

Life Science: Discovering Seeds

Activity Overview

Children **observe** different fruits and look inside to find seeds. They **compare** and **contrast** the seeds that they find and taste the fruits they cut open. They **record** their observations through drawing what they see.

*Science process skills are in bold.



Underlying Science Concepts:

- Fruits have seeds.
- Seeds differ in size, shape, color, and texture.
- There are many different types of seeds that grow into different kinds of plants.

Materials:

- Variety of fruits with different types and amounts of seeds. For example, avocados, peaches, plums, oranges, large grapes (with seeds), papaya, kiwi, apples, pear, string beans, pea pods, cherries, strawberries (with strawberries, children will discover that the seeds are on the outside).
- Plastic knives and spoons
- Paper plates
- Magnifying lenses
- Trays for collecting pieces of fruit
- Napkins or paper towels
- Paper and drawing materials

If possible, include some unusual fruits that the children may not be familiar with such as star fruit, dragon fruit, passion fruit, tamarind, fig, or lychee.

Be sure to check for any allergies children may have to certain fruits.

Getting Ready:

- Purchase assorted fruits from the store. Choose soft fruits that children can cut with plastic knives. Fruits like melons have very interesting seeds, but an adult will need to cut these open for the children.
- Wash the fruits before the activity.
- Place the paper plates and plastic knives and spoons on tables where the children will work.
- Have children wash their hands before handling and eating the fruits.

→ Engage

- Introduce the children to the fruits you brought for them to explore and let them identify each one. Teach them the names of any fruits they do not recognize. You may want to place all the fruits on a tray and ask, "What do you notice about these fruits?" This question invites interesting observations and comparisons.
- Ask the children where they think the fruits came from. They will probably say "the store." Continue the discussion to establish that they all grew on plants.
- Tell the children that they are going to explore the fruits by cutting them open with plastic knives to see what they look like on the inside.
- Demonstrate how to safely use a plastic knife.
- Explain that first, they will cut open the fruits to observe the insides. Teachers will then help cut them into smaller pieces for sharing. Then, they will have a chance to taste them. Make it clear that everyone will get to taste all the fruits, not just the one(s) they cut open.

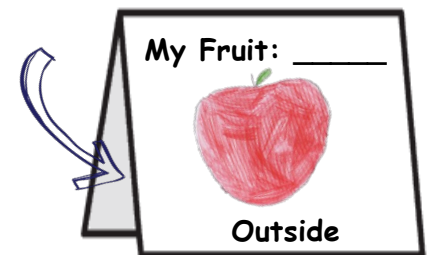
Since children tend to like some fruits more than others, you may want to have extras of the favorite ones to make sure there's enough for everyone.

→ Explore

Depending on the amount of fruits available, you can give each child one fruit to cut open, and/or adults can facilitate having small groups work together to cut open some of the larger fruits.

- Invite children to use their senses (except taste, for now) to observe the fruits and encourage discussion about their shapes, colors, textures, etc.
- Before opening the fruits, encourage the children to share predictions about what the seeds will look like.
- Help children to carefully cut fruits open on paper plates or trays using plastic knives. They can use the plastic spoons to help remove seeds as well. Have magnifying lenses available for a closer look.
- When seeds are discovered, have the child remove them and place on a paper plate. Label the plate with the name of the fruit the seeds came from.
- Talk about the sizes, shapes, and numbers of seeds the children discover.
- Place the cut up pieces of fruit that will be eaten later on a clean tray or bowl.
- When the children have finished exploring, have them wash their hands.

You may want to supply paper and markers or crayons for children to record their observations of their fruit and seeds in drawings (both insides and outside).



Decide when you will have the children taste the fruits. This could be done immediately following the exploration or served at a later time as a snack.

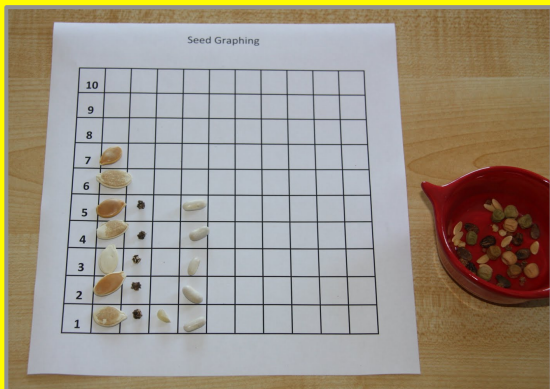
➔ Reflect

- Place the tray of seeds that were found inside the fruits where the children can see them. Encourage the children to talk about their discoveries. Ask questions such as,
 - *What do you notice about the seeds?*
 - *Are they all the same?*
 - *How are they different?*
 - *Which is your favorite? Why?*
- Ask, "Where else have you seen seeds?" "Have you eaten other kinds of seeds?"
- Ask the children if anyone knows what seeds can become. After children share their ideas you can summarize by saying that seeds grow into plants.

Key Vocabulary

During the activities integrate the words below into your conversations. Children's vocabulary will build with practice.

- Fruit
- Seed
- Pit
- Pulp
- Skin
- Edible
- Names of fruits



Math Connections

This activity offers many opportunities for incorporating math.

- Predicting, estimating, and counting how many seeds are in each fruit.
- Using mathematical vocabulary such as: more than, less than, same as, etc.
- Sorting seeds into groups by size, texture, shape, etc. (big and small, hard and soft, wrinkled and smooth).
- Ordering seeds from smallest to largest.
- Provide plenty of dried mixed beans and let children use them for making designs and patterns.
- Give each child a cup of dried mixed beans containing 1-10 beans of each type. Create a graph (like the one on the left) for children to graph the number of each kind of bean in his or her cup.

I'm a Little Seed (tune: "I'm a Little Teapot")

As children sing they can pretend to grow from a small seed into a plant.

I'm a little seed in the dark, dark ground.
Out comes the bright sun, big and round.
Down comes the cool rain, soft and slow.
Up comes the little plant, grow, grow, grow!



Ideas for Further Explorations

- Let children open pea pods and observe and describe what they find. They can try to count the number of peas (seeds) in the pod. Invite the children to eat their pea pods.
- Provide other fruits with seeds to continue building children's interest in seeds.
- Fill a sensory table or tub with a mix of dry beans. Add tools such as plastic cups, funnels, measuring cups, colanders, etc.
- Plant seeds (such as lima or kidney beans) in small cups or pots. Chart and record the plants' growth and development.
- Keep a seed collection on display in the classroom and invite families to bring in seeds that they find around them (from food, in nature, etc.). Involve children in labeling the seeds.

Background Information for Teachers

Seeds contain the embryo of a plant and are how most plants reproduce. The process of *germination* is when the embryo develops into a seedling. In order for most seeds to sprout, they need water, sunlight, and soil rich in nutrients. Dependent upon the type of plant, seeds may be dispersed away from the parent plant in many ways including by wind, by water, and by animals.

Fruits vs. Vegetables: There is a difference between the common definition of "fruits" and "vegetables" and the scientific definitions. Scientifically, the fruit is the seed-bearing part of a plant. Vegetables, on the other hand, are other parts of the plant (stems, leaves, roots, etc.). Asparagus, for example, is the stem of a plant; spinach and lettuce are leaves; radishes, and carrots are roots. Although squash, cucumber, tomato, pea pods and peppers are commonly thought of as vegetables, they are technically fruits because they contain seeds.