

**FRUITS AND SEEDS, ROOTS AND STEMS,
FLOWERS AND LEAVES**

Vocabulary: fruits, seeds, roots, stems, flowers and leaves

Lesson time: two 45-60 minute sessions



KINDERGARTEN

Description

Students learn six plant parts and learn that different foods come from different plant parts. Student then tour the school garden and the cafeteria looking for examples of plant parts that we eat.

Guiding Question

What plants grow in the school garden?

Big Idea

The characteristics of plants are evident in the school garden.

Learning Objectives

After completing this lesson, students will be able to identify six plant parts (fruits, seeds, roots, stems, flowers and leaves) and they will be able to recognize foods that represent each of the six plant parts.

Materials

Illustration KF3a - KF3g, picture of an entire tomato plant with various parts and Illustrations of edible plant parts.
Optional: Pictures or actual fruits and vegetables.

Preparation

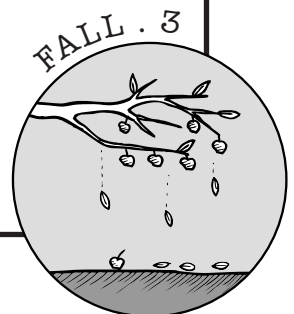
Recruit and train three volunteers (optional) to assist teacher.
Print and copy illustrations.
Print pictures of, or collect actual, fruits and vegetables.
Contact the school cafeteria staff to arrange a visit to the salad bar in the cafeteria before lunch.

Introducing the Lesson

Show the students Illustration KF3a and point out the parts of the plant: roots, stem, leaf, flower, fruit and seed.
Say and write each plant part on the board and create the top row of a 6-column chart:

Root	Stem	Leaf	Flower	Fruit	Seed

You may wish to draw representative pictures next to the words.



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Next, guide students through a class discussion to understand the definition of each plant part:

Roots grow under the ground and collect water and nutrients the plant needs to grow.

Stems grow above ground and hold plants upright. Stems transport water and nutrients from the roots to the rest of the plant.

Leaves grow above the ground and collect sunlight that the plant needs to grow.

Flowers grow above the ground on the branches of the stems.

Fruits grow on and above the ground and contain the seeds of a plant.

Seeds sprout under or on the ground. Seeds become new plants.



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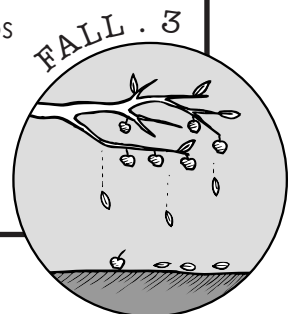
Next, explain to students that most of the foods that people eat come from plants. Tell students the names of several foods that come from plants: fruits, vegetables, seeds, grains, nuts. Then, invite students to name some plant foods they like to eat. Students may name foods such as carrots, apples, grapes, peanut butter. Correct students if they name a food that does not come from a plant. If you have brought actual fruits and vegetables, show them to students as they are named.

Remind students of the definitions of plant parts and help them to determine which part of a plant each of the foods represents. Enter each food into a chart on the board, drawing or sticking a picture of the food next to its name. For example:

Root	Stem	Leaf	Flower	Fruit	Seed
Beet	Asparagus	Spinach	Cauliflower	Tomato	Wheat
Radish	Rhubarb	Parsley	Artichoke	Pumpkin	Walnut
Carrot	Fennel	Kale	Broccoli	Apple	Corn

Procedure

1. Review class rules for trips to the garden. Then, divide the class into two groups.
2. Group One will tour the school garden and look for plant parts that are growing in the garden. Group leaders can encourage the children to discuss which parts of each plant are edible. Try to find one example of each plant part in the garden. Have students count how many of each plant part they find in the garden.
3. Group Two will visit the school cafeteria and look for fruits and vegetable on the salad bar. Group leaders can help students discover which plant parts are among the foods on the salad bar. They can ask questions such as, "What part of a plant does this lettuce look like?" Try to find one example of a plant part being served for lunch. Have students count how many of each plant part they find in the lunch room.
4. After each group has completed its tour of one site, switch the groups and tour the other site so that each group tours both the cafeteria and the garden site. Alternately, if volunteers are unavailable, take the entire group on a tour of the cafeteria and school grounds.



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Assessing Student Knowledge

Conduct informal assessments of your students' knowledge by asking them to do some or all of the following:

Bring in a potted plant or use the tomato plant illustration. Ask students to name the plant parts as they are pointed out. Next, hold up examples of edible plant parts such as walnut, carrot, parsley sprig, apple, celery or broccoli and ask students "Which plant part is this?"

