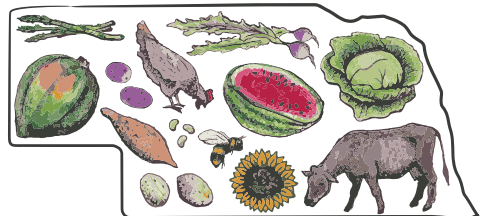


# Harvest of the Month

## DRY BEANS

Photo Credit: Nebraska Dry Bean Commission



*Farm to ECE*

EARLY CARE & EDUCATION

NEBRASKA



Download and print items from  
the Harvest of the Month toolkit at:

[www.education.ne.gov/ns/farm-to-school/harvest-of-the-month](http://www.education.ne.gov/ns/farm-to-school/harvest-of-the-month)

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NEBRASKA  
**AGRICULTURE  
IN THE CLASSROOM**  
NEBRASKA FARM BUREAU FOUNDATION

This project has been funded at least in part with Federal funds from the U.S. Department of Agriculture. The contents of this publication do not necessarily reflect the view or policies of the U.S. Department of Agriculture, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

# HOW TO USE THIS RESOURCE

## FLEXIBILITY – FOR YOU!

Use the provided activity calendars as a guide to incorporate this resource into your classroom. Follow the calendars as written, or use them as inspiration and select the activities that work best for you, the children, and your schedule.

## TRY READING THE SAME BOOK EVERY DAY FOR A WEEK.

Reading the same book every day for a week allows children to learn more about the story and dive deeper into the book's meaning. Rereading a story leads to greater reading confidence. Ask discussion questions to encourage children to retell the story. This practice will help prepare children for more complex narratives down the road.

## DON'T HESITATE TO REPEAT ACTIVITIES.

Repetition provides the practice that children need to learn and master new skills. As children repeat activities, they will improve speed, increase confidence, and strengthen the connections in their brain that help them learn!



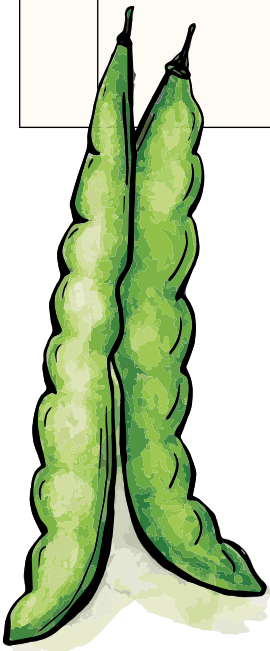
# ACTIVITY CALENDAR: PLANNING FOR ONE MONTH

WEEKLY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<b>Student Understanding:</b> Beans are seeds.  <b>Book of the Week:</b> <i>One Bean</i> by Anne Rockwell	Farm Story with Props  Science Activity: <i>Beanie Baby</i>	Story Time with Book of the Week  Recipe: <i>Hummus with Northern Beans</i>	Story Time with Book of the Week  Science Activity: <i>Bouncing Beans</i>	Story Time with Book of the Week  Recipe: <i>Baked Bean Medley</i>	Quick Bite Activity for Exploration  Counting Activity
<b>Student Understanding:</b> Farmers in Nebraska grow beans.  <b>Book of the Week:</b> <i>The Cool Bean</i> by Jory John	Video: <i>Amazing Bean Farming and Harvesting: Planting</i> (Start - 2:47)	Video: <i>Amazing Bean Farming and Harvesting: Growing</i> (2:50 - 4:28)  Sorting Activity	Video: <i>Amazing Bean Farming and Harvesting: Harvest</i> (4:29 - 6:25)  Recipe: <i>White Chicken Chili</i>	Video: <i>Amazing Bean Farming and Harvesting: Cleaning</i> (6:25 - 8:49)  Matching Activity	Video: <i>Amazing Bean Farming and Harvesting: Processing</i> (8:50 - end)
<b>Student Understanding:</b> There are many types of beans that we can eat.  <b>Book of the Week:</b> <i>The Adventure of Little Bean</i> by Ageno H. Monica	Farm Story with Props  Quick Bites Two	Story Time with Book of the Week  Quick Bite Two	Story Time with Book of the Week  Quick Bite Two	Story Time with Book of the Week  Quick Bite Two	Quick Bite Two  Farm Story with Props
<b>Student Understanding:</b> Beans come in many different sizes and colors.  <b>Book of the Week:</b> <i>One Little Bean</i> by Cecil Kim	Story Time with Book of the Week  Sorting Activity	Story Time with Book of the Week  Matching Activity	Story Time with Book of the Week  Sorting Activity	Matching Activity  Recipe: <i>Bean Burrito Bowl</i>	Dry Beans Coloring Page  Quick Bite One



# ACTIVITY CALENDAR: PLANNING FOR TWO WEEKS

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
WEEK ONE	<p>Farm Story with Props</p> <p>Science Activity: <i>Beanie Baby</i></p>	<p>Story Time with Suggested Books for Reading</p> <p>Recipe: <i>Hummus with Northern Beans</i></p>	<p>Story Time with Suggested Books for Reading</p> <p>Science Activity: <i>Bouncing Beans</i></p>	<p>Story Time with Suggested Books for Reading</p> <p>Recipe: <i>Baked Bean Medley</i></p>	<p>Quick Bite Activity for Exploration</p> <p>Counting Activity</p>
WEEK TWO	<p>Video: <i>Amazing Bean Farming and Harvesting: Planting (Start - 2:47)</i></p> <p>Quick Bite Two</p>	<p>Video: <i>Amazing Bean Farming and Harvesting: Growing (2:50 - 4:28)</i></p> <p>Sorting Activity</p>	<p>Video: <i>Amazing Bean Farming and Harvesting: Harvest (4:29 - 6:25)</i></p> <p>Recipe: <i>White Chicken Chili</i></p>	<p>Video: <i>Amazing Bean Farming and Harvesting: Cleaning (6:25 - 8:49)</i></p> <p>Matching Activity</p>	<p>Video: <i>Amazing Bean Farming and Harvesting: Processing (8:50 - end)</i></p> <p>Dry Beans Coloring Page</p>



