



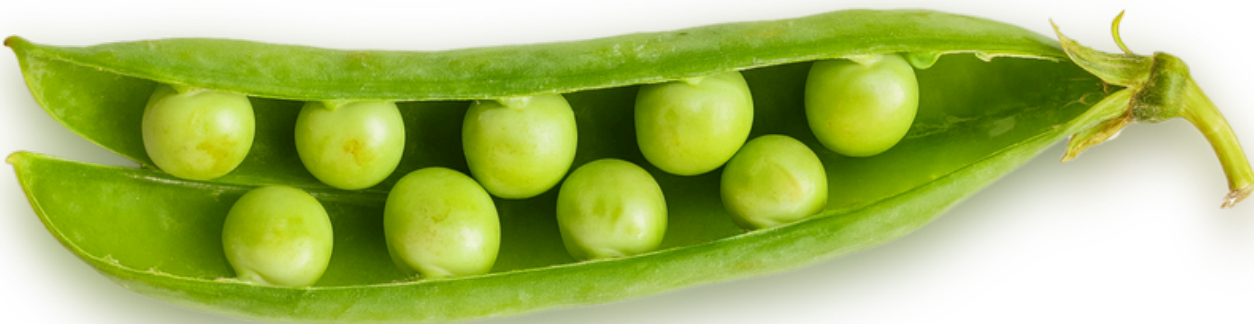
PEAS AND GREEN BEANS

What is It?

- Peas and green beans are part of the legume family with dried beans, lentils, and soy.
- Peas are one of the oldest cultivated crops and have been eaten by humans for more than 9,000 years.
- Peas can be found in three primary types: snap, snow, and garden.
- Some peas are referred to as “shelling peas” because the pod is not edible and must be removed before eating. Other types of peas have edible shells.
- Green beans are harvested when the pod is still young, making it soft and edible.
- Green beans aren’t always green! They can also be yellow, purple, red, or striped.
- Green beans are also be called “string beans.”

Grow It

- Peas are easy to grow and are great for beginning gardeners. They are also fast growers. Depending on the variety, they will be ready for harvest in 50–80 days. Peas prefer cooler weather, so plant in the spring, late summer, or fall for best yield.
- Green beans are ideal for summer gardens. They are also fast growers—averaging 50–80 days to harvest depending on the variety—but prefer warmer temperatures. Plant in late spring, once the soil temperature has reached 65 degrees F.
- Peas and green beans can be started indoors 10 days to two weeks before transplanting outside, or they can be direct-sown in an outdoor garden. Seeds should be planted one inch deep and spaced two to four inches apart. Bush type bean and pea plants grow to about three feet high, while pole types grow six to eight feet high and need a trellis for support. Peas and beans do not typically require fertilizer, as they are effective at fixing their own nitrogen, but compost or manure can be mixed into soil before planting to improve moisture and nutrient retention. Rhizobia bacteria may also support plant growth.





Growing a Pea

Learn It

Grades K–12

Objectives

- Define germination
- Plant pea seeds
- Observe and record seed growth

Materials

- A variety of pea seeds (different sizes)
- Per child: one dried pea, one plastic re-sealable bag, one folded paper towel
- Water in a container (one per table)
- Music and Movement video clip: Preschool Learn to Dance: Can You Plant a Bean: <https://youtu.be/LCKEdDEr82k>
- A journal for each child to track seed progress
- Optional extension: soil and a pot for planting seeds

Directions

Whole Group: 10 minutes

Begin by asking students, where plants come from. Seeds! With younger students, introduce the concept of seeds growing into plants. Show different types of seeds and lead students to make observations about how different seeds have different shapes and sizes.

Pass out a dried pea to each child. Explain that with some types of peas, often called “green peas,” the part we eat is only the seed. With other types of peas, like snap peas and snow peas, we also eat the pea pod. Share which type of pea they are holding. Encourage students to feel the seed and ask, “how does it feel?” Explain that peas and all kinds of seeds have a thin outer shell called a seed coat.

Explain that inside the seed is a tiny plant surrounded by special plant food to help the seed grow.

Explain to students that when a seed first starts to grow, it’s called “germination.” Have students repeat the word “germination.”

Discuss what a seed needs to grow: water, warmth, and light. If students suggest soil as a plant need, tell them that this science investigation into how plants grow will help determine if plants always need soil.





Growing a Pea

Learn It

Directions

Explore (small groups): 10 minutes

Explain that we usually grow plants in soil, but that means we can't see the seed sprout because it's underground. We are going to try growing the seeds in a plastic bag so we can watch them germinate.

Review that germination refers to the process of a seed starting to sprout and grow leaves.

Provide each child with a re-sealable plastic bag, paper towel, and pea; provide each table with a small container of water.

Instruct each child to fold the paper towel into quarters then gently dip it into the water to wet it. The paper towel should not be dripping, so have students ring it out if needed, then place it in the bag. Lay the pea on top of the paper towel. Place bags in a warm spot, like a windowsill. To make it easy to see, you can tape the bags to the window.

Instruct children to get out their journal and draw the seed how it looks today and label it.