Hand out Illustrations KF3a - KF3g and have students color the plant parts and circle the ones they saw on their tour. Circulate as students work, to observe their understanding and to correct any mistaken ideas.

Informally assess learning through class discussion. Ask students questions such as:

What is a fruit? A seed? A root? A stem? A flower? A leaf?

What fruits did you find in the school garden? Seeds? Roots? Stems? Flowers? Leaves? Tally the answers on the board.

What fruits did you find in the cafeteria? What seeds? Roots? Stems? Flowers? Leaves? Tally the answers on the board.



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OR. Dept. of Ed. Key Standards

Oregon Science Academic Content Standards:

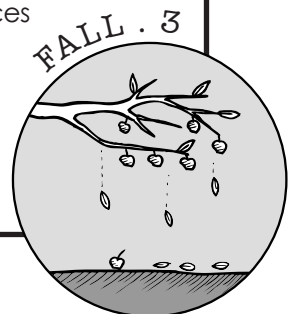
K.3S.1 Explore questions about living and non-living things and events in the natural world.

K.3S.2 Make observations about the natural world.

Common Core State Standards for English Language Arts:

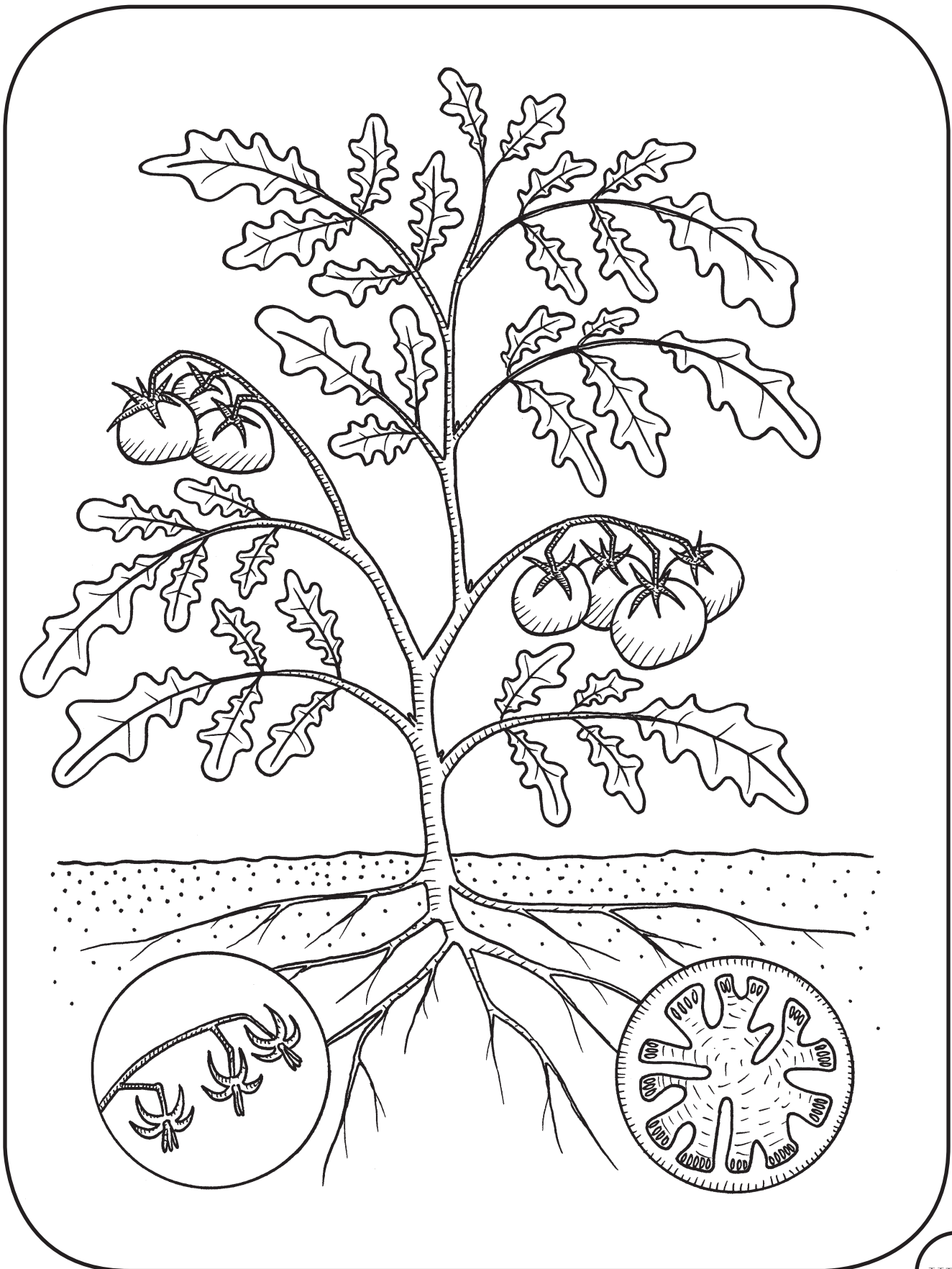
K.W.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

