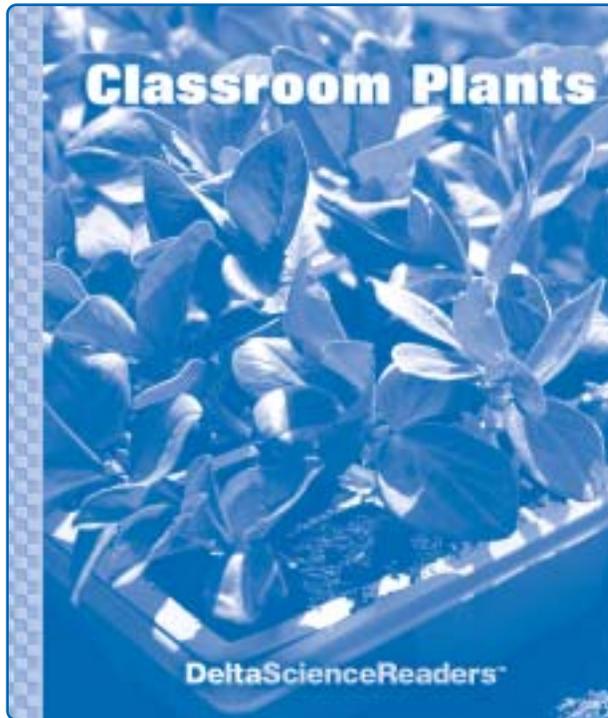


Classroom Plants



Delta Science Readers are nonfiction student books that provide science background and support the experiences of hands-on activities. Every **Delta Science Reader** has three main sections: *Think About . . .*, *People in Science*, and *Did You Know?*

Be sure to preview the reader Overview Chart on page 4, the reader itself, and the teaching suggestions on the following pages. This information will help you determine how to plan your schedule for reader selections and activity sessions.

Reading for information is a key literacy skill. Use the following ideas as appropriate for your teaching style and the needs of your students. The After Reading section includes an assessment and writing links.

OVERVIEW

In the Delta Science Reader *Classroom Plants*, students are introduced to the world of plants. Students observe the similarities and differences between plants and animals and compare different types of plants. They find out about the functions of plant parts and explore what a plant needs to grow. Students learn about plants' life cycles and methods of reproduction. Students meet George Washington Carver, a plant scientist who discovered many new uses for peanut plants. Finally, students read about hydroponics, growing plants in water.

Students will

- ▶ distinguish between plants and animals
- ▶ recognize the interdependency between plants and animals
- ▶ identify the names and functions of plant parts
- ▶ read about the stages in the life cycle of a plant
- ▶ examine the materials that make up soil
- ▶ infer what plants need to grow
- ▶ conclude that plants reproduce in different ways
- ▶ interpret photographs and diagrams
- ▶ read captions and labels
- ▶ recognize parts of a book
- ▶ discuss the functions of a table of contents and a glossary

READING IN THE CONTENT AREA SKILLS

- Compare and contrast plants and animals and the different functions of plant parts
- Draw conclusions about what plants need to grow
- Predict how different plants reproduce
- Sequence the stages of a plant's life cycle
- Identify main idea and supporting details
- Demonstrate critical thinking
- Summarize information

NONFICTION TEXT ELEMENTS

Classroom Plants includes titles, a table of contents, photographs, illustrations, captions, diagrams, labels, boldfaced terms, and a glossary.

CONTENT VOCABULARY

The following terms are introduced in context and defined in the glossary: *bud, bulb, carbon dioxide, chlorophyll, conifer, cutting, energy, flower, flowering plant, fruit, germinate, humus, hydroponics, leaf, life cycle, life span, minerals, nutrients, organism, oxygen, petal, photosynthesis, plant, pollen, reproduce, respond, root, seed, seed coat, seedling, soil, sprout, stem, tuber.*

BEFORE READING

Build Background

Access students' prior knowledge by having them brainstorm a list of plants they know. They may mention general categories, such as grass, flowers, and trees, or specific plants, such as daisy or pine tree. List students' responses on the board. Then use the responses to begin a concept web. Depending on students' abilities, you may wish to have students group their responses into categories.

Display and discuss the cover and title. Ask, *What does the photograph on the cover show?* (Possible answers: small plants in a planter tray; plants with bright green leaves; plants ready to be planted in a garden)

Invite students to share what they know about plants from their personal experiences and hands-on explorations in science. To stimulate additional discussion, ask questions such as these: *How is a plant different from an animal? How are a blade of grass and a tree alike? How are they different? Why are plants important to people?*

Begin a group KWL chart by recording facts students know about plants in the K column. Then ask, *What are some things you'd like to find out about plants?* Record students' responses in the W column of the chart. You may want to copy the KWL chart so they can maintain their own charts as they read.

K What I Know	W What I Want to Know	L What I Learned	+ What I Want to Explore Further

Preview the Book

Explain that when students preview a nonfiction book, they should look at the title, the table of contents, headings, boldfaced words, photographs, diagrams, and captions.

Then preview the book with students. Have students turn to the table of contents. Ask, *What do you notice about this page?* Give students a few minutes to share their observations. Point to the first three headings in boldface type and explain that the book is divided into three parts: Think About . . . , People in Science, and Did You Know? Read aloud the headings listed in the Think About . . . section. Ask students to use the

table of contents to locate different types of information in the book. For example, ask, *On what page might you find information about a plant's leaves?* (page 9)

Flip through the book, calling attention to the various nonfiction text elements and explaining how they can help students understand and organize what they read. Ask questions such as, *How does this heading help you predict what you will read about on this page? What do you see in this picture? How do you think it will help you understand what you are reading?* Explain that the words in boldface type are important words related to plants. Point out that these words and their definitions are listed in the glossary. Choose one word and have students find its definition in the glossary.

Preview the Vocabulary

You may wish to preview some of the vocabulary words before reading, rather than waiting to introduce them in the context of the book. Possibilities include creating a word wall, vocabulary cards, sentence strips, or a concept web.

For example, you might use the topics listed in the Think About . . . section of the table of contents to begin a word web. Have students predict in which section they might find each vocabulary word. If students have questions about the meanings of words, have them record the questions in the W column of their KWL charts. Encourage students to confirm or revise their predictions as they read the book.

Set a Purpose

Discuss with students what they might expect to find out from the book, based on their preview. Encourage them to use the questions on the KWL chart to set an overall purpose for reading.

GUIDE THE READING

Preview the book yourself to determine the amount of guidance you will need to give for each section. Depending on your schedule and the needs of your class, you may wish to consider the following options:

- **Whole Group Reading** Read the book aloud with the whole class. Encourage students to ask questions and make comments. Pause as necessary to clarify and assess understanding. Encourage students to add or revise information on the KWL chart as you read.
- **Shared Reading** Have students work in pairs or small groups to read the book together. Ask students to pause after each text section. Clarify as needed and discuss any questions that arise or have been answered.
- **Independent Reading** Some students may be ready to read independently. Have them rejoin the class for discussion of the book. Check understanding by asking students to explain in their own words what they have read.

Tips for Reading

- If you spread out the reading over several days, begin each session by reviewing the previous day's reading and previewing what will be read in the upcoming session.
- Begin each text section by reading aloud the heading. Have students examine any illustrations or graphics and read accompanying captions and labels. Discuss what students expect to learn, based on the headings, illustrations, and captions.
- Help students use context and picture clues to figure out the meanings in boldface type. Remind them that these words are defined in the glossary.
- As appropriate, model reading strategies students may find helpful for nonfiction: adjust reading rate, ask questions, paraphrase, reread, visualize.

Think About . . . (pages 2–13)

Pages 2, 3 *What Is a Plant?*

- Have students look at and identify the objects in the photographs on page 2. Ask, *What do all of these items have in common?* (They are all plants.) *How are they alike? How are they different?* (Accept all reasonable answers at this time.)
- Read aloud the heading. Ask, *Who knows what a plant is?* Tell students to read pages 2 and 3 to find out if their ideas are correct.
- Frame the word *organism* and ask, *What is an organism?* (a living thing) Ask a student to read aloud the sentence from the text that confirms their response. Point out that the word is printed in boldface type. Ask, *Where else could you find the meaning of organism in this book?* (the glossary) Have a volunteer turn to the glossary and read aloud the definition of *organism*.
- Ask, *What are two kinds of organisms?* (plants and animals) *How are plants and animals alike?* (They grow and change. They can make others of their kind. They need air, light, and water to live.) *How are they different?* (Plants cannot move from place to place. Animals cannot make their own food. Animals need plants for food and sometimes for shelter.)
- Point to the photograph of the sheep on page 3. Ask, *What are these animals doing?* (eating grass) *What are some other animals that eat plants?* (Answers might include horses, goats, rabbits, cows, and so on.) *Do all animals eat only plants?* (No, some animals eat other animals.) *What are some animals that eat other animals?* (Possible answers are lions, wolves, sharks, and people.)
- Ask, *Are you a plant or an animal?* (an animal) *What do people eat?* (plants and animals) *Could people live if there were no plants?* (no) *Why not?* (Our food supply

depends on plants. All food chains begin with plants.)

- Review the questions you listed in the KWL chart before reading. Ask, *Think about what we have read so far. Can you answer any of these questions now? Do you have any new questions?* Record students' responses in the chart.

Page 4 *What Is Soil?*

- Direct students' attention to the large photograph on page 4. Ask, *What do you think this is?* (soil) *What does soil have to do with plants?* (Most plants grow in soil.) Read the caption together and ask volunteers to point to the different layers in the soil shown in the photograph. Point out that the layers have slightly different colors.
- Briefly discuss students' prior experiences with soil. Ask, *What is soil made of?* Have students read page 4 to confirm their predictions.
- After students have finished reading, ask again, *What is soil made of?* As students respond, list the words *minerals*, *humus*, *air*, and *water* on the board. If you created a word web before reading the book, you may wish to record the words in the web. Ask questions to clarify students' understanding of each word. For example, ask, *Have minerals ever been alive?* (no) *Has humus ever been alive?* (yes) *What happens to plants and animals after they die?* (They decay or break down into humus.)

Page 5 *Plant Life Cycles*

- Read aloud the heading and first paragraph on page 5. Frame the phrase *life cycles* and ask, *What is a life cycle?* (the changes a plant goes through as it grows)
- Have students read the rest of the text on page 5. Then direct their attention to the diagram on the page. Read aloud the title.

Remind students that different plants have different life cycles, and explain that this diagram shows the life cycle of a flowering plant such as a pea plant.

- Have students place their fingers on the picture of the seed and read aloud the label. Then have them trace the arrow to the next picture. Ask, *What is happening in this picture?* (The seed is sprouting.) Read aloud the label. Follow the same procedure for each picture in the diagram.
- Have students point to the picture of the plant with seeds. Ask *What will happen to this plant next?* (It will die.) You may wish to remind students that dead plants decay to become the part of the soil called *humus*. Ask, *What will happen to the seeds that the plant has made?* Explain that if conditions are right, the seeds that the plant has made will grow into new plants and begin the cycle again.
- On the board, list in random order the words *seed, sprouted seed, seedling, flowering plant, plant with seeds, and dead plant*. Draw a large circle and ask volunteers to help you write the words in the proper sequence on the circle to show the life cycle of a plant. You may wish to direct students' attention to the inset photograph on page 4. Ask, *Which stage of a plant's life cycle is shown in this photograph?* (sprouted seed)
- Ask students, *Do animals have life cycles?* (yes) Tell students that just like plants, animals have life cycles that include being born, growing and developing into adults, reproducing, surviving, and eventually dying.
- Draw another circle on the board. Ask, *How does a bird begin life?* (as an egg) *What happens next?* (It hatches out of the egg.) As you continue to discuss the life cycle of a bird, record the words *egg, baby bird, and adult bird* in the appropriate places on the circle. The life cycle stages are different for different kinds of organisms.

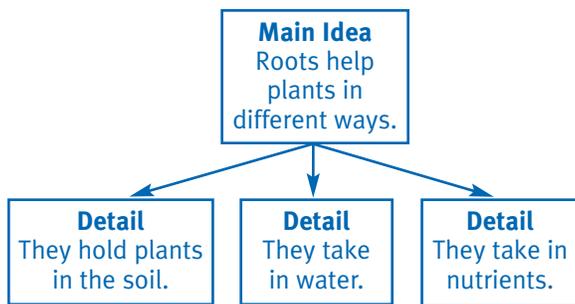
Page 6 *What Are the Parts of a Plant?*

- Have students identify the pictures on page 6. Ask, *How are an apple tree and a dandelion alike?* (They are both plants. They both have leaves, stems, roots, and flowers.) Read aloud the text on page 6 to confirm students' predictions.
- Ask students to read the label *leaves* and point to the leaves in each picture. Do the same for the label *flowers* in each picture and for the label *stem* in the picture of the dandelion. Then ask, *Can you find the label stem on the picture of the tree? Where is the arrow for the label pointing?* (to the tree trunk) Point out that a tree's trunk is its stem.
- Finally, have students point to the *roots* label in each picture. Ask, *Where do the roots of a dandelion usually grow?* (underground) *Where do the roots of a tree grow?* (underground) Point out that the root systems of these plants are often as large as the plant that grows aboveground.
- As appropriate, point out that people eat many different plant parts for food. For example, we eat roots (carrots, radishes, beets), seeds (peas, corn, beans), fruits (tomatoes, apples, cucumbers, berries), flowers (cauliflower, broccoli), leaves (lettuce, cabbage, spinach), and even stems (asparagus, celery)!

Page 7 *Roots*

- Read aloud the heading on page 7 and ask, *Why do you think plants have roots?* Have students read page 7 to confirm their predictions.
- Remind students that the most important idea of a piece of writing is called the *main idea*. Ask, *What is the main idea of what you read on this page?* (Roots help plants in different ways.) Record the main idea on the board.
- Point out that an author usually gives *details* to support or explain the main idea. Ask, *What details does the author*

use to tell how roots help a plant? (They hold a plant in the soil. They take in nutrients and water from the soil.) Record the details on the board as shown.



- Ask, *What are nutrients?* (Things a plant needs to live.) *Where does a plant get its nutrients?* (mostly from the soil) *Do people need nutrients?* (yes) *Where do you think we get our nutrients?* (from the food we eat) Review with students that plants need air, water, light, space, and nutrients to live and grow.
- Have students look at the picture on page 7 as a volunteer reads aloud the caption. Ask, *Have you ever eaten a carrot? Can you think of any other roots that people eat?* (Responses might include radishes, parsnips, and turnips. Students may mention potatoes. Tell students they will learn more about potatoes later in the book.)

Page 8 Stems

- Have students look again at the labeled pictures on page 6 and ask them to point to the stem in each picture. Ask them to turn to page 8 and point to the pumpkin stem. (Most students will point to the dark stem attached to the pumpkin itself.) Read aloud the caption and explain that the entire vine is the pumpkin's stem. Ask, *Does a pumpkin's stem look like the tree's stem or the dandelion's stem?* (no) Explain that although the stems on different plants may look different, they all have the same job. Have students read page 8 to find out what that job is.

- Ask, *What does a stem do for a plant?* (The stem holds the plant up so it can get sunlight. The stem carries water and nutrients from the roots to the other parts of the plant, such as leaves.)

Page 9 Leaves

- Have students identify the pictures on page 9. Ask, *What color are all these leaves?* (green) *Why do you think they are green?* (Accept all reasonable answers at this time.) Tell students that they will find out what makes leaves green as they read page 9. They will also find out what important job leaves do for plants.
- Ask students to look at the words in boldface type on page 9. Have students repeat after you as you point to and pronounce each word slowly. Then have them read the text on the page.
- After students have read the page, ask, *What makes leaves green?* (chlorophyll) Tell students that chlorophyll is a *pigment*, or colored substance, like a dye. Ask, *Have you ever gotten grass stains on your pants?* Explain that it is the chlorophyll in plants that cause the green stains.

(Students may ask why some leaves turn different colors at different times of the year. Explain that plants contain other pigments besides chlorophyll. We do not see those pigments because the chlorophyll is so strong. As winter comes and days get shorter, some plants produce less and less chlorophyll. As days get shorter and the chlorophyll gets weaker, we begin to see the other pigments, such as yellow, red, and orange, in the leaves.)

- Ask, *What important job does chlorophyll help the leaves do?* (make food for the plant) *What do leaves need in order to make food?* (energy from sunlight, water, and carbon dioxide from the air).
- Remind students that plants provide food for people and other animals. Ask, *What is another way that plants help people?*

(They give off oxygen, which people need to breathe).

- Point to the picture of the seedlings in the pot on page 9. Ask, *What do you notice about these plants?* (They are leaning to one side.) *Why do you think they are leaning in one direction?* Have a volunteer read aloud the caption to confirm students' predictions.
- Students may be interested to know that the leaves pictured are: oak, palm, and tropical (top); clover, alocasia, and maple (bottom).
- If necessary, provide help with the pronunciation of *chlorophyll* (KLOR-uh-fil) and *photosynthesis* (foe-toe-SIN-thuh-sis).

Page 10 *Flowers*

- Have students read page 10. Ask, *What job do flowers do for a plant?* (make seeds so that plants can reproduce) *Why do you think many flowers are brightly colored or have sweet smells?* (to attract bees and other insects)
- Ask students if they have ever had a yellow dust rub off on their hands after touching a flower. Explain that the yellow dust is pollen. Ask, *Imagine a bee lands on a flower. What do you think the bee might get on its body?* (pollen) Explain that when the bee lands on the next flower, some of the pollen rubs off on that flower. Ask, *What happens when pollen from one plant touches the pistil on another plant?* (a seed begins to grow)
- Read aloud the caption under the left-hand picture on page 10. Have students point to the petals on the flower in the picture and on the flower in the picture of the bee. Then point to the picture of the pine cones. Ask, *Do you see any petals in this picture?* (no) *What do you see?* (pine cones) Explain that conifers such as this pine tree make their seeds inside cones.

Pages 11, 12 *Fruits and Seeds*

- Help students identify the pictures on page 11. Ask, *Have you ever eaten any of these foods?* Briefly discuss students' experiences. Have volunteers point to the seeds in each photograph and ask, *Do you eat the seeds of this plant?* (The pictured fruits are [clockwise] apricot, papaya, kiwi, watermelon, avocado.)
- Ask questions that encourage students to compare the size, shape, and number of seeds found in each fruit. For example, ask, *Is a watermelon larger or smaller than a peach? Is a watermelon seed larger or smaller than a peach seed?*
- Explain that seeds are found in a part of the plant called the *fruit*. Remind students that each part of a plant has a special job to do. Ask, *What do you think the fruit's job is? What do you think the seed's job is?* (Accept all reasonable answers at this time.) Have students read pages 11 and 12 to confirm their predictions.
- Direct students' attention to the diagram on page 12 and ask a volunteer to read the caption. Ask, *What do you see inside the seed?* (tiny plant and seed food) Have students point to each part of the seed. Ask, *Where is the seed coat?* (around the outside of the seed) *What does the seed coat do?* (It protects the new plant.) The seeds shown are coconut, wheat, pumpkin, acorn (oak), and corn.
- Ask, *What do we mean when we say that a plant germinates?* (It starts to grow.) Have a volunteer read aloud the context clues that give the meaning for the word *germinates* in the text.
- Review students' KWL charts. Suggest that students think about what they have read on pages 6–12 and add to the chart any new information or questions they have about the different parts of plants.
- As necessary, provide help with the pronunciation of *germinate* (JUR-mih-nate).

Page 13 *Other Ways That New Plants Grow*

- Ask, *Do you think it is possible to grow new plants without seeds? How would you do it?* Discuss students' ideas. Tell students that they will learn about different ways to make new plants on page 13.
- Ask students if they have ever eaten potatoes. Briefly discuss students' experiences. Have students find the picture of a potato on page 13. Ask, *Where do you think potatoes grow?* (underground) Remind students that we eat different parts of different plants: seeds (peas), fruit (apples), leaves (lettuce), and stems (celery). Ask, *What part of the potato plant do you think we eat?* (Students may suggest that the potato is a root because it grows underground. Accept all reasonable answers at this time.)
- Have students read page 13. Ask, *What part of the potato plant do we eat?* (the tuber, or stem) Remind students that most stems grow aboveground, are long and thin, and carry water and nutrients to other parts of the plant. Explain that a tuber is a stem that grows underground and is thick because it contains stored food.
- Have students look at the picture of the potato again. Ask, *What else do you see in this picture?* Have students point to the buds, or eyes, on the potato, and ask a volunteer to read the caption aloud. Explain that *buds* are the beginnings of new plants. (You may wish to refer students to the lower left caption on page 10 and have them compare a flower bud to a potato bud.)
- Have students look at the picture of the tulips on page 13 and read the caption. Ask, *Have you ever planted tulip or daffodil bulbs? What do they look like? Did the bulbs sprout right away?* Briefly discuss students' experiences. Ask, *What part of the plant is a bulb?* (the stem) *How are tubers and bulbs alike?* (They

both grow underground. They are both stems.) *How are they different?* (People do not eat tulip bulbs.) Point out that although people do not eat tulip bulbs, they do eat other bulbs, such as onions, garlic, and leeks.

- Have students look at the picture of the leaf cutting. Ask, *What part of the plant do you see in this picture?* (the leaf) Ask, *Have you ever grown a new plant from a leaf cutting?* Briefly discuss students' experiences.
- Compare and contrast the life cycles of plants that reproduce with and without seeds. For example, the life cycle of a tuber has two stages, bud and mature plant.
- Tell students that paragraphs or sections of writing often contain a sentence or two that tell the main, or most important, idea. Ask, *Can you find a sentence on this page that tells the main idea?* (The first sentence: *Some plants do not reproduce from seeds.*)

People in Science

Page 14 *George Washington Carver*

- Ask, *Have you ever eaten a peanut? Have you ever had a peanut butter sandwich?* Briefly discuss students' experiences. Ask, *Have you ever seen a peanut in its shell? How do you think peanuts grow?* Explain that like peas peanuts grow in seedpods. They grow at the end of stems, called *pegs*. These stems start above ground but grow into the soil, so that the peanut itself grows underground.
- Help students read the heading on page 14. Ask, *What do you think George Washington Carver has to do with peanuts?* Have students look at the picture at the bottom of the page. Ask, *Who do you think this is? What do you think he is doing?* (taking care of plants; studying plants) Have a volunteer read

aloud the caption. Then tell students that they will find out more about George Washington Carver and his work with peanuts as they read page 14.

- After students have read page 14, ask, *Why was George Washington Carver interested in peanuts?* (He wanted to find new ways to use peanuts to help farmers sell their peanut crops.)

Further Facts

- George Washington Carver was born around 1865 in Missouri. He was the son of slaves. After the Civil War, he was raised as a son by his mother's former owners, Moses and Susan Carver.
- Carver did not attend formal school until the age of 12. He eventually received a bachelor of arts and master of science degree. In 1896 Carver became the director of agriculture at Tuskegee Normal and Industrial Institute, a school founded by Booker T. Washington.
- Carver's goal was to find ways to help southern farmers, especially former slaves. Years of planting only cotton had exhausted the soil of its nutrients. Carver taught farmers to plant peanuts and sweet potatoes, which would replace some of the nutrients and make the soil healthy again. To help farmers sell these new crops, Carver began to research new ways of using them.
- Carver researched and developed more than 300 products that used peanuts, including peanut butter, milk, flour, ink, dyes, plastics, soap, oils, and cosmetics. He also developed 118 uses for sweet potatoes, including flour, vinegar, molasses, rubber, and ink.

Did You Know?

Page 15 *About Hydroponics*

- Review students' KWL charts and ask, *Where do most plants grow?* (in soil) *Do you think that plants can grow without*

soil? Why or why not? Discuss students' speculations.

- Read aloud the heading on the page, and frame and pronounce the word *hydroponics* (hi-dro-PON-iks). Ask students to find the word in another place on the page. Explain that the word part *hydro* means "water." Ask, *What do you think hydroponics means?* Have students find the word in the glossary to confirm their predictions. Then have them read page 15.
- After students have finished reading, ask, *Do hydroponic plants grow in soil?* (no) *Where do they grow?* (in water)
- Have students look at the picture on page 15. Ask, *What do you see in this picture?* (a greenhouse) If necessary, explain that a greenhouse is a room or building made of glass or clear plastic so that the inside gets a lot of light. Tell students that the plants in this greenhouse are growing in water. Ask, *Where do you think the water is?* (under the plants)
- Remind students that plants growing in soil get their nutrients from the humus in the soil. Ask, *Is there humus in water?* (no) *How do plants that are grown in water get their nutrients?* (The farmer adds nutrients to the water.)
- Ask, *What are some reasons a farmer might want to grow hydroponic plants?* (There are no harmful insects or weeds; plants can be grown all year round.)

Further Facts

- Hydroponics is based on the fact that all plants have the same basic needs: light, nutrients, air, water, and space to grow.
- Most plants grown in water need to be supported in some way. Some are grown in soil-less mixtures, such as pebbles, peat, or vermiculite, which hold the plants in place. Plastic sheets or a soft substance called rock wool supports others.

- Farmers provide food for hydroponic plants by pouring a solution of nutrients into the water. Because the nutrients are readily available in the water, hydroponic plants often grow faster than plants grown in soil.

AFTER READING

Summarize

Complete the KWL chart you began with students by asking them to share the answers to their questions. Call on volunteers to retell each text section. Then have students use the information in the KWL chart to write brief summary statements.

Discuss with students how using the KWL strategy helped them understand and appreciate the book. Encourage them to share any other reading strategies that have helped them understand what they read. Direct attention to the third column in the chart and ask, *What questions do you still have about plants? What would you like to explore further?* Have students record their questions in the column. Then ask, *Where do you think you might be able to find this information?* (Students might mention an encyclopedia, science books, and the Internet.) Encourage students to conduct further research.

Review/Assess

Use the questions that follow as the basis for a discussion of the book or for an oral assessment.

1. What are two ways that plants and animals are alike? (They are both living things, or organisms. They both need air, light, and water to live.) What are two ways that they are different? (Plants can make their own food; animals cannot. Animals can move from place to place; plants cannot.)
2. A pea plant begins life as a seed. What are the next four stages that it goes through during its life cycle? (sprouted seed, seedling, flowering plant, plant with seeds)
3. What do the roots of a plant do? (take in nutrients and water; help keep a plant in place in the soil) What does the stem do? (carry water and nutrients from the roots to the rest of the plant) What do the leaves do? (make food for the plant) What do the flowers do? (make seeds) What do the fruits do? (protect the seeds)
4. What is photosynthesis? (the way that plants make their own food, using chlorophyll, energy from sunlight, water, and carbon dioxide from the air)
5. What do all plants need to grow? (air, water, light, space, and nutrients)
6. Do all plants grow from seeds? (no) What are some other ways that plants reproduce? (by tubers, by bulbs, or by cuttings)

Writing Links/Critical Thinking

Present the following activities as writing assignments.

1. Suggest that students make a picture dictionary of plants. Bring in seed catalogues, magazines, and other publications that show a variety of plants. Have students cut out pictures that illustrate the vocabulary words listed in the glossary and any other words related to classroom plants that they would like to include. Have students glue each picture to a sheet of construction paper, label the appropriate part or write a caption for the picture, and write the word and its definition. Remind them to include the word *plant* in their dictionaries. On that page, they can write a paragraph telling why plants are important. Encourage students to arrange their sheets in alphabetical order and use a hole punch and string or clips to bind the sheets together to make the dictionary.
2. Bring in several plant labels from potted plants and discuss the information given on the label. (Your local florist should have a selection of extra or discarded labels.) Suggest that students use index cards to

create labels for a plant of their choice. On one side of the card, have them draw and label a picture of the plant. On the other side, have them write a description of the plant and what it needs to grow well. Attach the cards to craft sticks to make the labels. To create an interesting display, stick the labels in small lumps of clay shaped like flowerpots.

Science Journals: You may wish to have students keep the writing activities related to the Delta Science Reader in their science journals.

References and Resources

For trade book suggestions and Internet sites, see the References and Resources section of this teacher's guide.