

# Population Density

## **Standard V: Geography**

### **Substandard C – Spatial Organizations**

**Standard Topic:** The student will understand the regional distribution of the human population at local to global scales and its patterns of change.

**Benchmark 1:** Students will describe the pattern of human population density in the United States and major regions of the world.

**Grade level:** 9/12

**Overview:** The lesson is designed to help students understand the difference between population density and population distribution. In addition, students will be able to identify world population patterns and the geographic factors that affect them.

**Time:** Four (4) 45-minute class periods not including extension activities

**Subjects:** Geography

**Required Materials:** Internet access

Printer for pie charts on Day 1

[Population Density and Distribution Worksheet](#)

World atlas with detailed physical maps by world regions,  
recommended atlases include:

Goodes

Nystrom

Rand McNally

**Optional Technologies:** A web site is provided as a link to help students create pie charts – they will need to be able to print these charts to answer questions on Day 1. If computer access is unavailable an atlas with multiple physical and population thematic maps can be used. The same atlases as above are recommended.

**Objectives:** After completing this lesson students will be able to:

- \* explain the difference between population density and population distribution
- \* describe the patterns of population in major world regions
- \* identify factors/features that affect these patterns

### **Day 1: Introduction/Vocabulary**

- 1) Using [Population Density and Distribution Worksheet](#) define:
  - population density
  - population distribution

2) Using <http://nces.ed.gov/nceskids/Graphing/>

Create pie charts showing population distribution based on the following regional % totals: (print pie charts – used to answer questions on work sheet)

	<b>1950</b>	<b>1999</b>	<b>2050</b>
Africa	9	13	20
Asia	56	60	60
Europe	22	12	7
Latin America and the Caribbean	7	9	9
North America	7	5	3
Oceania	1	1	1

Source: *The World at Six Billion*, Table 2, UN Publication Division  
<http://www.un.org/esa/population/publications/sixbillion/sixbillion.htm>

Current population density of the above regions:

Africa	74/sq mi
Asia	312
Europe	82
Latin America and the Caribbean	68
North America	42
Oceania	10

Source: Population Reference Bureau Data Sheet 2003  
[http://www.prb.org/pdf/WorldPopulationDS03\\_Eng.pdf](http://www.prb.org/pdf/WorldPopulationDS03_Eng.pdf)

3) Using the charts and population density information answer the questions on the [Population Density and Distribution Worksheet](#)

### **Day 2/3: Analyzing population patterns**

Open the site <http://earthtrends.wri.org/text/POP/maps/192.htm>. You can make the map larger by using the options on the right side of the map. These options will help you move the map around to view regional areas of the world. You are also able to zoom in to get a better look.

Using this Global Population Density map answer the questions on [Population Density and Distribution Worksheet](#) for regional distribution and patterns with regions.

### **Day 4: Assessment**

The above worksheet can be used as an assessment

## **Resource Bar**

**Definitions:** See Day 1

**National Geography Standard:**

**Standard 9** The characteristics, distribution, and migration of human populations on Earth's surface.

**Standard 12** The process, patterns, and functions of human settlement.

**Supplemental Web Link for Teachers and Students:** See Extensions below

**Extension:** Depending on time you can use these sites to analyze population density and patterns in other world regions.

Some online population activities include:

A hands-on activity for students to help them understand population density

<http://illuminations.nctm.org/lessonplans/6-8/popdens/>

This is an activity written for grades 6-8 but is well done and interesting for students.

This is a hands-on activity for students to help them analyze population density in the United States

<http://www.nationalgeographic.com/xpeditions/lessons/01/g912/density.html>

Population in China and India

<http://www.nationalgeographic.com/xpeditions/lessons/09/g912/population.html>

Population Reference Bureau Publication

Ripple Effects: Population and Coastal Regions

(effects of growing population on coastal regions)

<http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=9513>

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