# ENGAGEMENT TOOLS

## SUGGESTED BOOKS FOR READING

- *The Adventure of Little Bean* by Ageno H. Monica
- *The Cool Bean* by Jory John
- *One Bean* by Anne Rockwell
- *One Little Bean* by Cecil Kim

## SONGS, POEMS, AND VIDEOS

- Amazing Bean Farming & Harvesting
  - » [youtube.com/watch?v=BgWUKm27w\\_8](https://youtube.com/watch?v=BgWUKm27w_8)
  - » Suggested to watch in sections:
    - Planting: Start to 2:47
    - Growing: 2:50 – 4:28
    - Harvest: 4:29 – 6:25
    - Cleaning: 6:25 – 8:49
    - Processing 8:50 - End
- Bean Seed Time Lapse
  - » [youtube.com/watch?v=w77zPAtVTul](https://youtube.com/watch?v=w77zPAtVTul)
- What's Inside a Bean?
  - » [youtube.com/watch?v=UFmBKpQxf-U](https://youtube.com/watch?v=UFmBKpQxf-U)
- How To Grow a Bean Plant in a Jar | Fun Experiment
  - » [youtube.com/watch?v=RTRW2Cf9U2U](https://youtube.com/watch?v=RTRW2Cf9U2U)



## INVOLVING FAMILIES

Involve families in the dry beans unit by sharing the Dry Beans Fun Facts document. Add the information to a newsletter, incorporate the fun facts into a bulletin board, or send the sheet home so families can read through it and learn more together. Additional ways to involve families using the resources in this lesson could also include sharing the recipes and suggested books or inviting them to participate in one of the activities.

## QUICK BITES

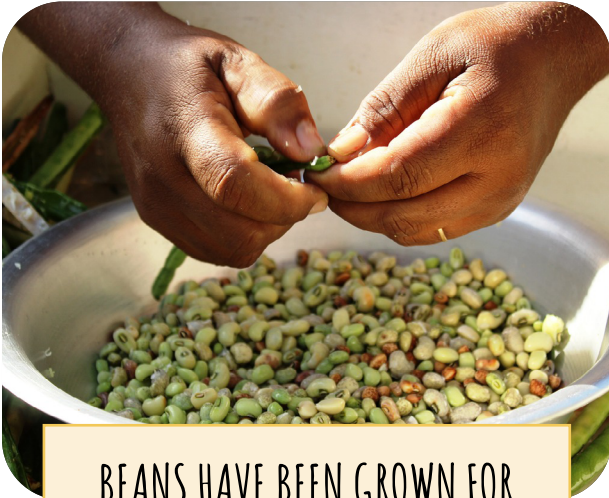
Harvest of the Month Quick Bites encourage children to participate in taste testing and provide activities for exploration. Children have the opportunity to learn more about the food on their plate and give feedback on food samples.

## HANDS-ON ACTIVITIES

These activities are aligned with the Nebraska Early Learning Guidelines for children ages 4-5. Use the lessons to engage children in hands-on activities to practice fine and gross motor skills, explore crafts and music, engage the senses, and more! All activities are “center” or “play station” based for small groups of children to complete at a time. Reference the Activity Calendars for scheduling inspiration.

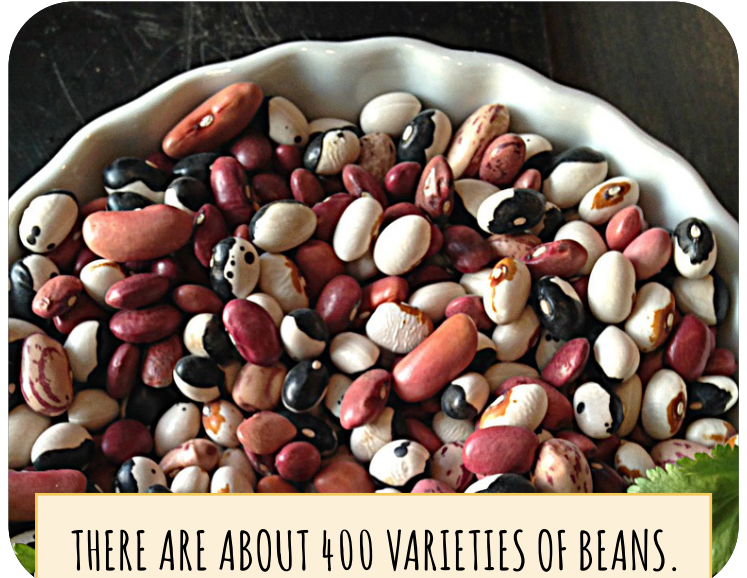
# DRY BEAN FUN FACTS

Children are learning about dry beans! Extend learning outside of the classroom by creating a positive experience for children with a conversation about dry beans. Help them to learn more about new foods and farming in Nebraska!



## BEANS HAVE BEEN GROWN FOR THOUSANDS OF YEARS!

Evidence suggests that native people of Mexico and Peru were cultivating bean crops as far back as 7000 B.C.



## THERE ARE ABOUT 400 VARIETIES OF BEANS.

Varieties of beans include pinto, Great Northern, black, kidney, navy, and so many more.



NEBRASKA IS THE #1 PRODUCER OF GREAT NORTHERN BEANS IN THE U.S., and the #2 producer of pinto beans!

