

# Agricultural Literacy Curriculum Matrix

Nebraska Agriculture in the Classroom

## That Was Then, This Is Now

### Grade Levels

3 - 5

### Purpose

Students will learn about food prices and how they have changed over time as they perform mathematical computations, analyze data charts, and compare and contrast statistical information.

### Estimated Time

Two 40-minute sessions and 1 homework assignment

### Materials Needed

- *Reading Chart I and II* activity sheets
- *Average Prices of Food—Retail* chart
- *The Price of Food Today* homework assignment
- Colored Pencils
- Graph paper

Essential Files (maps, charts, pictures, or documents)

- Average Prices of Food-Retail Chart  
([https://cdn.agclassroom.org/media/uploads/2016/11/21/Average\\_Prices\\_of\\_Food-Retail\\_Chart\\_2016\\_1.pdf](https://cdn.agclassroom.org/media/uploads/2016/11/21/Average_Prices_of_Food-Retail_Chart_2016_1.pdf))
- Reading a Chart-I Activity Sheet  
([https://cdn.agclassroom.org/media/uploads/2016/11/21/Reading\\_Chart\\_1\\_2016\\_2.pdf](https://cdn.agclassroom.org/media/uploads/2016/11/21/Reading_Chart_1_2016_2.pdf))
- Reading a Chart-I Answer Key  
([https://cdn.agclassroom.org/media/uploads/2016/11/21/Reading\\_Chart\\_1\\_2016\\_ANSWER\\_KEY\\_1.pdf](https://cdn.agclassroom.org/media/uploads/2016/11/21/Reading_Chart_1_2016_ANSWER_KEY_1.pdf))
- Reading a Chart-II Activity Sheet  
([https://cdn.agclassroom.org/media/uploads/2016/11/21/Reading\\_a\\_Chart\\_II\\_2016\\_1.pdf](https://cdn.agclassroom.org/media/uploads/2016/11/21/Reading_a_Chart_II_2016_1.pdf))
- Reading a Chart-II Answer Key  
([https://cdn.agclassroom.org/media/uploads/2016/11/21/Reading\\_a\\_Chart\\_II\\_2016\\_ANSWER\\_KEY\\_1.pdf](https://cdn.agclassroom.org/media/uploads/2016/11/21/Reading_a_Chart_II_2016_ANSWER_KEY_1.pdf))
- The Price of Food Today Homework Assignment  
([https://cdn.agclassroom.org/media/uploads/2016/11/21/The\\_Price\\_of\\_Food\\_Today\\_2016.pdf](https://cdn.agclassroom.org/media/uploads/2016/11/21/The_Price_of_Food_Today_2016.pdf))

## Vocabulary Words

**commodity:** a primary agricultural product that can be bought and sold

**farmer:** someone who grows animals or crops for food and fiber

**retail food prices:** the cost of food at a grocery store or other retail outlet

## Did You Know? (Ag Facts)

- U.S. consumers spend just 10 percent of their disposable income on food each year.<sup>1</sup>
- For every retail dollar spent on food, an average of 17 cents goes to farmers and ranchers.<sup>1</sup>
- For every retail dollar spent on food, an average of 83 cents goes to off-farm costs (processing, distribution, retail, etc.).<sup>1</sup>

## Background Agricultural Connections

This lesson includes information on how food price data can be used to make mathematical computation practice interesting and informative. Review the materials and revise them to meet the needs of your students.

You may choose to customize the lesson to include current and past newspaper grocery ads. Consider comparing **commodity** prices from one season to the next and from one

year to another. Statistics and colorful graphs are available from a variety of sources. As you use this lesson, it is important for students to realize that the United States has the safest, most abundant food supply in the world. Most **farmers** do not make a lot of money producing the food Americans consume. In fact, people who farm most often do it because they have a passion for it. Today, over 90% of farm families have some income that comes from outside of farming.<sup>2</sup> Profit made in agriculture is most often accrued on the marketing end. It may be interesting for your students to meet a producer and learn about his/her operation.

## Interest Approach - Engagement

1. Choose a food item and write the steps from farm production to consumption on the board from left to right. For example:
  - *Milk is produced by cows on a dairy farm; a truck picks the milk up and takes it to a processing plant; the milk is processed and packaged into butter, yogurt, and other dairy products; finally the product is transported to grocery stores where it is purchased and consumed.*
  - *Eggs are produced by chickens on a farm. Next, the eggs are cleaned, packaged and checked for quality at a processing plant. Finally, the eggs are transported to grocery stores where they are sold to consumers.*
2. As students visualize the different steps of the production of their food, help them understand that the food is sold on each level. When they buy food at the grocery store they are paying the farmer to produce it, the processor to prepare it for consumption, and the grocery store for putting it on their shelves.
3. Ask the students, "What costs are associated with purchasing food at the grocery store?"

## Procedures

1. Review the *Reading Chart* activity sheets. If necessary, rewrite the activity sheets or create math problems that supplement them.
2. Introduce your students to the lesson by having them think about the prices their family pays for specific food items and how they think that price is determined. Possible discussion and/or writing prompts are listed below.
  - If you were to ask your parents if the price of food is going up or down what would they say?
  - On average, is it less expensive, more expensive, or about the same to eat at a restaurant than at home? Explain.
  - How do you think the price of food is determined?
  - Do the farmers who grow the crops make a lot of money on the food you are eating?

- If you were to compare the price of food in the United States to the price of food in other countries, would it be more or less expensive?
3. Introduce your students to the *Average Prices of Foods—Retail* chart. In general, discuss what the chart shows. Review the meaning of *average*.
  4. Have the students complete the student activity sheets and the homework assignment. Part of the homework assignment requires students to make a graph. Be sure they have the rough drafts of their graphs approved before preparing their final copies.
  5. Share the graphs the students have created. Display the student graphs in the library, hallways, grocery stores, and at special events such as parent meetings and open houses.

### Concept Elaboration and Evaluation

After conducting these activities, review and summarize the following key concepts:

- The cost of buying food pays for the production of the food on the farm, the processing or packing of the food, as well as the work of the grocer who sells it.
- The cost of food changes as years pass and also from season to season.



We welcome your feedback

([https://usu.co1.qualtrics.com/jfe/form/SV\\_4HhIVpN4L8IC2IT](https://usu.co1.qualtrics.com/jfe/form/SV_4HhIVpN4L8IC2IT))!

Please take a minute to tell us how to make this lesson better or to give us a few gold stars!

## Enriching Activities

Convert the homework activity to a class field trip. Have students work in teams of two as they find information at the grocery store.

Create large colorful graphs of the information they collected at the grocery store. Display the student graphs at the stores the students visited.

Use the Food and Farm Facts Booklet

(<https://iframe.agclassroom.orghttps://iframe.agclassroom.org/nebraska/resource/22/>) available from the American Farm Bureau Federation to illustrate a variety of graphic ideas as well as information on the current status of American agriculture.

Use grocery ads to determine the prices of the food items in the homework assignment.

## Sources

1. Food and Farm Facts  
(<https://iframe.agclassroom.orghttps://iframe.agclassroom.org/nebraska/resource/22/>)
2. [http://www.ers.usda.gov/webdocs/publications/eib117/40008\\_eib-117\\_summary.pdf](http://www.ers.usda.gov/webdocs/publications/eib117/40008_eib-117_summary.pdf)

## Suggested Companion Resources

- Tuttle's Red Barn: The Story of America's Oldest Family Farm  
(<https://iframe.agclassroom.org/nebraska/resource/918/>)
- Food and Farm Facts Booklet  
(<https://iframe.agclassroom.org/nebraska/resource/22/>)

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