Explain (whole group): 10 minutes

Ask students what they think is going to happen to their pea seed. Discuss how the peas are going to germinate and ask students to make a prediction of what that will look like in a day, a week, and a month.

Explain that students will track their seed's progress, making observations and diagrams every day or every other day.

Explain that this seed will grow into a pea plant, and that peas are a kind of legume. Legumes are a group of vegetables that grow in pods. Other legumes include beans, lentils, and peanuts.

All vegetables, including legumes, help our bodies grow and get stronger.

Participate in a music and movement activity about planting beans: Preschool Learn to Dance: Can You Plant a Bean: <https://youtu.be/LCKEdDER82k>





Growing a Pea

Learn It

Directions

Extend (whole group): 15 minutes daily or every other day

Every day or every other day, lead the following activities to encourage students to track their seed's growth.

Allow students to check on their seeds daily and draw their observations in their journal.

Ask them to identify and label the seed, roots, and leaves as they grow.

Continue reviewing what "germination" means and have them explain it in their own words.

Have children share with the class different legumes.

Optional Extension:

As seeds grow larger, they can be transplanted into a pot with soil. Even if you don't plant them in a garden to create fully productive plants, you can continue to grow the plant in a pot so students can get an idea of what the process looks like over time.

Children can act out each stage of a plant life cycle to encourage movement.

Lesson Plan adapted from Montana Harvest of the Month Classroom Bites: Chickpeas [Harvest of the Month - Classroom Bites for Chickpeas](#); original source: Make Room for Legumes, Georgia Organics.





Make It

Be sure to follow local Food Safety rules and regulations. Learn more here: [Food Safety Rules and Regulations | Washington State Department of Health](#).

| Recipe: Green Pea Hummus Yield: 16 servings | |
|---|---|
| Ingredients | Directions |
| <ul style="list-style-type: none">• 1 15.5-ounce can chickpeas, drained and rinsed• 1 12-ounce bag of frozen peas, thawed• 1 1/2 tablespoons tahini• 3 tablespoons lemon juice• 3 tablespoons water• Pinch of salt• Pinch of pepper• 1 teaspoon granulated garlic• Fresh vegetables, cut for dipping• Pita chips or other crackers of choice | <ol style="list-style-type: none">1. Combine chickpeas, peas, tahini, lemon juice, water, salt, pepper, and granulated garlic in a food processor. Process until smooth.2. Serve with fresh vegetables and pita chips or crackers. |

Recipe adapted from [Healthy School Recipes](#).

Explore interactive taste test resources to encourage participants to try what you made!
[Taste-Testing Event Resources](#)



Peas, credit: WSDA



Make It

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Recipe: Honey Mustard Green Beans
Yield: 16 snack size servings

| Ingredients | Directions |
|---|---|
| <ul style="list-style-type: none"> • 1 tablespoon prepared mustard • 3 tablespoons honey (see notes) • 3 tablespoons vinegar • 4 cups green beans, fresh, thawed from frozen, or canned | <ol style="list-style-type: none"> 1. In a medium saucepan or skillet over medium-low heat, stir together mustard, honey, and vinegar. Cook until sauce boils and becomes thick, about 10 minutes. 2. Add green beans and stir to coat evenly. Cook until beans are heated through. Serve warm. |

- Notes
- 4 cups of green beans is about 1 1/2 pounds fresh or 16 ounces frozen or 2 cans (15 ounces each) drained.
 - Honey is not recommended for children under 1 year old.

Recipe adapted from [Oregon Food Hero](#).

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Green beans in Walla Walla, credit: WSDA

Eat It

Peas and green beans are both excellent sources of vitamin A and vitamin C, which help maintain healthy eyes, skin, and immune function. They are also rich in vitamin K, which supports proper blood clotting, and fiber, which is important for maintaining a healthy heart and digestive system, and regulating blood sugar.

Read It

- Eat Your Peas, by Kes Gray & Nick Sharratt
- Peas!, by Simon Rickerty
- Green Bean! Green Bean!, by Patricia Thomas
- Pick, Pull, Snap!: Where Once a Flower Bloomed, by Lola M Schaefer



Peas growing, credit: WSDA

More About It

- Stem Activity for early learners: [Carving Out Space to Grow | National Inventors Hall of Fame®](#)
- Lessons from Washington Agriculture in the Classroom:
 - K–2nd grade : [A Garden Plot: The Tale of Peter Rabbit – Curriculum Matrix | Washington Agriculture in the Classroom](#)
 - 3rd– 5th grade: [Peas in a Pod – Curriculum Matrix | Washington Agriculture in the Classroom](#)
 - 3rd– 5th grade: [Magic Beans and Giant Plants – Curriculum Matrix | Washington Agriculture in the Classroom](#)
 - 6th–8th grade: [FoodMASTER Middle: Protein – Curriculum Matrix | Washington Agriculture in the Classroom](#)
- Lesson for 5th–8th grade: [Learn About Ag Get Growing Green Beans](#)
- Learning resources for all ages: [More PEAS Please!](#)