

ACTIVITY SNAPSHOT

SUPPORTING AREAS

Goods and services

PURPOSE

Students will understand the supply chain: how producers deliver soybeans in Nebraska.

STATE STANDARDS IT SUPPORTS

SS 2.2.3 Describe how producers deliver products/services, earn an income, and satisfy economic needs and wants.

MATERIALS

- Large Transportation Pictures
- *Life of a Soybean Video*
- Supply Chain Soybean Cards
- *Soybean Video: CGB Grain*

Journey of a Soybean

Adapted from National Agriculture in the Classroom

Activity Summary

Students will understand how food gets from the grocery store to their home by participating in a sequencing activity to understand how soybeans are moved from producer to consumer. The sequencing activity will use a set of cards and allow students to predict the supply chain process and the rearrange their cards after watching a video from CGB Grain.

Vocabulary Words

Commodity: a primary agricultural product that can be bought and sold.

Consumer: a person who buys and uses goods and services

Producer: a person or company that makes, grows, or supplies good and services.

Supply chain: the sequence of processes involved in the production and distribution of a commodity.

Transportation: the movement of people or goods from one place to another.

Background Information

How does food get to the grocery store? The term **supply chain** is used to describe the sequence of processes involved in the **production, processing, and distribution** of a **commodity**. The chain begins with the equipment farmers (the producers) need to produce food, such as seeds, fertilizer, and machines. Farmers plant, maintain, and harvest crops or raise animals. The food is cleaned, processed, and packaged before being shipped to grocery stores and into the hands of **consumers**.

Each step in the chain is part of **agribusiness**, a term used to describe the range of businesses related to producing, processing, and distributing agricultural products.

Transportation is a critical part of the supply chain. Some regions cannot produce certain foods due to population density, seasons, and climate and soil conditions. In the United States, food is shipped an average of 1,500 miles before being sold.² The five main modes of transporting agricultural products are trucks, trains, airplanes, cargo ships, and barges.

What's the Connection to Agriculture?

- Nebraska ranks 4th in soybean production.
- Livestock and poultry in Nebraska used the meal from more than 28 million bushels of soybeans in Nebraska.
- A 60-pound bushel of soybeans yields about 48 pounds of soymeal and 11 pounds of oil.
- 1 bushel of soybeans can make 1.5 gallons of biodiesel.

Interest Approach

1. Ask students, "how does food get to the grocery store?"
2. Allow time for responses and guide students to understand that the term **supply chain** is used to describe this process. The chain begins with a farmer who grows the food, then is transported to be cleaned, processed, and packaged before it is shipped to the grocery store. Each step requires **transportation** of a product.
3. Using the Large Transportation Pictures, explain the different ways products can be transported.
 - a. Truck – provides fast delivery and controlled temperatures. Many different types of trucks such as tanker trucks to carry liquids, reefer trucks to carry cold product, and grain trucks to haul raw grains.
 - b. Train - contain data logging systems to allow customers to monitor their cargo in real-time.
 - c. Airplane – the fastest type of transportation; used for transport of perishable products that need to travel long distances. For example: bananas.
 - d. Cargo Ship – can hold 18,000 shipping containers that can be refrigerated or not. Ships are used to transport large quantities of items across oceans and seas.
 - e. Barge – flat-bottomed vessels that are self-propelled, pushed, or towed. Barge transportation is important to agriculture because it is low cost and moves things product to coastal areas.
4. After explaining the modes of transportation, transition students into the following activity.

Activity Procedure

1. Organize students into five groups. Pass out the Supply Chain Soybean Cards to each group.
2. Show students the *Life of a Soybean Video* to show what Nebraska farmers do with their soybean seeds.
3. Ask the groups to arrange their cards in the order they think each task is performed throughout the supply chain process of getting the product from the farmer to the consumer.
4. Have the group watch the *Soybean Video: CGB Grain* and use the information from the video to make any necessary adjustments to their card sequence.

Concept Elaboration and Evaluation

1. Once the activity is complete, review the following statements with students:
 - a. The supply chain is the processes involved in the production, processing, and distribution of a commodity.
 - b. Transportation is a critical piece of the supply chain.
 - c. Nebraska farmers grow soybeans that are used across the world.

Extension Activities

Program: Nebraska Agriculture in the Classroom Visit

Nebraska Agriculture in the Classroom staff leads customized, hands-on lessons and aligned with Nebraska State Education Standards within science, social studies, and language arts for grades K-8 in schools across Nebraska. Schedule a Classroom Visit at www.nefbfoundation.org/classroomvisits

Lesson Plan: By Land, Air, or Sea

Students discover how agricultural commodities are transported from producers to consumers. agclassroom.org/matrix/lesson/660

Truck



Train



Airplane



Cargo Ship



Barge



Soybeans

Soybean seeds are planted



Soybeans are harvested



Soybeans are tested for quality



Soybeans are transported to storage silos



Soybeans are transported by rail



Soybeans are loaded into containers and transported by barges



Soybeans are transported by trucks to processing plants



Soybeans are processed with other grains into animal feed



Animal feed is sold



Animal feed is consumed

