



Come and grow with us! In this project, you will learn how to grow food, how to preserve food using several different methods, and how to make a profit from the food that you have grown while exploring various career options.



Exploring 4-H Vegetable Gardening Spark Activity: Sprouting Seeds

Let's take a look at seeds and how they germinate using the scientific method.

Supplies:

11 lima or kidney beans, 1 cup water, 1 glass, paper towels, small plastic bag, paper and pencil.

Question & Hypothesis: How do seeds germinate? Write down how you think this process works.

1. Soak your beans in water overnight. Carefully peel the outer coat from one of the beans. Split the bean (seed) in half and draw what you see. Label the seed diagram with these parts: seed coat, cotyledon, and embryo.
2. Dampen a paper towel. Fold it once, and place all the seeds on it. Fold it again, and place it in the plastic bag for a week. Keep it in a warm place. Write down the date. Moist seeds should sprout in 7 to 10 days. Record what you see every day and draw the changes you see.

Conclusion: Compare what happened with what you thought would happen before you started your experiment. What can you conclude about this process? Explain your findings to others.

Looking for another challenge? Remove the seeds from a fruit of your choice. Instead of sprouting your seed for observation, plant the seed in a pot with soil and provide it the water and sunlight it needs to grow into a plant.



4-H Project Levels and Goals

Beginner

- Practice gardening safety
- Plan your garden and plant your seeds
- Grow and maintain your garden
- Harvest your crops
- Examine seeds and plants

Intermediate

- Start seeds indoors
- Grow plants from plant parts
- Preserve by freezing
- Learn how to handle weeds and pests
- Practice composting for better soil health

Advanced

- Understand photosynthesis
- Practice cross pollinating
- Preserve by canning, pickling and dehydrating
- Learn new ways of planting i.e. intercropping, vertical growing, greenhouses and hydroponics
- Explore biotechnology and genetic engineering

Put Your Project Into Action

Show Your Skills

- Exhibit vegetables grown in your garden
- Display of plant parts and their purpose
- Demonstrate how to preserve food
- Display growing food using hydroponics
- Build a planter box

Service and Leadership

- Donate produce to a food pantry
- Start a community garden
- Organize a seed or plant swap
- Sell produce to benefit a local charity
- Give 4-H club presentation about gardening
- Consider becoming a Master Gardener
- Host a 4-H club tour of your garden
- Join the Illinois 4-H Food Advocacy Team

Entrepreneurship

- Sell your produce from a home stand or at a local farmers market
- Harvest seeds and plant cuttings to sell
- Offer soil testing services
- Learn to preserve through canning and sell your products - observe IL Public Health guidelines

Technology Connection

- Drone technology to identify weeds, pests, and diseases
- Farm Bots being used to seed and water gardens
- Hydroponics
- Solar greenhouses
- Computer apps for identifying disease, weeds & insect damage

Connecting with a Mentor

- University of Illinois Extension Master Gardeners
- Local farms and garden clubs
- Farmers market vendors
- Greenhouse/garden center owners

Events

- County and state fairs and shows
- Illinois Master Gardener programs
- U of I Local Foods and Small Farms programs
- Local farmers markets
- Garden trade shows



Careers Related to Vegetable Gardening

Farmer	Botanist
Horticulturist	Educator
Soil Scientist	Greenhouse Owner/ Manager
Forester	Landscaper
Environmental Scientist	

Start a Conversation

What skills would you like to learn through this project and how would you use them?

What are some obstacles that you foresee and how can you overcome them?

Describe a time in your life when you have tried something new. What worked? What did not work? What would you have done differently?

What can you do to help grow more food for your community?

Want to learn more?

go.illinois.edu/4Hgardening

Explore more at Illinois 4-H!

4-h.extension.illinois.edu



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