K.L.5.a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.

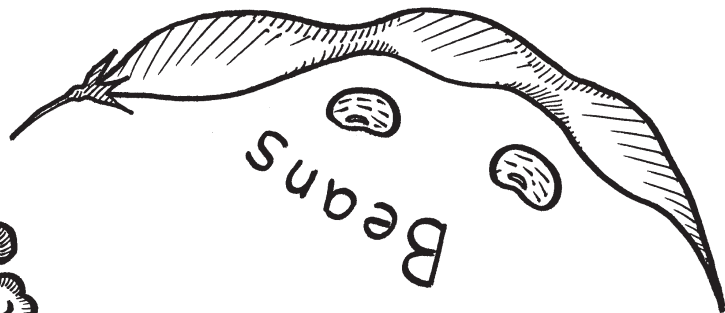


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Portland Partners for School Food and Garden Education



Seeds



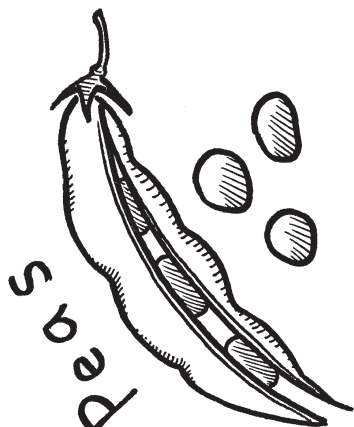
Beans



Walnut



Wheat

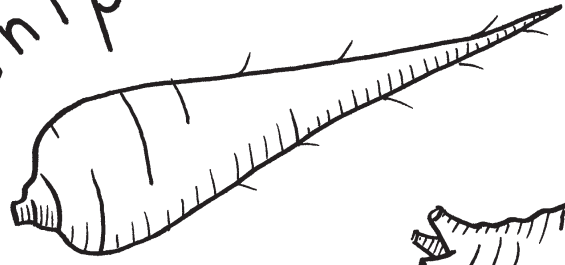


Peas

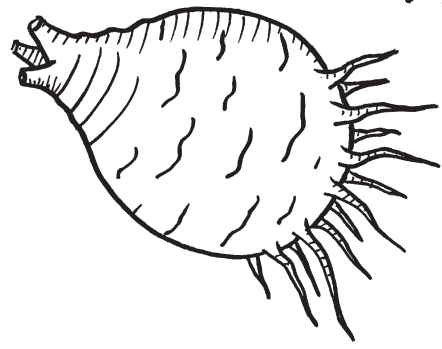
