

## Geography in Japan

### Purpose:

This lesson will enable students to develop basic knowledge of Japan's physical geography including absolute and relative location, factors contributing to climate, and temperature comparisons with the United States.

### Target Grade Level: 6-7

### Essential questions:

- What are the physical features of Japan?
- Where is Japan located?
- What effects do location, elevation, and ocean currents have on the climate of Japan?
- How do temperatures in Japan compare to temperatures in the United States?

### Rationale:

Location and physical features of a country affect climate.

### Key Ideas:

- Japan is an island nation.
- Japan is an archipelago similar to other archipelagoes in the Pacific (Hawaii, Philippines, Micronesia).
- Japan is an archipelago similar to other archipelagoes in the Pacific (Hawaii, Philippines, Micronesia).
- Japan stretches from 25 to 45 degrees N latitudes and from 128 to 145 degrees E longitudes.
- Japan is an island nation consisting of four main islands (Honshu, Hokkaido, Shikoku, and Kyushu) and many small islands.
- The Pacific Ocean is on the south and east of Japan and the Sea of Japan is on the north and west of Japan.
- Japan is east of Korea and China, north of the equator, and east of the Prime Meridian.
- If super imposed on the U. S., Japan would stretch from Tampa Florida to Montreal.
- Japan has many of the same climates, as we would find in the United States.

## Geography of Japan

### Materials:

- Wall maps, globes, student maps and atlases –Pacific Rim, and Japan's four main islands (available at: <http://www.eduplace.com/ss/maps/>)
- Overhead projector, overhead markers, map transparencies
- Crayons or colored pencils
- Internet access:  
<http://www.nationalgeographic.com/maps>,  
<http://www.nationalgeographic.com/xpeditions>,  
<http://www.acl.lanl.gov/GrandChal/GCM/currents.html>,  
[http://www.geog.ouc.bc.ca/physgeog/contents/8q\\_1.html](http://www.geog.ouc.bc.ca/physgeog/contents/8q_1.html)

Before teaching this unit, the teachers will need to copy the enclosed map of Japan and Geography Challenge worksheets for the students. These can be part of a student packet assembled for the unit.

### Procedures:

1. Introduce the lesson by asking the students the following question:  
“How do you think Japan’s geography is similar or different than that of the United States?” Have them discuss their thoughts on this.
2. Using the map transparency, overhead projector, Internet webs site, or student atlases, the teacher will guide the students to answer the geography questions in Challenge 1 Physical Structure of Japan.
3. Students will be divided into teams of three or four students. Each team of students will be responsible for completing the student geography challenge worksheet.
4. Distribute copies of the three regions (archipelagoes).
5. Debrief the students by recording the student group responses for challenge 1 on the chalkboard, whiteboard, or paper. Students are to copy the responses for their future use.

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6. Distribute Geography Challenge 2 Physical location of Japan, and student desk atlases.
7. Students are to work together to complete Challenge 2.
8. Debrief the students concerning Challenge 2.
9. Distribute Geography Challenge 3, maps of the United States, Japan, and the ocean currents. Students may also reference student desk atlases or  
<http://www.nationalgeographic.com/mapmachine>  
<http://www.acl.lanl.gov/GrandChal/GCM/currents.html>  
[http://www.geog.ouc.bc.ca/physgeog/contents/8q\\_1.html](http://www.geog.ouc.bc.ca/physgeog/contents/8q_1.html)
10. Students are to complete the activities located on Geography Challenge
11. Debrief the students on what they have learned. Each group should report on their findings.
12. Distribute Challenge 4 and ask the student groups to complete the activities.
13. Debrief the students. What have you learned? What general conclusions or patterns have you discovered?

### Lesson Extensions:

Lesson extensions might include taking notes on debriefing sessions. Brainstorm possible affects of the location and climate on the people who live in Japan. Students could then research to discover accuracy of their ideas.

### Evaluation:

Teacher will evaluate the students' team geography challenge worksheet. The final product of the lesson will be answers to the worksheet and a map of the United States with the main four islands of Japan superimposed along the eastern coastal region.

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### Relationship to Social Studies Standards:

Grade 6, Geography, Grade-level Indicator 1

Place countries, cities, deserts, mountain ranges and bodies of water on the continents on which they are located.

Grade 7, Geography, Grade-level Indicator 1

For each of the societies studied, identify the location of significant physical and human characteristics on a map of the relevant region.

*This lesson and the Geography Challenge Handouts were originally developed by Julia Morris, Westerville City Schools. It was revised by Kathleen Lorenz Ph.D., teacher, Fairfield Intermediate School, Fairfield City Schools.*

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### Teacher Information:

Japan is an island country (*shimaguni*). The Japan archipelago consists of four main islands and thousands of smaller ones. It lies off the eastern coast of the Asian mainland; at the closest point, the islands are approximately 120 miles away from Asia.

