

LEVELED BOOK • U

The Mighty Saguaro Cactus



Written by
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One Cool Cactus

Imagine you are 14 years old but only as tall as a pencil. You don't have any arms. When you turn 60, your first arm grows. Another arm grows, and then another. One day you realize you have nine arms. You are now 150 years old and as tall as a three-story building.



What if flowers grew from your head? What if your ribs were made of wood? And let's say you were green with sharp spines. Does that seem strange to you? That's what it would be like to be a saguaro.

How old might this saguaro be?

Try to Say It!

Can you say *saguaro*?

Imagine that the *gu* is a *w*.

Try saying it like this:

suh-WAR-oh. Saguaro. suh-WAR-oh.

A saguaro (*Carnegiea gigantea*) is a giant green **cactus** with a round trunk and curved arms. People often think that saguaros look like humans. Many saguaros look as though they are waving, and some appear to be dancing. But despite how they look, they all stand silently through the day and night.

The saguaro cactus is the silent keeper of desert secrets. From above, this green giant witnesses many lives. Bees buzz by, snakes slither past, and coyotes hunt and howl under a full moon.



Would you care to dance?

An old saguaro has watched human history **evolve**. People invented cars, then televisions, and then computers. Many old saguaros have even watched the ownership of their very land change from one country to another!



What parts of history might this saguaro have seen?

In this book, you will learn more cool things about the saguaro. You will learn where it lives and how it survives. You will also read about different animals that check into this cactus hotel. By the end, you may even imagine the taste of saguaro candy in your mouth!

