# My Farm Web

## *Integrated K-2 & Social Studies Core*

**Materials**

- Book: *If it Weren't for Farmers* by Allan Fowler (ISBN 0516460099)
- Book: *Heartland* by Diane Siebert (ISBN 0690047304)
- Book: *Harvest Year* by Cris Peterson (ISBN 1563975718)
- Copy of "My Farm Web" 3-inch pictures (30), available on www.agclassroom.org/ut>>Elementary Teachers>>Social Studies
- 12 inch pieces (29) of yarn or string

**Background**

How do you define the word agriculture? Merriam-Webster's Dictionary states that it is the "science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products." An accurate definition, but this definition doesn't impart the integral nature or importance of agricultural products–food, clothing and shelter–in our daily lives. Surely there is a better way to define agriculture!

Graphic organizers are a research-based teaching strategy that facilitates learning and student achievement. The strategy meets the needs of most learners, especially visual learners. How do graphic organizers work? By relating new concepts to the learners' preexisting understandings, which cause them to recognize new relationships among concepts. These associations help students to retain what they have learned. In addition, graphic organizers may be used to access student knowledge and help to identify student misconceptions.

One type of graphic organizer is the concept map. **Concept mapping** is a technique for visualizing the relationships between different concepts. A concept map (also referred to as a concept web) is a diagram showing the relationships between concepts. Concepts are connected with labeled arrows, in a downward-branching hierarchical structure. Concept webs can be created by using words or pictures. The relationship between concepts is articulated in linking phrases, e.g., "gives rise to," "results in," "is required by," or "contributes to." Other words that could be added on the line linking the words are simple words or phrases, such as "are," "can be," or "are part of." Finally words or pictures should be cross-linked to other relevant relationships—often drawing lines going across to other group maps. (For more information on concept mapping or webs visit this website http://library.usu.edu/instruct/tutorials/cm/CMinstruction1.htm.)

Agriculture is a big "umbrella" term that includes so many concepts–from farm-to-fork and field-to-fabric–not to mention all the other industrial uses of agricultural products such as linseed oil for paint and corn for fuel. Older students working in groups using pencil and paper or marker and dry-mark board, can create a concept web with the 5-Fs of agriculture; farming, food, fabric, forestry, and flowers (see explanation on last page). This lesson plan has been designed for young learners who

Utah Agriculture in the Classroom
Extension Utah State University

**Time: 30 - 50 minutes**

**Grade Levels: K-6**

**K-2 Standard 2:**

Students will develop a sense of self in relation to families and community.

Objective 2

Examine important aspects of the community and culture that strengthen relationships.

- Relate goods and services to resources within the community.
- Identify goods and services and where they come from.
- Differentiate between wants and needs of consumers.

**K-2 Standard 3:**

Students will develop an understanding of their environment.

Objective 1

Investigate relationships between plants and animals and how living things change during their lives.

- Observe and describe relationships between plants and animals.
- Describe the life cycle of local plants and animals using diagrams and pictures.
- Create pictures and stories about real animals and compare them to make-believe stories about animals.

**Grade 3 Standard 4:**

Students examine how government and economies develop as the indigenous community develops.

Objective 2

Identify the factors that determine economic development.

- Identify natural resources within environments that provide for community development.
- Trace the emergence of occupations relative to available natural resources.
- Identify producers and consumers in local communities.
- Identify the relationship between producers and consumers, supply and demand.

will focus on one aspect of agriculture—farming. Instead of words, these young learners will use pictures and yarn to create a simple concept web and the relationships, or "linking phrases," will be discussed as a class while the concept web is completed.

