PO 1. Describe current events using information from class discussions and various resources (e.g., newspapers, magazines, television, Internet, books, maps).
PO 3. Analyze how world events of the late 20th century and early 21st century (e.g., terrorism, globalization, conflicts, interdependence, natural disasters, advancements in science and technology, environmental issues) affected, and continue to affect, the social, political, geographic, and economic climate of the world.

Mathematics Common Core Standards
Functions
8.F.B.5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.
Statistics and Probability
8.SP.A.2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
Standards for Mathematical Practice
8.MP.2. Reason abstractly and quantitatively.
8.MP.3. Construct viable arguments and critique the reasoning of others.

Overview

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When the People's Republic of China (PRC) was founded in 1949, it had a population of 542 million. Despite the deaths of 30 million people during the Great Leap Forward, the population grew to an unprecedented 820 million by 1970. After decades of encouragement to have large families, the government realized the harmful impact posed by unchecked population growth on China's resources and economic development. In 1972, the government began a family planning campaign to restrict family size, which evolved into the present day "One couple, one child" policy. Although the One Child Policy has achieved low levels of fertility, China's population will increase by another 260-300 million people over the next three decades.

Purpose
In this lesson, students will assess the demographic characteristics of China's population growth, examine the demographic history of the PRC and the evolution of its family planning policies, and predict the future demographic profile for the People's Republic of China.

Materials
- World Map
- General Reference Resources: Almanacs, gazetteers, or computers with Internet access
- World's Most Populous Countries in 2014
- Projection device
- Student Notes and Answer Key
- Student Worksheet on Reading a Graph and Answer Key
- Public Service Announcement Examples
- China's One Child Policy Assessment and Answer Key
- Student Writing Prompt & Assessment Checklist

Objectives
The student will be able to:
1. Define key geographic vocabulary words including: demography, census, family planning, birth rate, death rate, growth rate, total fertility rate, and population momentum.

2. Write framed outline T-notes on China's One Child Policy.

3. Interpret a population growth graph of China, recognize population trends, and predict China's future pattern for population growth.

Procedures

SESSION ONE
1. Ask students to brainstorm the following question: What are the Top Five Most Populous Countries in the World? Generate a class list on the board and ask students why certain countries were selected. Next, ask students if they know what reference source to consult to find the answer to this question. *(An almanac, a gazetteer, online search engines for websites.)* Have one or more of these reference sources available for students to research the answer.

2. Have students collectively share their research results. Record the country names and population statistics on the board. Check student research results against the Population Reference Table: "World's Most Populous Countries in 2014" provided.

3. Have students locate China and India on a world map or in an atlas and identify the continent on which both countries are located (Asia). Inform students that the two countries of China and India account for 38% of the world's total population, and that China alone accounts for 22%.

4. A concrete way to illustrate the magnitude of China's proportionate make-up of the world's population follows. Since 22% is roughly equivalent to a fractional representation of 1/5th, tell students you will verbally count them off, one through five. Have every 5th student stand. Explain that if the classroom were a sample representation of the earth's population, the standing students would represent the

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proportion of people who would be Chinese; that is, one out of every five persons!

5. Next, pose the following questions to initiate class discussion: "Is it a "good" thing to be ranked Number One or Two in World Population? How would a huge population impact a country's resources and economy? Would a huge population affect a developing nation differently than a developed nation?"

6. Explain to students that in the 1970s, the government of China realized that unchecked population growth would dramatically hurt its citizens and that an immediate solution was needed. The government came up with a family planning system also known as the One Child Policy. This policy is quite controversial. Many human rights organizations believe it poses a direct violation on people's basic rights. They also accuse Chinese officials of brutal methods of enforcement, including forced abortions, sterilizations, female infanticide, beatings, razing of homes, jail sentences, and severe penalty fines. On the other hand, the Chinese government claims that the policy is a necessary duty to insure the present and future well being of its citizenry.

7. Show students the Population Reference Table: "World's Most Populous Countries in 2050" and explain that most demographers predict that if China can keep its population growth in check with the One Child Policy, then its population growth will begin to stabilize and it will move down to number two by the year 2050. Ask students, "Which country will move up to number one ranking?" (India - Explain that India does not have a one child policy.)

8. Distribute the Student Notes. As the teacher explains the Demography Basics on page one, students fill in the missing notes. The teacher should also display the Answer Key on a projection system as well. Stop at the end of page 1 of the Student Notes.

9. Now check for understanding on the following two demographic concepts:
1) "What is the difference between Birth Rate and Growth Rate?" (BR is the number of people added to the population each year due to births. GR is the overall number of people added to, or subtracted from, the population due to births, deaths, and migration.)
2) "What is the single most important factor in determining a country's population growth?" (TFR or Total Fertility Rate. If a country can accomplish a TFR of 2.1 or less, then its population growth will eventually stabilize, then decrease.)

