

# Grand Canyon

For Kids!

National Park Service  
U.S. Department of the Interior

Grand Canyon National Park



## Ecosystems: Nature's Neighborhoods

From snow-covered forests to hot, dry deserts, Grand Canyon contains many outdoor neighborhoods, called *ecosystems*, in which plants and animals live. These living things depend on each other—as well as non-living things such as air, water, soil, and sunlight—to survive.

### Wacky Ways of Survival

All animals and plants at Grand Canyon have *adaptations*, special things they do or have that help them survive in an ecosystem.



Sharp spines on a prickly pear cactus prevent many animals from eating it.



Short-horned lizards shoot blood out of their eyes to scare away predators.



People wear coats, hats and mittens to stay warm in winter.



Scorpions are nocturnal; they avoid summer heat by being active at night.

### Fun Facts!

With so many ecosystems, Grand Canyon has high *biodiversity*, or the number of species that live there. Just how many plants and animals live at Grand Canyon?



The endangered California condor

- 8,480 invertebrate species
- 1,750 plant species
- 356 bird species
- 91 mammal species
- 47 reptile species
- 17 fish species
- 9 amphibian species
- More than 2,000 people!

### Grand Canyon Ecosystems

Hikers discover different ecosystems as they walk from the top to the bottom of Grand Canyon.

#### Boreal and Ponderosa Pine Forests

**Elevation: 10,000-7,000 feet (above sea level)**  
Winter brings cold temperatures and snow to the forests along the rim, or edge, of the canyon. Pine, aspen, spruce, and fir trees fill the landscape. Deer and squirrels forage for leaves and seeds, while mountain lions hunt for prey.



Boreal forest



Ponderosa pine

#### Pinyon-Juniper Woodland

**Elevation: 7,300-4,000 feet**  
Utah juniper and pinyon pine trees grow in rocky soils along lower parts of the rim. They thrive in warm, sunny summers and cold, snowy winters. Pinyon jays and other birds eat nuts and berries from the trees.



Pinyon-juniper woodland

#### Desert Scrub

**Elevation: 4,500-1,500 feet**  
Scorpions, snakes, and bighorn sheep wander amidst cacti, agave, and Mormon tea plants in the desert scrub. This ecosystem begins about halfway down into the canyon and continues to the bottom near the Colorado River. It is known for hot and dry summer weather.



Desert scrub

#### Riparian

**Elevation: Depends on location**  
Riparian ecosystems provide homes for plants and animals that need a lot of water, such as cottonwood trees and frogs. They are found along the edges of springs, creeks, the Colorado River, and other sources of water.



Riparian



Canopy fires can be dangerous to Grand Canyon's forest ecosystems.

## Students Help Prevent Wildfires

Wildfires are a natural part of life in the forests along the rim of Grand Canyon. But if they become too big, they can be dangerous to plants, animals, and people.

Fires that burn low to the ground are good for the canyon's forest ecosystems. They burn dead trees and logs, creating space for living trees. They also turn dead leaves and pine needles into ashes, which act like vitamins in the soil.

Sometimes, *canopy fires*—those that burn into the tops of trees—can destroy whole forests and damage houses and buildings.

To prevent canopy fires at the South Rim of Grand Canyon, wildland firefighters start low fires (called *prescribed burns*) and monitor them so they do not grow too big. These fires burn extra *fuel* (dead trees, logs, and leaves) that lightning or campfires could ignite in the future.

Recently, local students helped wildland firefighters measure the amount of fuel in an area of forest along the South Rim. They found a lot of extra fuel.

Wildland firefighters decided to gather dead trees and logs into small piles and start prescribed burns. This prevented future fires from becoming too big and protected many important buildings in the park.



Students and teachers measure fire fuel at Grand Canyon.

## Find That Habitat!

An ecosystem contains many *habitats*—places where living things find food, water, shelter, and space to survive.



Human habitat



Scorpion habitat

For example, scorpions live in hot, dry, and rocky areas in Grand Canyon. They find bugs to eat and places to hide from the sun in their habitat.

### Your challenge:

**Write** a list of animals that live in your neighborhood such as birds, mammals, and insects.

**Choose** your favorite animal and **draw** a picture of its habitat. What does it need to live? Where does it find food?

Then, take a **walk** with an adult and **find that habitat!** How many other habitats can you see?



## Learn More

Check out these cool tools:

- [Watch](#) rangers teach about "Ponderosa Pine: Living with Fire" and "Teamwork in the Natural World"
- [Listen](#) to nature sounds from Grand Canyon
- [Explore](#) the Kids Do Ecology website
- Become a [Junior Ranger](#) or [WebRanger](#)

YOU can help protect ecosystems!



Desert spiny lizard