**Activity 1: Preparation (Concept "Picture Web," K-6)**

Begin by downloading from www.agclassroom.org/ut the images you need for this activity (see "My Farm Web" master on the last page of this lesson). When you get to the website, click on "Elementary Teachers" and then look for this lesson plan title "My Farm Web" under "Social Studies." This lesson plan will open, complete with 30 four-inch color images you can laminate and use for this activity. You may decide to mount the pictures on colored card stock and keep the web grouping in the same color; this will make the activity easier for very young students. For example, mount the pictures of dairy cows, milk, ice cream, and cheese on one color. This activity may be conducted inside or outside; either way, you'll need about 10 square feet of floor space.

With very young students, it will be easier to place the yarn in the appropriate location and then have them identify where the picture will go. Older students might prefer placing a picture and then the connecting yarn.

**Activity 1: Procedures**

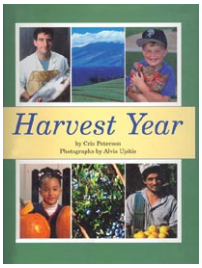
Tell your students that they are going to learn about some of the "things they use every day." Ask them "What things do you use every day?" You should get answers like food, clothes, books, paper, computers, balls, water, TV, etc. Discuss with the students that the items we use everyday are either grown or mined (with a few exceptions, like the sun!). If the item is grown specifically for people, it is a product of agriculture. Ask students "Where do we get the things we use everyday? "Most will say, "at the grocery store!" Some might say, "a factory." Tell students that the store is a distribution center where we buy things and that the factory is a place where "raw" ingredients, grown for us (wheat for bread) or provided by nature (petroleum for fuel or plastic), are put together to make a product that ends up in the store.

Tell students that agriculture begins on a farm and that there all kinds of farms. Cattle ranches, for beef and leather; dairy farms for milk and all the things that come from milk, orchards that grow apples to make juice and apple pies; pig farms for pepperoni, bacon, and ham; grain farms that grow corn for fuel or corn syrup for soda and wheat for bread; cotton farms for blue jeans; and tree farms for paper and landscaping. In fact, there is a different kind of farm for nearly every type of product. Farms specialize in what they grow based upon their location (climate and soil) and farmers choose only a few crops because the type of equipment used to plant and harvest each crop is very specific and expensive.

Inform students they are now going to create a "farm web" to help them understand agriculture and where the things they use every day come from. Agriculture begins in the soil on the farm. Place the farm picture in the center of the floor. Mix up the remaining pictures and either put them in a pile or pass a picture to each student. Ask the students which pictures will go closest to the farm picture? Answer: the pictures of things that are grown or raised on a farm. Students with products should place their pictures onto the web after the farm-raised item is placed. Ask each student to place his or her picture into the right place on the

**Recommended Books**

***Harvest Year***

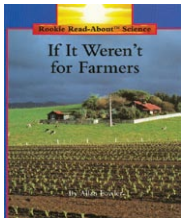



"When it's cold in the northern states, crunchy carrots are dug from the ground in Texas...Grapefruit as big as softballs hang on the citrus trees of sunny Florida, ready to be picked." The text is clear, with well-chosen details about crops and modern technology. The photographs are consistently excellent throughout. They not only illustrate the huge variety of commercially raised plants and animals in the U.S., but also reflect the great diversity of people, landscape, and weather found around the country. Author: Cris Peterson. ISBN: 1563975718

***Heartland***


Strong, assured verses and paintings create a vital celebration of the American midwest in its many faces, from farmland to town to cityscape. The "patchwork quilt" of fertile fields is dotted with storefronts and grain elevators; in turn, "farm and city rhythms merge" in the mills, stockyards and skyscrapers that rise out of the plains. Author: Diane Siebert. ISBN: 0690047304

***If It Weren't for Farmers***




This book briefly describes some of the work that is done on different kinds of farms and the foods that are produced there. Author: Allan Fowler. ISBN: 0516460099

