

How Many Seeds Does a Piece of Fruit Have?

Estimated Time:

Prep: 15–20 min.

Activity: 30 min.

Introduction

Overview

Experiment: Students investigate different **fruit seeds**.

Key Concepts: Students will understand that there are different types of seeds. They will learn that **flowering plants** produce fruits, which contain and protect the seeds, and that plants produce seeds differently.

Lead-In

Bring in a photo of a sunflower, sunflower seeds, and a fresh-cut sunflower. Have students share any prior knowledge about each. What produces the seeds? How do sunflowers grow? Does a sunflower produce a single seed or many seeds? Discuss that seeds grow into plants, and that those plants make new seeds, which then produce more plants. Explain that flowering plants, like the sunflower, produce **flowers**, which make seeds. Flowers also produce fruits, which protect the seeds. (In the case of the sunflower, the fruit is actually the hard shell around the kernel!) Explain that some plants produce many seeds, and other plants produce a single large seed. Tell students they will get to look at different types of fruit and their seeds.

Teacher Preparation

Lead-In and Try This!

Materials:

- Sunflower seeds
- Photo of a sunflower
- Fresh-cut sunflowers

Teacher-Provided Experiment Materials:

- 4 different fruits (apples, cucumbers, lemons, and peaches work well)

Prepare:

- Make copies of the Experiment Sheet.
- After students complete step 1, cut each piece of fruit in half.

Vocabulary

- ◆ **flower** the part of a plant that has petals and produces seeds
- ◆ **fruit** the part of a flowering plant in which seeds grow
- ◆ **flowering plant** a type of plant that produces flowers, fruits, and seeds
- ◆ **seed** the part of a plant that can grow into a new plant

You Will Need



sorting tray

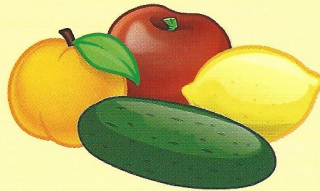


tweezers



magnifier

Teacher-Provided Materials



4 different types of fruit

Name: _____ Experiment 14: Types of Fruit

How Many Seeds Does a Piece of Fruit Have?

My hypothesis is that the _____ will have the most seeds.

Describe:

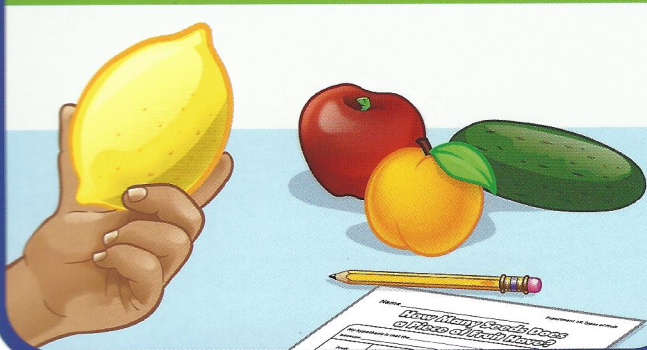
Fruit	How many seeds?	How many seeds?	How many seeds?	How many seeds?

My conclusion is: _____

Experiment Sheet

Procedure

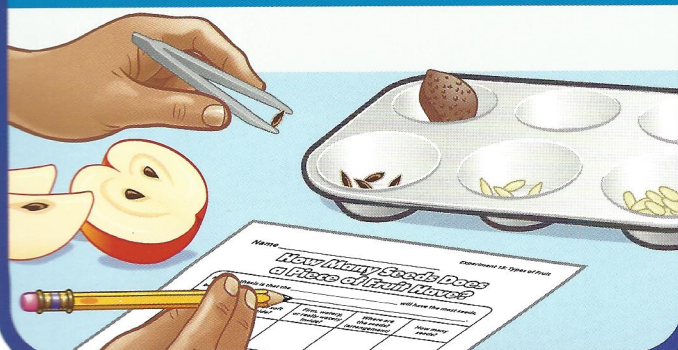
1 Examine each piece of fruit. Make a hypothesis about which one has the most seeds. Then have your teacher cut each piece of fruit in half.



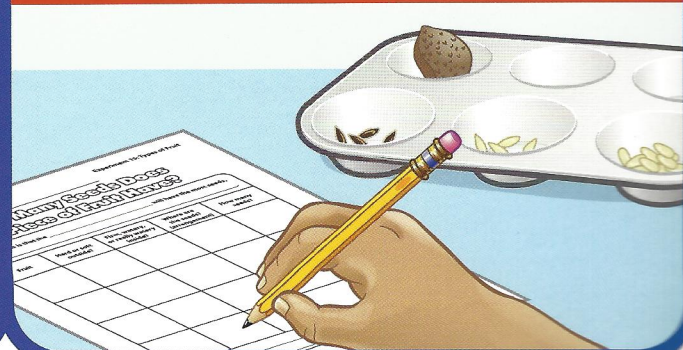
2 Place a piece of fruit in the sorting tray. Use the tweezers and magnifier to examine the fruit and the seeds. Record your observations.



3 Remove all the seeds from the fruits and put one type of seed in each well. Count the number of seeds. Record your results.



4 Review your observations. Which fruits were similar? Which were different? Which fruit had the most seeds? Write your conclusion.



Name _____

How Many Seeds Does a Piece of Fruit Have?

My hypothesis is that the _____ will have the most seeds, because _____.

Fruit	Hard or soft outside?	Firm, watery, or really watery inside?	Where are the seeds? (arrangement)	How many seeds?

My conclusion is _____, because _____.

Name _____

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My hypothesis is that the _____ will have the most seeds, because _____.

Fruit	Hard or soft outside?	Firm, watery, or really watery inside?	Where are the seeds? (arrangement)	How many seeds?

My conclusion is _____, because _____.



Why?

Encasing seeds in fruit is just one strategy for ensuring the growth of new flowering plants. Some plants produce fruit containing many seeds in order to maximize the number of new plants that may grow. Other plants produce a single large seed with features that help guarantee the seed's survival. For example, the coconut palm produces a seed with a tough exterior coat that allows it to float many miles in saltwater. The plentiful nutrients stored inside the coconut allow it to grow once it reaches land.



Discussion Prompts & Questions

- Which fruit had the most seeds?
- Which fruit had the fewest seeds?
- Which fruit had the largest seeds? Which had the smallest?
- What begins the life cycle of a flowering plant?
- How do you think fruit protects the seeds?



Sentence Frames

- I observed that the fruit with the most seeds was the _____.
- The flesh of the fruit felt _____.
- The seeds inside the fruit looked _____.



Try This!

To learn more about flowering plants, have students dissect a fresh sunflower. Ask them to gently take apart the flower by hand and examine it with a magnifier. Have children measure the flower's head, petal, stem, and seeds. Ask students to share their conclusions about the sunflower's appearance. Then have them draw the sunflower and label its stem, leaves, seeds, and petals.



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