

FOCUS

Wild Arizona

Key Words

Acre: an area of land slightly smaller than a football field

Hypothesis: what you think will happen before you do an experiment

Sprout: a plant that has just started to grow from a seed

Wildfire: an unplanned and uncontrolled fire

Summer is a favorite time of year. It means no school and long days playing in the pool. But for wildlife in Arizona, summer could mean something more drastic: **wildfires**.

Fires can start in forests, deserts or just about anywhere. For a fire to burn, three things are needed:

1. Heat is needed to start a fire. A burning cigarette, a campfire that hasn't been put out, or lightning are examples of heat sources.
2. Oxygen is required for humans to breathe and for fires to continue burning. It is in the air all around us.
3. Fuel is any object that can keep a fire burning. Wood, paper and dry leaves are examples of fuel.

To stop a fire, firefighters remove one of these three things from the fire, using different methods. For example, when firefighters spray water on a fire, they are preventing the fire from

finding oxygen. In addition, they are making the fuel sources wet and less likely to burn.

Sometimes, firefighters start small fires to burn the grass and ground in front of a large fire they are trying to stop. Which of the three things are they attempting to remove?

So what happens to animals during a fire?

When a wildfire burns, it may destroy food and shelter that animals need to survive. As a result, the animals need to flee to another area. Some animals (especially young, old or sick ones) may have trouble escaping the fire. However, most animals will survive. Birds are able to fly away. Large animals, like deer and coyotes, can run away. And many small animals, like snakes, lizards and mice, will hide underground.

But all is not bad for the wildlife. In fact, some fires can actually be good for animals and plants.

In a ponderosa pine forest, fire burns away dead leaves and branches littering the ground. This makes room for new plants to grow. In addition, some seeds actually need the heat created during a fire in order to grow. Once these have **sprouted**, there will be more food for the animals. Even the burned trees are helpful. They provide good homes for insects, and insects are food for many birds and other animals.

Do the science:

Pretend you are a researcher who wants to study the impact of fires on animals. Before you can do your experiment, you must develop a **hypothesis**.

Based on what you know about fires, how do you think each of the animals below will escape the fire and how will it benefit after the fire?

1. Woodpecker — eats insects and acorns
 - a. How will it escape? _____
 - b. How will it benefit from the fire? _____
2. Mule deer — eats grass and other small plants
 - a. How will it escape? _____
 - b. How will it benefit from the fire? _____
3. Chipmunk — eats plants and seeds
 - a. How will it escape? _____
 - b. How will it benefit from the fire? _____
4. Box turtle — eats insects and plants
 - a. How will it escape? _____
 - b. How will it benefit from the fire? _____



In recent years, a number of large wildfires have burned a lot of land. In 2002, the Rodeo-Chediski fires burned much of eastern Arizona. The next year, the Aspen fire struck Mt. Lemmon near Tucson. More recently, in 2005 the Cave Creek Complex fire burned near Phoenix.

Many people are concerned that the number of fires is increasing. But is it?

Do the math:

The table below shows the number of fires and the **acres** burned in Arizona each year since 2000.

Year	Number of Fires	Acres Burned
2000	3,579	82,896
2001	3,167	30,503
2001	3,081	629,876
2003	2,839	189,005
2004	2,623	222,503
2005	3,912	762,112
2006	3,080	152,423

What is the total number of fires that occurred in Arizona from 2000 through 2006?

How much total land has been burned?



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Now calculate the average number of fires per year and the average amount of land burned per year. This will tell us how many fires we can expect to see during a normal year. To calculate the average, divide the total number of fires from above by the number of years, 7. What is the average number of fires per year? _____

What is the average amount of land

burned each year? _____

How many years saw more than the average number of fires or land burned?

Do you think we are seeing more fires burning in Arizona? _____

Why? _____

■ This feature is part of the Arizona Game and Fish Department's Focus Wild Arizona program, a free

educational program for teachers, parents, students or anyone interested in learning about wildlife and habitat.

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