## BEANS PROVIDE MANY HEALTH BENEFITS!

Studies have shown a diet including dry beans may reduce the risk of heart disease and certain cancers, control blood sugar, help maintain and promote muscle, provide an energy source, and assist with weight management.



# QUICK BITES

Did you know? Children may need to try a new food 10-15 times before they determine whether or not they enjoy it. Taste tests are a great opportunity for children to try new, healthy foods in a low risk environment. Refer to the Taste Test Guide for food allergy information, precautions, and safety ideas before completing these activities with children.

## QUICK BITE ONE

Pair Great Northern Beans with different protein options. Use the Harvest of the Month Taste Test Evaluation sheet to record if children “loved it,” “liked it,” or “maybe next time” would try it.

- Example: Pair Great Northern Beans in the following ways:
  - » Ham and Great Northern Beans
  - » Italian Sausage & Great Northern Beans
  - » Chicken & Great Northern Beans

## QUICK BITE TWO

Try different varieties of dry edible beans.

- Example: Purchase Great Northern beans, pinto beans, light red kidney beans, black beans, navy beans, and garbanzo beans. All of these beans grow in Nebraska. Try a bean each day of the week. Like smells, different tastes can bring back strong memories. While tasting each bean, start a discussion about memories. What does this food make you think of? Grandma’s house? Winter time, a summer barbeque, or maybe a birthday party? Share the fun food memories you have with beans!

## ACTIVITY FOR EXPLORATION

Prepare and cook beans with kids. A one-pound bag of dried beans yields about 6 cups of cooked beans.

1. Pour dried beans in a large bowl, rinse, and then drain.
2. Cover beans with enough water to cover by 2 inches. Add 2 tablespoons of salt.
3. Soak beans at room temperature for 4 hours or cover and refrigerate 8 hours or overnight.
4. Drain soaked beans.
5. When ready to cook, place the soaked beans in a large pot. Cover again with water by 2-4 inches.
6. Bring the pot to a simmer. Continue simmering for 30-60 minutes or until beans are tender.
7. Enjoy!





# HANDS-ON ACTIVITIES

PAGE 10

## SCIENCE ACTIVITY - BOUNCING BEANS

Children make discoveries through observing a chemical reaction with dry edible beans.

PAGE 11

## MATCHING ACTIVITY - DRY BEAN RECIPE MATCH

Children classify types of beans by matching the dry edible bean to the recipe that it helps to create.

PAGE 15

## SCIENCE ACTIVITY - BEANIE BABY

Children will grow a dry edible bean in a Ziploc bag and observe how a bean sprouts.

PAGE 16

## COUNTING ACTIVITY - COUNTING BEANS

Children count dry beans and place them on a mat corresponding to the number written on the mat. Then, children trace the numbers on the mat to practice writing their numbers.

PAGE 18

## SORTING ACTIVITY - SORTING BEANS

Children sort dry edible beans by characteristics such as color and size into four different bowls.

PAGE 19

## FARM STORY WITH PROPS

Read the story and have children follow along with the photos. Use the circle time activity props to enhance the experience!

## SCIENCE ACTIVITY

## BOUNCING BEANS

(S.02): Develops foundational skills in learning and understanding about the world through exploration and investigation.

Science helps children develop key life skills, including an ability to communicate, remain organized and focused, and even form their own opinions based on observation. Science also helps children develop their senses and overall awareness.

## THE GOAL

Children make discoveries through observing a chemical reaction with dry edible beans.

## INSTRUCTIONS

This activity is best implemented as a small to medium center with 2-4 children.

1. In a 16 oz glass vase or mason jar add 1 cup water,  $\frac{1}{4}$  cup vinegar, and 1 tablespoon of baking soda. (Once the baking soda is added, the cup will overflow. While this is fun to watch, it is best to be done over a towel.)
2. Have the children add a variety of dry beans to the jar.
3. The beans will sink when placed in the jar, then rise. Some will “bounce” from bottom to top several times.

## ENGAGE THE CHILDREN

Engage children to help develop language, socialization, fine motor, and touch sensory skills.

1. Ask children about what they are doing.
2. Ask children to provide explanations.
3. Ask children the following questions to help them make the connection from their lives to the farm.
  - » Why do you think the beans are able to bounce? (The bubbles in the water from the vinegar and the baking soda help carry the beans to the top of the water, and then the bubbles pop, so the beans sink back down.)
  - » Do you like to dance and jump?



## MATERIALS NEEDED

- 16 oz Glass jar
- Dry beans (any variety will work)
- Water
- Vinegar
- Baking soda

## MATCHING ACTIVITY

## DRY BEAN RECIPE MATCH

Standard (M.04): Develops foundational skills in learning to understand concepts of classification, data collection, organization, and description.

Sorting and grouping things together are an important cognitive skill. It teaches children to notice similarities and differences, learn to categorize, and develops early literacy and numeracy skills.

## THE GOAL

Children classify types of beans by matching the dry edible bean to the recipe that it helps to create.

## INSTRUCTIONS

This activity is best implemented as a small center with 1-2 children.

1. Print and cut out each bean card and recipe card provided. (optional: laminate)
2. Place the cards in random order face up so children can see all the cards.
3. Help children to read the cards and connect the dry edible bean to the correct recipe one time.
4. After you have helped the child through one whole round, allow them to try it by themselves.

## ENGAGE THE CHILDREN

Engage children to help develop language, socialization, fine motor, and touch sensory skills.

1. Ask children about what they are doing.
2. Ask children to provide explanations.
3. Ask children the following questions to help them make the connection from their lives to the farm.
  - » Where do beans grow before we use them in a recipe? (beans grow in a field in a pod on a plant)
  - » Have you ever eaten any of these beans or tried one of these recipes?