The total island space of the Japanese islands is about 145,000 square miles. Indeed, it is a very small country when compared with the vast Asian mainland. Compared to the United States, Japan is smaller than the state of California; in fact, it's about the size of the state of Missouri. Yet the population of Japan is approximately half of the United States population. The climate zones in Japan are very similar to the climates found along the eastern coast of the United States. The climates range from humid sub-tropical to cool continental.

# Geography of Japan

## Handout A

### Geography Challenge 1

Date \_\_\_\_\_ Class Period \_\_\_\_\_

Group Members \_\_\_\_\_  
\_\_\_\_\_

Examine the geography samples provided and answer the following questions as completely as possible.

1. Describe the maps you see.
2. What do these maps have in common?
3. These maps are examples of what geographic terms?
4. Refer to the world physical map in your student atlas or National Geographic Map Machine [www.nationalgeographic.com](http://www.nationalgeographic.com). List other similarities you notice about these regions.
5. Describe Japan in geographic terms.

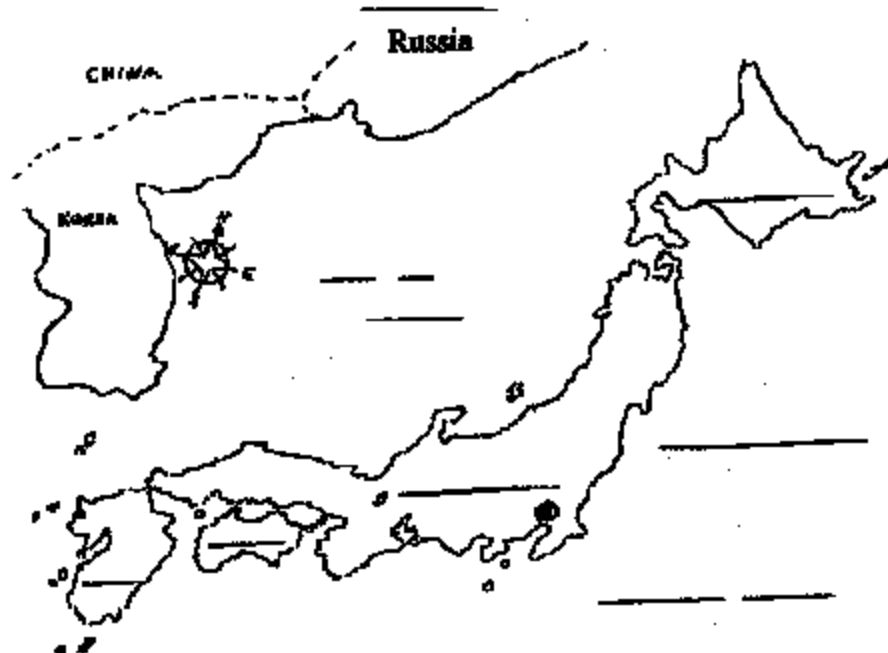
## Geography of Japan

### Handout B (pg. 1)

#### Geography Challenge 2

1. Refer to the student desk atlas, or world map to name the latitude and longitude range of the Japanese islands. \_\_\_\_\_ to \_\_\_\_\_ latitude  
\_\_\_\_\_ to \_\_\_\_\_ longitude.
2. What is absolute location of Japan?  
\_\_\_\_\_
3. What is the relative location of the Japan?  
\_\_\_\_\_  
\_\_\_\_\_

