



Title: Mastering Principles of World Population

Grade Level: 9th Grade Academic and Pre-AP World Regional Geography

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Rationale: Throughout history, world population has grown exponentially. Students need to understand physical features, innovations, and world events that have influenced trends in population growth and population distribution patterns. Students also need to understand that there are different tools that geographers can use to examine population growth and trends (i.e. population density maps, population pyramids, and the demographic transition model). In this three part lesson students will be presented with an overview of world population throughout history, explore vocabulary associated with population geography, examine and analyze world population maps and world population density maps, and participate in a simulation to illustrate the concept of population density. Part two will allow to students to interpret, analyze, and construct population pyramids. Part three students will discuss and sketch the demographic transition model and review the previously discussed tools that geographers can use to examine population growth and trends.

Time Frame: Three 50 minute class periods

Learning Outcomes: Students will be able to:

1. Understand the trends in population growth
2. Understand geographic terminology pertaining to population
3. Understand population distribution
4. Understand patterns associated with population distribution

TEKS Objectives:

1(A) analyze the effects of physical and human geographic patterns and processes on events in the past and describe their effects on present conditions including significant physical features and environmental conditions that influenced migration patterns in the past and shaped the distribution of culture groups today;

5(B) analyze political, economic, social, and demographic data to determine the level of development and standard of living in nations.



6(B) explain the processes that have caused cities to grow such as location along transportation routes, availability of resources that have attracted settlers and economic activities, and continued access to other cities and resources.

7(A) construct and analyze population pyramids and use other data, graphics, and maps to describe the population characteristics of different societies and to predict future growth trends;

7(B) explain the political, economic, social, and environmental factors that contribute to human migration such as how national and international migrations are shaped by push-and pull factors and how physical geography affects the routes, flows, and destinations of migration;

7(C) describe trends in past world population growth and distribution;

7(D) develop and defend hypotheses on likely population patterns for the future.

Vocabulary:

Population Density

Population Pyramid

Literacy Rate

Life Expectancy

Birth Rate

Death Rate

Infant Mortality

Child Mortality

Demographic Transition Model

Developing Country

Developed Country

Push Factor

Pull Factor

Migration

Immigration

Materials:

Population world clock (<http://www.opr.princeton.edu/popclock/popupclock.html>)

Note cards

Timeline depicting population throughout history (image)

Population Density World Map

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<http://www.geo.txstate.edu/tage/>

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*Access the sample Population Pyramid lesson from *Population Connection* [includes a lesson with sample population pyramids, etc.]

http://www.populationeducation.org/media/upload/Activity-power_of_the_Pyramids.pdf

Blank computer paper

Map pencils

Ruler

Projector

Demographic Transition Model (image)

Websites to use to access density world maps:

World View: <http://chartsbin.com/view/e1r>

Current world countries with youngest population: <http://chartsbin.com/view/1237>

India: <http://chartsbin.com/view/1200>

Example of Youtube video with Demographic Transition Model:

<http://www.youtube.com/watch?v=0dK3mL35nkk>

Population Connection video on World Population:

http://www.youtube.com/watch?v=9_9SutNmfFk

Procedures:

1. Engage students by using population world clock so that they can understand the magnitude of world population growth. Mark the starting number and then at the end of the lesson inform students how much the population has grown.
2. Review images of world population growth throughout history.
3. Engage students by posing the following questions:
 - a. When do you first see changes in population growth?
 - b. What are the causes of population growth?
 - c. What are the consequences of population growth?
 - d. What are predictions of future trends of population growth?
4. Teach vocabulary using pair/teach/share strategy. Students will be randomly assigned one of the fifteen vocabulary words and will be instructed to become an expert on that word. Students will find a definition for their word and then use a note card to write a paraphrased definition of their word and draw a picture that illustrates their concept. Students will then teach their classmates the word they have mastered. Students will pair with two other students to teach their word and to learn two others. There will be seven rounds and students will be given two minutes for each round.
5. Students will explore population world maps and world population density maps. Students can investigate questions such as:

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- a. Where are the highest population densities?
- b. Why are the highest population densities in those areas?
6. To assist students in understanding the concept of population density they will participate in a simulation.
 - a. Allow students to remain in their desk and tell them that they are at a comfortable population density of 87.4 people per square mile in America.
 - b. If possible, with the tiles (Approximately 2 by 12 tiles) on the floor in your classroom simulate the Nile River and have every student stand on that limited area. Tell the students that in Egypt everyone has to live along the Nile River to have water so their population density is 2,216 people per square mile.
 - c. Lastly, instruct every student to touch the same desk. Inform students that they are in Singapore where the population density is 7,357 people per square mile.
7. Introduce population pyramids and discuss questions.
8. *Instruct students to construct a population pyramid (see *Population Connection* lesson plan)
9. Introduce the demographic transition model by using the video
10. Instruct students to draw and interpret the demographic transition model.

Evaluation/Assessment:

1. Students will participate in class discussions over population growth trends, population pyramids, and the demographic transition model.
2. Students will orally interpret population pyramids and construct their own population pyramid using pre-selected data.
3. Students will construct and explain the demographic transition model.

POPULATION PYRAMID QUESTIONS

1. In the US are there more male or female babies?
2. In the US, who lives longer - male or female? How do you know?
3. How old are the people in the “bulge” area? What explains the bulge?
4. Look at the pyramids for Cedar Rapids and Honolulu. The citizens of Cedar Rapids, Iowa, are descendants of Europeans. The citizens of Honolulu are of Asian descent. How might this explain the birth rates?
5. The citizens of Laredo, Texas, and Detroit, Michigan, are dominantly of the Mexican ethnic group and of the African American ethnic group. How might that explain the birth rates?

