

Protecting Cats and Wildlife 6-8 grade

Themes: Biodiversty, Invasive species

Location:

Remote learning modification: Lesson can be taught over Zoom or Google Classrooms.

The PowerPoint, brainstorming, and assessments can be done in the classroom with student computers.

Standards:

NGSS

MS-LS2-2

Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

CCSS

CCSS.ELA-LITERACY.RI.7.8

Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

CCSS.ELA-LITERACY.RI.7.9

Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations o

Modifications, Adaptations:

For COVID-19 distance learning, or other remote learning modification, look for **Remote learning modifications** throughout the lesson plan.

If you are homeschooling and only have one student, give them one prompt and have them list the pros and cons of each viewpoint for the final activity. Ask them to come up with a compromise they think both sides would approve of, and explain why that solution is fitting for both sides.

Materials:

Washington Post PDF, National Geographic article PDF, Cat stories PDF, Scenario Prompts for final project PDF

Objectives:

Students will....

- 1. Summarize why scientists believe outdoor cats are harmful to wildlife.
- 2. Explore both sides of the outdoor cat issue by reading articles and watching videos.
- 3. Find common ground between people who experience problems with cats outdoors and people who let their cats outdoors.
- 4. Facilitate solutions to problems communities face with outdoor cats by working with someone who has an opposing viewpoint.
- 5. Justify why they think their solution(s) could be utilized by various stakeholders.

Vocabulary:

Biodiversity: Biodiversity is the full range of life in all its forms. This includes the habitats in which life occurs, the ways that species and habitats interact with each other, and the physical environment and the processes necessary for those interactions.

Feral: Un-owned cats who are born and live outdoors full time either alone or in colonies. Feral cats usually have to hunt for food, though some colonies are fed by cat-care groups and volunteers in special programs; feral cats are fearful of humans and avoid human contact.

Invasive species: An organism that causes ecological or economic harm in a new environment where it is not native. Invasive species are capable of causing extinctions of native plants and animals, reducing biodiversity, competing with native organisms for limited resources, and altering habitats. **Stakeholder:** A person or a group with an interest or concern in something.

Stray: Cats who roam outdoors for short to extended periods of time without human supervision; owned or semi-owned strays are regularly fed, possibly by more than one person; un-owned strays are lost or abandoned pets that may become feral; stray cats are usually comfortable interacting with humans.

Procedure:

1. Introduction to the issue

Explain to students they will be analyzing a global issue. What types of effects do domestic, outdoor cats have on wildlife populations? What role should individuals and communities play when ensuring the safety of both cats and wildlife? How might working together to solve this issue build stronger, more resilient communities?

Have students read the two following articles. The articles and their reading comprehension questions are part of this lesson packet, but the articles can also be found at the following links:

- 1. <u>Cats Are Natural Bird Killers. These Animal Experts Let Theirs Outside Anyway.</u>
- 2. The 232 Animals in this Photo Were Killed by House Cats in Just One Year.

After reading the articles and answering the questions, have a class discussion. Guiding questions could include: How did the two articles compare to another? Was one more rooted in evidence while the other more rooted in personal belief? Did the articles change your opinion of letting cats outdoors? After discussion, watch the following videos with the students to further introduce the topic:

The Story of Cats and Birds
Surviving the Wild Cats and Birds



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After watching these two videos, have students share with a partner what they felt was most impactful to them. Have them share:

- · Something they learned.
- Something they already knew.
- Whether or not they think outdoor cats are a hazard to wildlife (why/why not).
- Whether or not they think outdoor cats have better/ same/worse quality health than indoor cats.
- How have the authors of the articles and the videos shaped facts similarly? Differently?
- The videos and the articles mentioned, "biodiversity" and "invasive species". What do these terms mean and why are they important in this context?

Remote learning modification: Use Google/Zoom breakout rooms to have students discuss in small groups.

Learning more about cats and wildlife:

Read the following statements and have students stand up if they agree with them or stay seated if they do not. Encourage students to look around to see who agrees and disagrees with them.

