

What Seeds Need

TK-1 Lesson



Master Gardeners

The University of California Cooperative Extension (UCCE) Master Gardener Program (MGP) is an educational program designed to teach and effectively extend information to address home gardening and non-commercial horticulture needs in California.

UCCE is the outreach arm of UC's division of Agriculture and Natural Resources (ANR). Master Gardener volunteers (MG volunteers) promote the application of basic environmentally appropriate horticultural practices through UCCE-organized educational programs that transfer research-based knowledge and information.



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UCCE Master Gardener Program

Teachers: Why Is This Important?

- Propagation of plants that produce seeds may be the only way to obtain new plant cultivars, maintain hybrid vigor and a greater genetic diversity within a plant species.
- In certain species, it is the only practical method of plant propagation and it can reduce the transmission of certain plant diseases.



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Learning Goal

Student gardeners will learn what a seed needs to sprout and grow into a plant.



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What Seeds Need



Look carefully at these seeds.

How are they
alike?

How are they
different?





**Seeds can be very
small or very big.**

**Seeds come in
many colors.**



Seeds come in many shapes.

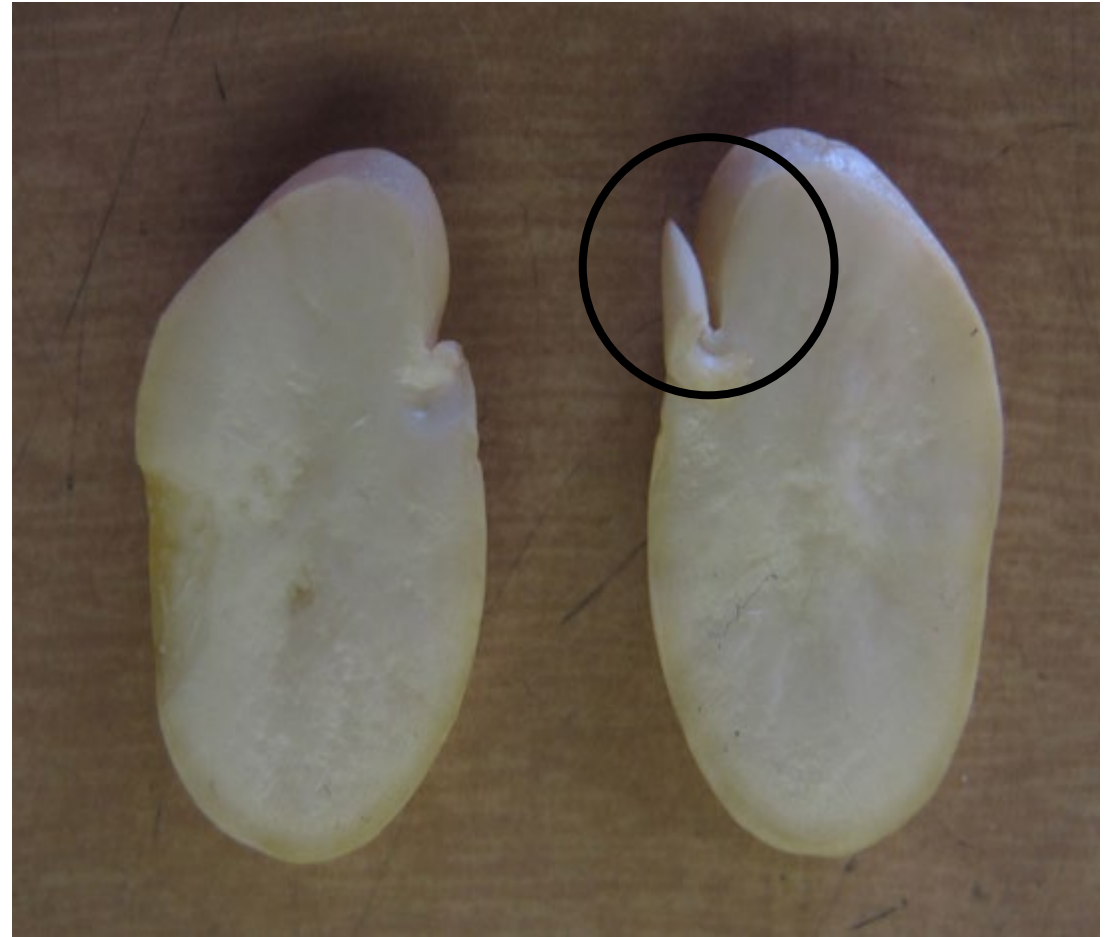




Most plants begin their life as seeds.

