

FOCUS

Wild Arizona

Key Words

Herbivore: an animal that eats plants

Litter: all of the babies born from one pregnancy

Mammals: warmblooded animals that breathe air and produce milk for their young

Population: a group of animals or plants of the same type living in the same area

Predator: an animal that hunts and eats other animals

If you have lived in Arizona even for a short time, you have probably seen some wild animals. Even in the city, birds, lizards and small **mammals** are frequently seen. Perhaps one of the most common animals is the cottontail rabbit.

Found throughout the state, cottontails were named for their white, fluffy tail. They are **herbivores**, primarily eating grass. Cottontails typically have two to four babies each time they give birth. They are capable of giving birth up to five times each year.

Do the math:

How many babies can one female cottontail produce in one year? _____

Most of the babies born will not survive beyond one year. **Predators**, including snakes, coyotes and owls, often eat them. Although many individual rabbits may die, the large number of babies born ensures that some will grow up to be adults and produce babies of their own. But do enough rabbits survive each year to maintain the population? Let's try to find out.

Do the science:

Pretend that you are a researcher who spent a few years watching and counting a **population** of cottontail rabbits. For the population you were studying, you discovered the following:



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1. At the start of your research, there were 20 rabbits in the population.
2. Throughout the study, about one-half (0.5) of the rabbits were female.
3. The average number of litters per female rabbit per year was four.
4. The average number of young per litter was three.
5. Each year, only about one-third (0.3) of the rabbits survived.

What seems to be happening to the rabbit population over time? Is it remaining constant, or changing? If it's changing, in what way? _____

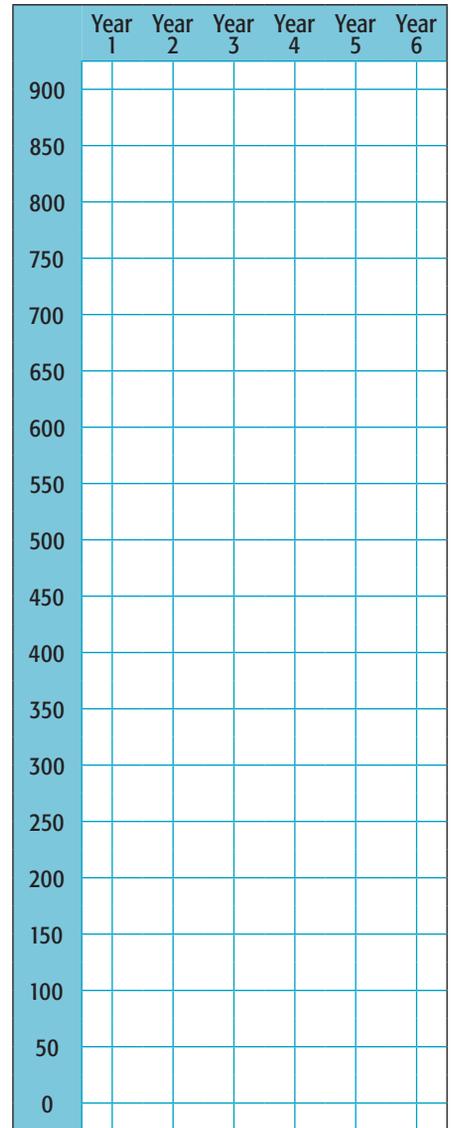
Your job as a scientist is not yet complete. You must try to explain what you discovered. Can you think of reasons why the population does not seem to remain the same? _____

What are some things you could do to determine if your explanation is correct?

Use the information provided to complete the table. It may be necessary to round to the nearest whole number.						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Row A. Number of cottontails (Multiply Row D from the previous year by statement 5)	20	42				
Row B. Number of females						
Row C. Number of cottontails born (Multiply Row B by statements 3 and 4)						
Row D. Total population at the end of the year (Add Rows A and C)						

Now complete the Cottontail Rabbit Population graph (right) to show the total number of rabbits (Row A) from Year 1 through Year 6.

Cottontail Rabbit Population



■ 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.