Corn



Parship

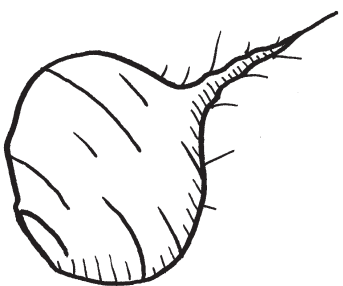


Celeriac

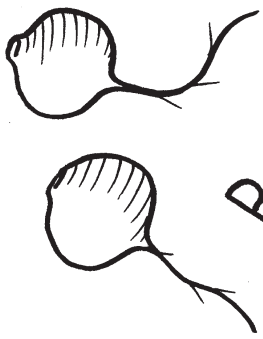


Roots

Beet



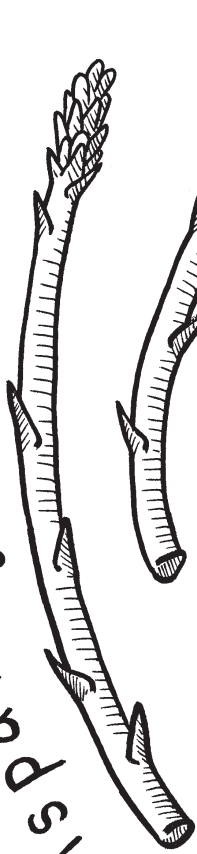
Radish



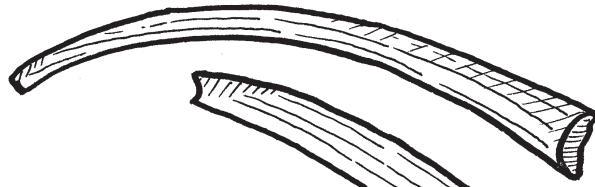
Carrot



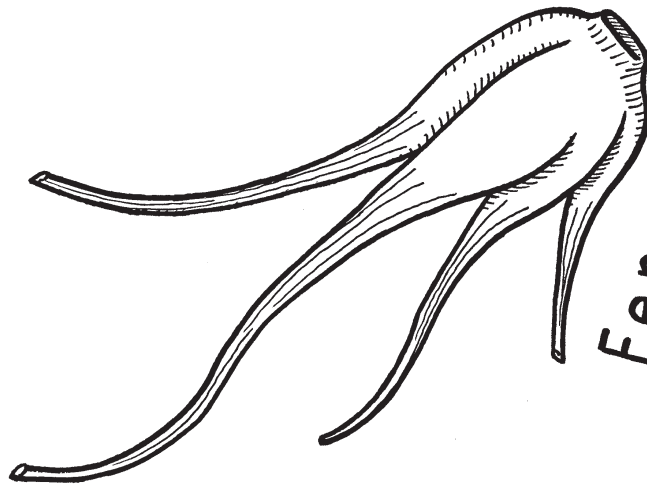
Asparagus



Stems

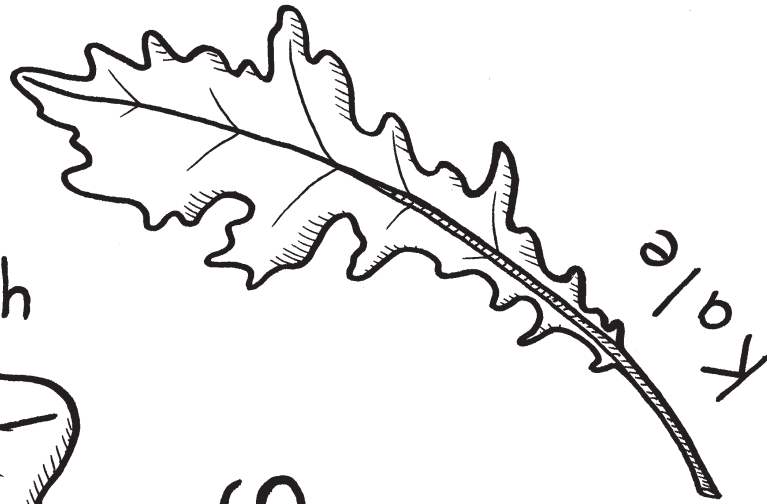
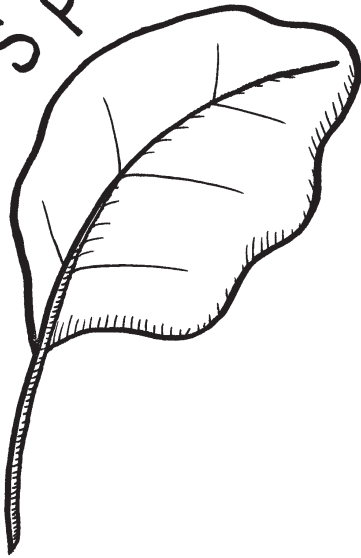


