



WILD Kids



Wildland Fire and Wildlife

When you hear about a forest fire, you may think of all the damage a fire can do. Fire can be destructive. Trees and grasses are burned, animals and people lose their homes, and some wildlife may not survive a fire. But, fires that occur in wildlands, such as forests and grasslands, can also be good for wildlife. Actually, most animals

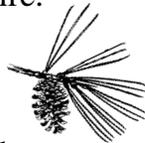
survive forest fires. They have adapted to fire and will flee if they sense a fire is spreading. Often, fires can improve habitat for wildlife. Forest rangers may start a fire, or let a small fire burn. These carefully watched fires are allowed to burn only in a certain area, and can actually prevent larger forest fires.

How Does Fire Keep A Forest Healthy?

Fire removes the *debris* (pine needles and dead leaves) that litter the forest floor. If there is too much debris, new plants cannot grow and thrive. As the debris burns, its nutrients are returned to the soil. These nutrients are then used by seedlings that sprout and grow after the fire.

How Are Plants Adapted To Fire?

The ponderosa pine and Douglas fir have thick bark that allows them to withstand the destructive effects of fire. If it weren't for forest fires, other trees would eventually outnumber the ponderosa pine and Douglas fir. (Plants that are highly adapted to fire are called *pyrophytes*.)



Aspen trees are adapted to fire in another way. Before a fire, a chemical in the leaves and buds keeps the roots from sending up new shoots. But after a fire, the leaves and buds are killed and the trees' roots send up thousands of new shoots.

Seeds Need Fire?

Some plants *need* fire in order to spread their seeds. The lodgepole pine is a tall, slender tree with cones that are held together by *resin* (a sticky substance produced by plants). The heat of fire melts the resin, opens the cones, and releases the seeds.

How Is Wildlife Adapted To Fire?

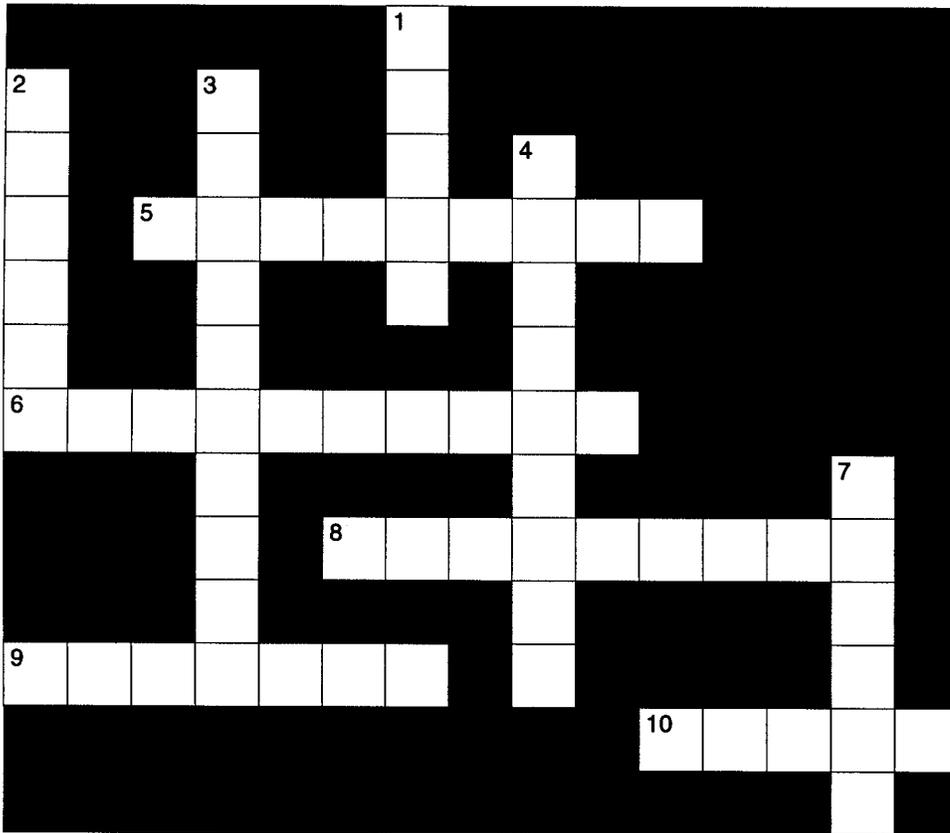
Young animals, very old ones, and those that can't escape, may not survive a fire, especially a large fire. Some fish may die too, when fire changes the temperature and condition of the water. But since most animals survive a fire, how do they do it?



Deer, coyotes, and other large animals can usually outrun a fire. Birds fly away to a safer area, and lizards, snakes, and small mammals seek shelter in underground burrows. But if a fire is very hot or burns beneath the surface (called a *ground fire*), even animals in burrows may not be safe from smoke and fire.

Insects are some of the first animals to move back in to an area after a fire. Burned, rotting wood makes a great home for insects, and a perfect place to lay their eggs. The large number of insects attracts woodpeckers. As they search for insects to eat, woodpeckers drill holes in the trees. They use the holes for shelter and a place to raise their young. After a few years, the woodpeckers move on to another burned area. The old woodpecker holes are used by birds that nest in holes, but can't make their own, such as mountain bluebirds and chickadees.

Pyro-Crosswords



Across

- 5. a pine tree with thick bark
- 6. “drills” for insects in burned trees
- 8. a plant adapted to fire
- 9. lay eggs in burned trees
- 10. sticky substance produced by plants

Down

- 1. this tree sends up new shoots after a fire
- 2. underground shelter
- 3. a fire that burns under the surface
- 4. tall, slender pine tree
- 7. pine needles and dead leaves



Arizona Wildland Fires

- 1. Use the library and internet resources to learn about the two large wildland fires listed below. For each fire, write a short report on how and where the fire started, how long it lasted, how many acres burned, and other information you can find out about the effects of the fire on wildlife habitat.
 - a. Lone Fire, 1996
 - b. Dude Fire, 1990
- 2. Use the website below to answer these questions: How many large wildland fires occurred in Arizona during the 2000 fire season? How many acres burned? What percentage of these fires was caused by lightning? What is the “incident name” of the largest fire?

Suggested resources:
 Arizona Wildlife Views magazine, Oct. 1997
 Arizona Wildlife Views magazine, June 1991
www.fs.fed.us/r3/fire/ytdstate.htm