Cranberry Bean Pasta



Great Northern Bean

## MATERIALS NEEDED

- Bean and recipe cards (optional: laminate)
- Scissors



Red Beans and Rice



Red Kidney Beans



Cranberry Bean Pasta



Cranberry Beans





Pinto Bean Soup



Pinto Beans



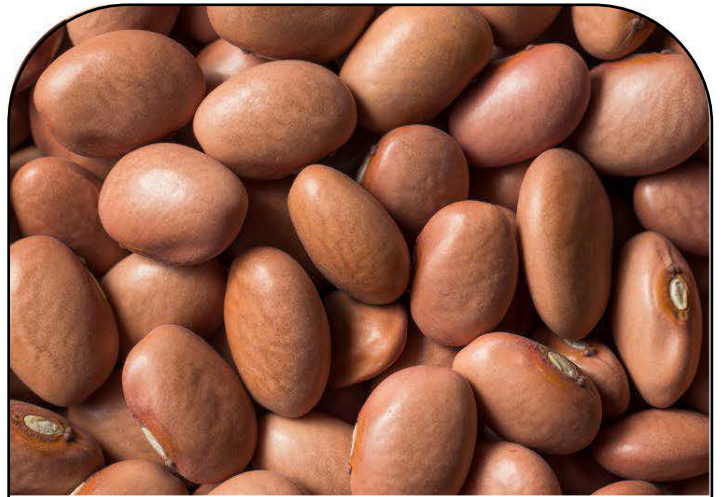
Mexican Black Beans



Black Beans



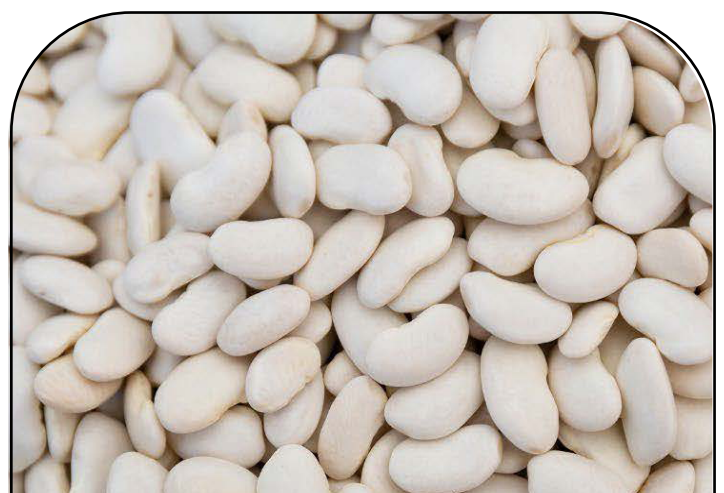
Pink Beans  
and Rice



Pink Beans



Creamy Great  
Northern Beans



Great Northern Beans



## SCIENCE ACTIVITY

## BEANIE BABY

Standard (S.02): Develops foundational skills in learning and understanding about the world through exploration and investigation.

Science encourages a real life understanding of the world around us. While there remains plenty of unexplained phenomena, there are many simple activities that can help spark an interest in the world at a young age.

## THE GOAL

Children will grow a dry edible bean in a resealable plastic bag and observe how a bean sprouts.

## INSTRUCTIONS

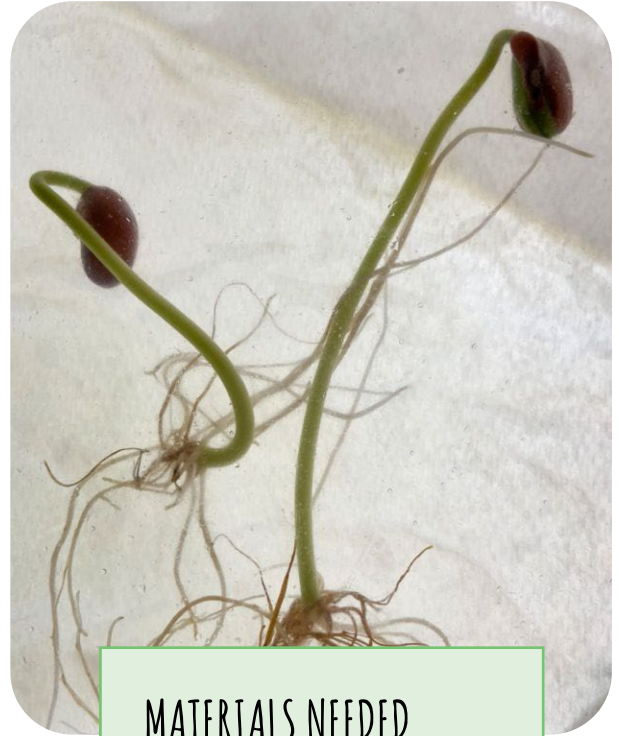
This activity is best implemented as a medium center with 3-4 children.

1. Soak beans overnight. Place beans in a bowl and add water until beans are covered by 2 inches of water. This step is optional but will make the beans grow faster.
2. Slightly wet a cotton ball so it's damp (not soaked) and insert into the plastic bag and seal it.
3. Tape the bag to a window that gets good sunlight.
4. Have children check on their beans once or twice a day. Beans will normally sprout in 3-7 days.

## ENGAGE THE CHILDREN

Engage children to help develop language, socialization, fine motor, and touch sensory skills.

1. Ask children about what they are doing.
2. Ask children to provide explanations.
3. Ask children the following questions to help them make the connection from their lives to the farm.
  - » What do you think is going to happen to the beans? (The beans will sprout some roots after a few days of having sunlight and water.)
  - » What do beans need to grow? (water and sunlight)
  - » How do you think farmers in Nebraska grow beans? (They plant them in the ground and make sure they have plenty of water and sunlight.)