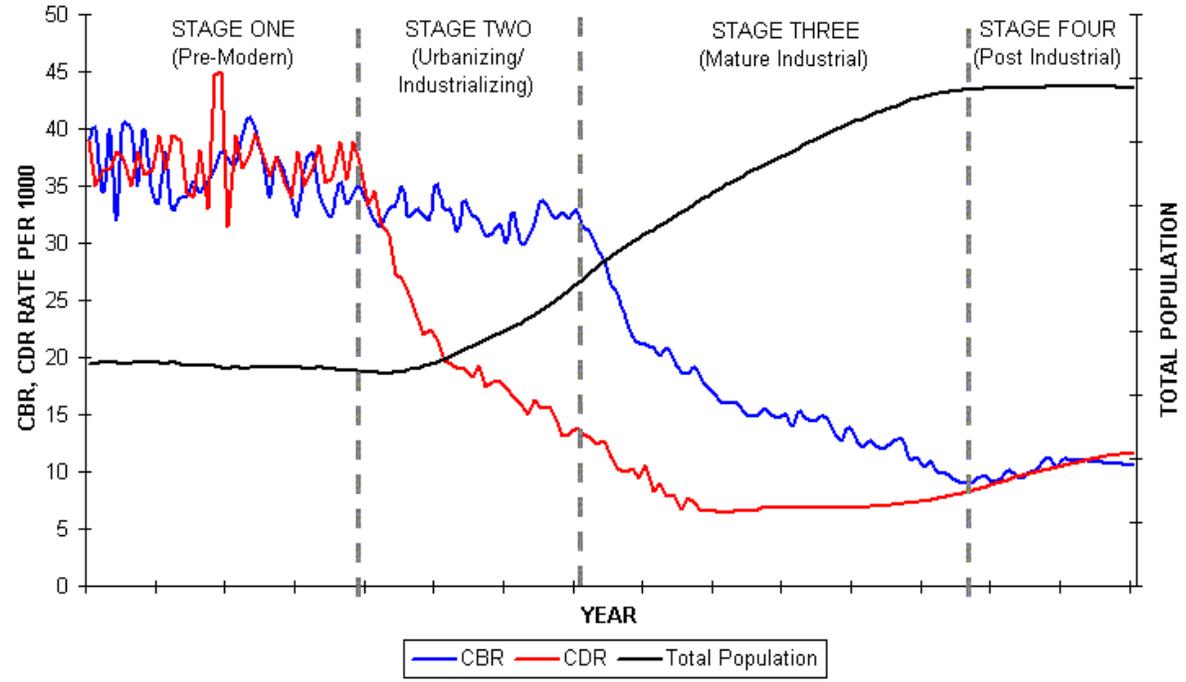
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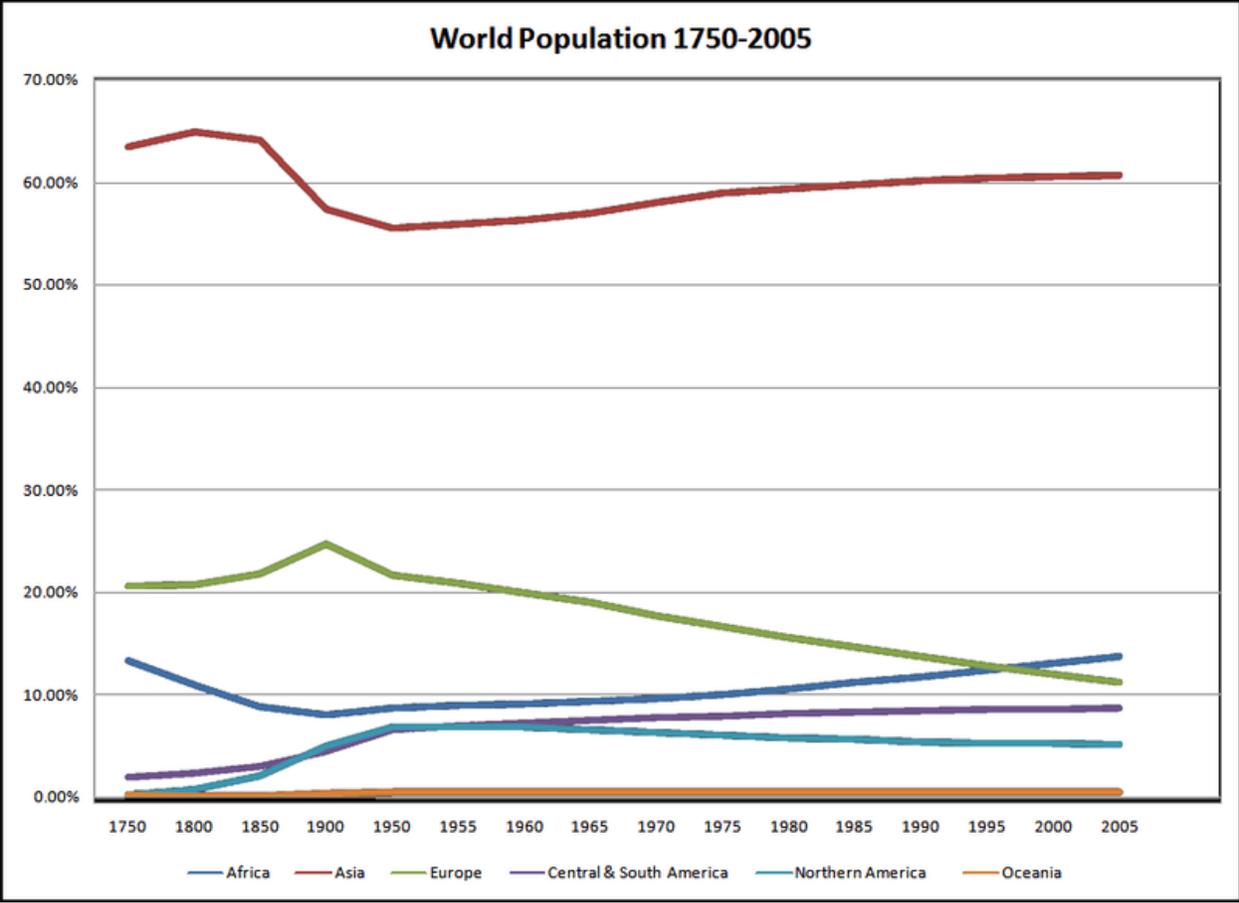


6. What might account for the large male population in Unalaska, Alaska?
(brainstorm)
7. What might account for the large number of people in the 20-24 and 18-20 age group in Lawrence, Kansas? (brainstorm again)
8. What might account for the small number of citizens age 30 and below and the large number of citizens over 40 in Naples, Florida?

