

What Land Works Best

Wyoming Science, Social Studies

Objectives:

- Students will be able to identify the crops grown in all Wyoming counties.
- Students will be able to explain how climate, water and soil type help to determine where plants and crops are grown.
- Students will be able to identify the major crops grown in the United States.
- Students will learn map reading techniques.

Background:

Wyoming, has a total area of 97,813 square miles, and is the 9th largest state. Approximately 51% of the state is owned by the federal government and 6.2% is owned by the state government. About 91.7% of Wyoming's land is located in rural areas (i.e. farms and ranches). The average size of a farm/ranch in Wyoming is 3,761 acres, the largest in the nation.

Crop Production in Wyoming accounts for 34% of the value of Wyoming's agricultural output. Most of the farming in Wyoming occurs in NW District also known as the Big Horn Basin Area. This area includes Park County, Washakie County, Hot Springs County, Big Horn County, Fremont County. This is where some of the best soils in the state is located. Hay is by far the leading crop in Wyoming in terms of value of production with 69% of the total crop production. Native grass and alfalfa are the most popular kinds of hay to grow. Alfalfa grows best under irrigation, cold winters and warm summers. It is drought-resistant, which means it can grow even when there's not much rain.

Sugar beets had the next highest crop value in 2002 at 26.2 million. The majority of sugar beets are grown in the Big Horn Basin Area. Sugar beets are the highest value field crop produced in the northern Big Horn Basin of Wyoming. Beets are grown within a 30 mile radius of Lovell, Wyoming and are processed into sugar at Western's Lovell factory. Western Sugar Company is also the largest food processing industry in the area. The average sugar beet crop in the area encompasses 17,500 acres.

Warm days and cool nights, with properly scheduled irrigation, yield an excellent high quality, low impurity sugar beet. The average tonnage is 21 tons per acre, with a 17.2% sugar content, producing an excess of 120 million pounds of pure sugar yearly. The by-products of the crop also provide feed for cattle and sheep.



Standards

Science

Life Systems: 1.3

Earth, Space,
& Physical Systems: 1.4

Social Studies

Production, Distribution,
& Consumption: 3.1, 3.2

People, Places,
& Environments:
5.1, 5.2, 5.3, 5.4

Materials

- Wyoming Agricultural Products Map
- Wyoming Agricultural Products Map - Questions.
- Where in the U.S. did my food come from? Map.
- Roof-top Farming Transparency

Estimated Time

60 Minutes

Grades 3-4

notes:

The area climate is arid, with average annual precipitation of 5.6 inches. The mean annual temperature is 45.6 degrees F. Water from surface runoff, mainly snow melt, is stored in reservoirs near the mountains surrounding the area. Well over 200 miles of canals are used for delivering water to irrigate the land. The irrigation systems supply water to 12,172 acres in the Lovell area, 78,330 acres in the Powell area, 15,120 acres in the Deaver-Frannie area, 16,943 acres in the Emblem area, and 23,354 acres in the Burlington area, totaling 145,919 acres receiving irrigation.

Livestock and livestock products account for 66% of the state's annual agricultural output. The cattle industry is by far the largest component of Wyoming agriculture accounting for over 70 percent of all cash receipts. Beef cattle graze wherever adequate grass and water exist. The largest percentages of cattle are raised in the NE district. The district includes Campbell County, Crook County, Johnson County, Sheridan County, and Weston County.

Although sheep and hogs way behind cattle in terms of value of production, Wyoming nationally ranks 2nd in breeding sheep, 3rd in all sheep and lambs, and 4th in market sheep and lambs production. The sheep are prevalent on the NE District, West District, and the SE District. Converse County alone had 60,000 head of breeding sheep in 2003.

Throughout the nation there is a lot of concern about the loss of farmland to development. It is reported that every day over 2,450 acres of forests, farms, and county side disappears as a result of eradication by suburban sprawl, roads, highways, and industrial development. Much of the land being taken is prime agricultural land. Years ago, our communities were built next to the best ground so farmers would be near their farms. Today, 85 percent of the nation's fruits and vegetables and nearly 80 percent of its dairy products are produced in counties subject to urban pressure (See the Roof-top Farming Transparency your class help you with the caption, something like, "Who decides where farmers farm?" or "Watch your next right turn!")

Many people think that the loss of farmland is primarily a farmer issue. Loss of farmland should of concern to everyone; it can affect food prices, property taxes, and the environment we live in. By the year 2050, food prices are project to increase three to five times. When development takes place, government receives an increase in taxes, but usually spends more on services to support that development

Activity Procedure:

Activity 1 – Wyoming Grown

- Share some of the background information with your students.
- Give each student a copy of the Wyoming Agricultural Products Map to complete.
- Post the Map Questions on the overhead projector. Feel free to make up some of your own questions. Ask students to complete the tasks and answer the questions.

