

For Creative Minds

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What Are Cats and How Are They Related?

Some people group all cats that roar and live in the wild (lions, tigers, jaguars, and leopards) as “big cats.” Other people use the size and weight of the wild cats to group them, including the roaring cats, cougars, snow leopards, and cheetahs in the “big cat” group. Some people include bobcats, clouded leopards, lynx, and ocelots in the big cat group but other people put these cats in a “medium cat” group. Other people think of “big cats” as any wild cat, regardless of size. What do YOU think makes a cat a big cat?

Scientists all over the world use a scientific name for all living things. No matter where the scientists live or what language they speak, they all understand the scientific names. It also avoids confusion over phrases like “big cat.” They sort or classify living things into groups, starting with very general sorts that get more and more specific: The two smallest (genus and species) groups become the scientific name.

Cats are mammals (like us) in the Carnivora family—or meat-eating mammals. There are two major sub-families:

Cats that roar (Pantherinae)



lion:
Panthera leo



tiger:
Panthera tigris



jaguar:
Panthera onca

Cats that don't roar (Felinae)



bobcat:
Lynx rufus



cheetah:
Acinonyx jubatus



domestic (pet) cat:
Felis catus



snow leopard:
Uncia uncia



cougar:
Puma concolor

Cats of the World: A Map and Matching Activity



Match the cat to its description. Answers are upside down, below. Can you find where the cats live on the map?



1 These endangered striped cats once roamed the jungles all across Asia but are now only found in isolated pockets.



2 The world's fastest cats are found on Africa savannahs (grasslands) and a small section of Iran (in Asia). Their spots help them hide in the tall grass.



3 Adult males are easily recognized by their manes. These great cats live in social groups called prides. They can be found in deserts, savannahs, and forests in parts of Africa and a small section of India.



4 Living high in the snowy mountains of Central Asia, these endangered spotted cats are rarely seen by humans.



5 This cat is known by many names including the one used in the book: mountain lion, panther, and puma. Solid in color, these cats can be found in many habitats in North, Central, and South America.



6 All cats will swim if they have to but this particular type of cat likes swimming! Some are spotted and some are black but they all live in the Central and South American rainforests.



7 Twice as big as an average domestic cat, these wild cats live in a wide range of habitats from southern Canada down to northern Mexico.

Answers: 1. Tigers; 2. Cheetahs; 3. Lions; 4. Snow Leopards; 5. Cougars (Mountain Lions, Pumas, or Panthers); 6. Jaguars; 7. Bobcats

Cat Senses and Adaptations



Cats have very large eyes for their body size to help them see in the dark. Like humans, the pupils open and close to let in more or less light as needed. Most non-roaring (small) cat pupils look more like tiny slits (to let only a little light in) when it is bright and big and round at night to let in lots of light.

Their eyes also act like mirrors at night to gather as much light as possible. That's why cat eyes glow or look red if caught in bright lights at night.

Like most predators, the eyes are on the front of the head (like our eyes) to judge distances. Cats can see more things in their "side" vision (peripheral) than we can.



Cats move each ear in different directions to track the sounds which helps them track their prey.



Unlike humans, cats can't taste much difference in foods.

Cat tongues are rough, like sandpaper, to help them drink water, to clean themselves, and to pull feathers, meat, and skin off the animals they eat.



Cats have a good sense of smell. Like many animals, cats "mark" their territory with smells. This tells other animals "stay out" or "this is mine." When a domestic cat rubs up against you, it is "marking you" to let other cats know that you belong to it. Cats and other animals also claw trees or go to the bathroom to mark territory.



Cats use their sense of touch as well as their eyes to help them move around in the dark. Their whiskers (vibrissae) sense changes in air currents to tell them where things are. When walking or pouncing on prey, cats' whiskers point forward to help them "see" in the dark. Blind pet cats can even walk around just using their whiskers to see! When sleeping or at rest, cats' whiskers are even with their heads.

Cats use their sharp claws to grab prey, fight, and climb trees. Most cats (except for cheetahs, fishing cats, and flat-headed cats) can pull (retract) their claws all the way inside their feet to help keep the claws nice and sharp. They sharpen claws on trees (or furniture).



The soft pads on the bottom of cats' feet act like cushions. Some scientists think that cats sense vibrations through their pads, helping them to know when something moves.



All cats have long, sharp, knife-like teeth (canines) to stab and kill their prey. Other teeth are used to hold onto their prey and to tear the meat off the bones.

Cat True False Questions

Can you tell which statements are true and which are false? Answers are upside down, below.

- 1 Many wild cats are threatened or endangered because of loss of habitat or over hunting.
- 2 All wild cats live by themselves (solitary). Mother cats will send their kittens off to find their own territory as soon as they are grown.
- 3 Kittens have baby teeth that are replaced by adult teeth, just like us.
- 4 All cats are meat eaters. Wild cats must hunt for their food. Pet cats have instincts to hunt prey and will often kill birds or mice—even if they aren't hungry.
- 5 All cats grab prey with their paws.
- 6 All cats can eat while lying down.
- 7 Cheetahs prefer to chase their prey. Most other cats prefer to keep low to the ground to stalk their prey and will usually pounce quickly, but will chase prey if they have to.
- 8 Cats wag their tails only when happy.
- 9 All cats purr when happy.
- 10 Wild kittens will push their feet up and down (like kneading bread) on their mother while drinking milk. Pet cats will sometimes do this to the people in their lives.
- 11 Wild cats live on every continent except Australia and Antarctica.
- 12 Pet cats have some of the same behaviors as their wild cousins.
- 13 Cats have different colors of fur and patterns.
- 14 Cats can talk to each other and to other animals like they do in the story.
- 15 Some scientists think pet cats descended from wild cats in Africa.

Answers: 1. True—some cats have been hunted and killed just because people are afraid of them and other cats (tigers, snow leopards) have been killed for their fur or other body parts; 2. False—lions live in social groups (prides); 3. True; 4. True; 5. True; 6. True; 7. True; 8. False—a cat swishing its tail could mean that it is upset; 9. False—some cats roar, but cannot purr, and others can purr, but cannot roar; 10. True—maybe as a way of saying “you are mine.”; 11. True; 12. True; 13. True; 14. False—many animals can communicate with each other but not by talking like we do; 15. True.