

Unit 2 Population

Text Readings:

Rubenstein, James M. 2005. *The Cultural Landscape; An Introduction to Human Geography*, 8th ed. Upper Saddle River, NJ Pearson Prentice Hall, (Chapter 2 Population pgs 44-80)

Kuby, Michael, et al. *Human Geography In Action*. 4th Ed. New York: John Wiley, 2006. . Chapter 3 pgs 61-82, Chapter 5 pgs 109-132

Student Supplemental Readings:

Morrill, Richard. 2005. The Spread of Natural Decrease. *Focus on Human Geography: Readings from Focus on Human Geography Magazine* ed Catherine M. Lockwood. Pgs 9-13

Hsu, Mei-Ling. 2005. Population of China: Large is not Beautiful. *Focus on Human Geography: Readings from Focus on Human Geography Magazine* ed Catherine M. Lockwood. Pgs 15-19

Heilbroner, Robert L. 1995. *The Worldly Philosophers*. Touchstone, New York, NY pgs75-104

Website References:

www.pbr.org - population resource

www.collegeboard.com - AP Central Course description, syllabi, vocabulary

www.prenhall.com/rubenstein - textbook company website

Unit Objectives:

- Identify areas of dense and sparse population distribution around the world.
- Evaluate environmental, social, political and economic factors leading to increases and decreases in overall population.
- Analyze common characteristics of high and low density areas.
- Compare the 5 population concentration regions.
- Analyze geographic data relating to population on cartograms and thematic maps, data tables, charts and graphs.
- Compare various calculations of pop density including arithmetic, physiological and agricultural.
- Identify the various stages of Demographic transition and characteristics of each state.
- Apply demographic transition model to England and other countries
- Evaluate population pyramids for various countries.
- Generate hypotheses about increase and decreased based on population data.
- Evaluate the Malthusian Dilemma and its applicability given population data today.
- Analyze the stages of Epidemiological transmission and its impact on population.
- Evaluate various population case studies including India, China, epidemics.

Unit Focus Questions:

- **Where** is the world's population distributed?
- **Where** has the world's population increased?
- **Why** is population increasing at different rates in different countries?
- **Why** might the world face an overpopulation problem?

National Geography Standards Addressed:

#1 - How to use maps and other geographic representations, tools and technologies to acquire, process and report information from a spatial perspective.

#2 - How to use mental maps to organize information about people, places and environments in a spatial context.

#3 - How to analyze the spatial organization of people, places and environments on the Earth's surface.

#12 - the Geographically informed person knows and understands the processes, patterns and functions of human settlement.

#9 - the characteristics, distribution and migration of Human populations on the Earth's surface.

Daily Activities Summary:

Date	In Class	Due for this Class

Unit Discussion Questions:

Unit Vocabulary/Concepts:

Agricultural density	Infant Mortality Rate
Agricultural revolution	Life Expectancy
Arithmetic density	Medical Revolution
Census	Natural increase rate
cohort	Overpopulation
Crude birth rate	Pandemic
Crude death rate	Physiological density
Demographic transition	Population pyramid
Demography	Sex ratio
Dependency ratio	Total Fertility rate
Doubling time	Zero Population growth
Epidemiologic transition	
Epidemiology	
Ecumene	
Industrial Revolution	

Day 1 Population

Overview

Lesson Abstract:

The purpose of this lesson is to introduce students to the basic concepts of population study focusing on population distribution. Students will be asked to generate hypotheses about population based on their prior knowledge. Students will then conduct an investigation of their text and world Population data supplement to confirm or refute their hypotheses about the location of population.

National Standards:

#1 - How to use maps and other geographic representations, tools and technologies to acquire, process and report information from a spatial perspective.

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#3 - How to analyze the spatial organization of people, places and environments on the Earth's surface.

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Materials:

Data Projector, overhead or chalk board

Chart paper

Key Terms and Discussion Questions Hand-out day 1

Population concentrations/Sparse Population Charts

World Mapping Activity

Reflection journals

Websites:

www.ibiblio.org/lunarbin/worldpop

www.prg.org

Time: 1 90 minute block

Lesson Plan

Focus Question: Where is the world's population distributed and why? (students should answer this question in a journal that they keep for the class)

Learning Objectives:

- Identify areas of dense and sparse population distribution around the world.
- Evaluate environmental, social, political and economic factors leading to increases and decreases in overall population.
- Analyze common characteristics of high and low density areas.
- Compare the 5 population concentration regions.
- Analyze geographic data relating to population on cartograms and thematic maps, data tables, charts and graphs.
- Compare various calculations of pop density including arithmetic, physiological and agricultural.

Procedure:

Prerequisite Work:

Read Rubenstein pgs 46-53, define key terms and discussion questions.