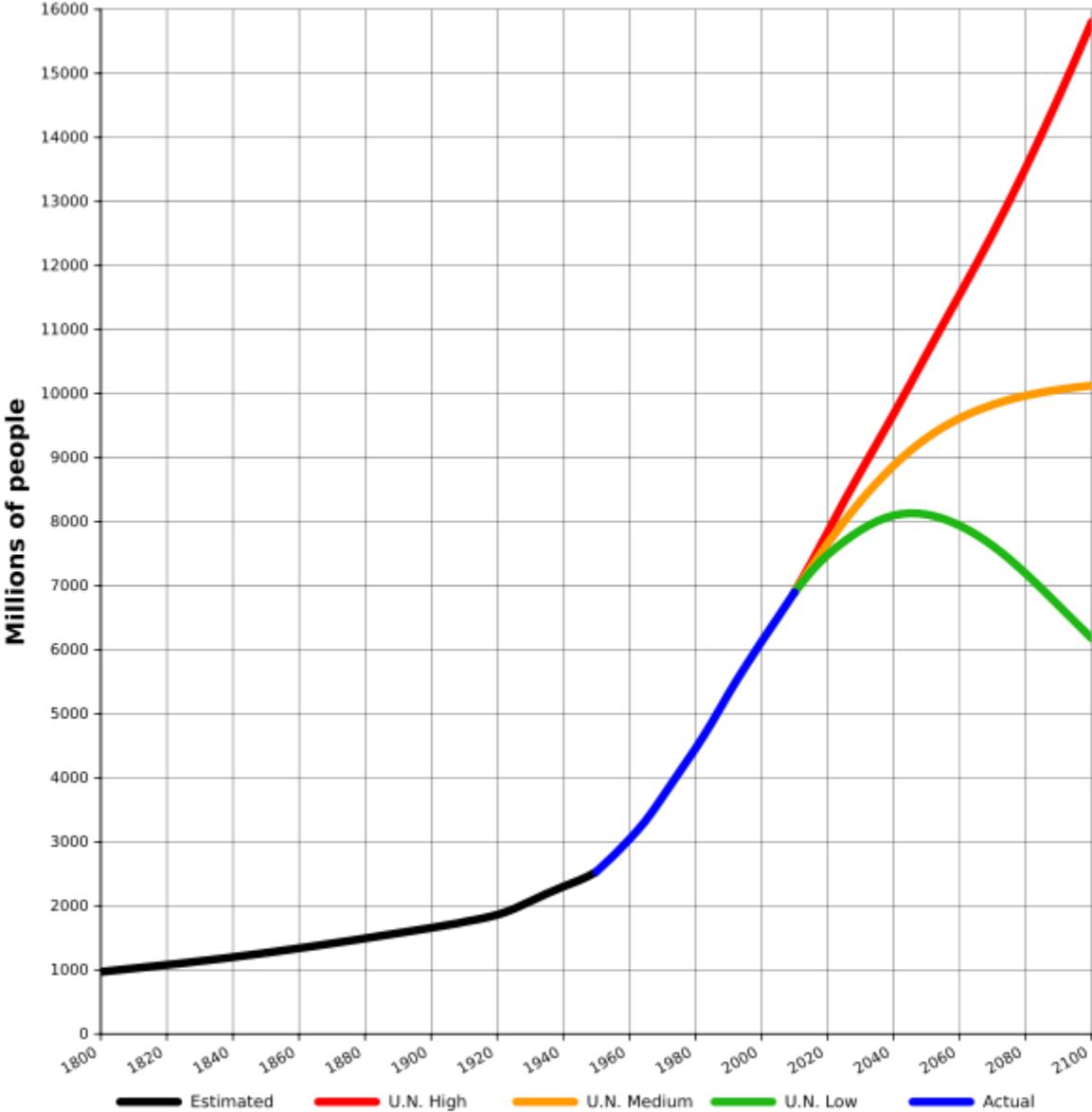
THE DEMOGRAPHIC TRANSITION MODEL



Source: <http://www.uwmc.uwc.edu/geography/demotrans/demtran.htm>



World-Population-1800-2100



Source for the above graphs: http://en.wikipedia.org/wiki/World_population