Lesson 2.4
A Plant in the Desert
Lesson Overview

Students expand their knowledge of what plants need and conclude that all plants, not just garlic, need water to live and grow. Partners analyze a variety of habitats with differing amounts of water, observing that even dry habitats have plants growing. The teacher leads a Shared Reading of *A Plant in the Desert*, a book about plants and animals that live in a desert habitat. The class adds “water” to both the Plants and Animals columns of the What Living Things Need chart, and discusses how plants can only live in habitats that provide them with the water they need to live and grow. Students use an Explanation Language Frame to explain why different plants can live in different habitats. The purpose of this lesson is to solidify students’ understanding that all plants need water to live and grow.

**Anchor Phenomenon:** There are no monarch caterpillars in the Mariposa Grove community garden since a vegetable garden was planted.

**Investigative Phenomenon:** Plants live in wet and dry places.

**Students learn:**

- Plants need water from the place where they are in order to live and grow.
- Animals need water from the place where they are in order to live and grow.
Reading: A Plant in the Desert

Students engage in a Shared Reading of *A Plant in the Desert* and add to the What Living Things Need chart.

### Instructional Guide

1. **Display the front cover of the *A Plant in the Desert* big book.** Point to and read the title aloud. Invite students to describe what they observe on the cover.

   - Do you think the place that this plant lives is a wet place or a dry place? 
     - [A dry place.]
   - What makes you think that? 
     - [We do not see any water. The ground is cracked.]
   - This plant lives in a dry place. Our evidence is that the ground is cracked and we cannot see any water.

2. **Set a purpose for reading.** Remind students that an important way that readers ensure they are learning what they want from a book is to set a purpose for reading.

   - What does it mean to set a purpose when reading? 
     - [Decide what you want to figure out by reading.]
   - We have been wondering if plants that live in dry places like the desert need water to grow. Our purpose for reading *A Plant in the Desert* is to figure out if plants in the desert need water like our garlic plants need water.

3. **Begin reading *A Plant in the Desert*.** Pause at the end of page 3 and remind students that a habitat is the place where an animal or plant lives and grows.

   Then, flip to page 4 and point to the illustration.

   - What do you notice about the desert from this illustration? 
     - [It looks very dry. There is only one plant in the picture. There is no water.]
4. Continue reading pages 4 and 5 and stop to allow partners to discuss. Reread the last line of page 5 aloud.

Do you observe any water in this desert?

Invite students to share their ideas with a partner. Encourage them to share why they think the sage plant does or does not get water in the desert.

We have a purpose for reading this book today. Who can remember our purpose? [To figure out if plants in the desert need water to grow.]

We do not observe any water in this picture. We should keep reading to figure out if sage plants need water to grow.

5. Continue reading and pause at the end of page 9.

What did we figure out? Do plants in the desert need water to grow? [Yes. All plants need water to grow.]

There is not usually water in the desert. When is there water in the desert? [After it rains.]

6. Continue reading to the end of the book. Pause briefly at page 13 to emphasize that animals also need water to live. As you read, invite students to share some of the other living things they observe in the book that need water to live and grow.

7. On-the-Fly Assessment: Students review the purpose for reading.

What was our purpose for reading this book? [To figure out if plants in the desert need water to grow.]

What did we learn from reading A Plant in the Desert? [Plants in the desert need water to grow.]

All plants need water to live and grow. We read about some animals that live in the desert. Did the animals in the desert need water to live? [Yes.]

8. Add to the What Living Things Need chart. Explain that now you will add what students have learned to the What Living Things Need chart. Review previous additions to the chart with students: that animals are a type of living thing and that they need food to live.

Write “Plants” on the top right side of the chart, beneath the title question. Underline it.

We know that plants are another type of living thing.
Determine with students what picture you should draw to help them remember that this word says plants. Draw it next to the Plants heading on the chart.

What did we decide all plants and animals need to live and grow?  
[Water.]

Write “Water” beneath both the Plants and the Animals headings on the chart and draw a small picture to represent water.

Plants and animals both need water to live.

Embedded Formative Assessment

On-the-Fly Assessment 8: Considering the Purpose for Reading *A Plant in the Desert*

**Look for:** Students’ recollections of the purpose for reading *A Plant in the Desert* presents another opportunity to informally assess their progress toward setting and reflecting on a purpose for a learning activity. While the primary focus of this unit is to call explicit attention to, and model, setting a purpose at the outset of an activity, followed by returning to that purpose when debriefing, having students recall the purpose will support their understanding of the strategy and establish an important foundation for intentional learning. If you would like to get a broader sense of students’ recollections of the purpose for reading, you may have students recall the purpose in pairs before sharing it with the class. In general, students should be able to restate the original purpose of the activity in their own words (e.g., to figure out if plants in the desert need water). Students may describe what they did in the activity (e.g., to read a book about a plant in the desert) rather than their goal or purpose for doing it.

**Now what?** If students have difficulty recalling the purpose of the activity, or describe something other than the purpose of figuring out if plants in the desert need water, take some time during the second reading of *A Plant in the Desert* in Lesson 2.5, Activity 4 to explicitly recall the purpose for reading, or to invite students to recall it. For example, after reading page 9, you could say something like *Remember, our purpose for reading the book again is to figure out how plants get the water they need. How does the sage plant get water?* Or, you could ask students something like *What was our purpose for reading the book this time?* This more explicit review will support students in recalling the purpose, and in connecting their reflections on what they read with achieving that purpose.

Teacher Support

**Background**

*About the Book: A Plant in the Desert*

*A Plant in the Desert* uses the example of a sage bush to help students understand the needs of plants. It may seem like the desert has no water. If that’s the case, how can plants grow there? Students learn that there is indeed water in the desert. It rains sometimes, and during those rains, the desert plants—and animals—take in all the water they can. The sage plant has many roots that reach deep into the soil to take in as much water as possible so it can survive until the
next rain. Even plants and animals that live in very dry places must get water sometimes. This drives home the idea that all plants and animals need water to survive. Students encounter the book twice as a Shared Reading, each time with a different focus: first, that even plants in the desert need water and second, how they get that water.

**Instructional Suggestion**

**Literacy Note: Multiple Readings**
The first and second readings of *A Plant in the Desert* were designed to build sequentially. The purpose of this first reading of *A Plant in the Desert* is for students to determine whether desert plants need water to live and grow. In the second reading in Lesson 2.5, you will discuss how plants get water: with their roots. If your students notice or comment on the roots as you read *A Plant in the Desert* today, simply acknowledge their observations and explain that you will talk more about roots soon. You might want to record these questions to make sure students know that they will be revisited.

**Instructional Suggestion**

**Going Further: Learning About the Great Basin Desert**
All of the illustrations in this book depict the plant and animal life of the Great Basin Desert. If your class is interested in learning more about this habitat, this is a good opportunity for a habitat study. The Great Basin Desert is a high, arid desert—the largest desert in the United States. It can get very cold, which may be a surprise to students who associate deserts with high temperatures. All of the plant and animal life that live in this desert have adaptations that allow them to survive with very little water. Learning about these adaptations would be a close fit with this unit’s goals of learning about plant and animal needs.
Reading: A Plant in the Desert

Students engage in a Shared Reading of A Plant in the Desert and add to the What Living Things Need chart.

Instructional Guide

1. Display the front cover of the A Plant in the Desert big book. Point to and read the title aloud. Invite students to describe what they observe on the cover.

¿Piensan que el lugar donde vive esta planta es un lugar húmedo o un lugar seco?  
[Un lugar seco].

¿Qué les hace pensar eso?  
[No vemos agua. La tierra está agrietada].

Esta planta vive en un lugar seco. Nuestra evidencia es que la tierra está agrietada y no vemos agua.

2. Set a purpose for reading. Remind students that an important way that readers ensure they are learning what they want from a book is to set a purpose for reading.

¿Qué significa definir un propósito al leer?  
[Decidir lo que quieres averiguar al leer].

Nos hemos estado preguntando si las plantas que viven en lugares como el desierto necesitan agua para crecer. Nuestro propósito para leer Una planta en el desierto es averiguar si las plantas en el desierto necesitan agua como nuestras plantas de ajo necesitan agua.

3. Begin reading A Plant in the Desert. Pause at the end of page 3 and remind students that a habitat is the place where an animal or plant lives and grows.

Then, flip to page 4 and point to the illustration.

¿Qué notan sobre el desierto de esta ilustración?  
[Se ve muy seco. Solo hay una planta en la fotografía. No hay agua].

© The Regents of the University of California
4. Continue reading pages 4 and 5 and stop to allow partners to discuss. Reread the last line of page 5 aloud.

¿Observan agua en este desierto?

Invite students to share their ideas with a partner. Encourage them to share why they think the sage plant does or does not get water in the desert.

Hoy tenemos un propósito para leer este libro. ¿Quién puede recordar nuestro propósito? [Averiguar si las plantas en el desierto necesitan agua para crecer].

No observamos agua en esta fotografía. Deberíamos continuar leyendo para averiguar si las plantas de salvia necesitan agua para crecer.

5. Continue reading and pause at the end of page 9.

¿Qué averiguamos? ¿Las plantas en el desierto necesitan agua para crecer? [Sí. Todas las plantas necesitan agua para crecer].

Usualmente no hay agua en el desierto. ¿Cuándo hay agua en el desierto? [Después de la lluvia].

6. Continue reading to the end of the book. Pause briefly at page 13 to emphasize that animals also need water to live. As you read, invite students to share some of the other living things they observe in the book that need water to live and grow.

7. On-the-Fly Assessment: Students review the purpose for reading.

¿Cuál fue nuestro propósito para leer este libro? [Averiguar si las plantas en el desierto necesitan agua para crecer].

¿Qué aprendimos tras leer Una planta en el desierto? [Las plantas en el desierto necesitan agua para crecer.]

Todas las plantas necesitan agua para vivir y crecer. Leímos acerca de algunos animales que viven en el desierto. ¿Los animales en el desierto necesitaban agua para vivir? [Sí].

8. Add to the What Living Things Need chart. Explain that now you will add what students have learned to the What Living Things Need chart. Review previous additions to the chart with students: that animals are a type of living thing and that they need food to live.

Write “Plants” on the top right side of the chart, beneath the title question. Underline it.

Sabemos que las plantas son otro tipo de ser viviente.
Determine with students what picture you should draw to help them remember that this word says plants. Draw it next to the  *Plants* heading on the chart.

¿Qué decidimos que todas las plantas y los animales necesitan para vivir y crecer?
[Agua].

Write “Water” beneath both the  *Plants* and the  *Animals* headings on the chart and draw a small picture to represent water.

Tanto las plantas como los animales necesitan agua para vivir.

**Embedded Formative Assessment**

**On-the-Fly Assessment 8: Considering the Purpose for Reading  *A Plant in the Desert***

**Look for:** Students’ recollections of the purpose for reading  *A Plant in the Desert* presents another opportunity to informally assess their progress toward setting and reflecting on a purpose for a learning activity. While the primary focus of this unit is to call explicit attention to, and model, setting a purpose at the outset of an activity, followed by returning to that purpose when debriefing, having students recall the purpose will support their understanding of the strategy and establish an important foundation for intentional learning. If you would like to get a broader sense of students’ recollections of the purpose for reading, you may have students recall the purpose in pairs before sharing it with the class. In general, students should be able to restate the original purpose of the activity in their own words (e.g., to figure out if plants in the desert need water). Students may describe what they did in the activity (e.g., to read a book about a plant in the desert) rather than their goal or purpose for doing it.

**Now what?** If students have difficulty recalling the purpose of the activity, or describe something other than the purpose of figuring out if plants in the desert need water, take some time during the second reading of  *A Plant in the Desert* in Lesson 2.5, Activity 4 to explicitly recall the purpose for reading, or to invite students to recall it. For example, after reading page 9, you could say something like  *Remember, our purpose for reading the book again is to figure out how plants get the water they need. How does the sage plant get water?* Or, you could ask students something like  *What was our purpose for reading the book this time?* This more explicit review will support students in recalling the purpose, and in connecting their reflections on what they read with achieving that purpose.

**Teacher Support**

**Background**

**About the Book:  *A Plant in the Desert***

*A Plant in the Desert* uses the example of a sage bush to help students understand the needs of plants. It may seem like the desert has no water. If that’s the case, how can plants grow there? Students learn that there is indeed water in the desert. It rains sometimes, and during those rains, the desert plants—and animals—take in all the water they can. The sage plant has many roots that reach deep into the soil to take in as much water as possible so it can survive until the
next rain. Even plants and animals that live in very dry places must get water sometimes. This drives home the idea that all plants and animals need water to survive. Students encounter the book twice as a Shared Reading, each time with a different focus: first, that even plants in the desert need water and second, how they get that water.

**Instructional Suggestion**

**Literacy Note: Multiple Readings**
The first and second readings of *A Plant in the Desert* were designed to build sequentially. The purpose of this first reading of *A Plant in the Desert* is for students to determine whether desert plants need water to live and grow. In the second reading in Lesson 2.5, you will discuss how plants get water: with their roots. If your students notice or comment on the roots as you read *A Plant in the Desert* today, simply acknowledge their observations and explain that you will talk more about roots soon. You might want to record these questions to make sure students know that they will be revisited.

**Instructional Suggestion**

**Going Further: Learning About the Great Basin Desert**
All of the illustrations in this book depict the plant and animal life of the Great Basin Desert. If your class is interested in learning more about this habitat, this is a good opportunity for a habitat study. The Great Basin Desert is a high, arid desert—the largest desert in the United States. It can get very cold, which may be a surprise to students who associate deserts with high temperatures. All of the plant and animal life that live in this desert have adaptations that allow them to survive with very little water. Learning about these adaptations would be a close fit with this unit’s goals of learning about plant and animal needs.