Kindergarten
Classroom Slides sampler

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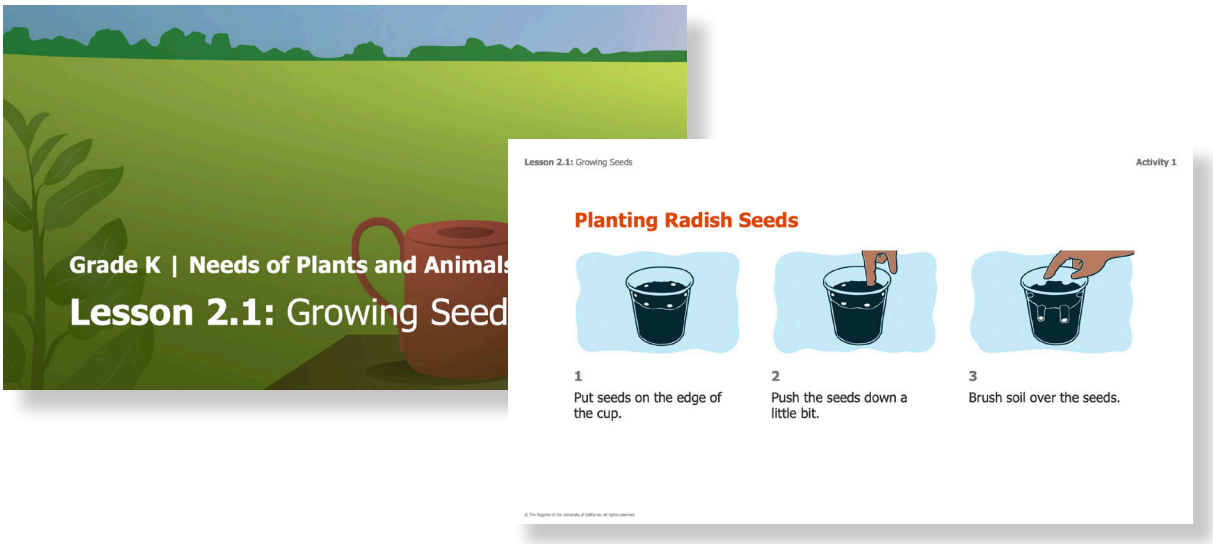
Science time just got a whole lot easier. With our new Classroom Slides, you can put down the Teacher's Guide and focus on what matters most—your students. Plus, with Classroom Slides, lesson prep is as quick as a click!

Classroom Slides are:

- **Available offline**, which means no more sweating unreliable internet connections.
- **Streamlined for easy lesson delivery**, including lesson visuals, activity instructions and transitions, animations, investigation setup videos, technology support, and more.
- **Fully editable**, allowing you to incorporate your own flavor, flair, and favorite resources, such as Mystery Science.

This sampler includes slides from one lesson from the Needs of Plants and Animals unit.



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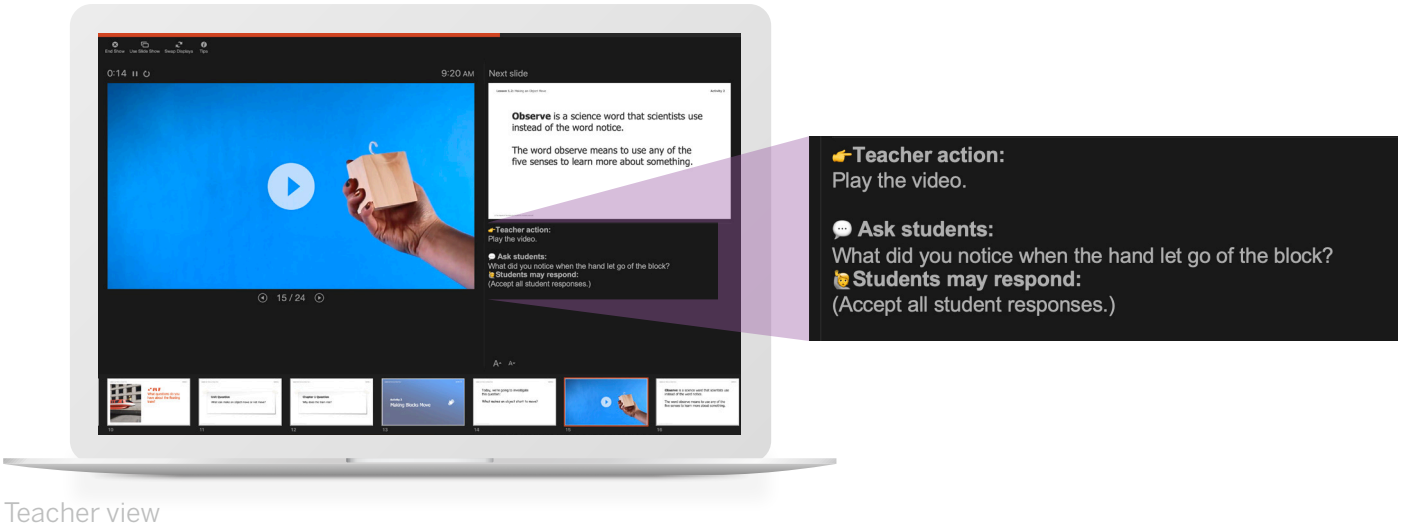
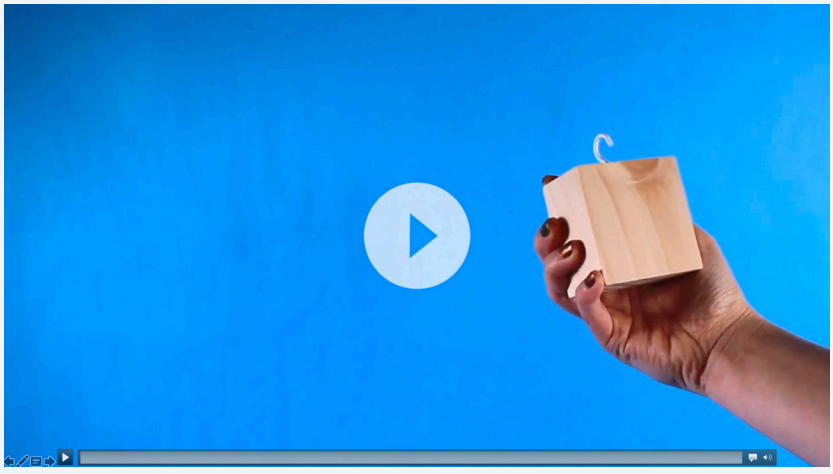
Presenter view

When using presenter view you can:

- **Project the student-facing content** and
- **View your teacher notes**, including teacher talk, teacher actions, and potential student responses and
- **Preview the next slide**.



Teacher view



Student view

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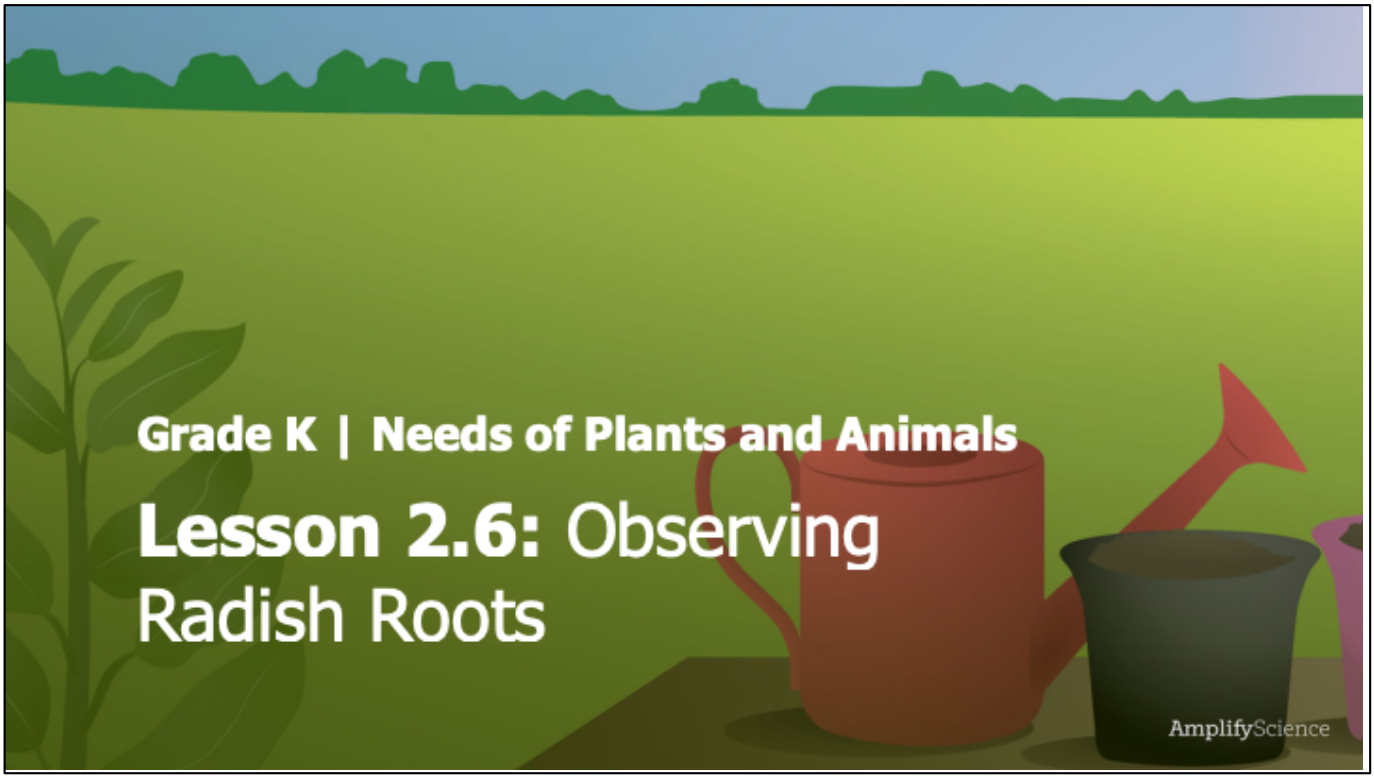


Lesson purpose: To support students' understanding that plants use their roots to get the water they need to grow

Please refer to this lesson's Materials & Preparation section in the digital Teacher's Guide or the Print Teacher's Guide for information about preparing to teach this lesson, including any applicable safety notes.

Activity 1

Observing Radish Growth

What are we doing to **help** the children in Mariposa Grove?

👩 **Students may respond:**

We are working as scientists. We are trying to figure out why there are no monarch caterpillars since the Field was made into a Garden.

💬 **Suggested teacher talk:**

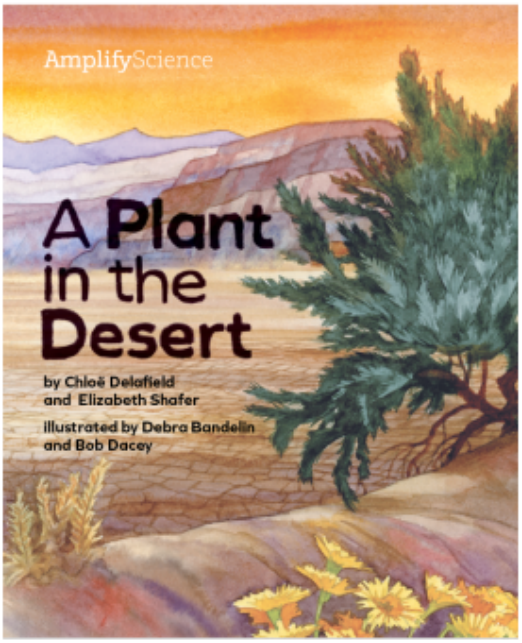
We figured out that the Garden will need to have milkweed plants in order for the monarch caterpillars to live there.

The Garden

What do plants **need** to live and grow?

🙋 **Students may respond:**

Water.



We read about sage plants in the desert and how they get water.

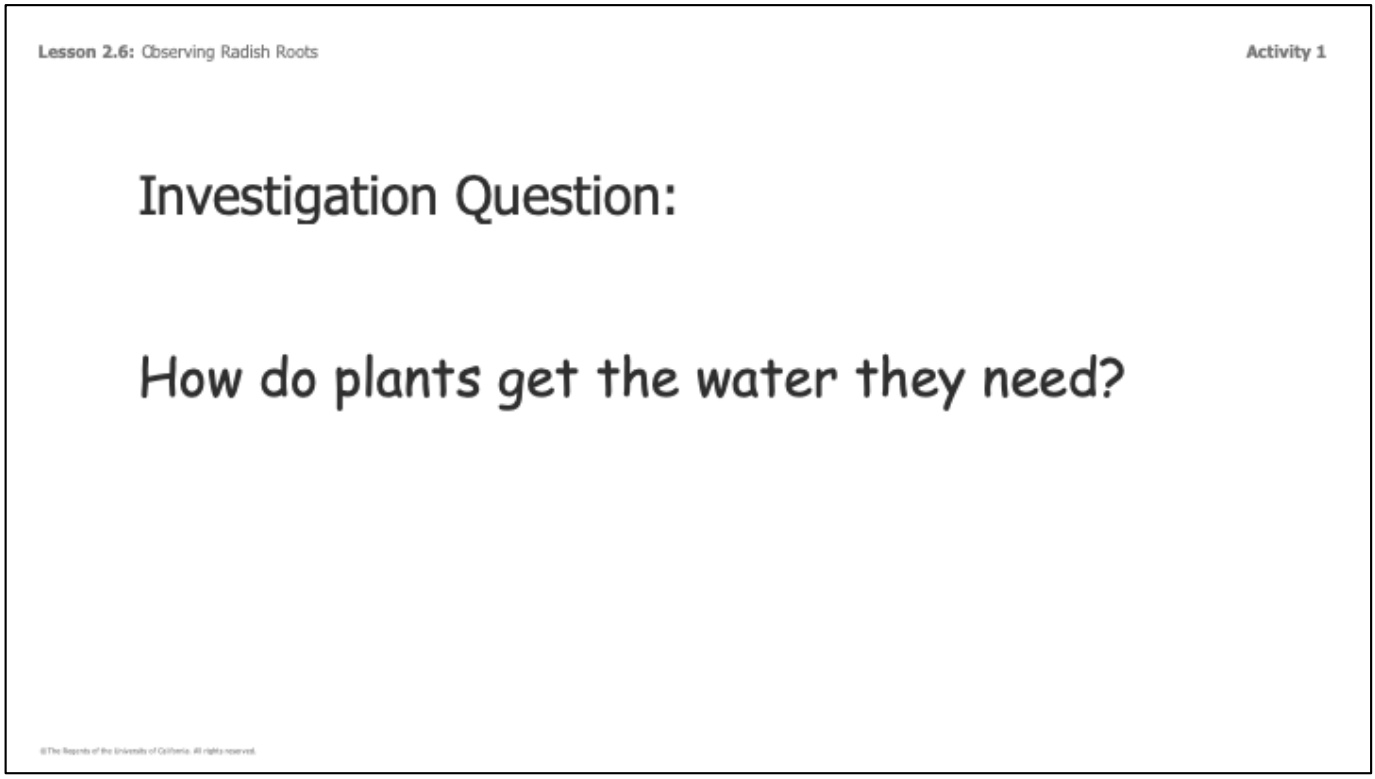
How do sage plants in the desert get water?

👩 **Students may respond:**

They use their roots to get water from the soil.

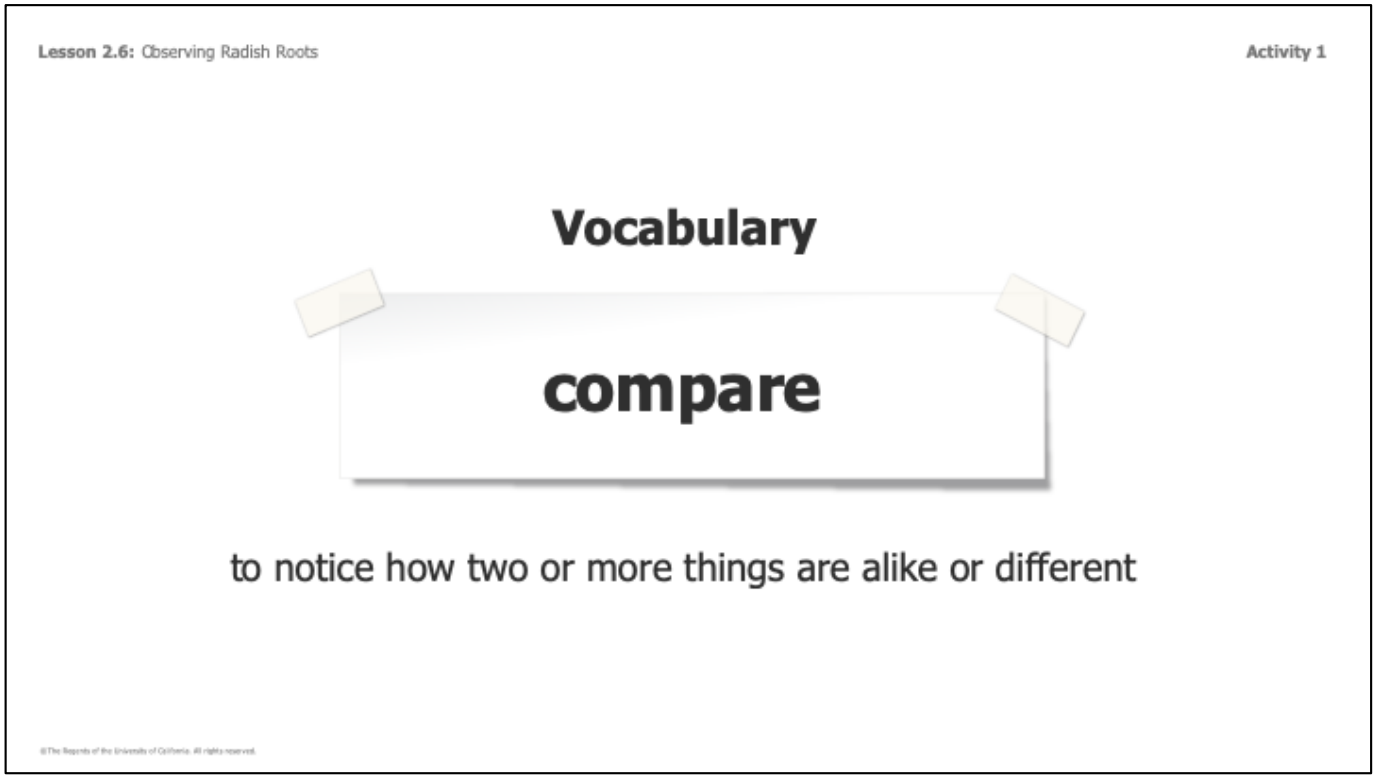
💬 **Suggested teacher talk:**

We know the sage plant has roots that are in the ground. We know it uses its roots to get all the water it can when it rains. I wonder if milkweed plants get water through their roots, too.



👉**Teacher action:**
Point out the Investigation Question written on the board.

💬 **Suggested teacher talk:**
Scientists investigate to answer their questions. We are investigating to try and answer this question: *How do plants get the water they need?*



👉**Teacher action:**
Review the meaning of the word *compare.*

💬 **Suggested teacher talk:**
We put radish seeds in two cups. We put water in one cup, and no water in the other cup. We are going to observe and compare the two cups. Remember when scientists compare, they observe things to figure out what makes them alike and different.

💬 **Suggested teacher talk:**
Scientists set a purpose to focus their thinking.

Our purpose for observing is to figure out how the seeds are **growing differently**.

💬 **Suggested teacher talk:**

You and your partner will compare your two cups. You will talk about what is similar and what is different about how the seeds are growing. Try to use the names of the different plant parts we have talked about in class.

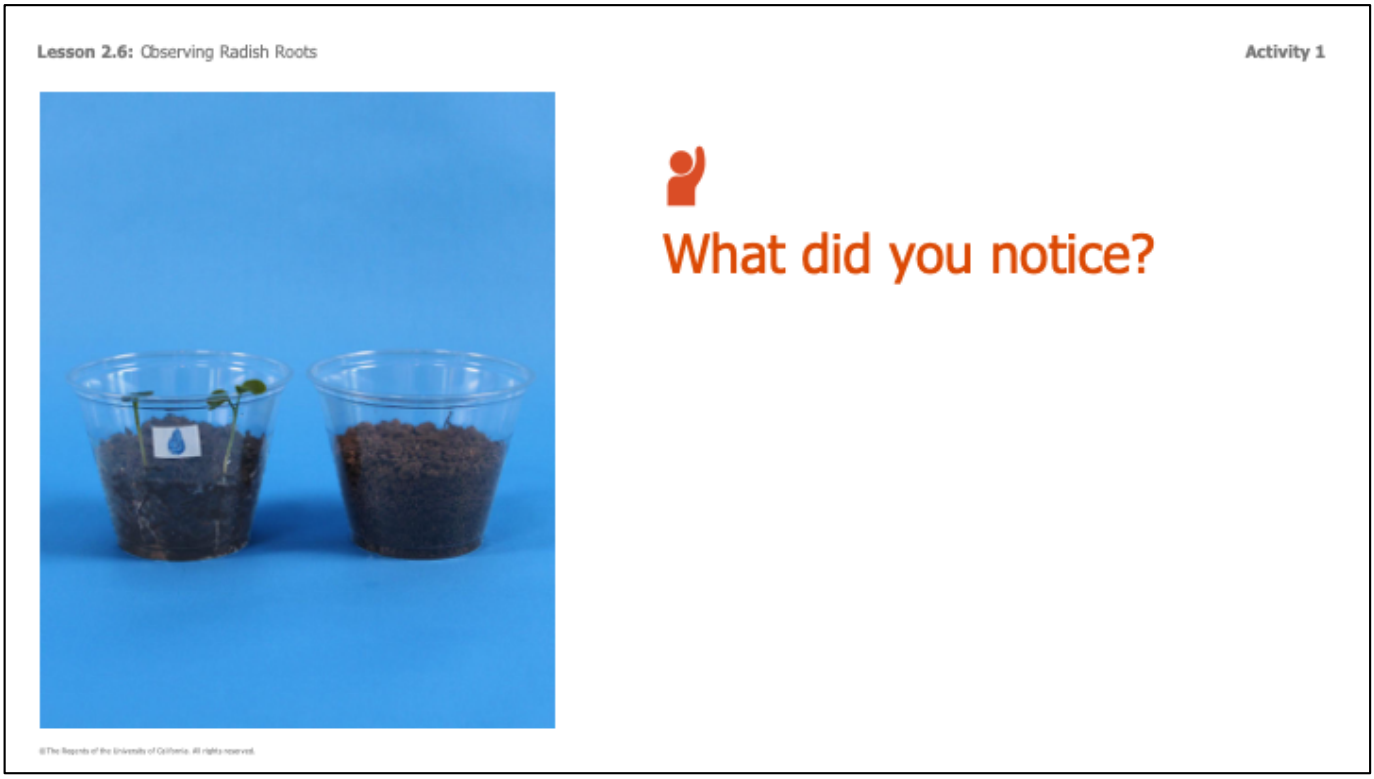
💬 **Suggested teacher talk:**
Make sure you observe above and below the soil in your cup. You can see what's below the soil through the clear cup.

👉**Teacher action:**
Direct pairs of students to the workstations where you have placed their Do All Plants Need Water Investigation cups, in which they planted radish seeds. Circulate as students work. As they discuss, listen for any talk about why only the radish seeds with water grew. If you have the opportunity, ask them about their ideas (see below). Record your notes on the Chapter 2b: Clipboard Assessment Tool.

💬 **Ask students (as you circulate):**
Why do you think these seeds grew but those did not?

🙋‍♀️**Students may respond:**
Because plants need water to grow, and only these radish seeds had water. The other seeds did not.

View your online Teacher's Guide for more assessment resources



👉**Teacher action:**
Gather students back together in the discussion area. Have students leave their Do All Plants Need Water Investigation materials at their workstations.

🙋**Students may respond:**
The seed that got water started to grow. There was a stem, leaves, and roots underground. The seed with no water did not change. It did not grow.

💬 **Ask students (to prompt more detailed responses if needed):**
What was different about the two cups of radish seeds that we observed?

🙋**Students may respond:**
The one with water started to grow bigger and had new parts—stems, roots, and leaves—but the one with no water did not grow.

💬 **Suggested teacher talk:**
Our purpose for observing our cups with radish seeds was to figure out how the seeds in the cups with water and with no water are growing differently. You just told me that the seed with no water did not grow, just like we observed with our garlic. You also told me that the radish plant growing in the cup with water had new parts: a stem, roots, and leaves.

What **part** of the radish plant helps it **get water?**

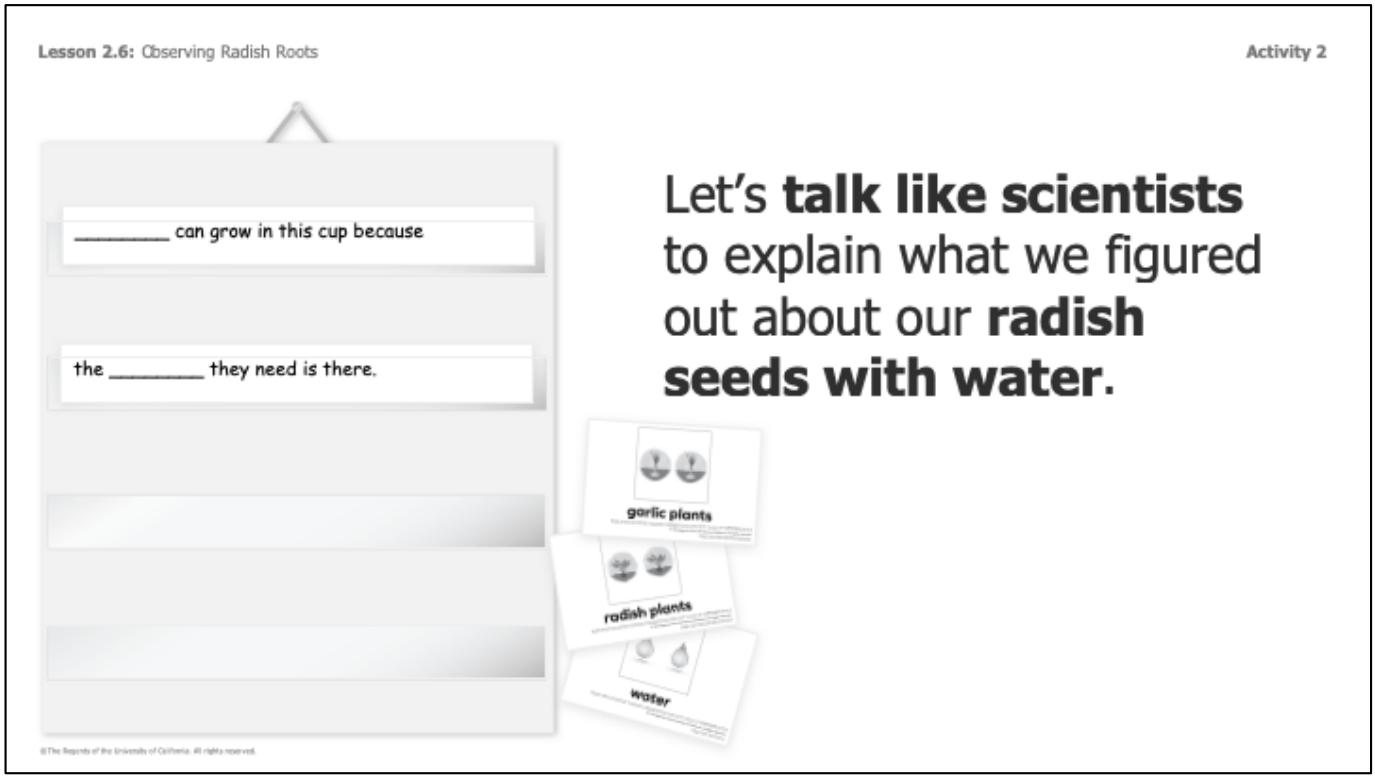
🙋 **Students may respond:**
The roots.

💬 **Ask students (to prompt more detailed responses if needed):**
Do you think the stem, roots or leaves help the plant get water? Why do you think that?

🙋 **Students may respond:**
(Accept all responses.)

Activity 2

Explaining that Plants Need Water



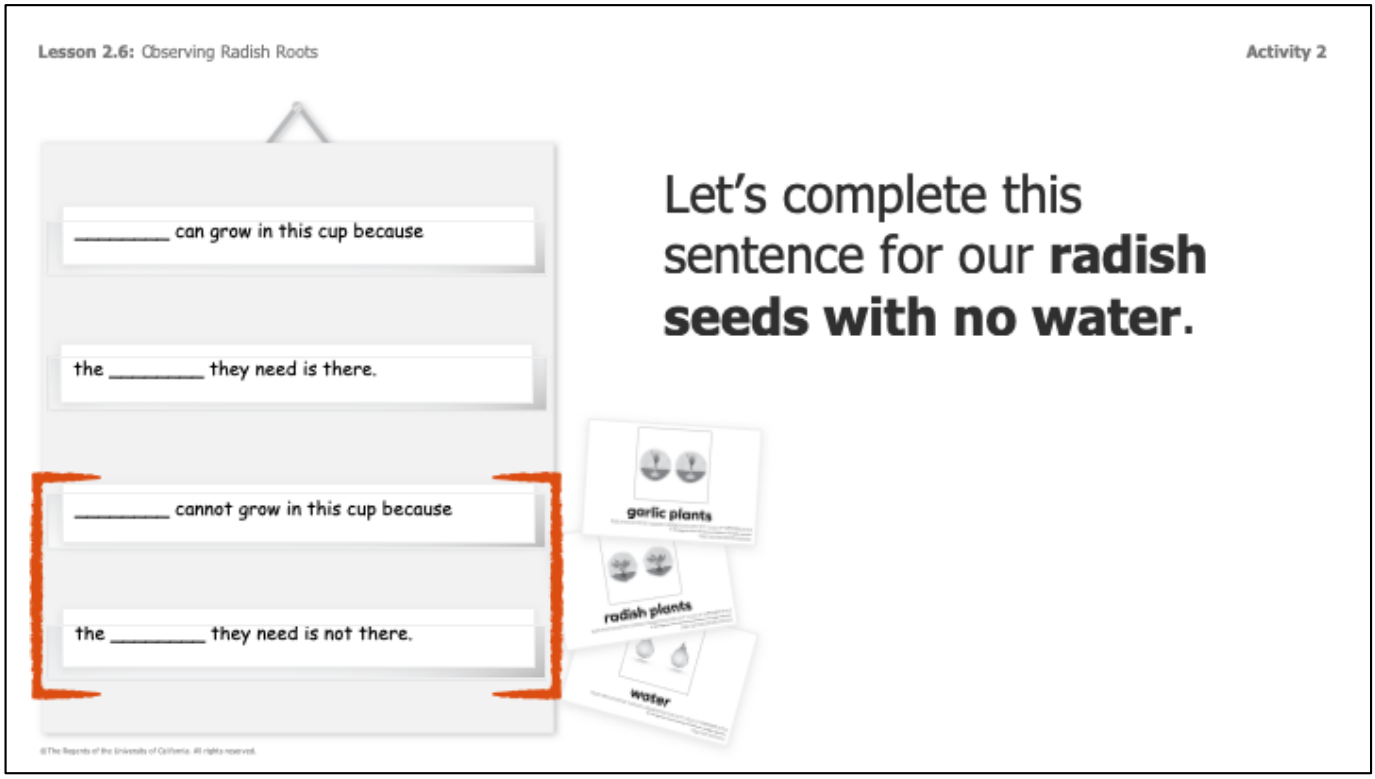
💬 **Suggested teacher talk:**
Scientists sometimes communicate what they have learned by talking. We have figured out that plants need water to live and grow. Today, we observed that our radish seeds with water had grown new parts: a stem, leaves, and roots.

👉**Teacher action:**
Display your demonstration Do All Plants Need Water Investigation cup with the radish plant that received water.

💬 **Suggested teacher talk:**
Now, we will explain what we figured out so that we can share with the children in Mariposa Grove.

👉**Teacher action:**
Point to the Explanation Language Frames you placed in a pocket chart.

View your online Teacher's Guide for more resources



👉**Teacher action:**
Turn over to reveal the second language frame. Point to it and read it aloud.

👉**Teacher action:**
Display your demonstration Do All Plants Need Water Investigation cup with no water in the soil.

💬 **Suggested teacher talk:**
_____ cannot grow in this cup because the _____ they need is not there.

👉**Teacher action:**
Invite a student to place the *radish plants* card in the first blank of the second language frame. Then, read the sentence aloud.

💬 **Suggested teacher talk:**
Radish plants cannot grow in this cup because the _____ they need is not there.

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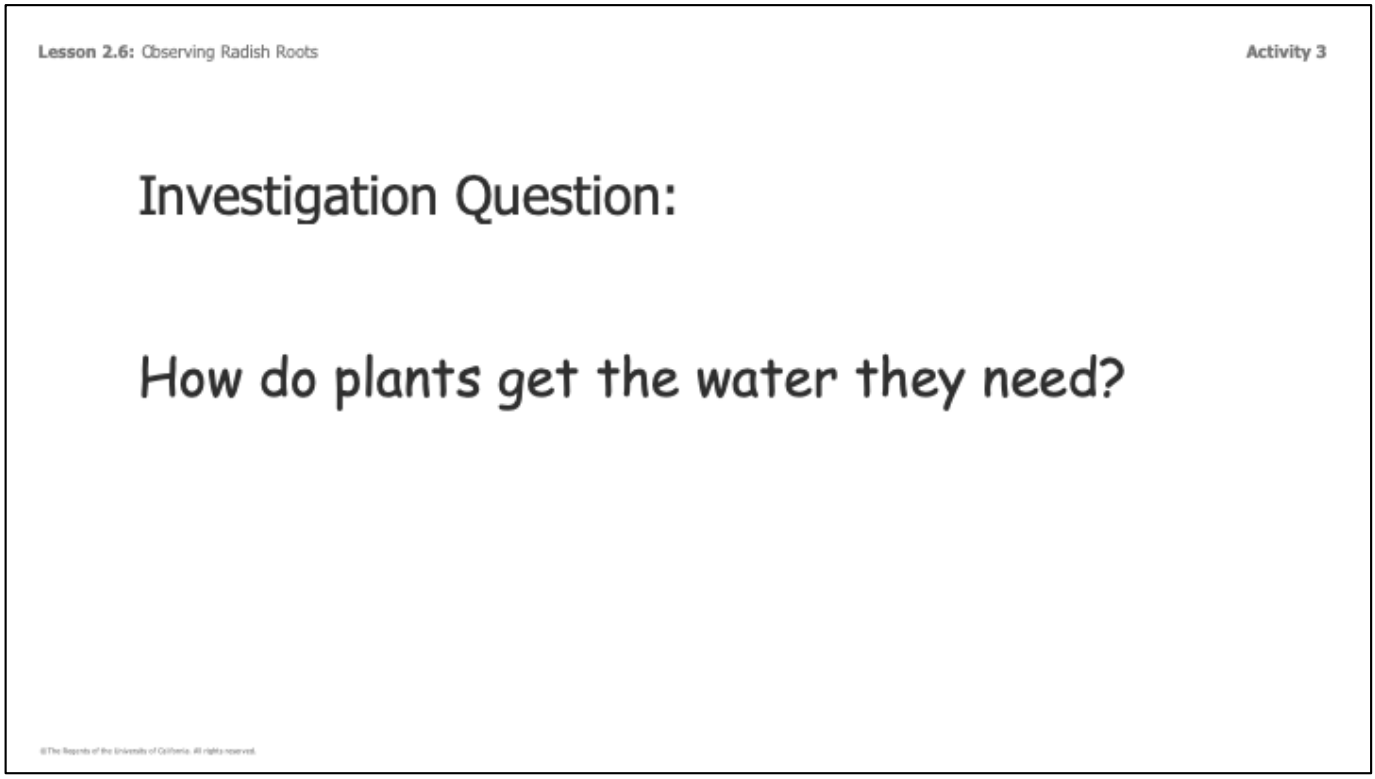
👉**Teacher action:**

Remove the cards from the Explanation Language Frames and repeat the process using both frames and the garlic plants cards. Be sure to hold up your demonstration Do All Plants Need Water Investigation materials to support students' explanation. Use this opportunity to confirm that the bumps or strings growing off the garlic clove are roots.

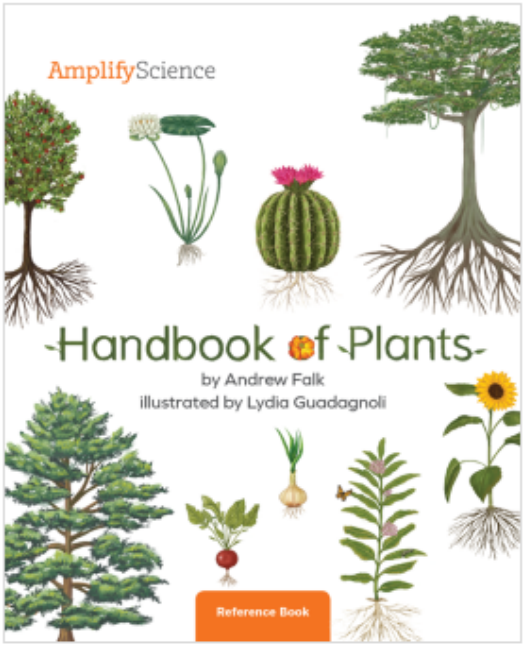
Activity 3

Reading More About Roots



👉**Teacher action:**
Point out the Investigation Question written on the board.

💬 **Suggested teacher talk:**
We already have some evidence from our investigations with radish and garlic plants and from reading *A Plant in the Desert* to help us answer this question. Today, we will read *Handbook of Plants* again to see if we can gather even more evidence.



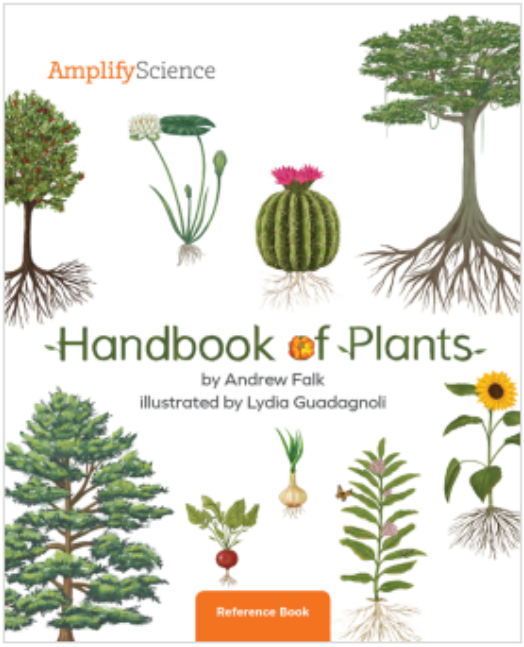
Remember, we have used this book to learn new things about plants.

What does it mean to **set a purpose** for reading?

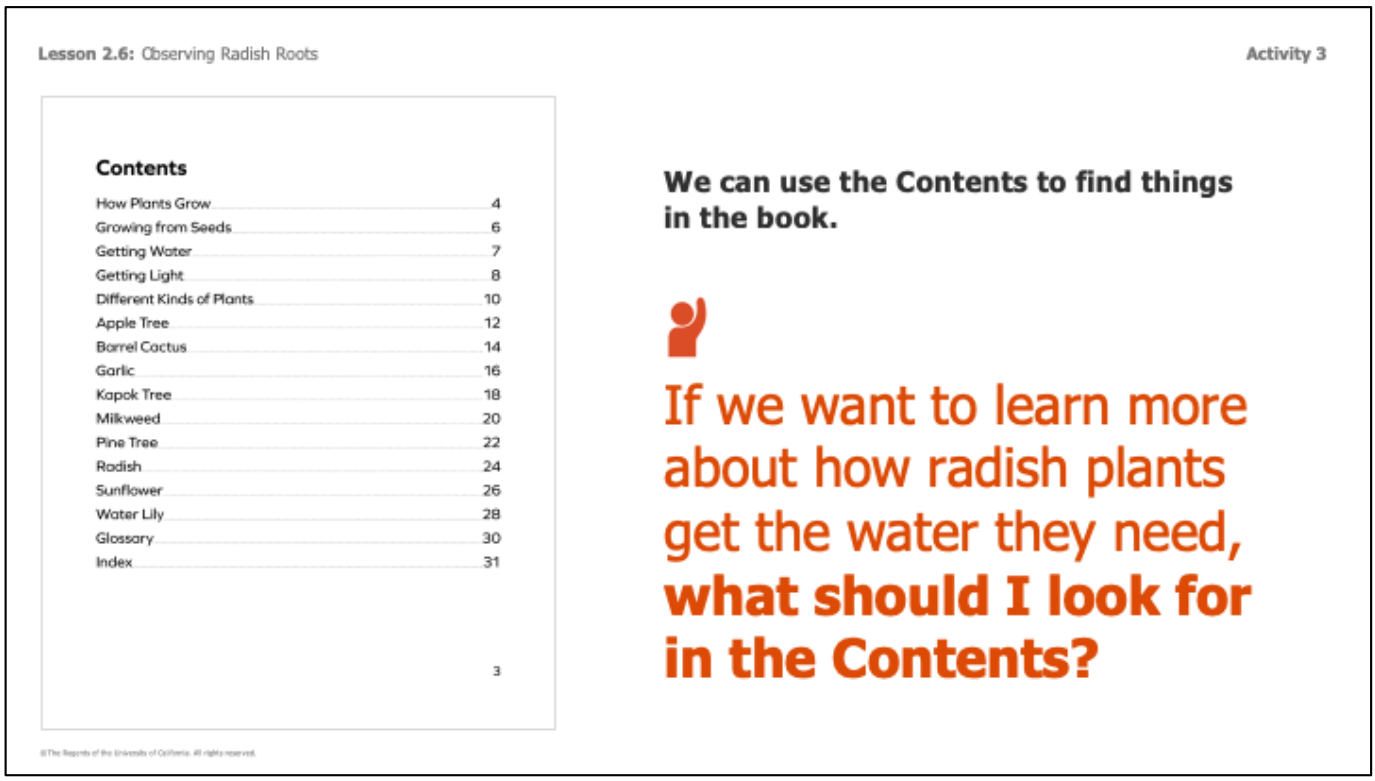
👉**Teacher action:**
Display the front cover of the *Handbook of Plants* big book.

🙋**Students may respond:**
To decide what you want to figure out by reading.

💬 **Suggested teacher talk:**
Remember, readers set a purpose when reading. When we set a purpose for reading a book, we can ask ourselves whether we are getting the information we want from the book.



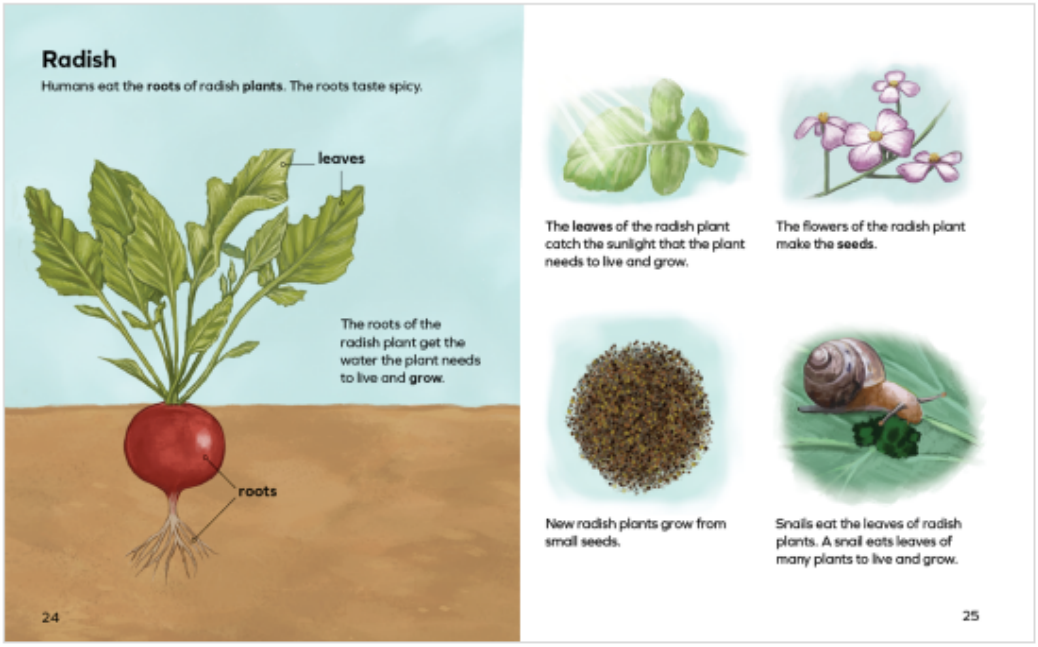
Our **purpose for reading** today is to gather more evidence of **how plants get water**.



👉**Teacher action:**
Turn to the Contents page on page 3 in the big book.

🙋‍♀️**Students may respond:**
Radishes. Water.

👉**Teacher action:**
Point to the “Radish” heading in the Contents and read it out loud.



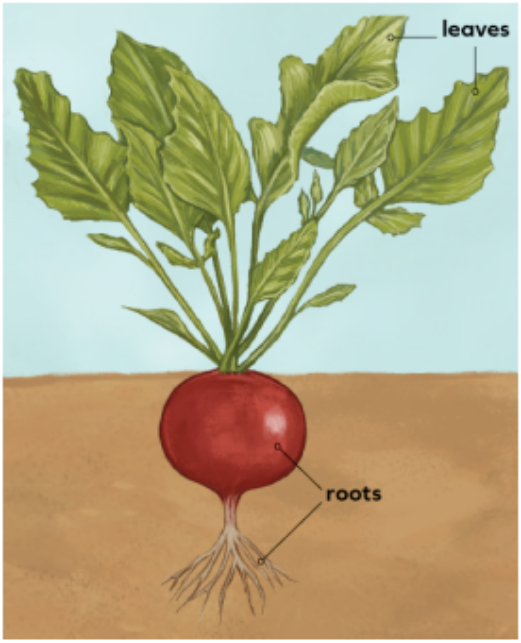
👉**Teacher action:**
Turn to the “Radish” section on page 24 and read it out loud.

Book reference:
Radish
*Humans eat the **roots** of radish **plants**. The roots taste spicy.*
The roots of the
radish plant get the
water the plant needs
*to live and **grow**.*

*The **leaves** of the radish plant*
catch the sunlight that the plant
needs to live and grow.

The flowers of the radish plant
*make the **seeds**.*

New radish plants grow from
small seeds.



Which part of the radish plant helps it get the **water** it needs?

👩 **Students may respond:**

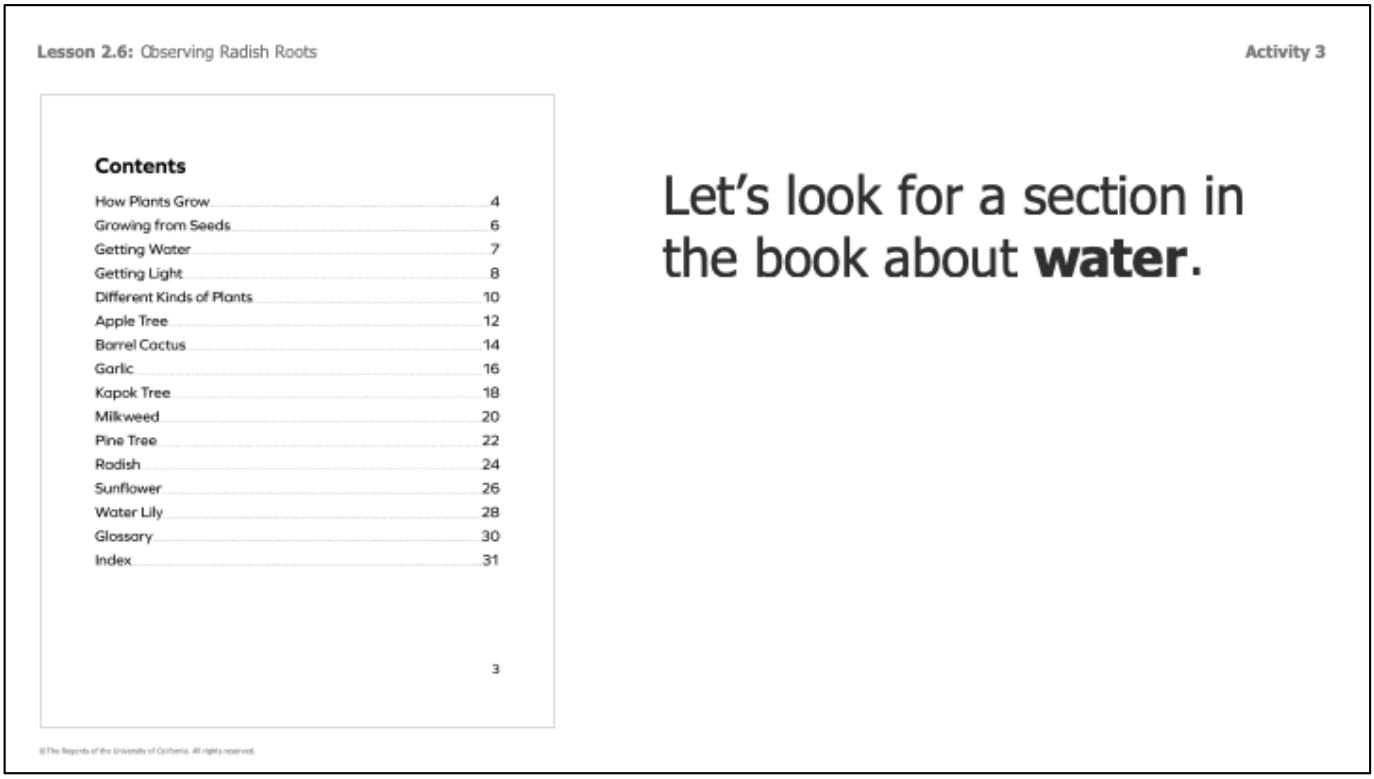
Roots.

👉 **Teacher action:**

Encourage students to draw comparisons between the radish plant and the sage plant students read about in *A Plant in the Desert*.

Contents

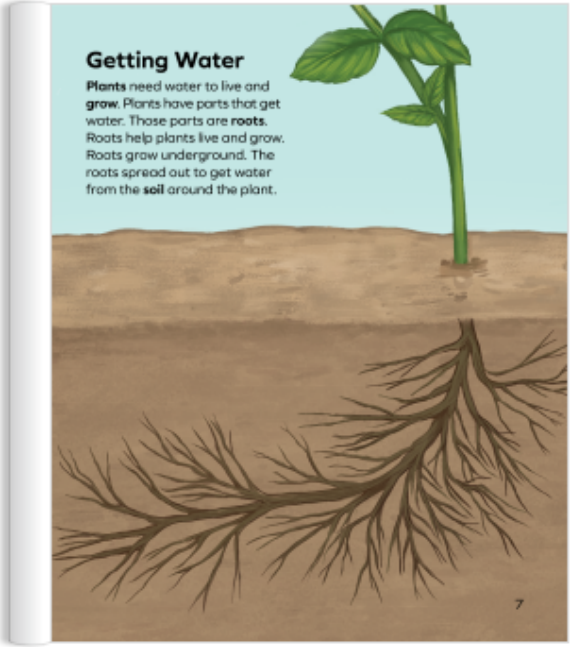
3



👉**Teacher action:**
Turn to the Contents page on page 3 in the big book.

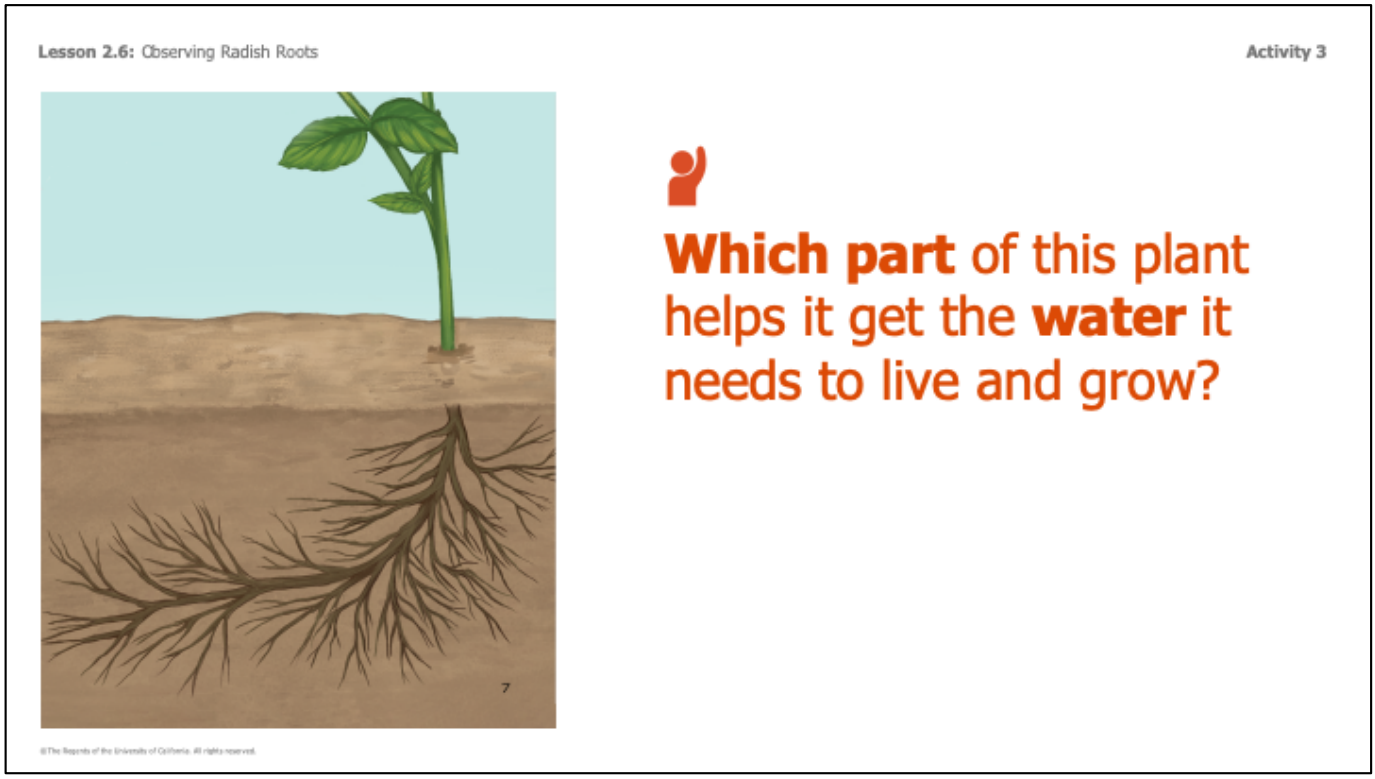
💬 **Suggested teacher talk:**
Some of you said that a section about water would also be helpful for figuring out how plants get the water they need. Let's look for that in the Contents.

👉**Teacher action:**
Point to the "Getting Water" heading in the Contents and read it out loud.



👉**Teacher action:**
Turn to the “Getting Water” section on page 7 and read it out loud.

Book reference:
Getting Water
Plants *need water to live and* ***grow.*** *Plants have parts that get water. Those parts are* ***roots.*** *Roots help plants live and grow. Roots grow underground. The roots spread out to get water from the* ***soil*** *around the plant.*



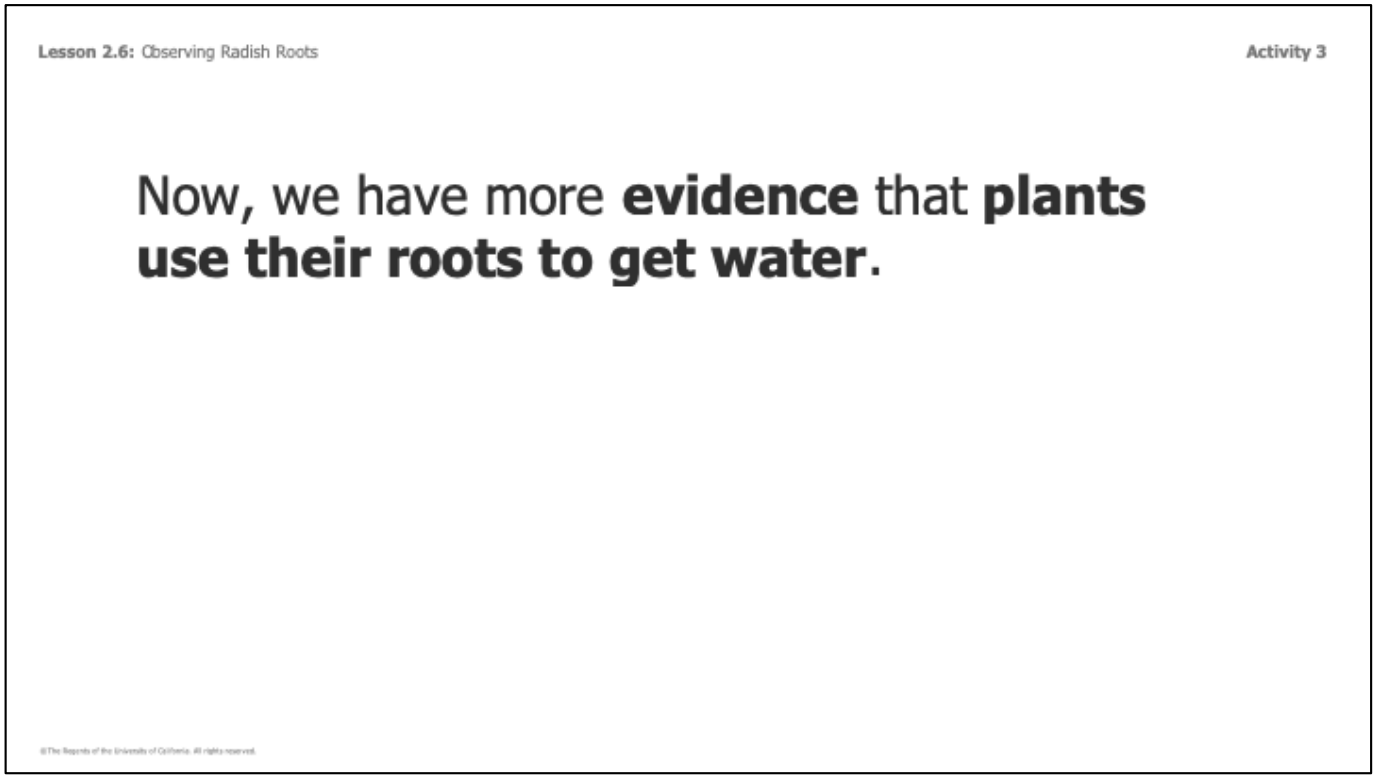
🙋 **Students may respond:**
Roots.

💬 **Suggested teacher talk:**
Roots help plants get the water they need. We have made observations of roots and read about roots in other places.

💬 **Ask students:**
Where else have we seen roots helping a plant get water?

🙋 **Students may respond:**
Our garlic. Our radish plants. The sage plant in *A Plant in the Desert*.

💬 **Suggested teacher talk:**
We have been investigating how plants get the water they need.



💬 **Suggested teacher talk:**
Remember, evidence is information scientists use to figure out the answer to a question.

💬 **Suggested teacher talk:**
We observed the radish seed growing roots in the cup with water. We also saw our garlic growing roots in the cup with water. That is evidence that plants get water with their roots.

💬 **Suggested teacher talk:**
We also read the book *A Plant in the Desert* and learned that sage plants use their roots to get water from the desert ground.

💬 **Suggested teacher talk:**
Now that we know plants use their roots to get the water they need, let's use our bodies to pretend we are seeds growing into full-grown plants.

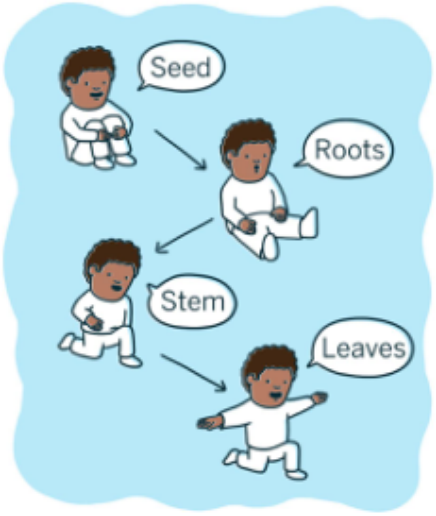
Plant Growth Movement Routine

1. Seed
Hug your knees and say the word **seed**.

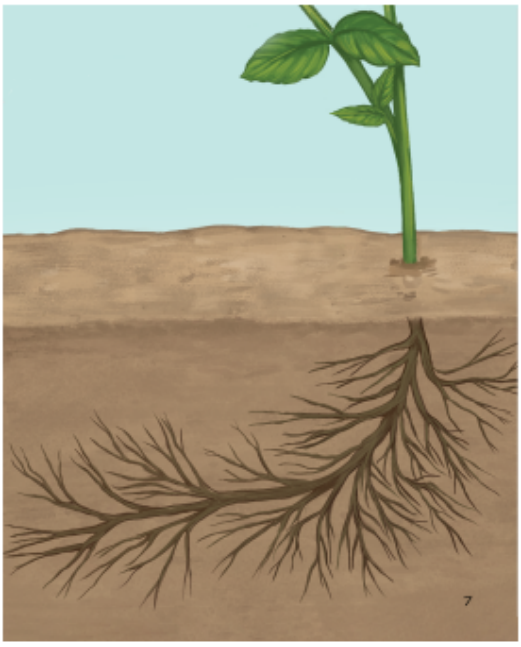
2. Roots
Push out your feet and say the word **roots**.

3. Stem
Begin to stand up and say the word **stem**.

4. Leaves
Reach your arms out and say the word **leaves**.



👉**Teacher action:**
Lead students through the Plant Growth movement routine, emphasizing how the roots help the plant grow.



A plant grows roots underground.

How do the roots help a plant grow?

🙋‍♀️**Students may respond:**

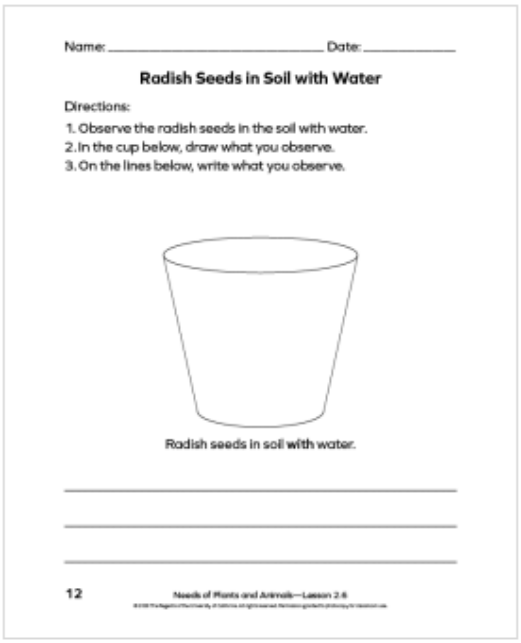
Plants use their roots to get water.

Activity 4

Observing Radish Roots

👉**Teacher action:**
Display your demonstration cup of radish seeds with water.

💬 **Suggested teacher talk:**
We know plants use their roots to get the water they need. Next, we will carefully observe and draw our radish plants in the cups with water. As you work, think about where the water is and how the roots are getting water into the plant.



Name: _____ Date: _____

Radish Seeds in Soil with Water

Directions:

1. Observe the radish seeds in the soil with water.
2. In the cup below, draw what you observe.
3. On the lines below, write what you observe.

Radish seeds in soil with water.

_____

_____

_____

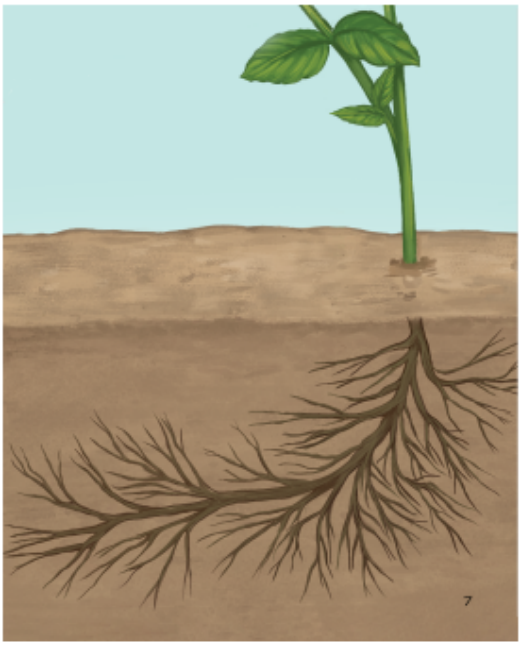
12 Needs of Plants and Animals—Lesson 2.6

We will **observe** and **record** the radish plants again.

Let's review the directions together.

👉**Teacher action:**

Point to the sentence under the drawing of a cup on this page and read it aloud.



Where can we find the radish plant's **roots** growing?

🙋‍♀️**Students may respond:**
In the soil. Underground.

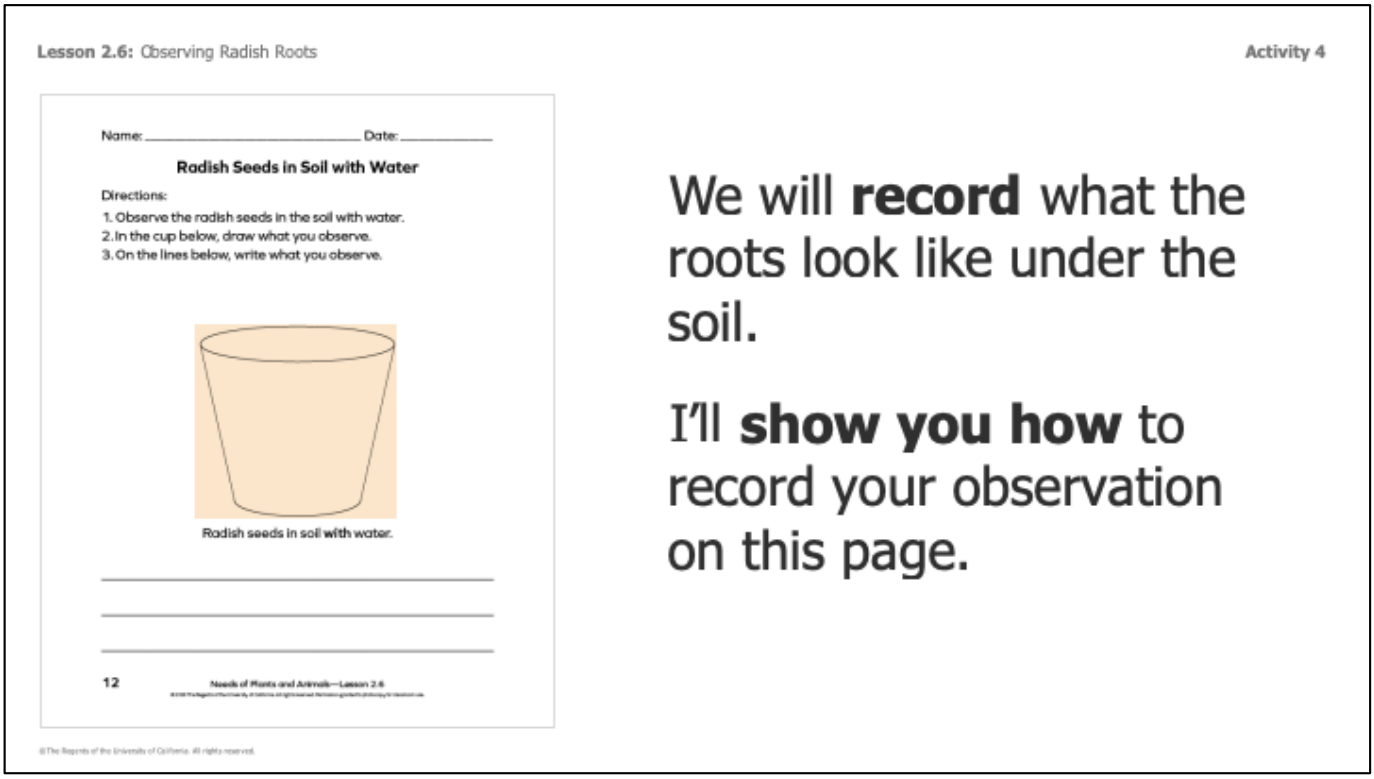
We can see the **roots under the soil** through the clear cup.

👉**Teacher action:**

Display your demonstration cup of radish seeds with water.

💬 **Suggested teacher talk:**

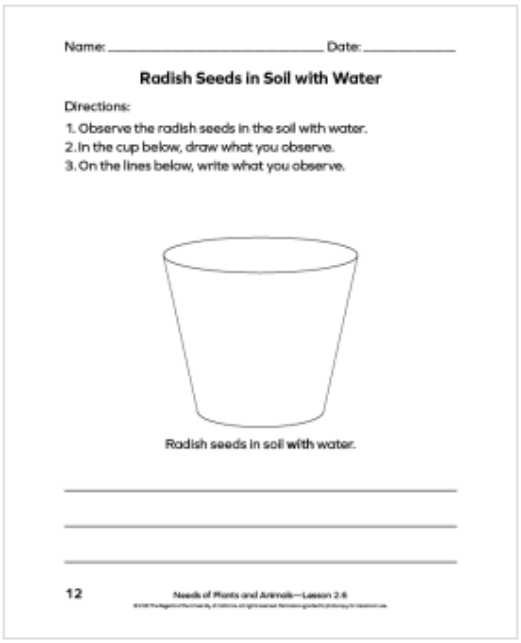
A plant's roots can be hard to see because they usually grow underground, but the clear cup lets us see these roots under the soil.



💬 **Suggested teacher talk:**
We should make sure to draw the soil, too.

👉**Teacher action:**
Model recording observations of the radish seeds in soil with water. Think aloud as you observe and draw the radish seeds in soil with on the projected notebook page.

💬 **Suggested teacher talk (to model drawing a radish plant):**
I will make my science drawing as accurate as possible. I will try to draw exactly what I see. I will make sure to draw the soil too. I notice that the soil in the bottom of my cup is wet and that the roots are growing towards the bottom of the cup. As I record my observations of the radish roots, I am thinking about how the plant is using its roots to get the water it needs.



Name: _____ Date: _____

Radish Seeds in Soil with Water

Directions:

1. Observe the radish seeds in the soil with water.
2. In the cup below, draw what you observe.
3. On the lines below, write what you observe.

Radish seeds in soil with water.

_____

_____

_____

12

Needs of Plants and Animals—Lesson 2.6

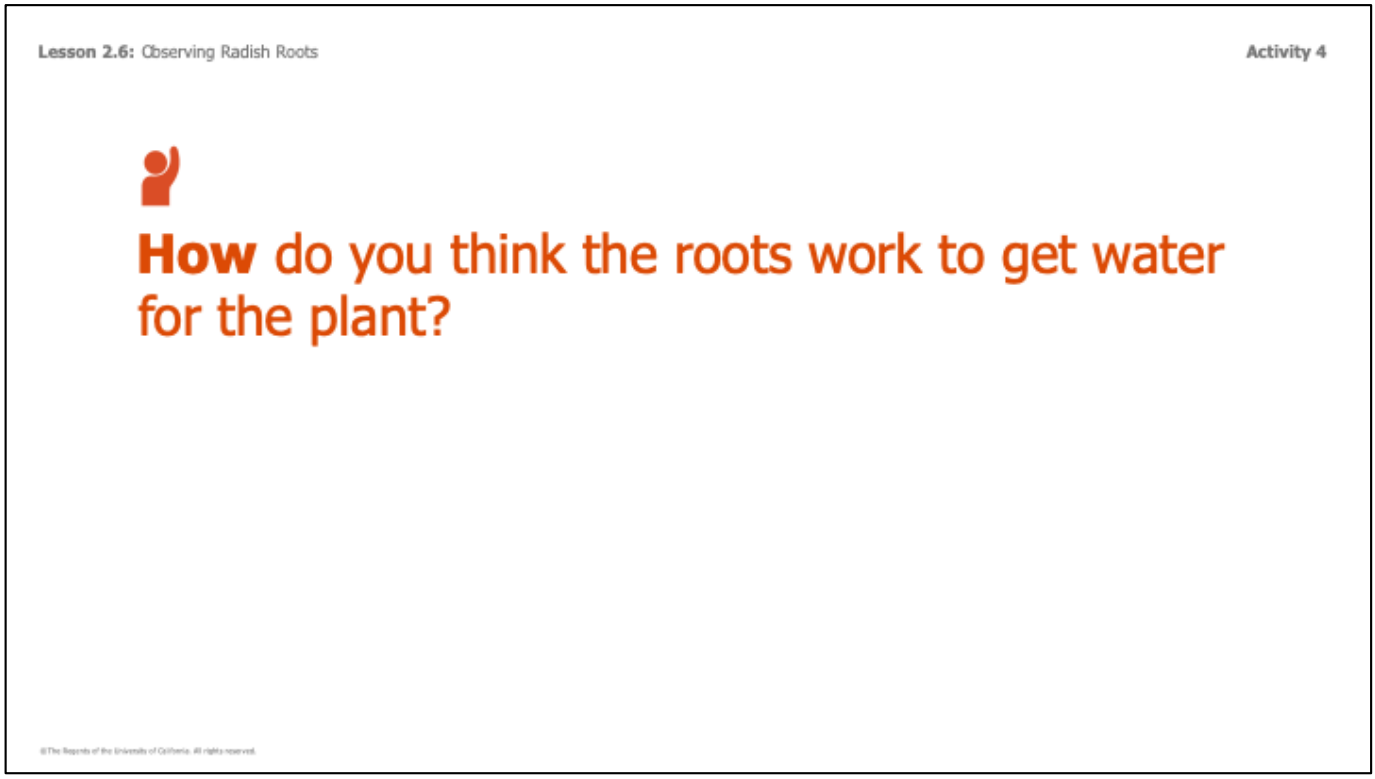
Turn to page 12 in your notebooks.

Record your observations.

👉**Teacher action:**
Distribute Investigation Notebooks. Have students return to their workstations with their Do All Plants Need Water Investigation cups. Assist them in finding page 12, Radish Seeds in Soil with Water, as needed.

👉**Teacher action:**
Allow time for students to observe the roots of the radish plants and record their observations. Circulate to remind students to think about how the radish plant is using its roots to get the water it needs to live and grow.

👉**Teacher action:**
When students are done, gather them back together in the discussion area. Have students leave their radish plants at their workstations and bring their Investigation Notebooks to the discussion area.

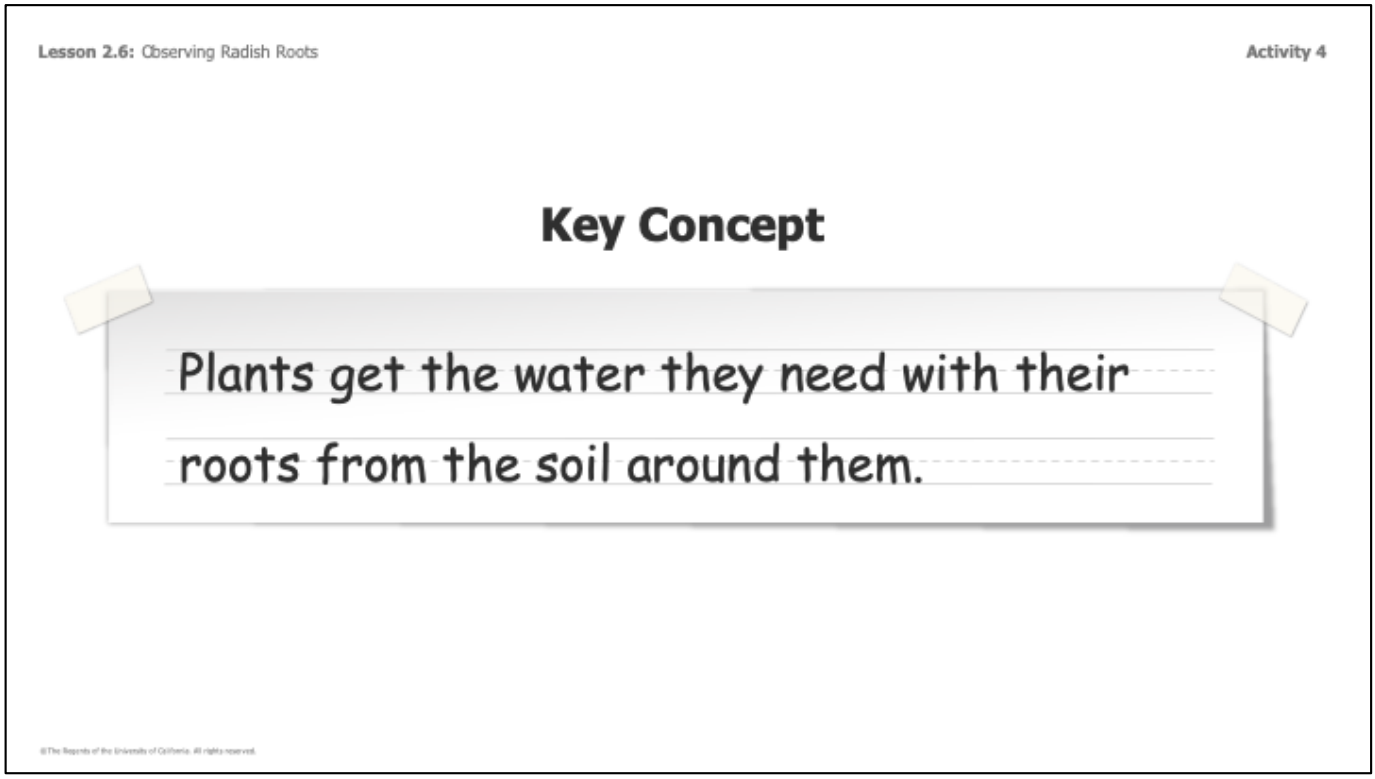


Students may respond:
(Accept all responses.)

Teacher action:
As students volunteer their ideas of how roots get water to the plant, guide them to notice how the roots stretch through the soil to get water that may be far away from the other parts of the plant.

Suggested teacher talk:
We just discussed how parts of a plant work. Scientists also think about how different parts of things work together.

Teacher action:
Collect the Investigation Notebooks.



👉**Teacher action:**
Post the key concept to the classroom wall and read it out loud.

💬 **Suggested teacher talk:**
In the next lesson, we will use what we have learned about plants and water to help Ms. Ray and the kids from Mariposa Grove with their milkweed plants.

End of Lesson

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