

NATIONAL SCIENCE EDUCATION STANDARDS

A. Science as Inquiry

Understanding about scientific inquiry

C. Life Science

K–4

Life cycles of organisms

- o Plants and animals closely resemble their parents.
- o Many characteristics of an organism are inherited from the parents of the organism.

Organisms and their environments

- o When the environment changes, some plants and animals survive and reproduce and others die or move to new locations.
- o Humans depend on their natural and constructed environments. Humans change environments in ways that can be either beneficial or detrimental for themselves and other organisms.

5–8

Reproduction and heredity

- o Every organism requires a set of instructions for specifying its traits. Heredity is the passage of these instructions from one generation to another.

Regulation and behavior

- o How a species moves, obtains food, reproduces, and responds to danger is based in the species' evolutionary history.

F. Science in Personal and Social Perspectives

K–4

Changes in environments

- o Changes in environments can be natural or influenced by humans.

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CONTENTS



Domestication: A Journey
Through Time 3

DNA 13

Wild Animals Among Us 14

Displaced Animals 19

How Many Animals? 22

Glossary 24





With each new **generation** of puppies, people kept only the most obedient ones for **breeding**. The ones that didn't run away were tame. When these puppies grew up, they had puppies much like themselves. Gradually, over thousands of generations, people bred a new animal with this **trait**. This process of taming a wild animal and breeding it for certain traits is called domestication. People eventually gave domesticated wolves a new name—dogs.

Breeding meant that dogs ended up looking different from wolves. For example, some had shorter fur and shorter tails. But the most important thing people did was to breed dogs that behaved differently from adult wolves.

The First Cities

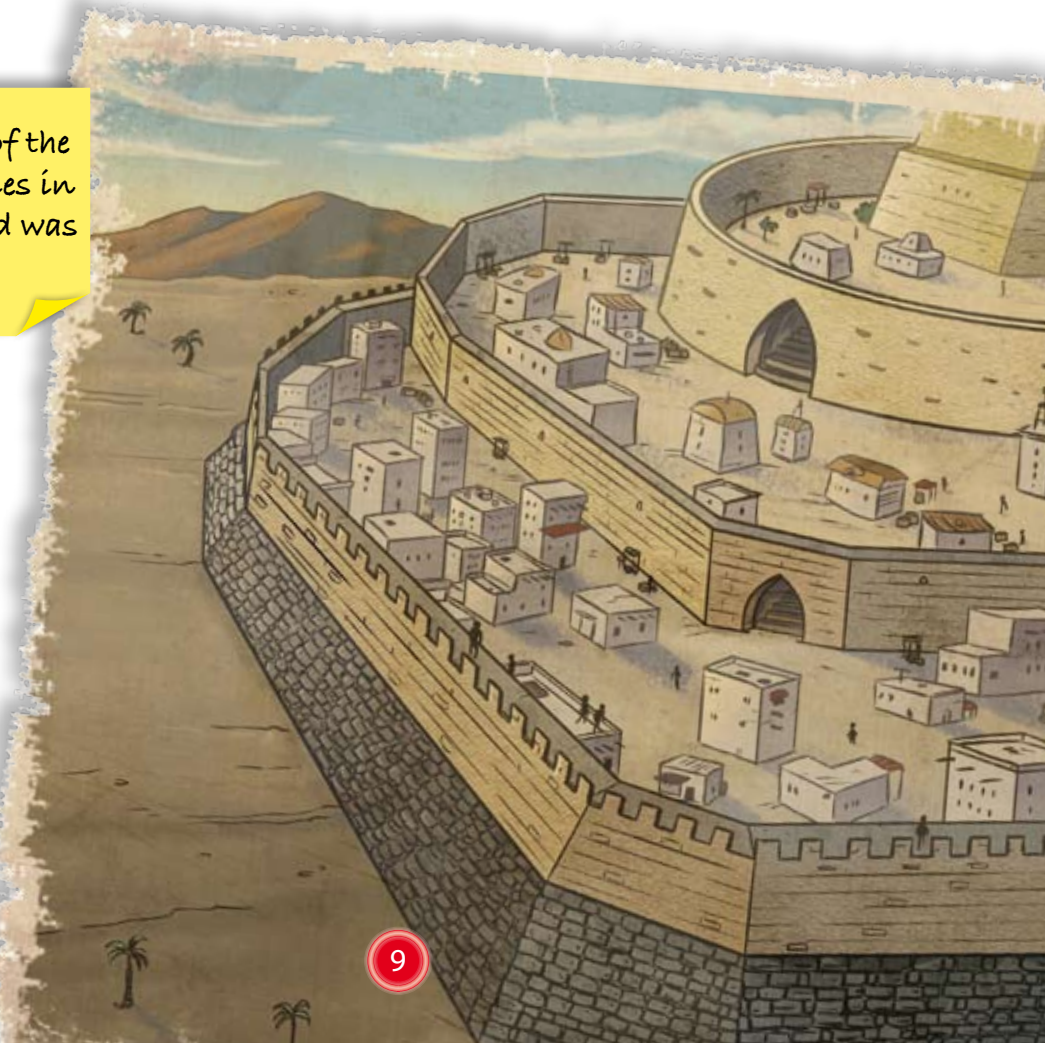
With farming, people had more food. They didn't have to spend all their time hunting and gathering. With more food, more people could live together in one place.