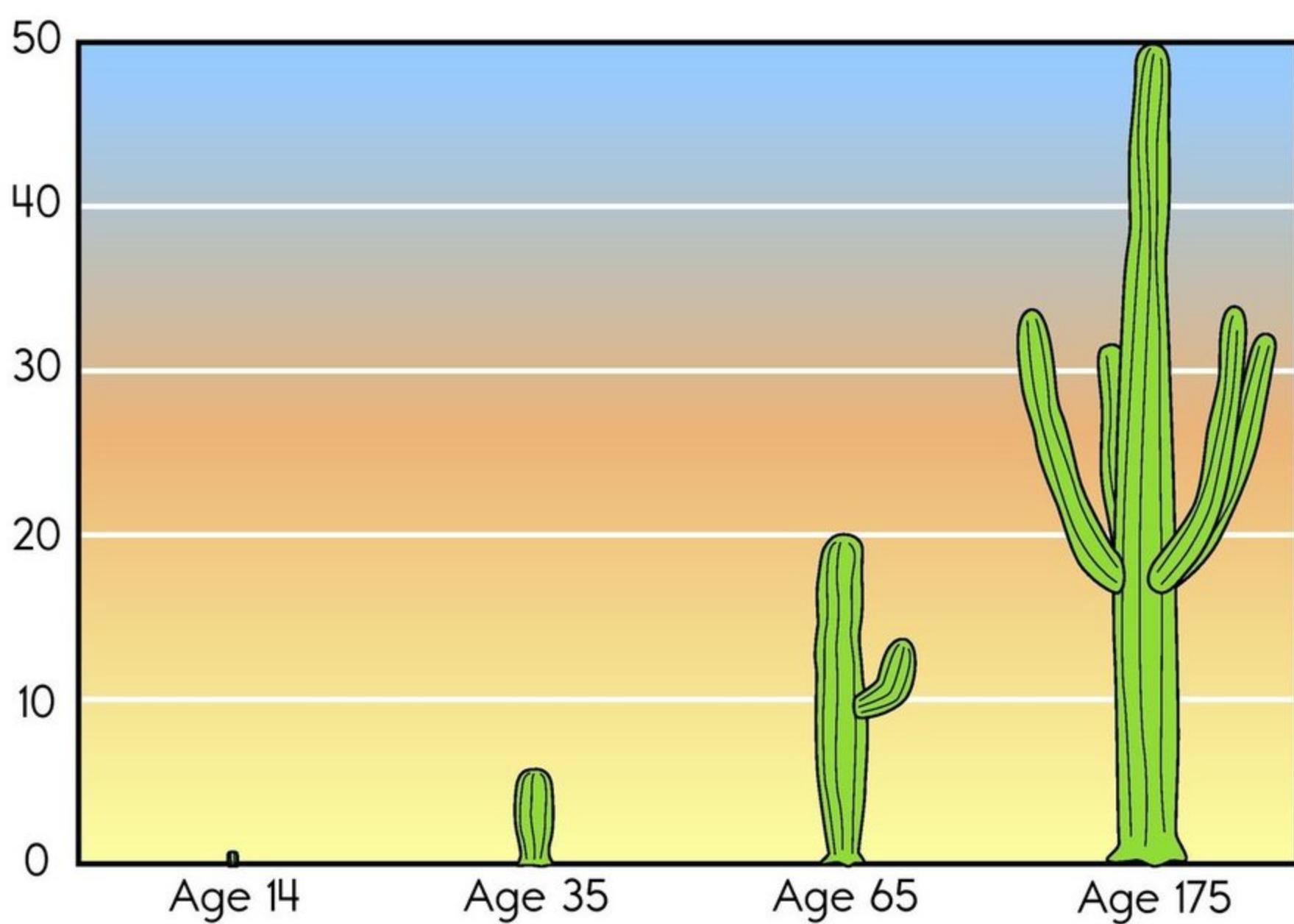
Up Close and Personal

The saguaro grows only in the Sonoran Desert. It cannot be found anywhere else in the world! Though, even in the Sonoran Desert, it cannot grow everywhere. The saguaro needs enough water to grow and protection from freezing temperatures. It usually grows on land between sea level and 4,000 feet (1,219 m) above sea level. This area provides the saguaro with the conditions it needs to grow.

The saguaro also needs to protect itself from other desert dangers. It grows thousands of two-inch spines on its body. These sharp spines prevent animals from eating it. Spines also are the saguaro's silent way of saying, "Don't knock me down!"



Saguaro spines grow in clusters.



This bar graph shows (in feet) the slow, tall growth of the saguaro.

A saguaro grows very slowly. At age 14, it is still a baby and only as tall as a pencil. A baby saguaro normally grows under a nursing plant like a palo verde. The nursing plant protects it from the sun, wind, and animals.

A saguaro will not grow its first flower until the age of 50. The cactus may grow many arms and hundreds of flowers. It will grow its first branch, or arm at 60. The height of a 200-year-old saguaro may extend more than 50 feet (15 m) above the Sonoran Desert surface.

Surviving the Sonoran Desert

The Sonoran Desert is hot—a summer day can reach a scorching 120°F (49°C)! The Sonoran Desert is also dry. Months can pass without a single drop of rain.

What if you didn't drink a drop of water for months—wouldn't you get thirsty? Like people and other animals, plants need water to live. Water is scarce in the desert.



The Sonoran Desert is located in North America. People from Mexico, the United States, and several Native American nations call the Sonoran Desert home.

But when it does rain, it rains hard. Half of the year's rain falls in just two months. These late summer monsoon storms bring strong winds and lots of lightning. It rains so fast and hard that dry streambeds and riverbeds quickly become raging torrents of water and streets quickly flood.

The saguaro is an expert water collector. Its long, shallow roots spread out in all directions just below the ground's surface. When it rains, these roots soak up tons of water, which the saguaro stores inside its trunk and arms.

Many plants lose water through their leaves. Just as people sweat, plants **transpire**. But the saguaro has spines instead of leaves, so it doesn't lose as much water. The saguaro's skin is tough and waxy. This also helps to keep water inside.



Saguars expand like sponges when they soak up rainwater.

Do You Know?

The word *cactus* has two plural forms: *cactuses* and *cacti*. Many people from the Sonoran Desert say “*cacti*”: One cactus, two cacti, three cacti, four . . .



This owl is just one of many animals that live in the Sonoran Desert.

Survival in this desert is tough. Animals and plants must find enough water to live, and they must protect themselves from the extreme weather. They also must defend against hungry animals.

Many plants and animals have adapted well to the Sonoran Desert. Humming birds, doves, and quail fly about. Coyotes, rabbits, and snakes also live here. Many types of bushes, trees, and other cacti grow here as well.



Gila woodpeckers make their home in this saguaro.

The Cactus Hotel

The saguaro is a center of activity for many desert animals. This **hospitable** cactus has free rooms for birds, lizards, and insects. These rooms are cool in the summer, and they have pretty views.

Every spring, the Gila woodpecker chisels out a new home inside a saguaro cactus. First the woodpecker makes a narrow entrance. Then it hollows out a deep room.

Inside this room, the female lays her eggs. The nest is high above the desert floor. The saguaro's sharp spines help to protect the baby birds. Inside the saguaro they will be safe from **predators**. When the woodpecker family moves out, tiny owls or other birds will move in.

Hawks may build their nests high in the saguaro. These nests, made of twigs and grass, rest on the arms of the giant cactus.

The saguaro attracts other desert animals as well. It serves up free flowers, nectar, and fruit.

In late spring, the saguaro produces flowers that are white with yellow centers. They grow on the tips of the saguaro's arms and trunk. A summer saguaro looks as if it is holding flowers in its hands. Around its head is a flowery crown.

A saguaro's flowers open for a short time at night and close during the heat of the day. When the flowers open, birds, insects, and bats drink the flowers' sweet nectar.



Bees drink nectar and help spread pollen.