4. Label all the islands and the bodies of water.
5. Insert a compass rose.
6. Label the capital.

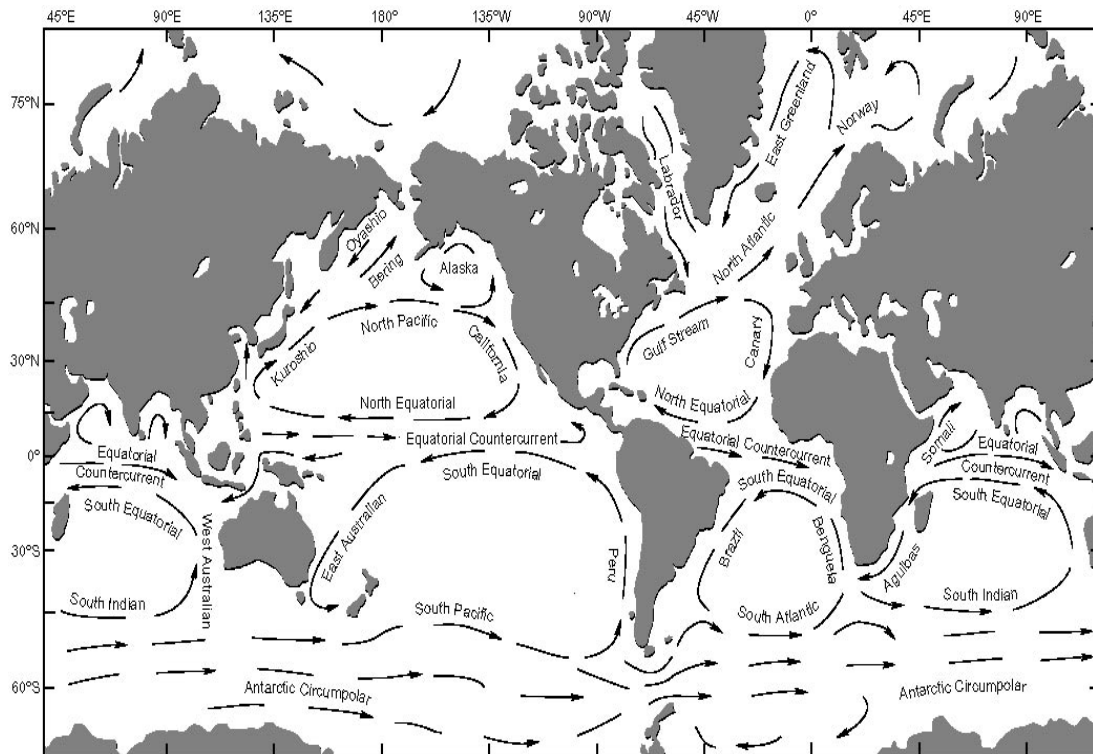


# Geography of Japan

## Handout B (pg. 2)

### Major Oceanic Surface Currents

Prominent features in this map of the major oceanic surface currents include the subtropical gyres centered on 30 degrees latitude in each of the major ocean basins. The earth's rotation and the change in wind direction with latitude (from the east in the tropics and from the west at mid-latitudes) cause the circulation of the gyres to be clockwise in the Northern Hemisphere and counterclockwise in the Southern Hemisphere. The well-known Gulf Stream in the Atlantic and its counterpart in the Pacific, the Kuroshio Current, are strong currents that carry heat northward from the tropics. Both currents are evident in the model simulations. (Adapted with permission from a figure in *Principles of Ocean Physics* by John R. Apel, Academic Press, 1987).



Malone fig1  
3/14/93

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## Handout C

### Geography Challenge 3

Three of the factors that affect the climate of a region are **ocean currents**, **location**, and **elevation**. We will consider all three of these in our hypothesis concerning the climate of Japan.

**Ocean currents** affect the climate of land areas that border them. Warm currents will warm the land and cool currents will cool the land. Currents that are in the northern hemisphere near the equator flow in a clockwise direction and currents in the southern hemisphere near the equator flow in a counter-clockwise direction. Currents that flow away from the equator are warm currents while currents that flow from arctic regions are cool currents.

1. Color the warm currents red and the cool currents blue.
2. Refer to your map and hypothesize the affect of the currents on Japan

Record your hypothesis here \_\_\_\_\_

\_\_\_\_\_

The **location** of an area in reference to the equator also affects climate temperatures.

Generally speaking the higher the latitude, the cooler the climate temperatures. Refer to your map of Japan and hypothesize where Japan might match the climate of the United States.

Record your hypothesis here: \_\_\_\_\_

\_\_\_\_\_

**Elevation** is the third factor we will be considering in predicting the climate of Japan.

Elevation measures the distance an area is from sea level. When elevation increases the average temperature decreases. Refer to the physical maps of the United States and Japan.

Record what you observe. \_\_\_\_\_

\_\_\_\_\_

Refer to the copies of maps of Japan and United States and the climate and theme maps of climate and physical features maps found in the student atlas, and complete the following activities: Impose the map of Japan on the United States using your knowledge of ocean currents, latitude, and elevation. Create a project that will illustrate your hypothesis of states that might match climate and physical features of Japan and the United States.

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### Handout D (pg. 1)

#### Geography Challenge 4 Climate Guide

Using the student atlas complete the following chart record the latitude of the Japanese cities and cities in North America that are approximately at the same latitude.

Japan		North America	
City	Latitude	City	Latitude
Kagoshima			
Tokyo			
Wakkanai			

List the climates found in Japan:

List the areas where these climates can be found in the United States.

What pattern seems to exist between the climates in Japan and those in North America?

Using the ocean current map locate and record the names of the two currents that affect the east coasts of:

Japan \_\_\_\_\_  
\_\_\_\_\_

## Geography of Japan

Handout D (pg. 2)

### Geography Challenge 4 Climate Guide

What pattern do you see?

Would you expect the temperatures in the interior of Japan to be hotter or cooler than the coastal region? Explain your answer.