The places where more people started living together became the first towns and cities. This shift toward living in larger, **permanent** communities happened at about the same time in many different parts of the world.



One of the first cities in the world was Jericho.

Jericho may have looked something like this 10,000 years ago.



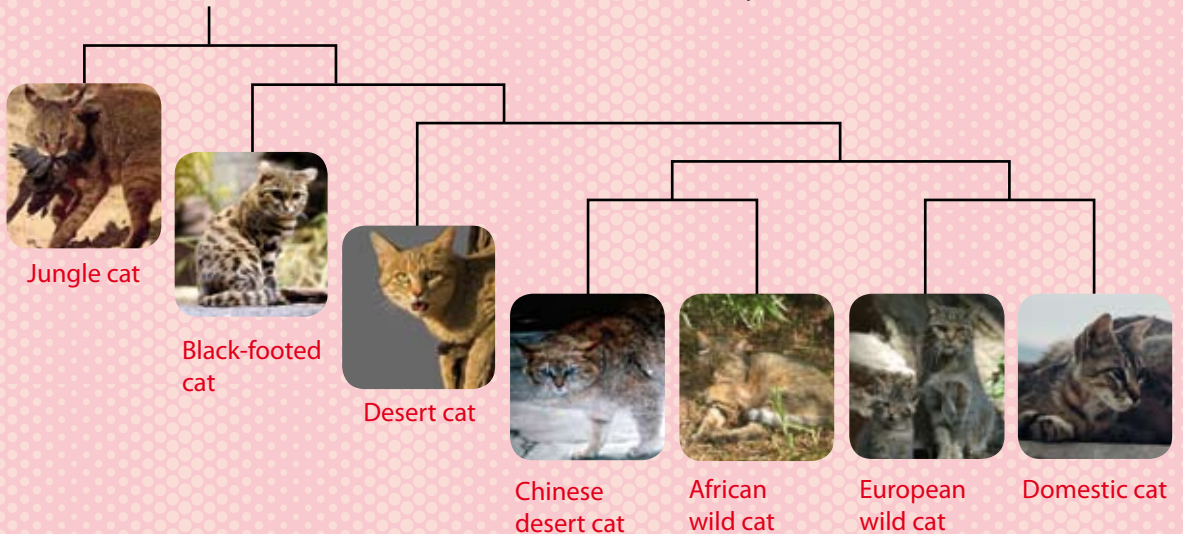
DNA

Inside every living thing there is a **code** called DNA (which is short for deoxyribonucleic acid). This code tells your body what it should look like and how it should work. By looking at the DNA from different animals, scientists can compare their codes. If the codes are almost the same, they know that the animals are closely related. By using DNA, scientists can make a “family tree” for an animal.

The domestic dog's family tree



The domestic cat's family tree



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MOUNTAIN LION HABITAT



Mountain lions are a natural part of this region's environment. Lions typically live alone and hunt between dusk and dawn.

Adult lions are generally wary of people and try to avoid contact. In the rare case of an encounter with a mountain lion, use caution.

IF YOU ENCOUNTER A MOUNTAIN LION



FACE LION. BACK AWAY SLOWLY.



BE L



KEEP CHILDREN CLOSE.

PICK UP CHILDREN WITHOUT BENDING.

IF A
FIC

NOTICE OF RESTRICTED

Lions and Tigers

Mountain lions come into some cities looking for food. However, it is too dangerous to let mountain lions live among us. Mountain lions are taken back into the wild, and so are other dangerous animals, such as poisonous snakes.



Did you know that Korean cities once had high walls around them? The capital city of South Korea, Seoul (pronounced *Soul*), was called "The Fortress City" because of its 20-foot-high (6.09-meter) wall. Why did Korean cities need such high walls? To keep out tigers!