# "My Farm Web" Master

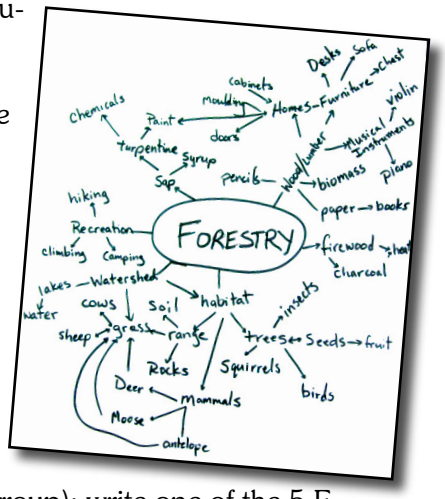

*The entire lesson plan and larger 4-inch images of each picture can be printed from this link:*
*http://extension.usu.edu/aitc/teachers/pdf/lesson/farmweb.pdf*

web and discuss or use "linking phrases" such as "dairy cows make milk" after each picture is placed (the word "make" is the linking word). When all the pictures have been correctly placed, review the linking phrases and ask students if they think other pictures could be added to the web.

As a conclusion to the activity, read aloud one or more of the recommended books and ask students where the products mentioned in the books would fit into their "Farm Web."

## Activity 2: Preparation (Concept "Word" Web)

For upper elementary students, "Activity 1" can be extended or evaluated by defining agriculture further using the 5-Fs of agriculture (see the 5-Fs of Agriculture sidebar). To make sure students understand concept maps and the content, ask students to create a concept web with words on paper or on the dry-mark board (kids love to have an opportunity to write on the board!). Divide your students into five groups. Give each group a sheet of flipchart paper or disperse them along the dry-mark board (draw a large rectangle, the size of the flipchart paper, for each group); write one of the 5-F words (farm, food, fabric, forestry, flowers) in the center of each paper or rectangle. For a large class, make two more groups and add the words "fuel" and "fish."




Ask students to create a concept map around their group's word by thinking about products they can associate with the word. Give them about 5 minutes. Next, ask them to create "linking phrases." Ask each group to share their web with the class and explain their concept web. (Paper maps should be posted on the wall.) Conclude the instruction by announcing that the students have visually created a definition of agriculture.

## Additional Activities, What's Next?

- In addition to the products students thought about with the 5-Fs, ask students to try to identify careers with the new word links they have created. For example, if they have listed the word "yogurt" on "FOOD," they should now link the word to milk processing plant worker, and then to dairy farmers, and then to dairy computer programmers, and milk-hauling truckers, etc. Again, give the students 5 minutes to see if they can get 20 new career links. Or, make it a contest to see which group can link and list the greatest number of careers.
- After careers have been identified and written on the concept web, ask students to note the natural resources used to produce each product such as fuel (oil), water, soil, etc.
- Leave the concept maps up on the board or on the wall and encourage other groups to help add to each other's maps. It's important to add words showing the relationship between linked concepts if a step or stage is missing.

### 5-Fs of Agriculture

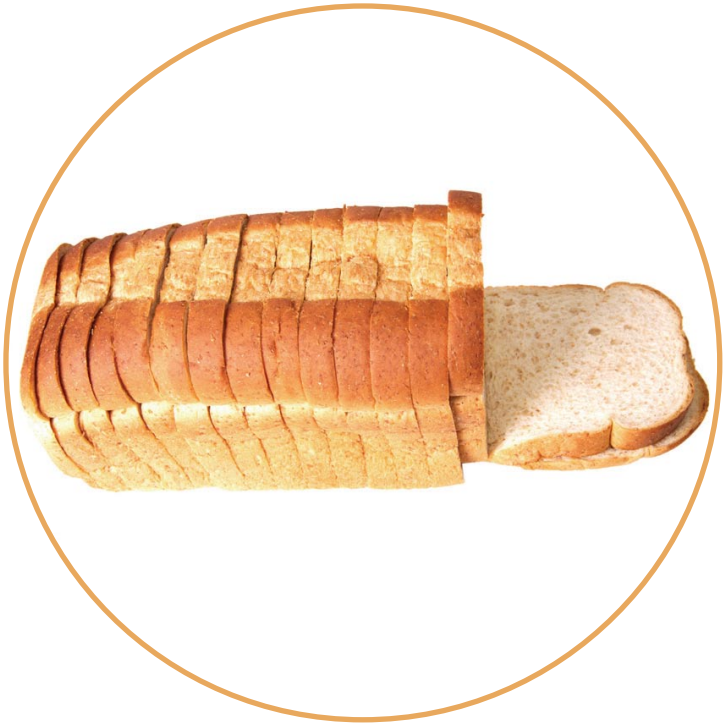
***Farming:*** The production of food and fiber derived from plants and animals. Farmers must understand economics, business, mathematics, and the science involved in getting their crops and animals to market. The science involved in agriculture includes the knowledge of ecosystems, soil, water, weather, chemistry, and plant and animal biology.

