LiveWell Kids

Garden and Nutrition Program

Lesson 4: Plants From Pollination to Food

3rd GRADE

OBJECTIVES

By the end of this lesson, students will:

- Observe the anatomy of a flower and understand that each part has an important job.
- Identify the main parts of a plant.
- Recognize that people eat a variety of foods that are parts of plants.
- Learn about a plant's life cycle, including the role of seeds.
- Understand the role of pollinators and observe pollination in the school garden.

SUPPLIES

Supplies to bring from home – **PROVIDED BY VOLUNTEER**:

- One or more flowers with clearly visible reproductive parts.
  - Examples: lily, tulip
- One or more fruits or seed pods with visible seeds.
  - Examples: tomato, milkweed pod

Store flowers in water or refrigerate prior to lesson to prevent wilting.

- Supplies to bring from the shed to the garden:
  - Laminates
    - *The Life Cycle of a Plant*
    - *Anatomy of a Flower*
    - *Flower to Fruit Process*
    - *Parts of a Plant*
    - *Plant Parts We Eat*
    - *The Vegetables We Eat*
  - Books:
    - *What is Pollination?*
  - 2 Cafeteria trays
  - Knife
  - Cutting Board
  - Magnifying lenses
  - Tweezers
  - Optional: Whiteboard and dry-erase marker

- Supplies to bring from classroom to garden - *arrange with the teacher ahead of time*:
  - Paper - one piece per student
  - Writing tools such as crayons, colored pencils, markers

PREPARATION

- Refer to the LiveWell Kids Volunteer Manual for preparation guidance.
- Because this lesson includes observing pollinators, confirm with the teacher whether any students have insect allergies.

SET-UP INSTRUCTIONS

- SET UP THE INTRODUCTION AREA:
  - Set out the laminate: *The Life Cycle of a Plant*.

- SET UP THE GARDEN ACTIVITY:
  - Cut one flower in half lengthwise and place it on a tray.
  - Place any additional whole flowers around the cut flower.
  - Cut the fruit or pod in half and place it on a second tray.
  - Place magnifying lenses, tweezers, and laminates: *Anatomy of a Flower* and *Flower to Fruit Process* next to the trays.

- SET UP THE NUTRITION ACTIVITY:
  - Place the following laminates and books out:
    - Laminates: *Parts of a Plant*, *Plant Parts We Eat;* book: *The Vegetables We Eat*

- SET UP THE POLLINATION ACTIVITY:
  - Set out the book: *What is Pollination?*

Optional: Use the whiteboard and dry-erase markers to aid you in teaching the topic in any of the activities.

INTRODUCTION & MINDFUL BREATHING *(2 MINUTES)*

- Introduce yourself and any other volunteers.
- Guide students through a brief mindful breathing exercise.
- Explain: *"Today we are going to review how plants grow, learn how flowers become food, and explore the important role of pollinators."*

Discussion: Life Cycle of a Plant

Supplies: Laminate: *The Life Cycle of a Plant*

- Show the laminate.
- Review the life cycle using student responses when possible:
  - Plants start as seeds.
  - Seeds grow into plants with soil, water, sunlight, and nutrients.
  - Plants grow flowers.
  - Flowers can develop into fruit or seed pods with seeds inside.

****Divide Class into Two Groups****

- Split the students into two groups.
- One group goes to the *Nutrition* activity with the other volunteer.
- The other group goes to the *Garden* activity with you.
- Both activities will run simultaneously. Switch groups after 16 minutes.

GARDEN DISCUSSION & ACTIVITY *(16 MINUTES)*

Discussion: Anatomy of a Flower

Supplies – Laminate: *Anatomy of a Flower*

REVIEW CONTENT

- Ask students what travels from the stigma down into the flower during pollination.
- Reinforce that pollen moves inside the flower to help make fruit and seeds.

NEW CONTENT

- Point out the ***stamen*** on the laminate.
- Explain that the stamen has two parts: the anther and the filament.
- Explain that the ***filament*** holds the anther in a position where pollinators can easily brush against it.

Activity: Looking Inside a Fresh Cut Flower

Supplies – Fresh flower, laminate: *Anatomy of a Flower*

- Refer to the cut flower on the tray.
- Use tweezers to gently expose flower parts.
- Help students locate the anther, stigma, style, and ovary.
- Pass the tray so students can look closely.

