

## Grade 4 Science Study Guide: Plant Structures & Functions

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| <b>Student Name:</b><br>_____ | <b>Date:</b> _____ |
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### Part 1: Multiple Choice & Identification

#### 1. Function of Roots

What primary job do plant roots perform to help a plant live and grow?

- A. They catch sunlight to make food for the plant.
- B. They make colorful flowers to attract insects.
- C. They soak up water and minerals from the soil and anchor the plant.
- D. They carry seeds far away so new plants can grow.

#### 2. Identifying Edible Plant Structures

When you eat spinach or lettuce, which main part of the plant are you consuming?

- A. Root
- B. Leaf
- C. Flower
- D. Seed

#### 3. Plant Defenses (Select TWO correct answers)

Which structures help defend a plant against hungry animals or harsh environments?

- ☐ A. Sharp prickles on a rose stem that stop animals from eating it.
- ☐ B. Bright green leaves that soak up sunlight.
- ☐ C. A waxy outer layer on a cactus stem that traps moisture inside.
- ☐ D. Soft petals that fall off in the autumn breeze.

## Part 2: Plant Structure & Function Matching

### 4. Plant Environments

Match each structural adaptation to the plant it best belongs to by writing the correct letter in the table below:

- **A.** Broad, flat leaves designed to capture limited sunlight under dense foliage
- **B.** Thick, waxy stems that store large amounts of water

| Desert Cactus | Rainforest Fern |
|---------------|-----------------|
|               |                 |

### 5. Matching Parts to Functions

Match each plant part on the left to its main job on the right by writing the correct letter.

| Plant Structure     | Primary Function                                              |
|---------------------|---------------------------------------------------------------|
| <b>Roots</b> _____  | a. Attract pollinators such as bees and butterflies           |
| <b>Stem</b> _____   | b. Holds the plant upright and carries water upward           |
| <b>Petals</b> _____ | c. Anchor the plant firmly in the ground and absorb nutrients |

### Part 3: Short Answer & Explanations

#### 6. Transporting Water

- Describe what happens inside a plant's stem after the roots drink water from the soil.
- How does that water travel to reach the top leaves?

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#### 7. Seed Dispersal & Survival

- Maple trees produce winged seeds that spin like tiny helicopters when they drop.
- Explain how this special shape helps the maple tree survive and make new plants.

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