Rhubarb



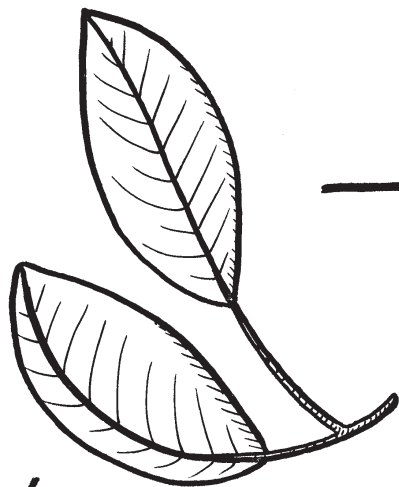
Fennel

Spinach

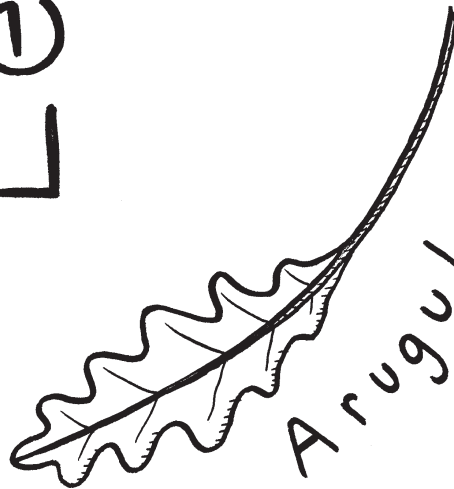


Maple

Leaves



Basil



Arugula

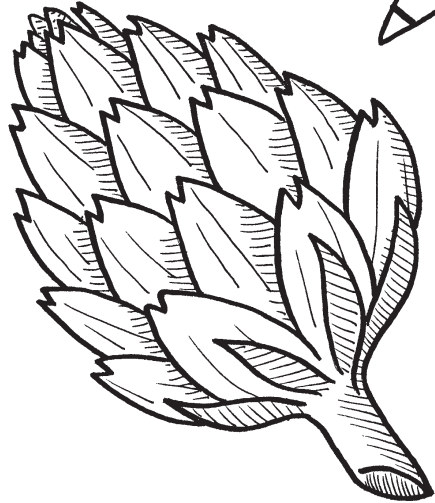
Blossom



Broccoli

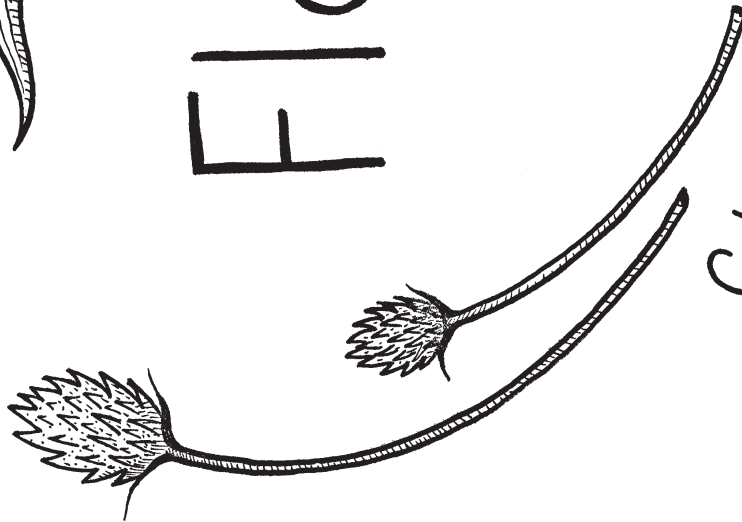


Artichoke



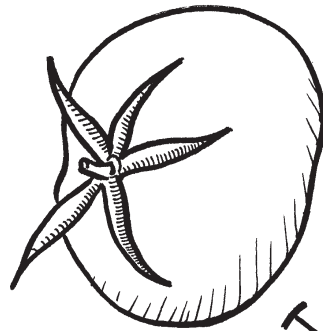
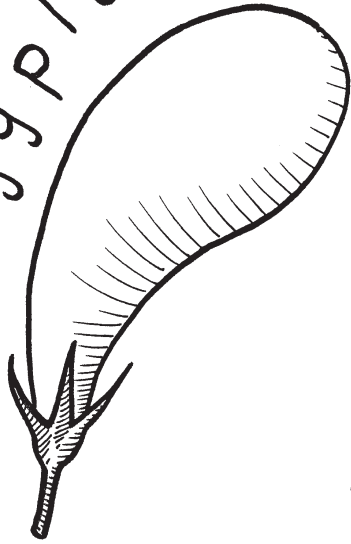
Flowers

Squash



Chive

Eggplant



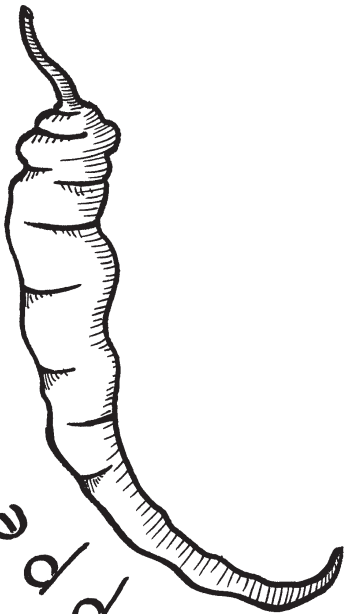
Tomato

Fruit



Pumpkin

Pepper



Fig

