

Lesson Plan: Orange Cat

Summary

In this session, Blade sketched an orange kitten while reflecting on the history of cats, their self-domestication, and their spread alongside human civilization. He described genetic quirks of orange cats and calicos, the rise of feral cats, and the importance of humane management through trap, neuter, and return practices.

<https://www.youtube.com/live/wsPrKoyBdpM?si=wTzPjKy5sx2FtoTg>

Objective

Students will learn about the origins, domestication, and spread of cats, explore the genetics behind coat colors, and discuss the ecological impact of feral cats along with humane management strategies.

Standards

- NGSS MS-LS4-4: Construct an explanation based on evidence for how genetic variations influence survival and reproduction.
- CCSS.ELA-LITERACY.RST.6-8.1: Cite specific textual evidence to support analysis of science and technical texts.
- C3.D2.Geo.5.6-8: Analyze the combinations of cultural and environmental characteristics that make places both similar to and different from other places.

Materials

- 9 Fun Facts list (required)
- Worksheet (required)
- Paper and pencils (optional)
- Whiteboard for class discussion (optional)

Activity

1. Read through the 9 Fun Facts with the class.
2. Discuss how cats domesticated themselves compared to dogs.
3. Explore the genetics of orange cats and calicos.
4. Analyze the impact of feral cats on ecosystems and consider humane management methods.
5. Complete the worksheet individually or in small groups.

Introduction

Begin by asking students if they have ever noticed differences in behavior between male and female cats or seen pictures of soldiers with animals. Lead into a short discussion about how animals, especially cats, have lived alongside humans for thousands of years.

Assessment

Students will be assessed on participation in discussions and completion of the worksheet, demonstrating understanding of cat domestication, genetics, and ecological impact.

Rubric

Criteria	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Content Understanding	Full understanding of Fun Facts	Mostly understands	Some understanding	Minimal understanding
Discussion Participation	Actively contributes thoughtful ideas	Contributes regularly	Occasional contributions	Rarely contributes
Worksheet Completion	All answers correct and detailed	Most answers correct	Some correct answers	Few or no correct answers
Technology Connections	Uses resources effectively	Adequate use	Limited use	No use

9 Fun Facts

1. Domestic cats (*Felis catus*) descend from the African wildcat (*Felis lybica*), which still roams parts of Africa and the Middle East today. Genetic studies show the domestic cat's closest relatives come from the Near East around 130,000 years ago, long before true domestication began.

Source: <https://www.scientificamerican.com/article/the-taming-of-the-cat/>

2. Cats first began associating with humans about 9,000 years ago in the Fertile Crescent. The earliest evidence of domesticated cats comes from a burial in Cyprus around 7,500 BCE, where a human and a cat were laid to rest together.

Source: <https://www.alleycat.org/resources/the-natural-history-of-the-cat/>

3. Cats domesticating themselves Unlike dogs, which were actively bred from wolves, cats essentially tamed themselves. Wildcats were attracted to human settlements for the rodents living off stored grain. Humans tolerated them for pest control, and over time the friendlier cats thrived alongside people.

Source: <https://www.smithsonianmag.com/smart-news/cats-may-have-been-domesticated-twice-180957960/>

4. Cats spread out of the Near East through trade routes and ships. Egyptians held them sacred, but Phoenician traders carried them across the Mediterranean, and Roman legions helped move them across Europe. By the Middle Ages, cats were found from Asia to Northern Europe.

Source: <https://www.smithsonianmag.com/science-nature/how-cats-conquered-world-180963749/>

5. Selective breeding of cats is relatively recent compared to dogs. Most recognized cat breeds were developed in the last 150 years, starting in the Victorian era with organized cat shows in England. Before that, cats were valued for function more than form.

Source: <https://blog.britishnewspaperarchive.co.uk/2013/02/08/changing-history-exploring-the-origins-of-the-modern-cat-fancy>

6. While most cat breeds were developed for appearance, a few did have functional roots. For example, the Maine Coon's dense coat and size made it a capable mouser in harsh climates, and the Siamese was prized in temples for its keen vocal warnings. Still, compared to dogs, most cat breeds lean heavily toward aesthetics.

Source: <https://www.msn.com/en-us/lifestyle/pets/how-10-fancy-looking-cat-breeds-were-actually-bred-for-function-over-fluff/ss-AA1FDIe2>

7. Orange cats are often thought of as ornery or mischievous, but genetics play a role. Their coat color is linked to a mutation on the X chromosome, which makes males far more common than females. This skew in sex ratio, along with roaming behaviors, may contribute to their reputation for being feisty and bold.

Source: <https://www.cnn.com/2025/05/23/science/orange-cats-genetic-mutation>

8. As cats spread globally, many slipped out of households and established feral populations. Unlike strays, feral cats are born and live without human contact, forming colonies in cities, farms, and wild spaces. Their adaptability has made them one of the most successful invasive predators on Earth, with heavy impacts on birds and small mammals.

Source: <https://www.kauairefuges.org/blog/feral-cats-harm-our-wildlife>

9. The most effective way to manage feral cat populations is Trap-Neuter-Return (TNR). Cats are humanely trapped, spayed or neutered, vaccinated, then released back into their territory. This prevents new litters while allowing the colony to stabilize, reducing suffering and ecological impact over time.

Source: <https://www.alleycat.org/resources/why-trap-neuter-return-feral-cats-the-case-for-tnr/>

Worksheet

Name: _____ **Date:** _____

Review

1. From which wild species do domestic cats descend?
2. About how many years ago did cats begin associating with humans?
3. How did cats domesticate themselves?

Discussion

4. How did Egyptian worship and Roman soldiers help spread cats?
5. Why do you think orange cats are mostly male?

Data Analysis

6. Compare the purposes of dog breeds to cat breeds. Give one example of each.
7. How does the Trap-Neuter-Return method help control feral cat populations?

Reflection

8. Why might people still care for feral cats even if they impact local wildlife?
9. What does the bond between soldiers and kittens reveal about humans and animals?