

UC Davis Arboretum Outdoor Education Program

“Plant Parts”

Goal:

Students will learn plant parts and that these parts can look very different in different kinds of plants.

Time: 30-45 minutes

Age: Grades 2-4

Materials:

General plant diagram—one for every group of students

Plant Part Table

Writing utensils

Plants—have enough of each plant part to give 2 kinds from each category to every group of students:

Seeds—nuts, green beans, dried beans

Roots—carrots, beets, radishes

Leaves—lettuce, cabbage, spinach

Flowers—broccoli, artichokes, cauliflower

Stalks—celery, asparagus, rhubarb

Fruit—tomatoes, squash, bell peppers

Overview:

In this activity, students will test their knowledge of plants and try to figure out from which parts of a plant common food items come. By working in small groups, ideally students will have to defend their answers to others in their group, which will make them think more deeply than simply guessing.

Background:

Roots help stabilize plants in the ground in addition to absorbing water and nutrients. **Stalks** support the plant and transfer water and nutrients to areas that need them.

Leaves are generally where most of photosynthesis occurs—this is where the plant makes its own food from sunlight.

Flowers attract pollinators, such as insects and other animals, for fertilization.

Fruit forms around fertilized seeds to protect them, and in some cases to attract animals that will eat the fruit and disperse the seeds.

Seeds contain plant embryos—the next generation of plants.

Procedure:

- 1) Discuss the different parts of a plant. Ask students to define words such as “seed,” “root,” etc., and their functions.
- 2) Have students work in groups of 3 or 4. Give each group the plant diagram and 2 plant parts from each category above.
- 3) Explain that each group has two seeds, two roots, etc., and their task is to determine which is which, and explain why. Let the groups work on this for about 15-20 minutes, then as a class let students discuss what plant part they believe each item is and what evidence they are using to determine this.

Extension:

Many students will be surprised that some “vegetables” are actually fruits. What classifies something as a fruit? This can lead to a discussion about where seeds come from and why a plant makes them.

UC Davis Arboretum Field Trip Connection:

As students walk through the UC Davis Arboretum, they will see many different kinds of roots, stems, leaves, flowers, fruits, and seeds. This activity can help students see similarities and differences between the various plant parts. Students can also compare the kinds of plant parts that are familiar to them (like fruits and vegetables) to wild plant parts that may not be as familiar to them.

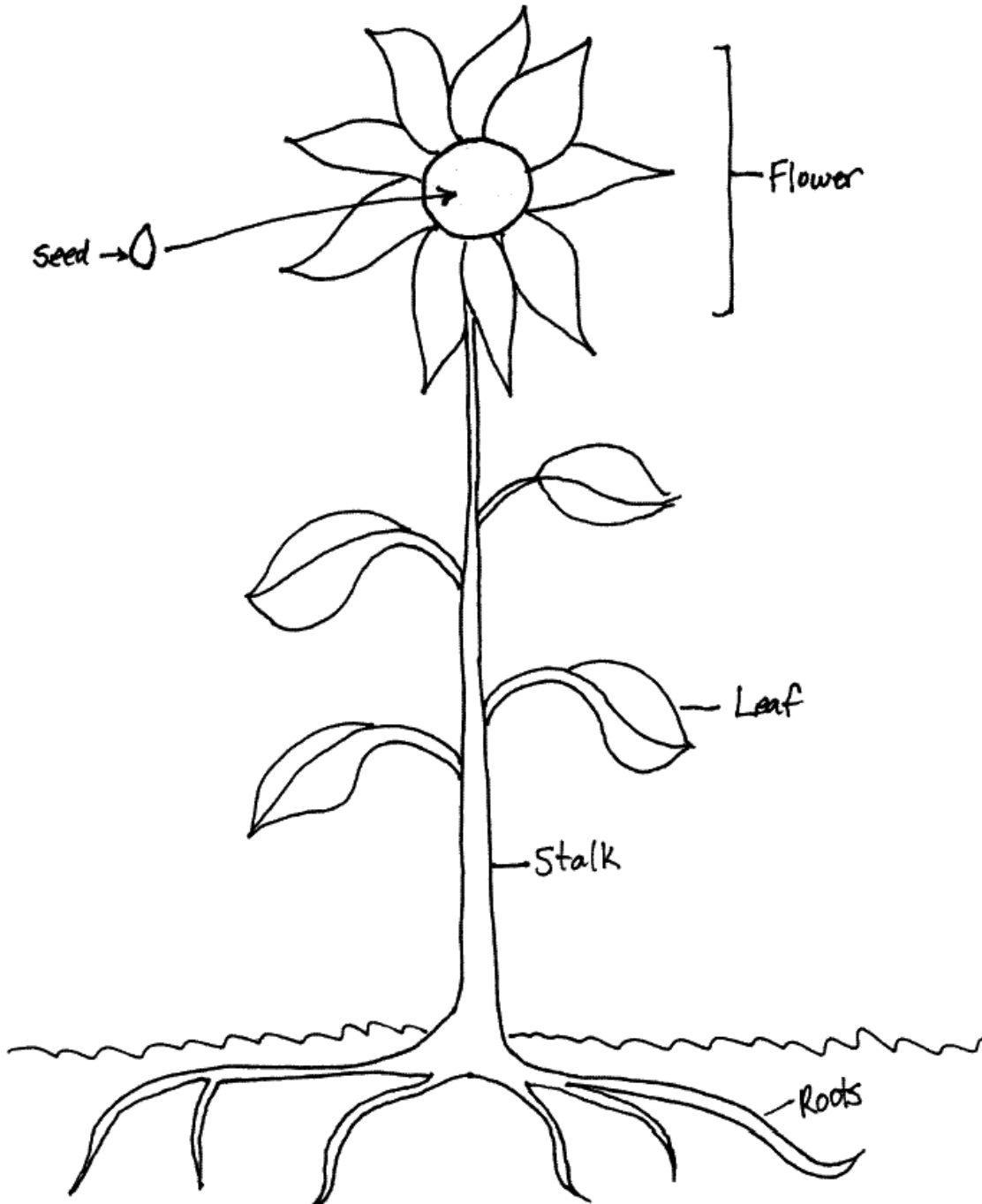
Students in the UC Davis Arboretum will not only discover that both animals and plants have life cycles that include birth/germination, reproduction, and death, but also that plants and animals interact during the different stages of their life cycles. To relate “Plant Parts” to this theme, discuss how different wildlife interacts with different plant parts. For example, butterflies and bees are attracted to flowers and help plants live out their

life cycles; worms live around the roots of plants and help the roots get oxygen and water by creating tunnels; and some beetles eat or live among the roots and others interact with the flowers and the leaves. Birds perch among the stems and larger animals live in plants, in tree cavities, or burrowed among the roots.

This activity was written by Susan Crider, UC Davis School of Education, 2003.

Plant Parts

Plant Diagram



Name _____

Date _____

Plant Parts Table

Food Item	Plant Part	Explanation
	ROOT	
	ROOT	
	STEM	
	STEM	
	LEAF	
	LEAF	
	FLOWER	
	FLOWER	
	FRUIT	
	FRUIT	
	SEED	
	SEED	

Name _____

Date _____