SESSION TWO
1. Pass out the Student Worksheet on Reading a Graph. Discuss graph reading basics with the students: Graph Title, Years on the x-axis, Total Population on the left Y-axis and Crude Birth and Death Rates on the right Y-axis, the legend, and "how to" read the lines on the graph. Have students perform the worksheet activities.
Note: Have students trace the slope lines in contrasting colors. This will enable easier visual identification of the proper slope lines for the various questions on the worksheet. It would be best to stick to the colors used in the answer key; that is, red for Total Population, green for Crude Birth Rate, and black for Crude Death Rate.

2. Project the Answer Key. Go over the correct answers for the Student Worksheet.
3. Finish the Student Notes from Session One. The teacher discusses China's Demographics: A Brief History on pages 2-4 of the Student Notes, as students fill in the missing notes. Note: It is possible to teach an abbreviated form of this lesson by using only pages 1 and 4 of the Student Notes. Pages 2 and 3 go into a more in-depth treatment of the historical evolution of the PRC's Family Planning Policies.

4. After completing the Student Notes, initiate an open forum class discussion about the One Child Policy. Allow for open debate regarding

the pros and cons posed by the policy. Have students predict if China will be able to stabilize its population in the near future. Ask students, "Should the One Child Policy remain?"

SESSION THREE
1. Give students the China's One Child Policy Assessment to evaluate mastery of the demographic concepts illustrated by China's One Child Policy and the math skills involved in interpreting data and recognizing trends on a population graph.
2. Introduce the writing prompt. Have students work in groups to create their public service announcements.

Assessment

Geography Assessments: Students need to score at least 80% on questions 1-5 to show mastery on the geography component of China's One Child Policy Assessment.

Students need to score at least 90% on Student Notes to show mastery.

Math Assessments: Students need to score at least 80% on questions 6-10 to show mastery on the mathematics component of China's One Child Policy Assessment.

Students need to score 80% or higher on the Student Worksheet on Reading a Graph to show mastery.

Writing Assessment: Students need to receive a 4 or higher on the 6 Traits Writing Rubric in the area of Ideas and Content, Word Choice, and Voice to show mastery.

Extensions

Have students compare the Population Pyramids for China for the years 2000 and 2050. Ask students to interpret how population momentum is displayed in the double bar graphs.
http://www.census.gov/population/international/

Have students construct their own "Population growth, crude birth and death rates, 1949-1996" Graph for the country of India. Ask students to compare India's CBR, CDR, and population growth trend with that of China's, paying particular attention to the time period after the late 1970's, when the One Child Policy was implemented.

Sources
Population Reference Bureau Website:
http://www.prb.org

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

Population and Reproductive Health Profiles, Statistics and Indicators
http://www.unfpa.org/public/countries
Ministry of Foreign Affairs of the People's Republic of China
http://www.fmprc.gov.cn/eng/default.htm

China Internet Information Center Website:
http://www.china.org.cn/

China in Brief – Population and Ethnic Groups
http://www.china.org.cn/english/features/37208.htm

International Institute for Applied Systems Analysis website: "Can China Feed Itself?"
http://www.iiasa.ac.at/Research/LUC/ChinaFood/index_s.htm

Stefan Landsberger's Chinese Propaganda Poster Pages website:
http://www.iisg.nl/~landsberger/ - to download "Population Policy in the 1970's" posters:
http://www.iisg.nl/~landsberger/pop1.html For "Population Policy - China 1986-88" posters:
http://www.iisg.nl/~landsberger/pop.html For "Fifth National Census – 2000" posters:
http://www.iisg.nl/~landsberger/rkpc.html

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United Nations ESCAP (Economic and Social Commission for Asia and the Pacific) Population Programme Databases Website: http://www.unescap.org/pop/database/chinadata/intro.htm

China Population Information and Research Center Website: http://www.cpirc.org.cn/eindex.htm Official

U.S. Committee for Refugees Website: http://www.refugees.org/world/articles/women_rr99_8.htm – Worldwide Refugee Information, "China's One Child Policy," Sept. 1999.

A January 1999 report from U.S. Embassy Beijing, "Quanzhou, Fujian – A Traveler's Tale." http://www.usembassy-china.org.cn/sandt/Quzhweb.htm

An April 2000 report from U.S. Embassy Beijing, "Family Planning Rules in the Xi 'an, Shaanxi Region." http://www.usembassy-china.org.cn/sandt/xian-fp.htm

An April 2000 report from U.S. Embassy Beijing, "PRC Family Planning Rules In Rural Henan County." http://www.usembassy-china.org.cn/sandt/shangcaipop.htm