While drinking, these animals get dusted with pollen. Then they fly to the next flower and spread the pollen. This is what **pollinates** saguaro flowers and makes the fruit grow.

Saguaro fruit is red with black seeds. Birds like to eat this sweet fruit. Sometimes saguaro fruit falls to the ground. Foxes, coyotes, and **javelinas** enjoy these sweet summer treats.

Sweet Desert Desserts

The Tohono O'odham (toe-hoe-noh OH-eh-dom) people have lived in the Sonoran Desert for hundreds of years. The saguaro cactus is an important part of their lives.

In the past, they left their villages every summer and moved into cactus camps for a few weeks. These camps were located near the mighty saguaros.

Women and children harvested the ripe fruit using the long wooden ribs of dead saguaros. Women knocked the fruit down, and children collected it in baskets.



Reaching up high
to harvest the fruit of
the saguaro

Back at the camp, the women would boil the fruit in water, and then they would filter it. Next, they poured the sweet syrup into clay jugs. Finally, they carried the jugs back to their villages.

The Tohono O'odham still make saguaro jams, candies, and wine. They use the wine for a special rain ceremony.

The Cycle of Life

Every saguaro begins its life as a small seed on the ground. When the seed **germinates**, roots grow. The baby saguaro begins to grow under a nursing plant, and over time, the cactus grows high above the desert floor.

Like all plants and animals, saguaros will die. They grow old, and their life ends. However, some saguaros die before old age. They may freeze on cold nights, or they may become infected with diseases. A few **unfortunate** saguaros get struck by lightning.



A palo verde tree (left) often serves as a nursing plant for saguaros.



Saguaro ribs are a shadow of the mighty saguaro that once lived.

When a saguaro dies, its fleshy skin falls to the ground. Termites, scorpions, and lizards burrow new homes inside of it. Slowly, the body of the saguaro **decomposes**, and it turns back into desert soil. The saguaro's wooden ribs often remain standing like a **tribute** to the cactus's life. But after a while, these ribs also fall down.

Entrance to Saguaro National Park near Tucson, Arizona, USA (right)

Arizona license plate (below)



The Modern Saguaro

The mighty saguaro has come to symbolize the Sonoran Desert. It shows up on postcards, in movies, and on Arizona license plates.

The saguaro even has a park named after it! Saguaro National Park near Tucson, Arizona, is the home of many beautiful saguaros. Visitors from all over the world come to see these mysterious giants. They take photographs of themselves with the saguaros. Some tourists like to hike on park trails and enjoy the beauty of the saguaro in their Sonoran desert home.

Today, there are laws to protect saguaros. In certain places you cannot dig them up without a permit. If you do, you can be fined. When new roads are built, saguaros are moved to keep them safe.

These are just some of the secrets of the mighty saguaro. Other stories may never be known. But one day you might visit the Sonoran Desert. You might walk out into the desert's silence and sit next to a saguaro. You might carefully touch its tough skin and stare up at its huge green arms. You might picture the animals that have eaten its fruit.

You might even scratch your head and try to guess its age. You might wonder, "Will it still be standing here when I am old and gray?" If nothing else, perhaps you will just sit and enjoy the sunset. If you listen long enough, maybe the saguaro will whisper some of its secrets.



A photographer captures a saguaro at sunset.

Digging Deeper

Did you like learning about the saguaro cactus? Are you interested in learning more cool things? If so, keep reading!

1 At the Library

Tell your librarian that you are interested in books about the Sonoran Desert. These books will have pictures of desert animals, such as rattlesnakes, roadrunners, and coyotes. The books will talk about saguaros, too.

2 On the Web

- In the address window, type: *www.google.com*
- Then type: *saguaro cactus*. Click on “Google Search.”
- Read the colored links. Click on one that looks interesting.
- When you want to explore other links, click the “*back*” arrow on the top left.
- Or try a new search: *Sonoran Desert*.

3 Try This!

Do you believe that plants sweat? Tape a plastic bag tightly around the end of a bush or tree branch. Make sure there are leaves inside. After two days, come back and see if there is water in the bag. Be careful if you try it with a cactus—you might get poked!

Glossary

cactus	a thick plant native to dry parts of the world that usually has spines instead of leaves (p. 5)
decomposes	decays, rots, or breaks down into small parts (p. 16)
evolve	to change or develop over time (p. 6)
germinates	begins to grow from a seed and becomes a new plant (p. 15)
hospitable	friendly and welcoming to strangers or guests (p. 12)
javelinas	pig-like animals that live in the Americas (p. 13)
pollinates	puts pollen in a flower and fertilizes it (p. 13)
predators	animals that naturally hunt or prey on others animals (p. 12)
transpire	to give off water vapor (p. 10)
tribute	an act or statement that shows gratitude or respect (p. 16)
unfortunate	unlucky (p. 15)

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