Activity 2 – Where does my food come from?

- Give each student a copy of the United States activity map to complete.
- Discuss regional patterns. (Use the Roof-top Farming transparency)

Questions for Investigation:

1. What determines which crops are grown where? (Water availability, soil type, slope, climate, elevation, etc.)
2. Who determines what farmers grow? (Markets, meaning consumers, government quotas and farmers also have favorites and traditions)
3. Using the U.S. map can you identify where the corn and the wheat belt are located.

vocabulary:

- *production*
- *crop*
- *irrigation*
- *drought-resistant*
- *runoff*
- *output*
- *suburban*
- *eradicate*
- *quotas*

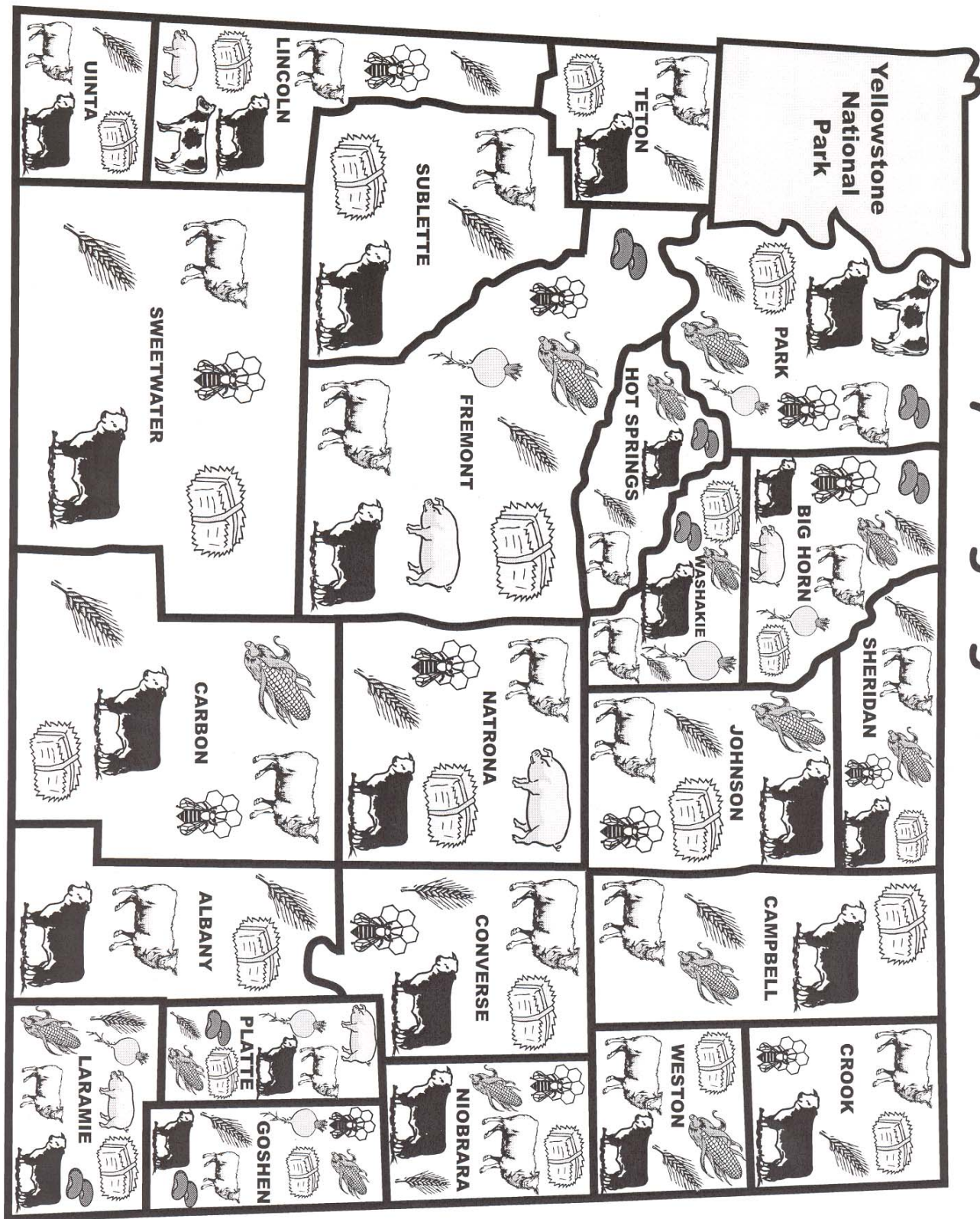


More Fun:

Using the Wyoming Agricultural Products

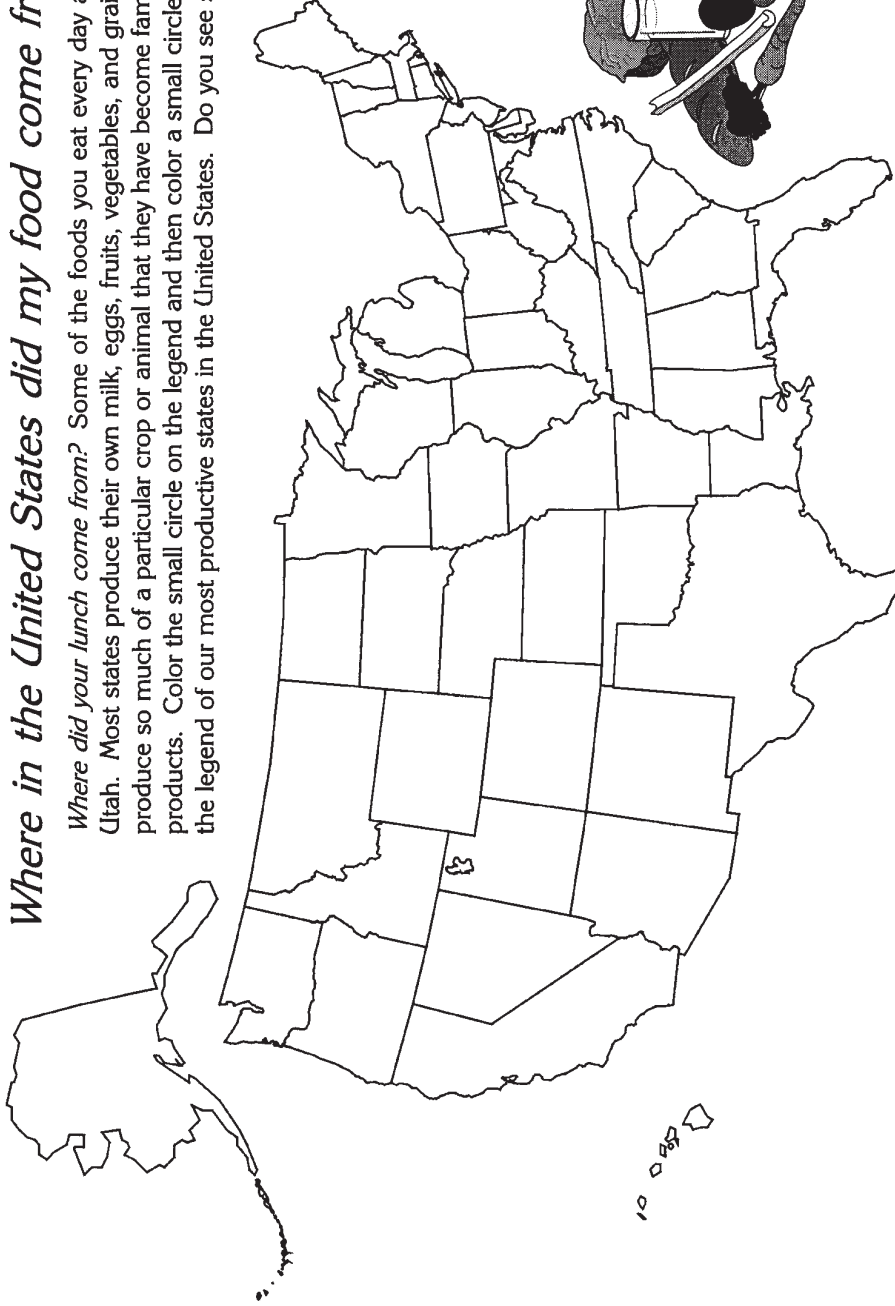
1. Geographically, where are the largest variety of crops grown in Wyoming?
2. What percent of land in the state of Wyoming is rural?
3. What is the average size (acres) of a farm/ranch in Wyoming?
4. What factors contribute to a excellent, high quality, low impurity sugar beet?
5. Why is hay is produced in most counties?
6. Why do you think there are more beef cows than dairy cows in Wyoming?

