# World Climate Growing Zones

## Geography

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<th>Materials</th>
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<td><strong>Activity 1</strong></td>
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| ♦ Maps, display, and copies of *World Climate Zones* worksheet  
♦ Colored pencils |
| **Activity 2** |
| ♦ Poster board (to make puzzle pieces) or old puzzle pieces  
♦ Paper (letter, legal or tabloid size)  
♦ Pencils (graphite and colored)  
♦ Glue  
♦ Topographic maps (available from your local Natural Resources Conservation Service or Forest Service offices) |

## Background

Many of our “new world” foods have originated in the tropical climatic zone. Of course today, new world foods grow all over the world. Many varieties have been bred and adapted to grow in different soils and different temperate zones.

Plants have been cultivated for centuries in these different zones. Your classroom discussion might include the origins of certain plants and how these plants have been cultivated to the crops we know today. These crops have influenced the food people eat, traditions, customs, and cultures.

Geography and agriculture can help you teach your students about longitude, latitude, climatic zones and allow them to identify major food grain crops and cultures around the world. At the same time they’ll gain an awareness about the importance of agriculture.

## Activity 1: World Climate “Ag” Zones

1. Have a world map displayed or available in a book for students to use as a reference.
2. Distribute copies of the “World Climatic Zones” map on page 4.
3. Students should create their own legend by coloring in the circles at the bottom, then using corresponding colors to fill in the map where the noted plants originated. For older students add some plants like beans, cotton, tea, etc.

*Note:* There is more than one crop in certain countries. In these countries students may want to make colored dots.

## Evaluation

Ask students the following questions (or make up some of your own):

1. Which country would have made bread from rice? (China)
2. Which grain do you think is the most widely used worldwide? (Wheat, it can be grown in more climatic zones than any other)
3. Corn would have been part of what culture—Egyptian, Aztecs, or Irish? (Aztecs)
4. Thailand is known for its hot spicy food—did the hot pepper originate there? (No, it was transported by Portuguese traders)
5. Which plants on the legend are the most important grain crops? (Wheat, rice, and corn)
6. Is rice grown in the U.S.? (Yes—many southern states grow rice)
7. If the potato is a new world food, how did it get to Ireland? (The Spaniards invaded Peru in the 1530’s and brought potatoes back

# Standard 1

Students will understand the world in spatial terms.

**Objective 1**

Use maps and other geographic tools to acquire information from a spatial perspective. Collect and interpret geographic data using maps, charts, population pyramids, cartograms, remote sensing, and Geographic Information Systems (GIS).

# Standard 2

Students will understand the human and physical characteristics of places and regions.

**Objective 1**

Interpret place by its human and physical characteristics. Examine human characteristics, including language, religion, population, political and economic systems, and quality of life. Investigate physical characteristics such as landforms, climates, water cycle, vegetation, and animal life. Recognize that places change over time.

# Standard 4

Students will understand how human activities shape the earth’s surface.

**Objective 1**

Analyze the characteristics, distribution, and migration of human populations on the earth’s surface. Describe how physical environments provide geographic advantage or disadvantage. Examine the importance of water to settlement patterns. Explain why people who modify their physical environment in one place cause change in other places. Investigate how people adapt to their environment.
8. Why don’t apples grow in southern California? (too warm, apples need a cold period)
9. Why is America the “breadbasket” of the world? (temperate climate and good soils)
10. Why is hay one of Utah’s major crops? (dry summers to cure the hay and low acid soils)
11. Where do you find orchards in Utah? (foothills, cold air sinks, during spring you don’t want the blossoms to freeze
12. Geographically, where is agriculture pursued in Utah? (along the Wasatch front, where there are good soils and water)
13. Most of these questions could be answered with one simple word, geography!

Activity 2: Land Puzzles
Map reading is an essential skill. Topographic maps may be a bit intimidating when your students take their first look. Being able to interpret topographic maps is very important to farmers, ranchers, geologists, foresters, civil engineers, architects, land managers, and many other professionals, not to mention hikers and other recreationalists. This simple activity will demonstrate how topographic maps work and how they are created.

Through this activity, students will be able to relate the different shaped stacks to different landforms and develop the concept of contour (topographic) maps and interpret the topographic map to others.

Procedures
1. Group students into teams.
2. Ask students to draw a river on the paper (like it might appear on a map). The students may draw the river in the center of the page or off to one corner.
3. Give each team half a sheet of poster board (14 by 22 inches).
4. Tell the students that their rivers are in a valley. The elevation goes up on either side of the river. They will determine the topography (elevation) of the area.
5. Explain to the class that to show the elevation of the land around the river they will be cutting shapes out of the poster board or using puzzle pieces. The cutout shapes should look like the landform as if they were looking at it from an airplane. This would be a good time to show students other topographic maps.
6. Students should begin cutting out their shapes. (You may provide the pre-cut pieces for younger students or use old puzzle pieces.)
7. Instruct the students to glue the larger “puzzle” pieces on the bottom. Higher elevations mean that the more poster board “puzzle” pieces will be added, largest to smallest. Each layer represents a different elevation. You may determine the scale, i.e., each layer is 100 feet.

Evaluation and Follow-up
Allow time for each team to share their map and explain the topography around the river.
The students may smooth out their puzzle lines with paper mache or masking tape to see what the land forms will look like.
Maize: Mexico
Black Pepper: India
Peppers: South America (Caribbean)
Peanuts: Peru/Brazil
Potatoes: Peru
Tomatoes: Mexico
Chocolate: Central America
Wheat: Middle East
Rice: Asia
Sugar Cane: Polynesia
Tea: China
Coffee: Central America

World Climate Zones