

LEVELED BOOK • L

# Plant Defenses

Written by Alyson Greene

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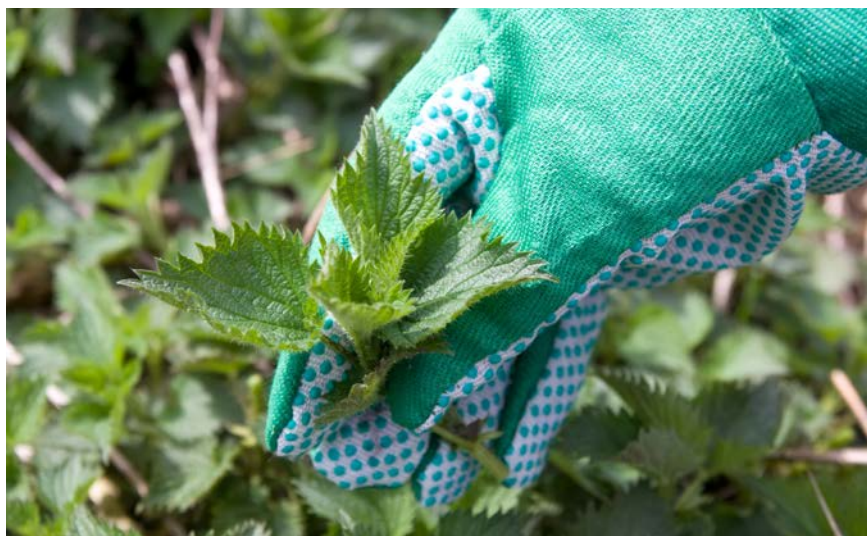
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This Sumatran tiger has sharp claws and teeth to defend itself.

## Introduction

Animals have many ways to **defend** themselves and stay safe. Some have sharp claws, teeth, or horns. Others change color or hide in a shell. Some animals simply run away from danger.

Plants can't bite, fight, or run away. However, they have many other ways to protect themselves.





Hawthorn branches have long thorns that look like needles. Thorns are small branches that grow from inside the stem or branches of a woody plant.

## Thorns, Prickles, and Spines

Some plants grow **thorns** on their branches. Animals that try to eat those plants can get cut or scratched. Some trees have long thorns that keep animals away.



The sharp prickles on a rose grow on the outside of the stem like a layer of skin.

Roses and some other plants have **prickles** on their stems. Prickles are different from thorns. Prickles grow out of a plant's soft stem. Most often, prickles grow on small shrubs and flowering plants. Thorns usually grow on trees or large shrubs.





All barrel cactus have many spines. Some barrel cactus have spines that are curved at the end like fishhooks.

Some plants have **spines** to defend themselves. Some plants are covered in spines to protect them from being eaten. Spines look and feel like thorns, but they are different.



## Amazing Spines

The hairy cactus, also known as the old man cactus, is covered with white hairlike strands. These strands protect it from sunlight, and help hide its sharp spines.

A cactus spine is actually a special kind of leaf. Cactus plants usually live in hot deserts. Regular leaves may dry out in the hot sun, but sunlight and heat bounce off spines.



Stinging nettles are also known as common nettles. They have been used to treat muscle pain for hundreds of years.

## Stinging Plants

Stinging plants have hairs that can poke animals that are trying to eat them. Inside each hair is a small tube with stinging **fluid**. The tip of this tube breaks easily.





The fine hairs on stinging nettles can cause a painful rash.

When an animal bumps the hair, the tip breaks off and shoots fluid into the animal. Each leaf of a nettle plant has hundreds of stinging hairs.



The berries of the deadly nightshade may look edible but are very poisonous.

## Poison Plants

Some plants make **poison** to protect themselves. Eating one of these plants can cause an animal to get sick or even die.

Deadly nightshade makes a powerful poison. This poison is found in all parts of the plant. Eating just one leaf can kill a large animal.



peppermint

### Do You Know?

Poisonous plants are not poisonous to every animal. The peppermint plant smells and tastes good to people, but it is harmful to insects.



The living stone plant in the middle of the photo blends in with the rocks.

## **Hidden Plants**

Some plants hide from animals by blending in with the ground where they grow. The living stone plant grows in dry, rocky ground among pebbles and stones. This plant looks like just another small stone. Animals do not see it as something to eat.





True to its name, the touch-me-not plant has leaves that close upon contact.

## Other Defenses

When an animal bumps a touch-me-not plant, the plant folds up its leaves. The thin, folded leaves do not look as tasty as full leaves. Also, a plant that moves may scare away an insect or other animal trying to eat it.



tobacco plant



big-eyed bug



tobacco hornworm

The scent from the chewed leaf of the tobacco plant attracts the big-eyed bug, a predator of the tobacco hornworm.

The tobacco plant plays a trick on the pests that eat it. When an insect bites a leaf, the plant sends out a special smell. This smell invites enemies, such as the big-eyed bug, to eat the invading insect.



prickly pear  
cactus



New Mexico  
thistle



agave

## Conclusion

Plants might look defenseless at first, but they have powerful defenses to help them survive. Even without claws or horns like some animals, plants can protect themselves.

## Glossary

- defend** (*v.*) to resist an attack (p. 4)
- fluid** (*n.*) a liquid, such as water (p. 9)
- poison** (*n.*) a toxic substance that is harmful or deadly if it enters one's body, especially when swallowed (p. 11)
- prickles** (*n.*) sharp, pointed parts that grow out of the soft stems of small shrubs and flowering plants (p. 6)
- spines** (*n.*) needle-shaped parts of some plants that are actually leaves, such as those found on cactuses (p. 7)
- thorns** (*n.*) sharp, short parts that grow out of the woody branches of large shrubs or trees (p. 5)



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Front cover: Saguaro cactus, with their sharp thorns, are one of the largest cactus in the world.

Back cover: A beautiful rose has a prickly, protective stem.

Title page: A giant thorn can be as long as a finger.

Table of contents page: Using a glove is a necessity when touching a stinging nettle plant.

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