## MATERIALS NEEDED

- Dried beans
- Cotton balls
- Resealable plastic bags
- Tape

## COUNTING ACTIVITY

## COUNTING BEANS

Standard (M.01): Demonstrates awareness of quantity, counting, and numeric competencies.

Math is an important part of learning for children in the early years because it provides vital life skills. They will help children problem solve, measure and develop their own spatial awareness, and teach them how to use and understand shapes.

## THE GOAL

Children count dry beans and place them on the mat in the jar. Then, they trace the number below the jar that represents the number of dry beans that belong in a jar.

## INSTRUCTIONS

This activity is best implemented as a small center with 1-2 children.

1. Print the worksheet on the following page. (optional: laminate)
2. Give each child 15 dry beans, one worksheet, and a writing utensil (use dry erase markers if worksheets are laminated).
3. Demonstrate how children will place the number of dry beans listed below the jar in the picture of the jar and then trace the number below the jar.

## ENGAGE THE CHILDREN

Engage children to help develop language, socialization, fine motor, and touch sensory skills.

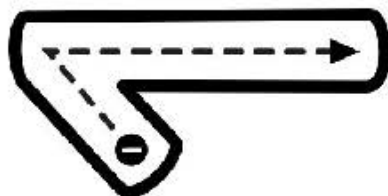
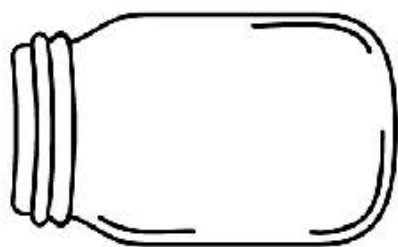
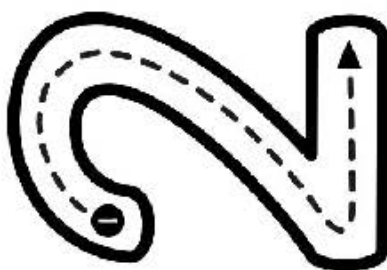
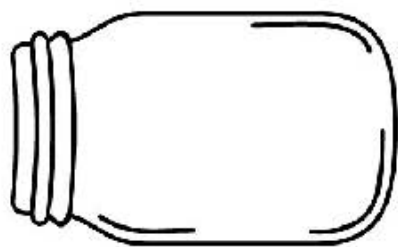
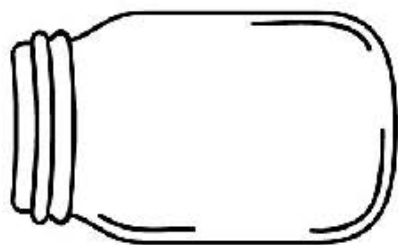
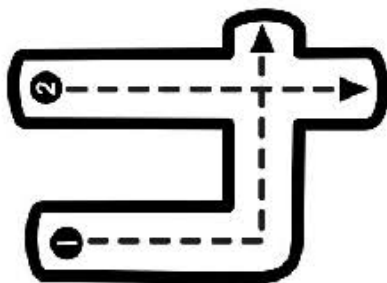
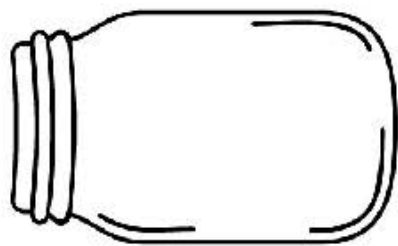
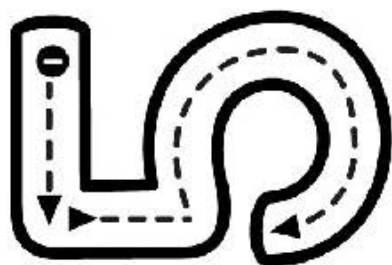
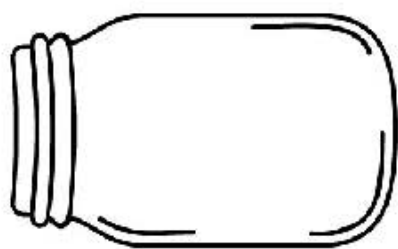
1. Ask children about what they are doing.
2. Ask children to provide explanations.
3. Ask children the following questions to help them make the connection from their lives to the farm.
  - » Is it fun to count dry beans?
  - » Do you think farmers have to count dry beans?
  - » How do you think farmers count all their dry beans?



## MATERIALS NEEDED

- Worksheets (optional: laminate)
- Dry beans
- Writing utensils





## SORTING ACTIVITY

## SORTING BEANS

Standard (M.03): Demonstrates awareness of routines, predictable patterns, and attributes that can be measured.

Sorting and grouping things together are an important cognitive skill. It teaches children to notice similarities and differences, learn to categorize, and develops early literacy and numeracy skills.

## THE GOAL

Children sort dry edible beans by characteristics such as color and size into four different bowls.

## INSTRUCTIONS

This activity is best implemented as a small center with 2-3 children.

1. Mix together four different types of dry edible beans into a medium bowl.
2. Provide four small bowls.
3. Each child will sort the beans into four different bowls based on their color, shape, and size.

## ENGAGE THE CHILDREN

Engage children to help develop language, socialization, fine motor, and touch sensory skills.

1. Ask children about what they are doing.
2. Ask children to provide explanations.
3. Ask children the following questions to help them make the connection from their lives to the farm.
  - » Do all the beans look the same? (No, there are many different shapes, sizes, and colors.)
  - » How do you think a farmer sorts beans? (A machine helps sort beans by size and color.)
  - » What else can we do with these dry beans? (If we soak and cook them, then we can eat them in yummy recipes.)