Part I. Warm-up/Engage Activity:

1. project the population clock on the board, or write the current population. A running clock can be found at the following website <http://www.ibiblio.org/lunarbin/worldpop>
2. choose a date and put it into the clock to compare today's population with population in the past. You may want to look at a couple of different dates to compare growth rates.
3. have students develop hypothesis about population to see what they know already, and help debunk myths as the unit progresses.
4. Students should provide hypotheses about the location of population, factors causing an increase/decrease in population, environmental, political and social impact of population.
5. Generate a list of student responses on a piece of chart paper, or record on the computer or transparency. Keep this list to review at the end of class so that hypotheses can be confirmed or refuted on a daily basis.

Part II. Review of Key Terms

1. Review key terms via lecture. See key terms list
2. Review Discussion Questions.

Part III. Student Exploration of Information

1. Have students independently read Rubenstein pgs 46-53 before class
2. Work in groups to complete the Population Concentrations/Sparse Population Charts
3. Complete the data analysis questions for the charts.

Part IV. Direct Instruction - Teacher Explanation

1. Review information from the charts.

Part V. Spatial Awareness and Mapping Extension

1. Have students complete the Mapping World Population Activity
2. Review student maps and summary questions

Part VI. Closure

1. confirm or refute any hypotheses from class list that apply to today's lesson.
2. journal entry focus question

Evaluation:

- Student responses to discussion questions
- Student responses on charts and maps
- Student hypotheses
- Student journal response

HW: Read Rubenstein pgs 53-57 - complete discussion questions for this section

Population Requisite Assignment Student Hand-out

Key Terms

Define each term below.

1. Demography -
2. Overpopulation -
3. Ecumene -
4. Arithmetic Density -
5. Physiological Density -
6. Agricultural Density -

Rubenstein Discussion Questions pgs 45-53

Complete each question below.

1. Figure 2-1 pg 48 - What are the advantages and disadvantages of using figure 2.1 and 2.2 to represent population? Which countries have highest population (2.1)? Where is population density high/low (2-2)?
2. How has the ecumene changed overtime? Use maps on page 50
3. What are the advantages and disadvantages of using arithmetic density, physiological density and agricultural density?
4. Using table 2-1 pg 53 - Are there any correlations between percent farmers and percent arable land, and the three measures of density?

Population Requisite Assignment

Teacher Notes

Key Terms

Define each term below.

1. Demography - The scientific study of population characteristics
2. Overpopulation - The number of people in an area exceeds the capacity of the environment to support life at a decent standard of living.
3. Ecumene - The portion of the Earth's surface that is occupied by permanent human settlement
4. Arithmetic Density - the total number of people divided by the total land area
5. Physiological Density - the number of people per unit of area of arable land, which is land suitable for agriculture
6. Agricultural Density - The ratio of the number of farmers to the total amount of land suitable for agriculture

Rubenstein Discussion Questions pgs 45-53

1. Figure 2-1 pg 48 - What are the advantages and disadvantages of using figure 2.1 and 2.2 to represent population? Which countries have highest population (2.1)? Where is population density high/low (2-2)?

Adv	Disadv
2.1 shows population in comparison to other countries and regions	2.1 does not show population distribution within countries
2.2 Shows population distribution within regions and across the globe	2.2 is difficult to compare individual countries to one another

Highest Population:

China,	Japan	Nigeria
India	Brazil	Germany
Indonesia	United States	

Density high

India	Coastal north west South	Japan
East coast of china	America	Some Pacific Islands -
Central America	Europe	Indonesia
	Equatorial Africa	

Density Low:

North Africa	North Central South	East/Central China
Australia	America	Central and Northern
	Northern Canada	Russia

2. How has the ecumene changed overtime? Use maps on page 50

Settlement started in ancient river valleys of Middle East and Asia, from there it has spread along coastal areas of the large continents, eventually filling in the interior of each country, except in areas that are inhospitable due to physical geography - deserts, rainforests

3. What are the advantages and disadvantages of using arithmetic density, physiological density and agricultural density?

	Adv	Disadv
Arithmetic	Gives us an idea of overall density of a country Answers the where questions	Does not provide a useful measure of sustainability
Physiological	A good measure of the sustainability of the population because it measures pop density based on arable land Answers the why question	Should use it in conjunction with arithmetic density. Does not take into account countries plentiful in natural resources who can buy food elsewhere
Agricultural	Often gives us a measure of development in the nation. The lower the number the more developed	Should use with physiological in order to identify the relationship between pop and resources

4. Using table 2-1 pg 53 - Are there any correlations between percent farmers and percent arable land, and the three measures of density?

There is no correlation in the data.