***Food:*** Made from the raw products taken from the farm. Some products, like corn, may be consumed in their "raw" state or processed into an entirely different product like corn chips, soda, peanut butter, detergents, or medicines. Some of our farm "raw" food products need to be processed into a more palatable and digestible form before they can be eaten. Wheat, for example, is the most important grain in the U.S. We would have to eat hundreds of "raw" or whole-wheat seeds to get the same nutrition we can get more easily from processing the wheat into flour and then baking bread. Bread is a more palatable way to eat wheat. Flour, of course, is used in hundreds of other products: tortillas, pastas, doughnuts, muffins, pancakes, cookies, pie crusts, and pretzels, just to name a few. The food industry is the processing and distribution of food.

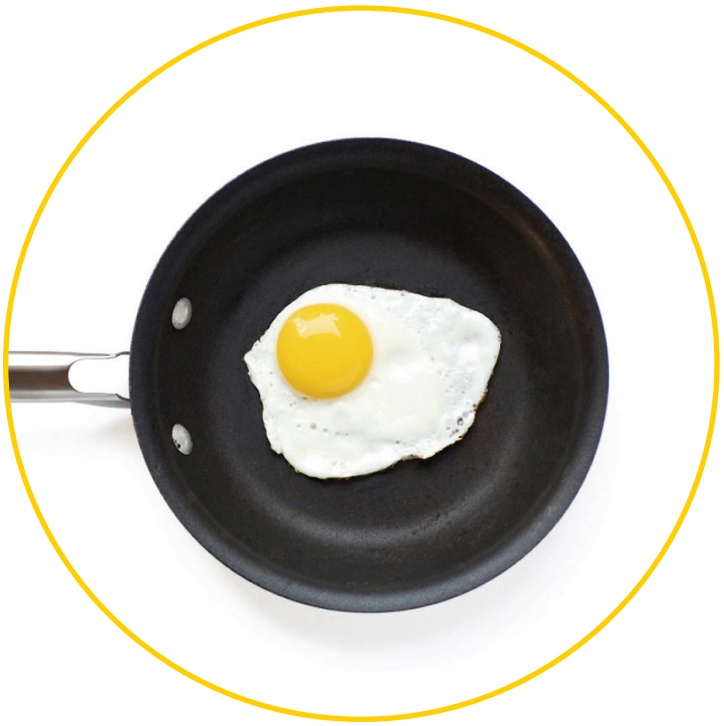
***Fabric:*** Natural fibers are produced on the farm; the two most important fibers are wool and cotton. These fibers are made into thread or yarn and then knitted or woven into fabric or cloth, then finally made into gloves, socks, suits, coats, and other products including blankets, carpets, and curtains.

***Forestry:*** Many forests are cultivated. Agriculturally, many private forests are grown to provide paper and other wood products.

***Flowers:*** Flower and nursery crop production are part of the "green industry" which includes turf. The primary use of these "crops" is for aesthetics or beauty.




WHOLE GRAIN
CEREAL
Toasted Whole Grain Oat Cereal
NET WT 10 OZ (283g)




BENNETT