



# JUST FOR U.S.\*

GRADES 4 - 5

\*Understanding Science

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*Class, today we are going to study Canis familiaris.*

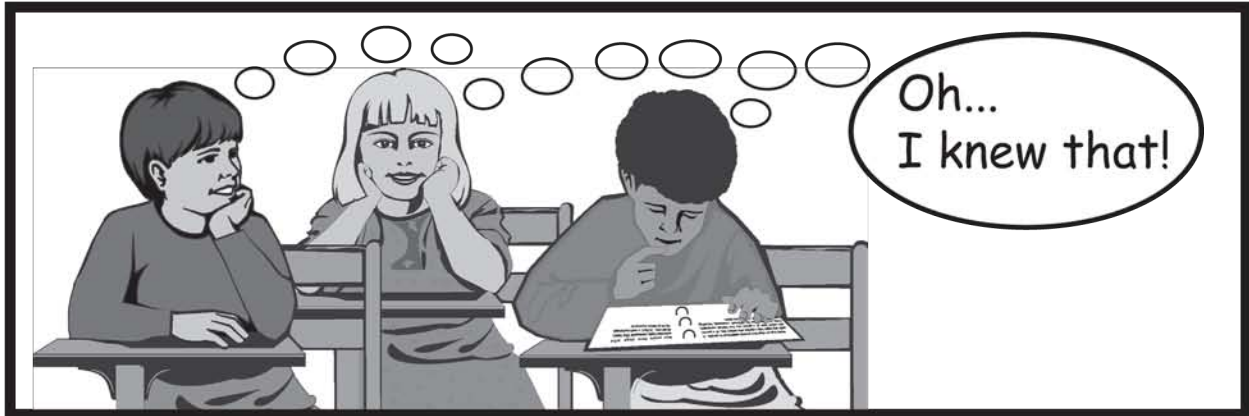
I hope it doesn't make me sick!

What is she talking about?

I hope it's not dangerous!



Canis familiaris is the scientific name for dog.\*



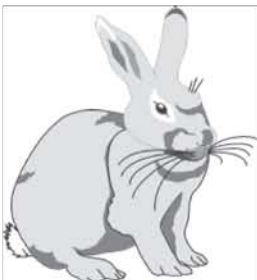
All dogs, no matter what they look like, are the same species.



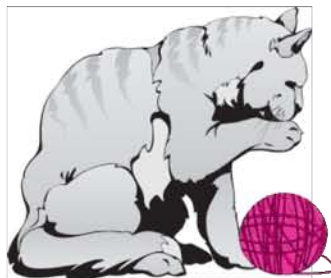
Members of the same species can reproduce and their offspring can reproduce as well.

\*A scientific name indicates the genus and species. Dogs are the genus *Canis* and the species *familiaris*. All living things have a scientific name. Humans are Homo sapiens. Do you know these animals?

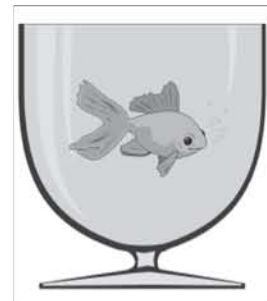
Oryctolagus cuniculus



Felis catus



Carassius auratus

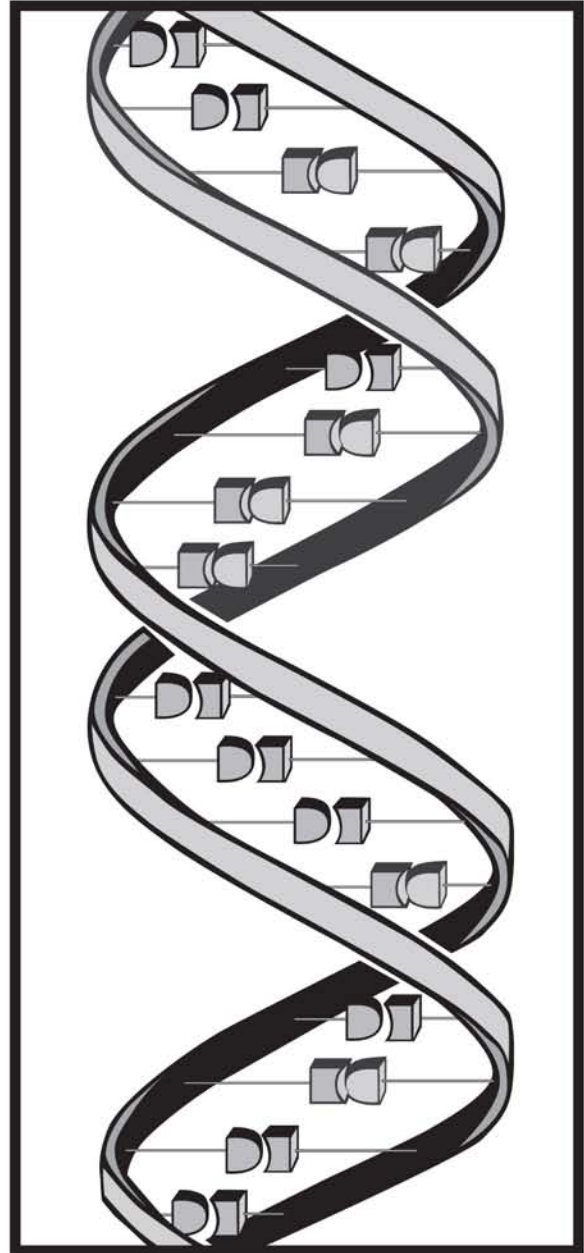


The correct way to write a scientific name is to capitalize the first word but not the second word. The whole name is either underlined or in italics.