## MATERIALS NEEDED

- 4 Types of dry edible beans (black beans, cranberry beans, dark red kidney beans, and pinto beans suggested)
- One medium bowl
- 4 Small bowls

# TEACHER SCRIPT FOR FARM STORY WITH PROPS

## INSTRUCTIONS

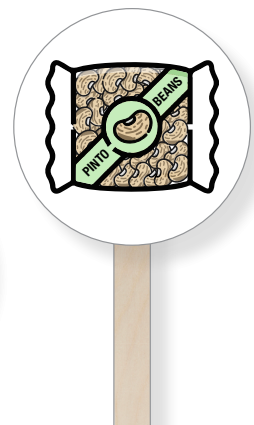
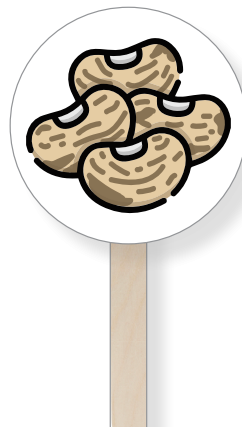
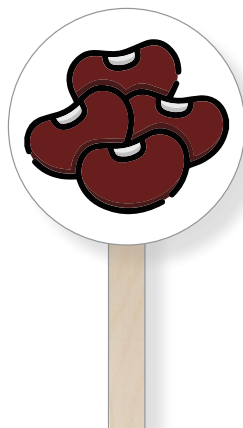
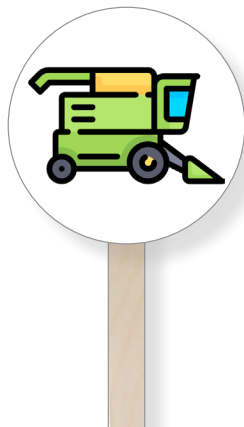
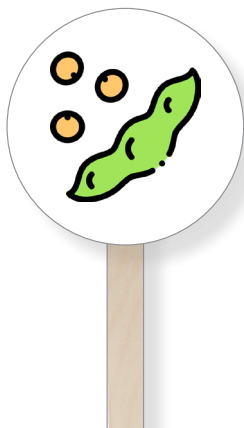
Read the story and have children follow along with the photos on the front of this page. Use the circle time activity props to enhance the experience.

- Beans are planted in the spring, grow all summer, and are harvested in the fall. The beans grow in pods in a field.
- When the bean pods are dry, they are cut from the plant with a tool called a knife.
- A machine called a combine picks up the beans and separates the beans from the pods that they grew in all summer.
- In Nebraska, beans can be many different colors like white, black, brown, red, and even pink. They also come in all shapes and sizes. Some are small, and some are big. Some are round, and some are small. People sort the beans from the field by their size and their color.
- Beans are packaged in bags and sold in grocery stores. Nebraska beans are excellent in chili, soups, and salads. You can enjoy eating white bean chili, baked beans, and black bean salad. Beans can count as either a vegetable or a protein on your plate and help you grow strong.



## CIRCLE TIME PROPS

Ahead of the activity, cut out the shapes and glue each one to a popsicle stick. Distribute the props before you read the story and have children act out the story with the props. Practice sequencing: when children hear their item called, they would stand in order at the front of the room with the teacher.





# FARM STORY



## DRY BEANS

Learn more about how dry beans start on the farm and get to you.



1

Bean plants grow pods that contain beans. The beans pods dry out when they are in the field on the plant in the fall.



2

The bean pods are cut from the plant with a tool called a knife.



3

A machine picks up the dry, cut pods and shakes the beans out of the pods.



4

Beans come in many shapes and colors which helps people sort them.



