Focus
Wild Arizona

Key Words

Barrier: an object that blocks or stops something

Predict: to guess what might happen in the future

Underpass: a tunnel built under a road

Roads serve as **barriers** to wildlife. The larger the road, the more difficult it can be for animals to cross. If they do try to cross, they can be hit by fast-moving vehicles. These collisions can be dangerous for the animal and for people inside the car.

As more people move into Arizona, what do you think will happen to traffic on the roads? Will there be more or fewer cars? What will this mean for wildlife? Will more or fewer animals be hit by cars each year?

The Arizona Game and Fish Department is trying to answer these questions by studying a small stretch of road along Highway 260, near Payson, Ariz. Let's take a look at what has been discovered so far.

Graph A shows the average number of cars that drove on the road each day. What has happened to the amount of traffic on this highway from 1994 to 1999?

Scientists often use data they collect to **predict** what will happen in the future. How many vehicles do you think there were in 2003? Mark this number on Graph A. Draw a line connecting the end of the other line to your new point.

Graph B shows the number of elk hit by vehicles on this same road. What happened between 1994 and 1999?

How many elk do you think were hit in 2003? Mark this point on the graph and draw a line connecting it to the end of the other line.

The graphs now show actual data collected from 1994 to 1999, as well as your predictions about what happened from 1999 to 2003. Your next job is to compare your predictions with what actually happened.

The table on the next page shows data collected since 1999. Using a different color, mark these points on the two graphs and connect them with a line.

Illustration by Tracy Hill

Year	Average Daily Traffic	Number of Elk Hit by Cars
2000	5,112	14
2001	4,500	29
2002	6,267	36
2003	8,700	34

Did traffic continue to increase?

What happened to the number of elk being hit by cars?

How close were your predictions?

As scientists, we often collect data that does not fit our predictions. If this happens, we try to explain it.

Why do you think we saw a large decrease in the number of elk being hit from 1999 to 2000? Are people driving more safely? Maybe. Are elk learning to avoid traffic? Maybe. But there may be another answer.

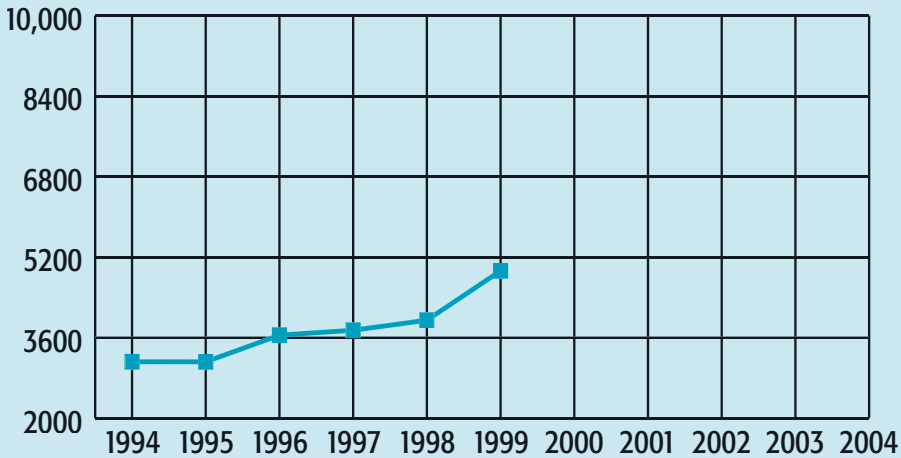
As this data was being collected, the Game and Fish Department also was working with the Arizona Department of Transportation to build wildlife **underpasses** under the road. These underpasses are designed for animals to use instead of walking across the road.

Do you think elk are using the underpasses?

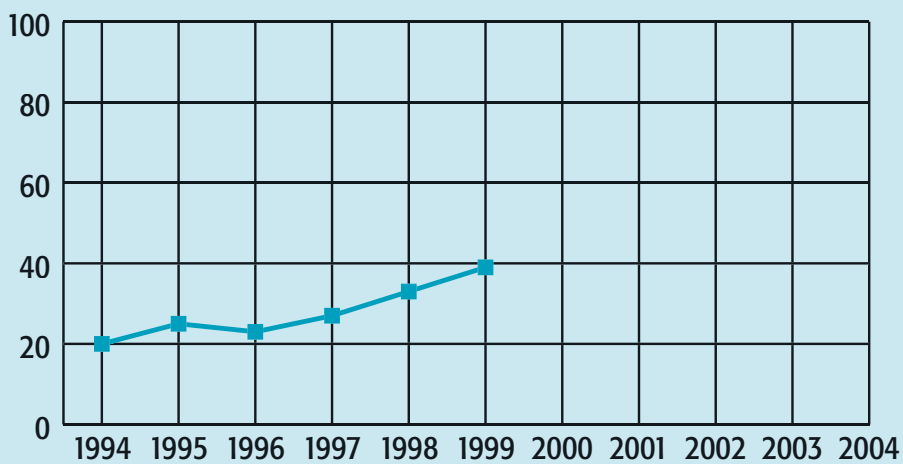
If so, why aren't all of them using the underpasses?

Scientists are still working on this project. If you were one of them, what would you do next? Can you design an experiment that would help you answer these questions? Try it, and maybe sometime in the future we will see you working to make roads safer for people and animals.

Graph A: Average daily traffic



Graph B: Number of elk-vehicle collisions



■ 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. Visit our Web site, azgfd.gov/focuswild, to find exciting lessons and resources.