Dogs are descended from gray wolves. However, scientists are still trying to learn when and where this happened. The newest research uses **DNA** to try and answer these questions.

All living things have **DNA**. DNA is the code for building the organism. Each species has a unique DNA code. The more similar the DNA code, the more the species are related. DNA of dogs and wolves is more than 99% identical.

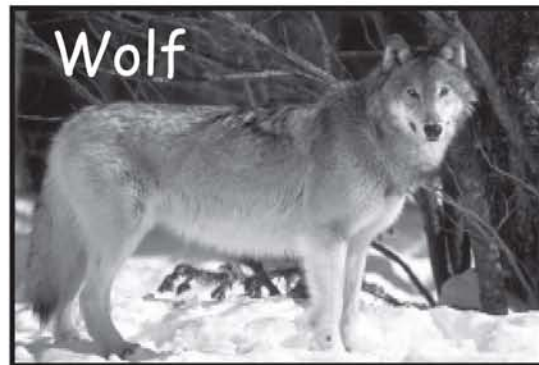
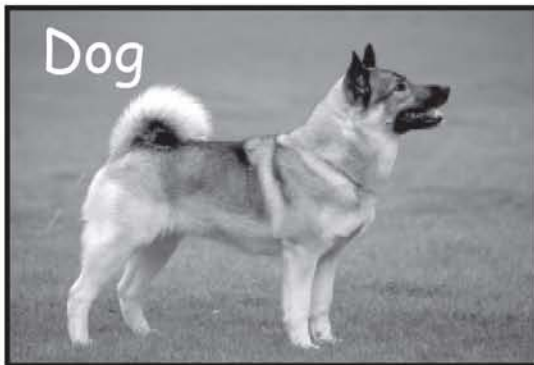
Using **DNA**, scientists currently believe that dogs descended from wolves 15,000 - 40,000 years ago and that all dogs originally came from Asia.



**DNA**

The structure of **DNA** was published 50 years ago by James Watson and Francis Crick in 1953. They won the Nobel Prize for their work.

Gray wolves (Canis lupis) and dogs are so similar, some people argue they are the same species. In fact, dogs and wolves can reproduce and their offspring can reproduce. However, dogs and wolves have many differences as well.

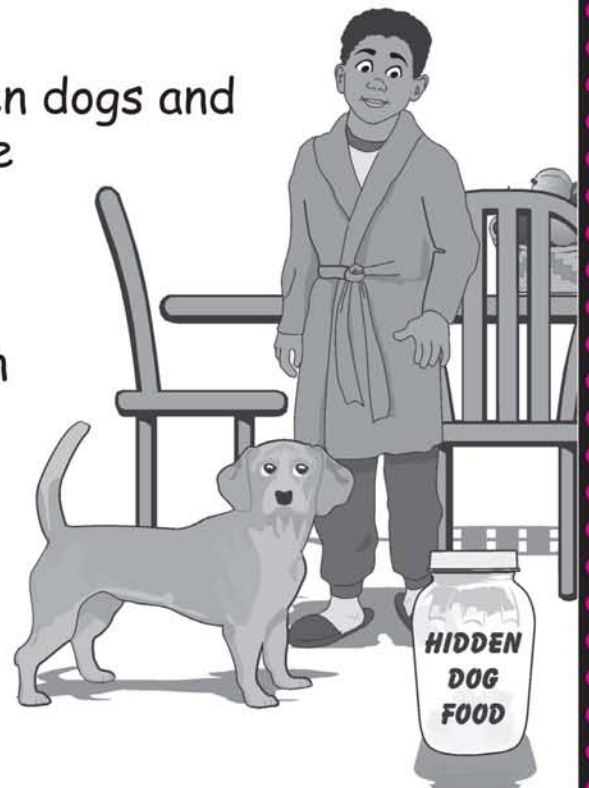


Here are a few.

A dog holds its tail up. A wolf holds its tail down. Most dogs love to bark. An adult wolf rarely barks. Dogs enjoy being around people. Wolves prefer to be around wolves.

The special relationship between dogs and humans may be the best evidence that dogs and wolves are a different species.

In fact, dogs respond to human faces. What does this mean? A dog can understand from clues like pointing, tapping or looking that food is hidden in a container. This is something wolves, even those raised by humans, do not do.



## Dog Thoughts

How smart are dogs? Dog thoughts are more complex than you might think.

### Dogs as Pets

Many dogs understand basic commands like heel, sit and stay. In fact, a well-behaved dog can go almost anywhere!



### Working dogs

Working dogs can know up to 90 different commands, including: dress, car, visit, lap, and under. Working dogs include: seeing-eye dogs; hearing dogs; assistance dogs; sled dogs; police dogs; and rescue dogs.

Photos provided by Canine Companions for Independence



While it is amazing that working dogs can follow many different commands, even more interesting is that these dogs also have "intelligent disobedience." This means the dog will not follow a command if it could lead to danger. Pretty smart!



## BEAUTIFUL WRITING

Authors like to use colorful descriptions of ordinary things to make their writing come alive. Can you match the expression with its meaning?

**A** Dog-tired

**1** a page folded over

**B** Dogged

**2** a fancy presentation

**C** Dog-eared

**3** very hot summer days

**D** Dog days

**4** in trouble

**E** Dog and pony show

**5** stubbornly sticking

**F** Dog-eat-dog

**6** exhausted

**G** In the dog house

**7** an intense competition

Answers: A-6, B-5, C-1, D-3, E-2, F-7, G-4