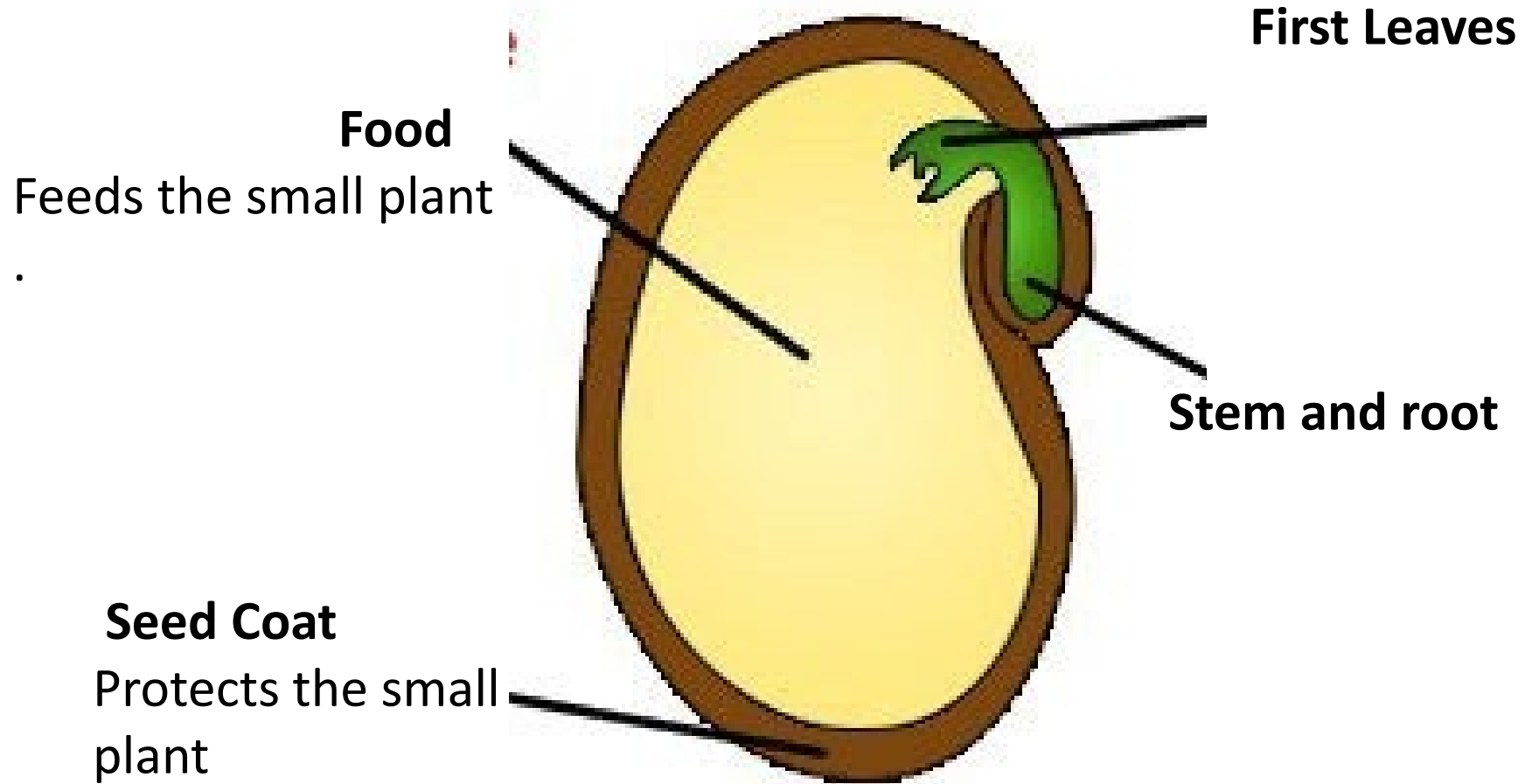
Inside the seed is a living thing.

Every seed has the beginning of a plant waiting to sprout.





Look inside a seed!



Most plants make seeds.