5

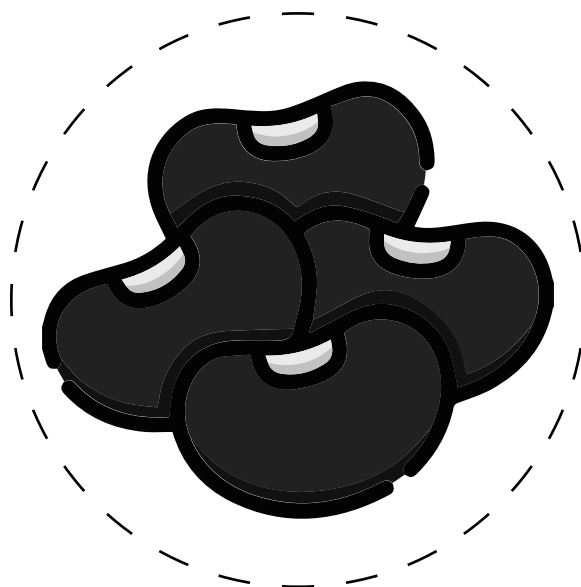
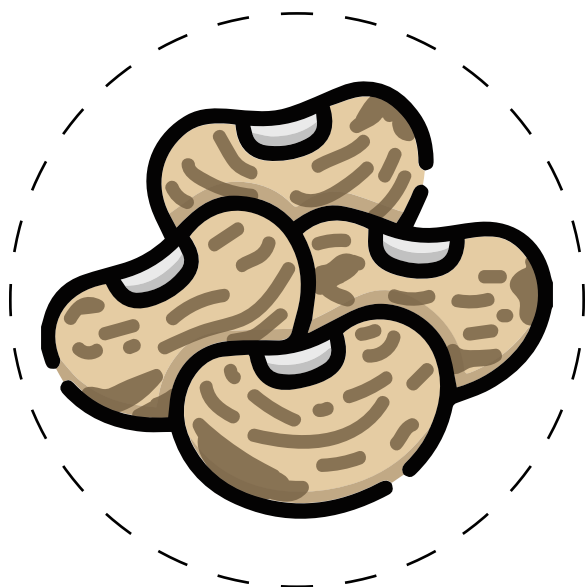
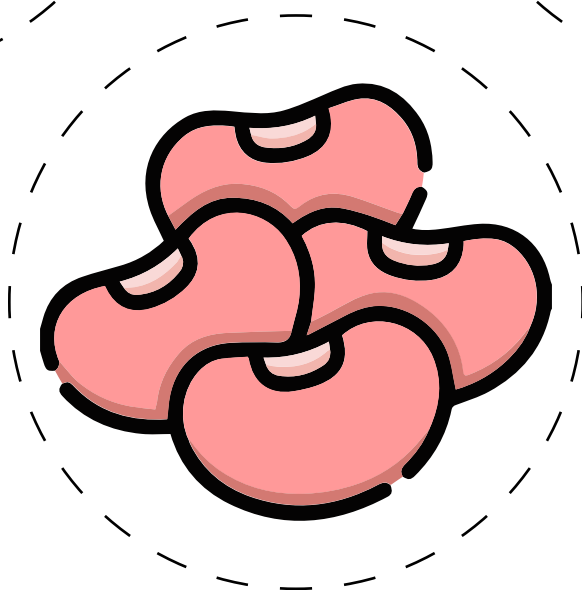
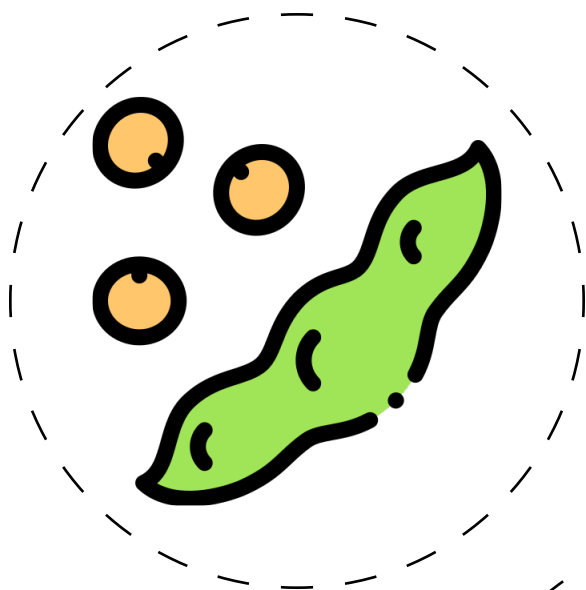
Dry beans are packaged in bags and sold in grocery stores.

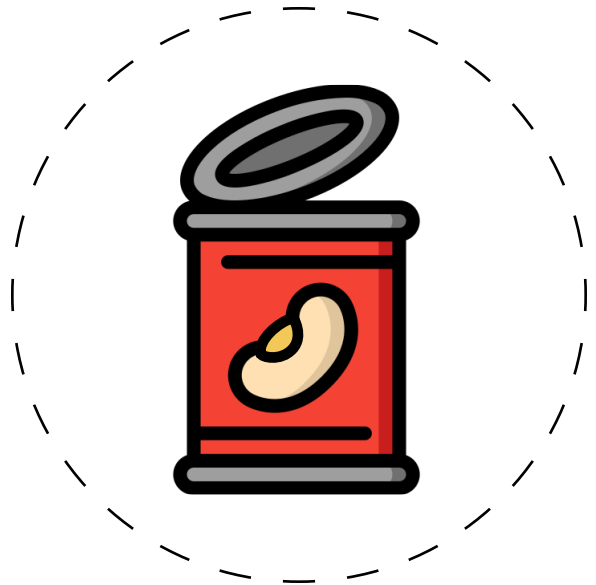
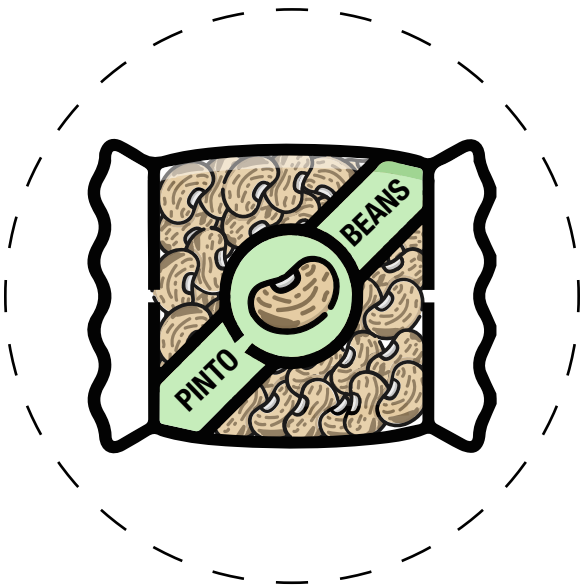
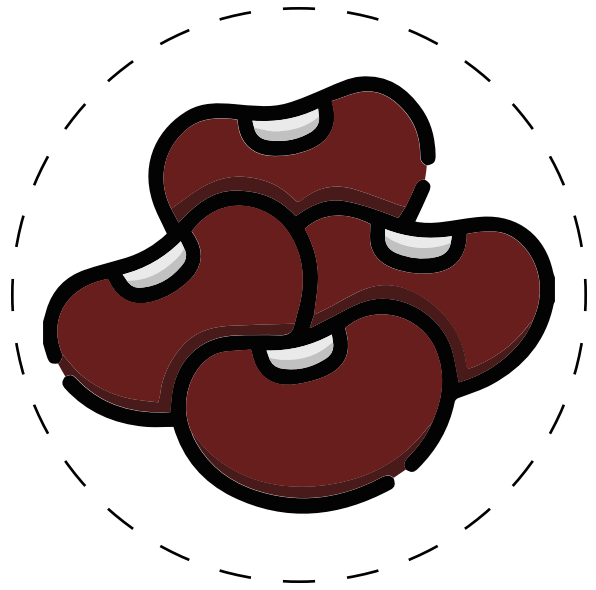
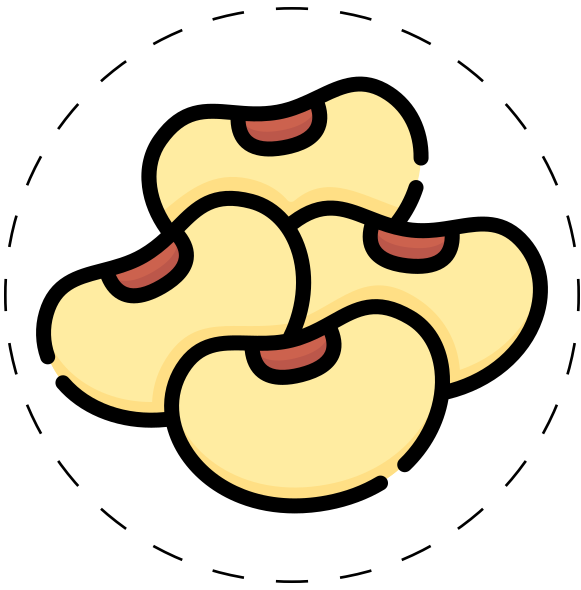
*Photo Credits*

