

Comparative Geography I

Purpose:

To have students use population density and other statistics to compare countries.

Target Grade Level: 6-7

Essential Questions:

1. How does the population density of countries differ?
2. How does population density affect the way of life of a country?
3. How does geography affect population density?

Rationale:

Given statistical information, students will make generalizations about the impact of population density.

Materials:

- Comparison Table of Countries (Handout A)
- Internet access or current *World Almanac* or *Information Please, Almanac*

Activities:

1. Introduce the lesson with the following question:
How do you think Japan's population density compares with that of the United States?
Have students discuss their thoughts on this. Be sure students understand what is meant by the term "population density" - *The average number of people living within a square mile or square kilometer.*
2. Put information on the board, overhead, or give each student or group a copy of the table.
Question: How might one find the population density given the above information?
Divide the total population by the total land area.
3. Working individually, students find the population density for the countries listed in the table. Students compare findings with a partner, and then share with the class. (*China—338; Australia—6*)

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4. Working individually, students are to make comparisons and make note of any conclusions they can draw. (Accept all comparisons.)
 - *The U.S. has the highest per capita income; China has the lowest per capita income.*
 - *Japan has the highest population density. Australia has the lowest.*
 - *China has the lowest literacy rate.*
 - *China has the highest population followed by the U.S.*
 - *The U.S. has the largest land area. Japan is the smallest country.*
5. Students then pair up and compare findings.
6. Students present their findings to the class. Discussion and feedback from the class and teacher.
7. Next, set up a simulation. Put ten chairs in front of the classroom and ask the following to the class:
If these ten chairs represent one square mile, approximately how many students could we use to represent the population density of Australia?
One would need 0.6 students so round that to one.
8. Ask for a volunteer to represent that one person. Ask questions such as:
Do you have plenty of room?
Can you stretch your legs?
Can you lie down?
9. Next, move onto the United States—*One would need 7.7 students so round it to eight.* Have seven more volunteers sit in the chairs. Again questions the students as to comfort.

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10. China would require 33.8 so ask everyone in class to come forward and to try to sit on the chairs. Students will soon find it does not work. Most classes do not have 34 students, but even a class of twenty will give the students the idea. Make sure students realize there would be even more people. If you wish, remove five chairs and have 17 students try to sit on the remaining five. After students try to squeeze onto the chairs, have them go back to their seats. To represent Japan, one would need 87 students. Discuss what it was like to try to fit on the chairs. What would it be like to live in an area that is so crowded?

11. Have the students discuss the following questions:

- How might population density affect daily life?
Possible conclusions: It affects shelter, transportation, land use, recreation, and social skills.
- In what ways do you think Japan's population density and geography affect housing?
Possible conclusions: Houses are much smaller in Japan. Many people live in apartments.
- How might the population density affect transportation?
Possible conclusions: Japan has developed an extensive train and subway system. Traffic is very heavy; cars and trucks are smaller.
- Given Japan's population density and geography, how do you think Japan produces its food?
Possible conclusions: Japan uses all available space. Japan imports much of its food.
- How might Japan's population density and geography affect manners and behavior?
Possible conclusions: Japanese people must get along because they live in such close proximity to each other. People have learned to adapt to such closeness.

Assessment:

- Class discussion
- Upper grades—completed table

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Grade Adaptation:

Intermediate grades—Compare Japan to Ohio and/or Tokyo to Columbus. Give students a completed table with *Total Land Area, Population, % Arable Land, and Population Density* for the two countries filled in. Students make comparisons.

Upper grades—Give students a blank table with only the names of the countries filled in. Using the Internet or *World Almanac*, students complete the table either individually or in groups.

*Most reference books agree that Japan has a constitutional monarchy type of government, however, the Japanese see their government as a democratic republic. The reason for this being is that the emperor has had no say in the government since the end of WWII.

Information taken from:

<http://www.population.com/s/population/database.html>

Additional or updated information may be obtained from

<http://www.odci.gov/cia/publications/factbook/indexgo.html>

<http://www.population.com>

<http://www.census.gov/cgi-bin/ipc/idbrank.pl>

Relationship to Social Studies Standards:

Grade 6, Geography, Grade-level Indicator 4

Identify and describe a variety of physical and human regions by analyzing maps, charts and graphs that show patterns of characteristics that define regions.

Grade 6, Geography, Grade-level Indicator 6

Describe ways in which human migration has an impact on the physical and human characteristics of places including:
(a) urbanization, (b) desertification, and (c) deforestation.

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Grade 7, Geography, Grade-level Indicator 3

Describe changes in the physical and human characteristics of regions that occur over time and identify the consequences of such changes.

This lesson was developed by Kay Tomesek, teacher, Gahanna Middle School West, Gahanna-Jefferson City Schools.

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Handout A

	Japan	United States	China	Australia
Total Land Area (sq. mi.)	145,874	3,761,363	3,691,521	2,966,150
Population (2001 est.)	126,771,662	278,058,881	1,269,385,100	18,783,551
% Arable Land	11%	19%	10%	6%
GDP	\$3.15 trillion	\$9.96 trillion	%4.5 trillion	%394 billion
Per Capita Income	\$24,800	\$36,000	\$3,500	\$21,400
Literacy Rate	99%	97%	84%	100%
Largest City Population (metropolitan area)	Tokyo 27,242,200	New York 19,938,492	Shanghai 14,711,091	Sydney 3,858,248
Population Density	869	74		

Table was developed by Kay Tomesek, teacher, Gahanna Middle School West, Gahanna-Jefferson City Schools and derived from the websites listed on pg. 168.