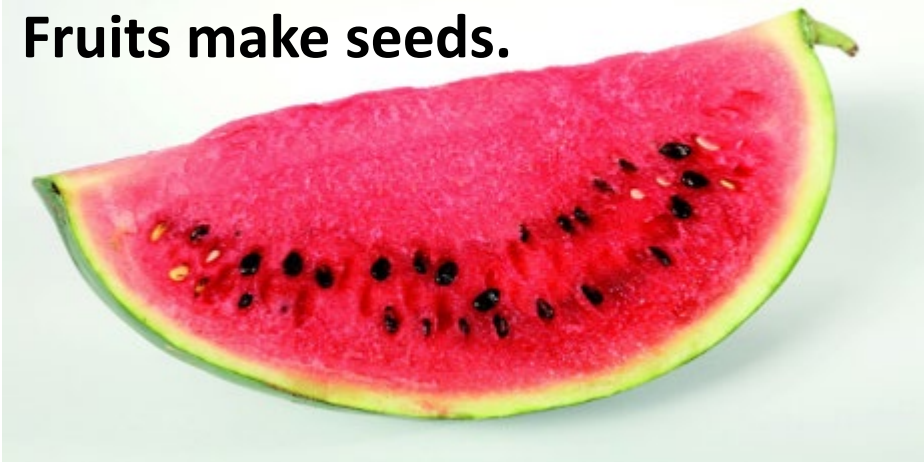
Flowers make seeds.



Vegetables make seeds.



Fruits make seeds.



Plants make seeds to make new plants.



What do seeds need to sprout and grow into plants?



Seeds need a place to grow.

How do seeds find a place to grow?



Some seeds can fly.





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Some seeds can float.

Some seeds travel by getting a ride from people and other animals.



Some seeds just land next to their parent plant.



Seeds need water.

Seeds must stay moist in order to sprout.

Seedlings need water to grow into plants.

Plants need water to stay alive.



Seeds need sunlight.

Sunlight warms the soil to help the seed sprout.

Sunlight helps the sprout grow into a plant.



If a seed lands where there is sunlight and water, it will sprout!



**That sprout will grow
into the same kind of
plant.**

What will this seed
become?



An apple tree!



Video: How Seeds Grow

Check for Understanding

- Give one example of how seeds are alike or different.
- What is inside a seed?
- Give an example of how a seed finds a place to grow.
- Name one thing a seed needs to sprout and grow into a plant.



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Application Activity #1: Grow a Seed

Radishes sprout quickly and are easy to grow.

- Plant seeds directly in a garden bed, or in egg cartons and grow in the classroom.
- If possible, try growing in both locations and have students observe which sprout first.
- Discuss variables that influence sprouting: The amount of sunlight and water.



Application Activity #2: Learn the Seed Song

[Video](#): *The Seed Song*



A close-up photograph of a walnut shell, showing its characteristic wrinkled, brain-like texture. The shell is light brown and is centered against a dark, olive-green background. The lighting highlights the intricate ridges and grooves of the shell.

Extend Your Thinking



**Some seeds are eaten by people and other animals.
What seeds do you eat?**

Science Vocabulary

- Seed
- Sprout
- Seedling

Seed

A seed is a small beginning plant with an outside covering to protect it.



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Sprout

To begin to grow.

- The seed began to sprout in the soil.



Seedling

A young plant grown from a seed.



California Preschool Learning Foundations

California Next Generation Science Standards

Preschool Life Science Strand

- 48 months:1 .4 Indicate knowledge of the difference between animate objects (animals, people) and inanimate objects. For example, expect animate objects to initiate movement and to have different insides than inanimate objects.
- 60 months: 1.4 Indicate knowledge of the difference between animate and inanimate objects, providing greater detail, and recognize that living things (humans, animals, and plants) undergo biological processes such as growth, illness, healing, and dying.

Kindergarten Life Science

- K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive

California Preschool Learning Foundations

California Next Generation Science Standards

Preschool Life Science Strand

- At 48 months: 2.2 Recognize that animals and plants require care and begin to associate feeding and watering with the growth of humans, animals, and plants.
- At around 60 months: 2.2 Develop a greater understanding of the basic needs of humans, animals, and plants (e.g., food, water, sunshine, shelter).

Kindergarten Earth and Human Activity

- ESS3.A: Natural Resources: Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1)

Next Generation Science Standards

First Grade

- **LS1.B: Growth and Development of Organisms** ▪ Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive. (1-LS1-2)
- **LS3.A: Inheritance of Traits** ▪ Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents. (1-LS3-1)

Resources

- California Master Gardener Handbook, Second Edition, Dennis R. Pittenger, Editor, 2015
- Videos: Stephaney Eberhard, Mr. R's Songs For Teaching
- Images: Creative Commons, Stock Images, Wikipedia

Gardening Questions?

- Email or Call the UCCE Master Gardeners of Riverside County
- Email Helpline
 - anrmgriverside@ucanr.edu
- Telephone Helpline
 - 951-683-6491, ext. 232 or 231
- [Riverside Master Gardeners Website](#)



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