

# North, South, East, West, Different Crops Grow the Best

**Grade Level: 3**

**Approximate Length of Activity: One-two class periods**

## **Objective**

### **Teacher**

1. Help students understand that there are different weather conditions throughout the United States.
2. Teach students that certain crops are grown best in certain climates.
3. Help students learn about different crops and where they are grown in the United States.
4. Teach students what greenhouses are and why they are used.
5. Help the students understand a controlled environment.

### **Students**

1. Learn that there are different weather conditions throughout the United States.
2. Understand that certain crops grow best under certain weather conditions.
3. Know about the different crops and where they are grown in the United States.
4. Learn about greenhouses and understand why they are used.
5. Grow seeds in a controlled environment.

**Michigan Content Standards: (Social Studies) G1.0.1**

## Introduction

Since the 1600s, many changes have occurred in American agriculture. Farmers and scientists have helped these things to occur. Agricultural scientists study various things in agriculture to help improve the way we grow and process our food and fiber. One very important aspect of agriculture learned by farmers and scientists a long time ago is that certain plants and animals grow best in certain climatic conditions. For instance, by the late 1600s, colonists found that crops such as cocoa beans, sugar and coffee grew best in tropical regions of the Americas. In the mid 1800s many people moved across the United States to the Great Plains. The large amount of grass in the Great Plains area helped farmers to raise livestock; however, there was not enough rain to grow a large yielding crop. Farmers soon found what was most suitable for the dry climate conditions of the Great Plains, and farmers began producing large crops of wheat.

Because of climatic conditions varying throughout the United States, corn grows best in what is termed "The Corn Belt." The Corn Belt consists of 12 states that have the best climate and soil suited for growing corn. These states are Michigan, Nebraska, Minnesota, Indiana, Wisconsin, Iowa, South Dakota, Illinois, Missouri, Kansas, Ohio and Kentucky. About three-fourths of the U.S.'s corn crop comes from the Corn Belt. The Corn Belt produces such high yields of corn because these states average a daytime temperature of 86 degrees Fahrenheit and a nighttime temperature above 50 degrees Fahrenheit during the growing season.

Today the Great Plains area is also known as the Grasslands. The Grasslands are great for growing livestock such as cattle and hogs because the animals can graze on the land. Wheat is still raised throughout the Grasslands, along with barley, rye, sunflowers and sugar beets. Through irrigation other crops such as cotton, sorghum and corn can be grown in the Grasslands.

Cotton grows best in a warm to hot climate where the growing season has many sunny days. This is why states in the south such as Texas, Louisiana, Alabama, Georgia and South Carolina grow cotton well. These are areas where there are 200 or more days a year in which temperatures do not drop below freezing, which is important for a cotton crop. Many times these states are referred to as the Cotton Belt.

Florida's year-round warm climate is home to many orchards of oranges, grapefruits, tangerines and limes. Other fruits grown are strawberries and watermelon. Florida's tropical climate also grows sugar very well. Florida is also a major producer of vegetables. Tomatoes, snap beans, cucumbers, sweet corn, celery, cabbage, head lettuce and carrots are all grown in Florida.

Due to extreme variations in weather conditions, scientists have found that they could study plants best when they could control the temperature, sunlight and amount of moisture the plant receives. A greenhouse is a building that is specifically designed and made to control the environment in which the flowers, vegetables and plants grow. It collects the sun's heat to keep the temperature warm. A greenhouse controls light, temperature, moisture, soil and other growing conditions. By controlling these conditions people can grow flowers, vegetables, plants and shrubs anywhere in the United States, regardless of the climate in an area. Nowadays many vegetable growers utilize greenhouses to provide cucumber, tomatoes and lettuce outside of their normal growing season.

## Materials Needed

- Large world map or United States map
- Styrofoam egg cartons with lids
- Cotton balls (six per student)
- Eye droppers
- Six different kinds of seeds
- Scissors

## Activity Outline

1. Discuss with the students the information from the introduction about how crops grow best in certain areas of the United States. Make sure the students understand where different crops are grown and why. Have the students locate the various areas on a world map or a map of the United States.
2. Next discuss with the students what greenhouses are. Make sure they understand that vegetables, flowers and plants can be grown in greenhouses in different areas of the United States, regardless of climate.
3. Have the students make their own mini-greenhouses. This can be done individually or in groups. To prepare for this activity the 12-cup egg cartons need to be cut in half width-wise. This will give each student a six-cup section of egg carton with a lid. This is their mini-greenhouse.
4. Have students place one cotton ball in each cup of their mini-greenhouses. Then have them take six different types of seeds and place one seed on each cotton ball.
5. Using the eyedroppers, have the students place a couple drops of water on each of their cotton balls until they are saturated.
6. Close the lid of their greenhouses and place them in a warm spot such as a windowsill. Have the children check their greenhouses daily for growth.

## Discussion Questions

1. Is the weather the same throughout all of the United States?
2. What grows best in the Grasslands?
3. What type of crops grows best in the South?
4. What is the name of the group of states that grow corn the best?
5. What is a greenhouse?
6. What are some of the controlled environmental conditions in a greenhouse?

## Related Activities

1. Study climates of other countries and what crops they grow.
2. Conduct various growing activities by altering the controlled conditions such as: too much light, not enough light, too much water, not enough water, etc. Chart what happens.
3. The lesson "Here, There and Everywhere" located in the social studies section of this curriculum guide.
4. The lesson "Where Would We Be Without Seeds?" located in the science section of this curriculum guide.

## Book Resources

1. "Life on a Crop Farm" by Judy Wolfman
2. "Farm Crops" by Carol Benanti

*Acknowledgement: Adapted from "North, South, East, West Different Crops Grow the Best" Illinois Farm Bureau® Agriculture in the Classroom.*