Important: Students should look only. The flower is fragile.

Discussion: Flower to Fruit

Supplies – Use above supplies plus cut half of fruit/pod, laminate: *Flower to Fruit*

- Show the fruit or pod and the laminate.
- Identify where the ovary was in the flower.
- Explain that the ovary grows into the fruit or pod that protects the seeds.
- Point out the stem end and blossom end if visible.

NUTRITION DISCUSSION & ACTIVITY *(16 MINUTES)*

Happening at the same time as the Flower Dissection activity.

IMPORTANT: *Not all plant parts are safe to eat. Students should only eat plants given to them by a trusted adult.*

Discussion: Guess My Plant Part Meal

Supplies - Laminates: *Parts of a Plant*, *Plant Parts We Eat*, book: *The Vegetables We Eat*

Use the book: *The Vegetables We Eat* (pages 3 - 19), to help illustrate the discussion below, before doing the activity.

- Explain that many foods we eat come from different parts of plants.
- Ask students to name the main parts of a plant.
  Show the *Parts of a Plant* laminate and briefly review each part and its function.
- Explain that eating a variety of plant parts helps our bodies get different nutrients.
- Ask students to name foods they eat and identify the plant part they come from.
  Show the *Plant Parts We Eat* laminate and highlight examples.
- Explain that some foods look very different from plants once they are cooked or processed.

Activity: Guess My Plant Part Meal

- Explain that students will describe a meal using plant parts instead of food names.
- Give the example: “I ate a bowl of flat seeds with dried fruit and bark sprinkled on top.”
- Explain that this describes oatmeal with raisins and cinnamon.
- Have students work in pairs or small groups to create their own plant-part meals.
- If time allows, invite a few groups to share while others guess the meal.

If time allows, they can share their meals with the class and have the other students try to figure out the meal they are describing.

Gather Class Together

POLLINATION DISCUSSION & ACTIVITY *(10 MINUTES)*

Discussion: Pollination

Supplies: Laminate - *Anatomy of a Flower*, Book – *What is Pollination?*

- Explain that pollination is the process plants use to make seeds.
- Explain that pollination happens when pollen moves from the anther to the stigma of the same type of flower.
- Explain that pollinators move pollen while visiting flowers to drink nectar or collect pollen.
- Explain that plants use different pollination strategies depending on the species.

TYPES OF POLLINATION

- **Cross-pollination:**
  Explain that pollen moves between flowers of the same species, often with the help of animals.
  Explain that cross-pollination increases genetic diversity, which helps plants stay healthy and adapt to changes.
- **Self-pollination:**
  Explain that some flowers can pollinate themselves when pollen moves within the same flower.
  Explain that this helps plants make seeds when pollinators are scarce.
- **Wind pollination:**
  Explain that some plants rely on wind instead of animals.
  Give examples such as grasses, corn, and many trees.

WHY POLLINATION MATTERS

Explain that pollination allows plants to make seeds, which grow into new plants.
Explain that many fruits and vegetables we eat depend on pollination.
Explain that having many kinds of pollinators helps gardens, farms, and ecosystems stay healthy.

Activity: Observing Pollination

SAFETY INSTRUCTIONS

- Observe with eyes only.
- Move slowly and calmly.
- Do not touch insects.

OBSERVATION

- Walk quietly through the garden.
- Have students watch for insects visiting flowers.
- Ask students to notice where insects land and how they move.

If pollinators are not present, discuss where students might see pollinators in other outdoor spaces.

CLOSING *(2 MINUTES)*

- Bring students together to close the lesson and thank the students, teacher, and other volunteers.

- Review Questions:
  - What part of the flower grows into fruit.
  - Why are pollinators important.
- Key Takeaway (repeat together): "Pollinators help flowers become seeds and food."

- If you have time, have students draw/write a "Reflection Page" after the lesson, either in the garden or with the teacher when they return to class. If you see any that you'd like to share with BCHD, take photos of their work and email them to mishell.balzer@bchd.org.

- Thank the volunteers and dismiss the students.

***Remember to report your lesson as delivered with either the online form or this QR code.**

From your phone, scan this QR code below to report lessons as delivered. Once the page opens, select the 'grid view'. From the computer, click the link LiveWell Kids Tracking Links 2025-26