*Story Photo 2: Nebraska Dry Bean*

*Commission Story Photo 4: A Legume A Day*







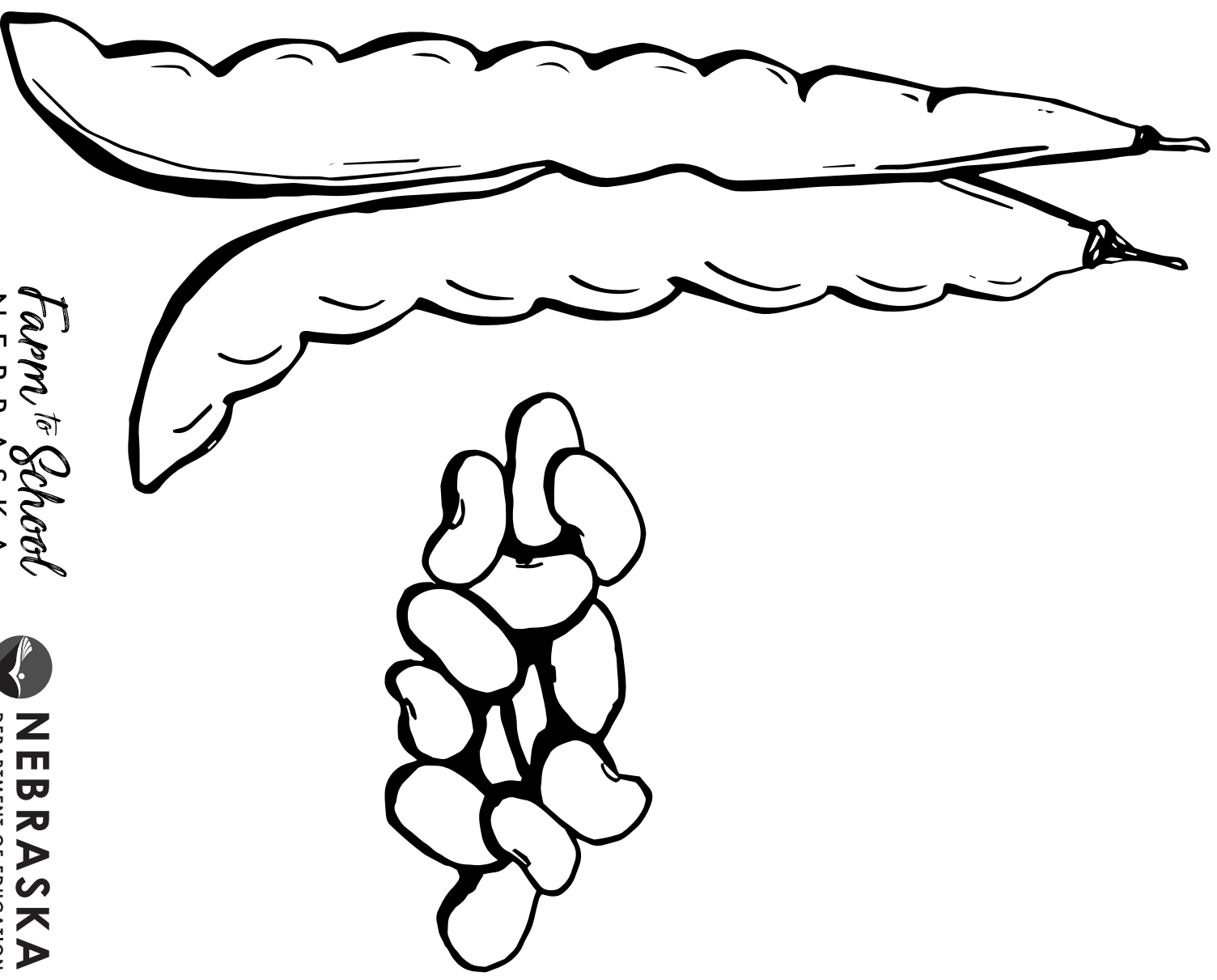
*Harvest of the Month*

# DRY BEANS



## DID YOU KNOW -

Nebraska is the largest producer of the Great Northern beans in the U.S. and is also the second largest producer of light red kidney and pinto beans.



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