Wyoming Agriculture

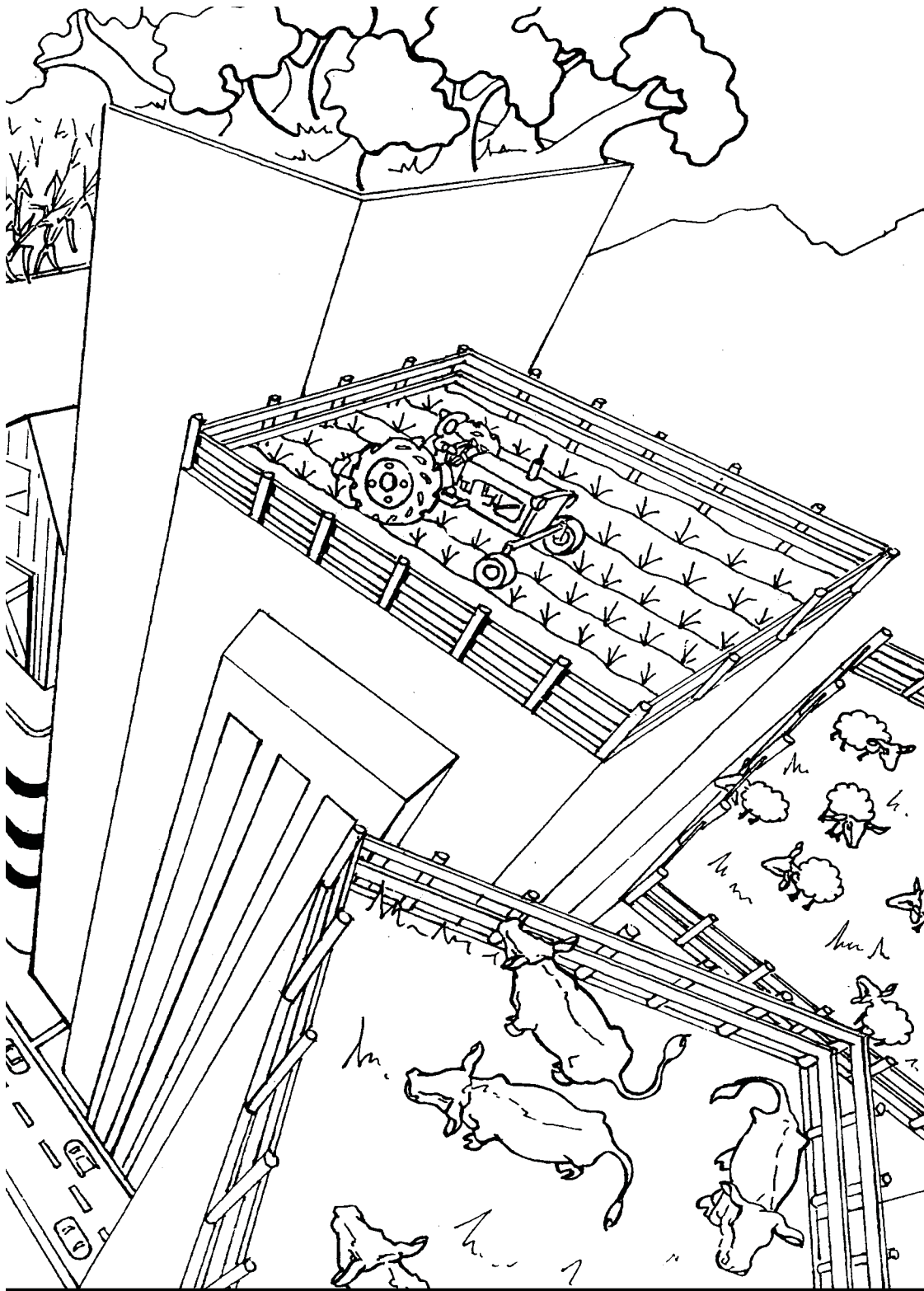


Where in the United States did my food come from?

Where did your lunch come from? Some of the foods you eat every day are produced here in Utah. Most states produce their own milk, eggs, fruits, vegetables, and grains. Some states produce so much of a particular crop or animal that they have become famous for their agricultural products. Color the small circle on the legend and then color a small circle on the map to match the legend of our most productive states in the United States. Do you see some regional patterns?



- Corn: Illinois, Iowa, Nebraska, Indiana, Minnesota, & Ohio.
- Dairy Products: Wisconsin, California, New York, Pennsylvania, & Minnesota.
- Beef: Texas, Nebraska, Kansas, Colorado, Iowa, Oklahoma, & California.
- Soybeans, major oil crop used in salad dressings and mayonnaise: Illinois, Iowa, Nebraska, Indiana, Minnesota, & Ohio.
- Pork: Iowa, Illinois, Minnesota, Nebraska, Indiana, North Carolina, & Missouri.
- Chickens: Arkansas, Georgia, Alabama, North Carolina, Mississippi, & Texas.
- Wheat: North Dakota, Kansas, Montana, Oklahoma, Washington, & Minnesota.
- Eggs: California, Georgia, Arkansas, Indiana, Pennsylvania & Texas.
- Potatoes: Idaho, Washington, California, North Dakota, Maine, & Wisconsin.
- Tomatoes: Florida, California, Virginia, Ohio, Georgia, & Michigan.



Create a Caption: