

Quarter 2/Unit 2

Title: Saguaro Cactus¹

Suggested Time: 5days (45 minutes per day)

Common Core ELA Standards: RI1, RI2, RI3, RI7, RF3, RF4, W2, W4, W7, W8, W9, SL1, SL4, SL5, L1, L2

Teacher Instructions

Refer to the Introduction for further details.

Before Teaching

1. Read the Big Ideas and Key Understandings and the Synopsis. Please do **not** read this to the students. This is a description for teachers, about the big ideas and key understanding that students should take away **after** completing this task.

Big Ideas and Key Understandings

All living organisms, including plants and animals, depend on other living organisms for survival. [This selection tells of the dependence of many animals on the Saguaro Cactus for survival in the harsh Sonoran desert.]

¹ *This story is a “duplicate.” (It is found in other basals, as well.) This particular revision was completed by a teacher who uses a different basal, so the page numbers have been removed. This may require you to make some adjustments/add page numbers to some of the questions.*

Synopsis

The Saguaro Cactus is a giant cactus that grows in the Sonoran Desert. The Sonoran Desert is very hot and dry for most of the year making it a very difficult place for plants to grow. Yet, the Saguaro Cactus not only grows there but is the center of life for many animals.

2. Read entire main selection text, keeping in mind the Big Ideas and Key Understandings.
3. Re-read the main selection text while noting the stopping points for the Text Dependent Questions and teaching Vocabulary.

During Teaching

1. Students read the entire main selection text independently.
2. Teacher reads the main selection text aloud with students following along. (Depending on how complex the text is and the amount of support needed by students, the teacher may choose to reverse the order of steps 1 and 2.)
3. Students and teacher re-read the text while stopping to respond to and discuss the questions and returning to the text. A variety of methods can be used to structure the reading and discussion (i.e.: whole class discussion, think-pair-share, independent written response, group work, etc.)

Text Dependent Questions

Text-dependent Questions	Evidence-based Answers
On page 321, the author writes, "In the Sonoran Desert, there is an amazing sight." To what is the author referring and why do you think the author introduces the selection in this way?	The author is referring to the saguaro cactus. . He begins the selection in this way to pique the student's interest in the saguaro cactus and to emphasize the rarity of plants surviving in the harsh conditions of the desert.
Reread the last paragraph on page 322. The author writes, "For desert creatures, it is time to feast!" To feast means to have a very large meal. Which animals feast and what do they feast upon? Use the illustrations and the text to support your	The animals are eating the fruit of the plant after it falls off of the saguaro cactus. Insects and birds feed on the juicy pulp of the red fruit and mice and rabbits eat the soft, black seeds.

answer.	
Reread page 323. What part do animals and insects play in the growth of the saguaro cactus?	Mice and rabbits may pick up and transfer the seeds as they eat the fruit. Birds, bats, and insects may transfer pollen from flower to flower enabling a new cactus to grow.
Why is a saguaro cactus considered lucky if it "takes root" and grows?	The desert is a harsh place and most saguaros die in the harsh sun. They survive by being in the shade of a tree.
Use details from page 325 to describe adaptations the saguaro makes to help it survive.	The pleats on the skin allow the cactus to stretch as it takes in water. The roots do not grow deep. They stay shallow to catch rainwater.
The relationship between the gila woodpecker and the saguaro is one that is a benefit to them both. How does the woodpecker depend on the saguaro and how does the saguaro benefit the woodpecker?	The woodpecker uses the saguaro for a cool safe home. The woodpecker eats insects that would harm the saguaro.
What becomes of the nest of the gila woodpecker after it leaves?	Elf owls may come and live in the hole for years. Other birds use it as a safe cool place to raise their families. White wing doves build cozy nests. Red tail hawks and horned owls also find homes. Lizards, insects and spiders also fill the empty nest.
What do you think the authors mean when he says the saguaro is "teeming" with life?	This helps the readers create a mental image of the cactus with many animals living in, on and around it.
What are some of the animals that benefit from the habitat surrounding the saguaro? How do these animals use the habitat?	Mule deer and other animals eat plants that grow in its shade. Other creatures stay safe from other animals by perching on the top. Coyotes and bobcats hunt in the brush around the saguaro.
Describe what happens after the saguaro dies.	It becomes a home for animals close to the desert floor. The cactus decomposes. Animals eat it.

Vocabulary

	KEY WORDS ESSENTIAL TO UNDERSTANDING	WORDS WORTH KNOWING General teaching suggestions are provided in the Introduction
TEACHER PROVIDES DEFINITION not enough contextual clues provided in the text	scrub brush (321) take root (323) folds, pleats (325) spines (329) prey (330) boot (326) mesquite (324)	Harsh (324) habitat, topple, decompose (332) shallow (325)
STUDENTS FIGURE OUT THE MEANING sufficient context clues are provided in the text	Feast (322) nectar, pollen (324) teeming (329) dine (331)	Pulp (323)

Culminating Task

- Re-Read, Think, Discuss, Write

The Saguaro cactus and the desert animals have a symbiotic relationship. A symbiotic relationship is when two organisms of different species live together, often to their mutual benefit. Using details from the text, explain how the cactus and the desert animals benefit from sharing life together.

Answer: The saguaro cactus in the Sonoran Desert is one of the best examples of a symbiotic relationship in a North American desert. Many other plants and animals depend upon this cactus for food and shelter. Woodpeckers, particularly the Gila woodpecker, like to nest in this colossal cactus that can grow over fifty feet tall and live for over 200 years. Not only do the saguaro's prickly spines prevent predators from harming the young birds in the nesting cavity; the saguaro's thick walls provide a climate-controlled home. Every year, when the woodpecker abandons the nest to build a new home, other house hunters, such as other bird species, lizards, or bats, are waiting in the wings to move into the vacant nesting hole. The saguaro is a virtual bird hotel, as over 30 species of birds are known to nest in old woodpecker cavities in the cactus, including cactus wren and curve-billed thrasher. This generous host also feeds some of the creatures that live in or near the cactus. Birds like the Inca dove eat the blossoms, mule deer and javelina eat the fruit, and rodents and insects eat the seeds. All the species, including the saguaro, benefit from this mutualistic relationship. The birds and other inhabitants eat insects that could bring disease to the cactus. In the evening, the saguaro's white and yellow blossoms open, attracting nocturnal pollinators like moths. The blossoms stay open until the next afternoon so other insects and birds also have the opportunity to feed on the plant's nectar and pollinate the cactus.

Additional Tasks

1. *Many animals depend on the saguaro cactus for food and shelter. Complete the chart below with evidence from the text of these animals and their dependence on the saguaro cactus.*

Animal	How the animal depends on the saguaro cactus
1. <i>Insects</i>	1. <i>Eat the sweet, juicy pulp of the saguaro's fruit</i>
2. <i>Birds</i>	2. <i>Eat the sweet, juicy pulp of the saguaro's fruit</i>
3. <i>Mice</i>	3. <i>Eat the seeds</i>
4. <i>Rabbits</i>	4. <i>Eat the seeds</i>
5. <i>Birds, bats, insects</i>	5. <i>Drink the nectar</i>
6. <i>Gila woodpecker</i>	6. <i>Drills a hole in which to build its nest</i>
7. <i>Elf owls</i>	7. <i>Live in the holes made by the gila woodpecker</i>
8. <i>Starlings</i>	8. <i>Live in the holes made by the gila woodpecker</i>
9. <i>White tail doves</i>	9. <i>Build nests on the branches</i>
10. <i>Red-tailed hawks</i>	10. <i>Build nests on the saguaro</i>
11. <i>Horned owls</i>	11. <i>Build nests on the saguaro</i>
12. <i>Insects</i>	12. <i>Fill the empty nests and feed on the cactus</i>
13. <i>Lizards and spiders</i>	13. <i>Fill the empty nests and feed on the insects</i>

<i>14. Mule deer and other animals</i>	<i>14. Eat the plants that grow in the shade of the cactus</i>
<i>15. Ringtail cat</i>	<i>15. Perch on top to stay safe from coyotes and spy on small prey</i>
<i>16. Coyotes and bobcats</i>	<i>16. Hunt in the brush around the saguaro</i>
<i>17. Scorpions, rattlesnakes, and horned lizards</i>	<i>17. Come to look for food and shelter after the saguaro dies</i>
<i>18. Javelina</i>	<i>18. Eats the cactus and plants under it</i>

2. Choose one plant or animal from page _____. Conduct a short research project, where you use multiple books or online resources to determine the role of this plant/animal in the web of life in the Sonoran Desert. When researching, take notes from each source and compile your findings into a short presentation for your classmates. Explain what you have learned about your plant or animal and use at least one visual aid during your presentation. Provide a list of sources.

Name _____

Date _____

“Saguaro Cactus”

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2. Reread the last paragraph on page 322. The author writes, “For desert creatures, it is time to feast!” To feast means to have a very large meal. Which animals feast and what do they feast upon? Use the illustrations and the text to support your answer.
3. Reread page 323. What part do animals and insects play in the growth of the saguaro cactus?
4. Why is a saguaro cactus considered lucky if it “takes root” and grows?

