#### DEMOGRAPHICS THROUGH INFOGRAPHICS

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**School**: Pulaski Academy, Little Rock, Arkansas **Subject Area**: Social Science, Human Geography

Grade Level: 9-12

**Time Frame**: Six 80 minute class periods (or about 7 hours). Although that time period is flexible. It is OK to use only parts of this unit plan. Also, it is important to note, that my students are on a rotating block schedule so we meet every other day. If you meet with your students daily, you may want to make adjustments to the homework assignments.

**Introduction:** This lesson plan is designed to teach the population unit (Unit II I in accordance with College Board AP standards) in Human Geography with the focus on demography. Note: This unit does not include information on migration which is also a key component of the population unit.

Geographic Connections: Global demographic concepts and comparisons

Vocabulary:

Demography Age-sex (population) pyramid J-curve
Crude birth rate Bottleneck Mortality

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Crude death rate
Infant mortality rate
Demographic equation
Total fertility rate
Demographic momentum
Demographic Transition model
Cohort
Dependency ratio
Neo-Malthusian
Overpopulation
Population densities
Population distributions
Population explosion

Rate of natural increase Doubling time S-curve

Population projection Epidemiological Transition model

Zero population growth Fertility control

**Key Figures** (varying points of view):

Thomas Malthus Ester Boserup Paul Ehrlich

Karl Marx Ramirez Nam (not a population expert, but speaks in podcast from technology/

development perspective)

## Stage 1 – Desired Results

#### **Common Core Content Standard(s):**

- <u>CCSS.ELA-Literacy.RH.11-12.1</u> Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
- <u>CCSS.ELA-Literacy.RH.11-12.2</u> Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
- <u>CCSS.ELA-Literacy.RH.11-12.3</u> Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.
- <u>CCSS.ELA-Literacy.RH.11-12.4</u> Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines faction in Federalist No. 10).
- <u>CCSS.ELA-Literacy.RH.11-12.6</u> Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.
- <u>CCSS.ELA-Literacy.RH.11-12.7</u> Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.
- <u>CCSS.ELA-Literacy.RH.11-12.8</u> Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.
- <u>CCSS.ELA-Literacy.RH.11-12.9</u> Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.
- <u>CCSS.ELA-Literacy.RH.11-12.10</u> By the end of grade 12, read and comprehend history/social studies texts in the grades 11–CCR text complexity band independently and proficiently.

College Board Advanced Placement requirements for Human Geography (Unit II)

## Understandings/Goals: Students will understand that:

- Through statistical research, analysis, and interpretation, demography can provide a snapshot of a particular region's conditions.
- Population size, growth, characteristics, and distribution of smaller regions can impact larger, distant regions.
- A regions demographic character reflects the level of development and/or stability in the region.
- There are multiple explanations as to why (or why not) population increase is an impending threat to the distribution of resources
- The major cause for rapid population growth

### **Essential Questions Related to Theme:**

- As far as policy is concerned, what should be more of a priority: development, education (for girls), or family planning options?
- What is the relationship between education (for girls) and population growth?
- What impact does rapid population growth in other countries have on the US and our foreign policy?
- Why does it take so long to slow or stop population growth, and why, even in some countries where there is a negative increase rate, the population is still expanding?
- What are the social implications of rapid population growth in Less Developed Countries?

# Student Objectives (Outcomes): Students will be able to:

- Know key concepts, vocabulary, and the Demographic Transition Model.
- Compare and contrast 2 or more opposing POV's in regards to population theory.
- Understand the relationship between development and education to population increase or decrease.
- Create an info graph about a country regarding their population and development data.

#### Stage 2 – Assessment Evidence **Performance Task(s):** Other Evidence: ☐ Authentic, performance based tasks that ☐ Includes pre-assessment, formative have students apply what they have learned assessment, and summative assessment evidence and demonstrate their understanding. ☐ Can be individual- or group-based ☐ Designed at least at the application level ☐ Can include informal methods (such as or higher on Bloom's Taxonomy thumbs up, thumbs down, and formal assessments, such as quiz, answers to questions ☐ Rubrics can be used to guide students in on a worksheet, written reflection, essay self-assessment of their performance Stage 3 - Learning Plan

**Learning Activities:** (Again, this is designed for a six-day unit with 80 minute class periods, but parts of the unit may be selected individually or in combination with other parts)

## Day One:

- Assign vocabulary and Key figures. Students will be given 20 minutes to get the definitions (formulas) for the vocabulary in the first column. The vocabulary will be written in their unit journal and they will need to leave room for examples as we explore the vocabulary.
- Next, students will be given the 2012 (or most recent) World Population Data Sheets and two worksheets to fill out. They will work with a partner. The first sheet they will fill out is: The World Population Data Sheet at a Glance. Second, they will complete a country profile. They will choose their country from randomly from a hat once they have completed the first worksheet. They will have the rest of the class period to complete their country profile. If they finish the country profile early, they can get the instructions for the info graph, and begin the brainstorming process.
- For homework: Read the Population Bulletin (published by PBR) Vol. 62, No. 1, 'Population: A Lively Introduction'

## Day Two:

- 12-15 minutes: Quiz/free write based on homework
- 15 minutes: Prezi/PowerPoint on the Demographic Transition Model
- Give infographics assignment. Students will have the remainder of class to research and create the skeleton or flowchart design of the info graphic.
- Homework: Complete the rest of the vocabulary and the Key Figures not completed in class the first day.

## Day Three:

- 5-10 minute pair/share: Have the partners of each group pair up with another group to compare and discuss results they have discovered about their country. If discussions are lacking, have students hypothesize on why their respective countries have their particular population data. What do they find interesting, and what do they want to find out.
- 15 minute Prezi/PowerPoint on population pyramids
- Students will have the rest of class to work on info graphics.
- Homework: Read the Population Bulletin (published by PBR) Vol. 59. No. 1, 'Transitions in World Population' only pages 3-21. Be able to explain the DTM and reasons for the transitions

### • Day Four:

- TED Talk: Hans Rosling, Global Population Growth, box by box (10 minutes)
- Students will have the rest of class to finalize their info graphics.
- Homework: Have infographics ready for in-class peer reviews.

#### • Day Five:

- Info graphics: in-class peer reviews, edits, and final submitted online by midnight.
- Homework: Listen to podcast: Science Fantastic with Dr. Michio Kaku, 'Energy, Population, Water, Fossil Fuels' (only first 15 minutes); be prepared for graded synthesis discussion (some questions provided).

#### • Day Six:

Synthesis Discussion: (Roundtable) Questions are asked in a Socratic style from the unit

#### **Resource List/Bibliography:**

http://www.reelhouse.org/tiroirafilms/mothercaringfor7billion/mothercaringfor7billion

http://www.ted.com/talks/hans\_rosling\_on\_global\_population\_growth.html

I will be using this lesson in the second unit (of seven) for my AP Human Geography class which is taken at the senior level at Pulaski Academy, an independent school, in Little Rock, AR.