

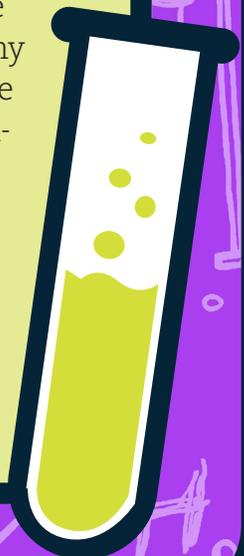
# UNLOCKING SCIENCE HANDSON!

## FRUIT DISSECTION

The first biologically living things God created on earth were the plants on day 3. Those plants were created according to specific kinds that would reproduce more of the same kind. An apple tree will always produce fruits with seeds that make more apple trees, never grapes. Botany is the study of plants God has created. Speaking in scientific botanical terms, many of the things we commonly call vegetables are actually fruits. Fruits are structures that hold seeds and often have fleshy parts we enjoy eating. But if you cut into a cucumber or a tomato, foods we commonly call vegetables, you will find seeds. That makes them a fruit in the eyes of a botanist. Foods like potatoes, lettuce, and carrots are true vegetables.

Flowers are the beginning of any fruit, and it is the female ovary of the flower that develops into the fruit with the seeds inside of it. The position of the flower, the number of petals, whether the fruit is fleshy or dry, and other factors can all be studied by carefully examining the fruit. As you study different fruits, you will be able to see the creativity of God in all he has designed.

**Extra Family Fun:** Take a trip to the market and find a new or exotic fruit you have never tried. Praise God for the wonderful fruits he has made for us to enjoy.



# Dissecting a Fruit

## Supplies

- Sharp knife (use under adult supervision)
- Tweezers
- Cutting board
- Hand lens
- 2 large fruits
- Paper plate or tray



**Figure 1: Supplies**

## Dissecting a Fruit

- 1 Examine the fruit and note any distinct features like color, shape, and presence of leaves, sepals, stems, and other structures.
- 2 Make a cross-sectional cut across the center of the fruit and note the structures. Sketch one of the sections.
- 3 Make more cross-sectional cuts and compare each slice to the others.
- 4 Using the second fruit, make a longitudinal cut (top to bottom) and note the structures. Sketch one of the sections.
- 5 If you have used clean tools and the fruit is edible, describe the taste and texture of the fruit.

## Fruit Dissection

Fruit Name: \_\_\_\_\_

Fruit Type: \_\_\_\_\_

Description (skin, flesh, etc.): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Scars/Sepals/Petals/Stem: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Cross Section Sketch:

Longitudinal Section Sketch:

How many ovaries were present in the fruit? \_\_\_\_\_

Find a picture of the flower of this fruit. How does the number of ovaries compare to the number of petals? \_\_\_\_\_

How were the seed(s) in this plant arranged inside the ovary? \_\_\_\_\_  
\_\_\_\_\_

How many seeds were present? Describe each seed. \_\_\_\_\_  
\_\_\_\_\_

Based on the presence of scars or sepals, is the ovary of this fruit superior or inferior? \_\_\_\_\_

If the fruit is edible, describe the taste and texture of the fleshy part. \_\_\_\_\_  
\_\_\_\_\_

## Analysis Questions and Discussion

- 1 Why do you think the number of petals and/or sepals on the flower matches the number of ovaries in many cases? *In an apple, there are five sepals and five petals which match the pattern of the ovaries. The structure of the fruit reflects the structure of the flower.*
- 2 Based on the structure of the fruit you observed, how would the seeds in the fruit spread to find new places to grow? *The structure of the fruit is used to spread the seeds. God has designed many different ways for seeds to spread. For fruits that are round, they can roll on the ground to new places and as the fruit decomposes, the seeds can grow. For small berries, animals can eat the fruit, but the seeds pass through and are deposited with fertilizer for the seeds to grow in a new place. Other seeds, like maple and dandelions, are carried by the wind to new places to grow.*
- 3 Read Genesis 1:11–13. Based on what God says, could you cross breed (hybridize) a grape with an apple? Explain. *No, God created plants with seeds according to their kinds. While different types of apples can make hybrids to produce different types of apples, they will always be apples. Research the history of the banana to learn how we have used special hybridizing techniques to make the large, seedless fruits we eat today.*
- 4 Use a concordance, Bible software, or online resource to look for the word “fruit” in the New Testament. Find a passage referring to a literal fruit and one where a fruit is used in a metaphor (to represent something). *Several passages like Galatians 5:22–24 use fruit to talk about the way someone’s actions reflect their beliefs. Many of the parables use actual fruit in the story and then use it as a metaphor. Luke 22:18 talks about literal grapes as the fruit of the vine.*

**“Abide in me, and I in you. As the branch cannot bear fruit by itself, unless it abides in the vine, neither can you, unless you abide in me.” John 15:4 (ESV)**