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Dogs or cats?

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What makes every animal different?

Dogs and cats have a lot in common! These are the two most common pets in the United States. They are also **companion animals**, which means they live in our homes to bring us company, fun and even friendship!

The biology of dogs and cats is also very similar. Both kinds of animals are mammals. They both eat meat, and they both need **enrichment**. Playing, exploring and even trying new kinds of treats are enrichment that help dogs and cats practice natural behaviors and feel healthy.

But dogs and cats are different in several important ways. Not only do dogs tend to be bigger, but dogs and cats are different **physiologically**. This means their bodies work differently.

For example, dogs have claws, but their claws are dull. Cats have very sharp claws. This difference is because dogs always have their claws out. The claws get dull from rubbing against the ground as they walk. But cats can retract their claws. This means they normally have their claws hidden inside their paws. By retracting their claws, cats can keep them sharp for when they need to hunt for food or protect themselves.

Looking at the differences between cats and dogs is a great way to start learning about animal **anatomy** and behavior!



Two views of a cat paw with claws out

By the numbers:

There are about **74 million** pet dogs in the United States! Around **54%** of dog owners say their dogs sleep in their beds!

There are more than **90 million** pet cats in the United States. In fact, around **34%** of homes in the country have a pet cat!



Photo: iStock / vvvita

Fun Fact: A cat's meow!

Cats can make several noises. Cats can hiss when they are mad or let out a rumbling purr when they are happy. Of course, cats are best known for their meow.

When humans aren't around, cats mostly meow to get their mother's attention. Adult cats do not usually meow at each other. So it is interesting that adult cats do meow at humans. This behavior suggests that cats see us as their parents. When they want to eat, they meow at a human to get their attention. Smart cats know that humans will get them what they want!

Some people have noticed that a cat's meow can sound a lot like a human baby's cry. Some people think that cats may have developed a baby-like meow because it tends to get the attention of humans nearby!

The origins of dogs and cats

Anatomy (pronounced ann-at-oh-me) is the study of the parts of the body and how they work. Studying animal anatomy is an important part of animal science! When we look at dogs and cats, one big anatomical difference is their size! Unless you have a very small dog such as a chihuahua, cats tend to be a lot smaller than dogs. Why is that?

This difference comes down to the origins of dogs and cats. Both animals are **domesticated**. That means they have been raised to live alongside humans.

Long ago, humans and wolves crossed paths. Wolves learned that they could get food scraps by hanging around near human camps. Researchers think that over time, some of the tamer wolves started hunting alongside humans. As they worked together, the wolves were domesticated by the humans, and the wolves slowly became the dogs we know today. Scientists have actually studied dog DNA (their genetic code) to find that this domestication happened between 27,000 to 40,000 years ago!

Dog DNA shows exactly how their anatomy changed as they were domesticated. Most dogs today are smaller than wolves. Many breeds also have floppy ears and shorter fur than wolves. Domestication has changed dog anatomy!



Wolves (pictured), foxes, coyotes and dogs are all members of the Canidae family.

The story of cat domestication is a lot different! House cats today are most likely related to a Middle Eastern wildcat called *Felis sylvestris*. This name means “cat of the woods.” Cats today aren’t very different from these wild cats. In fact, the skeletons of wild cats and house cats today look almost exactly the same.

Researchers believe that cats sort of domesticated themselves. Instead of being bred to live alongside humans, wild cats seem to have figured out that living near humans was good for their survival.

Cat domestication dates back 9,500 to 12,000 years. This is around the same time that people in the Middle East began establishing agricultural societies. This means people were growing more grain and other crops than ever before. They needed to store this grain to feed people in the growing cities in the area. But storing grain came with a big problem: mice and rats.

Time for wild cats to shine! Wild cats likely figured out that they could find rodents to hunt if they stuck near these human cities. More humans meant more grain and more mice! Eventually, the cats moved in and made themselves at home!



Photo: iStock / davenhuntingphotography

Ancient wild cats probably looked a lot like the Scottish wild cat pictured.

Fun Fact: Why eat meat?

Dogs and cats both need a lot of protein! This means that both species need a lot of protein-rich meat. Cats are known as “obligate carnivores.” This means they must eat meat, and almost only meat! One reason they really need meat is because they need a nutrient called taurine, which is found in meat.

Dogs also need meat, so we can also call them carnivores. Yet dogs can also adapt to eating many plants, as long as their plant meals include enough protein. Dogs (and humans) can produce their own taurine. They don’t have to get it from meat.



Photo: iStock / anastas_



Dogs vs Cats!

DOGS

Good students!

Dogs can be trained to follow dozens of commands and even follow directions in sign language.

Best long-distance runners!

Cheetahs only run in short bursts. Greyhound dogs can sustain a speed of 35 miles per hour for about 7 miles.

Biggest difference in size!

The largest dog ever recorded was about 8 feet tall. The smallest dog was only 3.8 inches tall.

CATS

Fastest land animal!

Cheetahs can run up to 70 miles per hour.

Most popular pet!

There are more pet cats than dogs in the United States.

Long-living!

The oldest pet cat lived to be 38 years old! The oldest pet dog lived to be 29 years old.

Share your favorite pet!

Jr. Animal Scientist Charlotte drew this one-of-a-kind pup! Does someone in your family have a pet? Draw a picture of the pet below. Or draw your favorite kind of animal! Put your picture up or ask a grown up to send a shot of it to janimalscientist@asas.org. We'd love to feature your drawing in our next issue!



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