- · Cats need freedom to roam outdoors.
- Letting a cat roam outdoors puts them in danger.
- Wildlife is very important for keeping communities healthy.
- Wildlife populations are not seriously affected by domestic cats.
- Spaying or neutering cats is important.
- Communities should enact laws to require people to fully supervise their cats when outside.
- It is only natural for domestic cats to hunt wildlife.
- We should treat cats with the same level of care as dogs.
- Cats should be licensed and identifiable (with collar, tattoo, or microchip), just like dogs.
- Protecting wildlife by keeping cats from roaming outdoors is part of protecting the environment.

Remote learning modification: Have students raise hands on Zoom/Google Classroom.

People in communities with opposing viewpoints often must work together to solve issues at an individual and community level. This means listening, empathizing, and working with as many stakeholders as possible to come up with solutions that fit each community. For example, people living in an urban community might have a different response to feral cat communities than people in rural communities.

The following stories outline outdoor cat experiences of three members of a community. Have students read the stories from Maria, Johann, and Damian. After reading the short stories, students will identify at least one problem the author of the story is facing. Students will then research at least three different solutions to the identified problem of each individual. Solutions must come from a reputable source. Students must cite their source.

In researching, students should answer the following questions.

- Describe the problem each of the community members is experiencing.
- What solutions to this problem were you able to find?
- Do(es) the solution(s) have evidence to support it?
- Is there common ground among the three characters?
- Can these three different problems have a common solution if the individuals work together? Explain.

Working together

By this point, it's likely the students have developed an opinion of whether domestic cats should be outdoors. For the next activity, you will group students into groups of four. In each group, two students should be "pro" cats outdoors and two students should be "against" cats outdoors. Students may choose to be in a role that is adversarial to their own personal belief. Each group will receive a prompt (see PDF scenario prompts for final project) and the groups must work together to find evidence-based solutions to their problem.

Finding solutions that fit both parties will take research, collaboration, compromise, and empathy. Students should prepare an oral and visual presentation of the problem their prompt presented and then outline how they developed a solution together. Their visual presentation can include a PowerPoint, Prezi presentation, movie, graphic, brochure, etc. and should cite sources appropriately.

Students will share their presentation with the class.

Remote learning modification: Students can still break up into partner groups and do work individually at home. Students will need to be responsible and schedule times for their group to meet virtually and put together a presentation. Presentations can be done over Zoom/Google Classrooms.

Part of this lesson has been adapted from Cats and Birds educational lessons. Link to more lessons from this organization are found below.



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Additional Resources:

You can use the following resources to build onto this lesson, or share these resources with students for their research project.

Supplemental Activities:

Cats and birds educational program for 7-9th grade students

Videos:

- Why do cats hunt?-BBC Earth
- Cats and wildlife: How much is too much?-American Bird Conservancy
- <u>Videos-American Bird Conservancy</u>
- Keep cat indoors- Cornell Lab of Ornithology

News Articles & Blogs:

- Understanding the hunting behavior of cats-International Cat Care
- Cats killing billions of animals in the US-BBC
- Domestic cat predation on birds and other wildlife-American Bird Conservancy
- To save birds, should we kill cats-National Geographic
- The moral cost of cats-Smithsonian Magazine
- Outdoor cats have oversized effect on neighborhood wildlife- Smithsonian Magazine
- When cats roam free, wildlife suffers-CNN
- Cats kill up to ten times more than natural predators-ZME Science
- Cats kill billions of animals a year-Live Science
- The killer at home: housecats may have impact on local predators-NPR

Scientific Articles:

- Keeping cats indoors could blunt adverse effects to wildlife
- Impact of free ranging domestic cats on wildlife in the U.S.
- State of birds 2014
- What biologists can do to counter TNR

Brochures and other resources:

- Keep cats indoors-USFWS
- Effects of domestic cats-The Wildlife Society
- · Cats and wildlife-Texas Parks and Wildlife
- Cats indoors card-American Bird Conservancy
- TNR bad for birds-American Bird Conservancy
- Cats, birds and you-American Bird Conservancy

Other important resources:

- Love wild birds? Keep your cat indoors-WFDW
- 22 ways to help Washington Wildlife-WDFW
- Bird be safe collars
- <u>Cats and Birds-American Bird Conservancy</u> (This website is a wealth of information on this topic).
- Safe solutions for cats-American Bird Conservancy
- Wildlife in urban areas-King County
- Cats indoors-Seattle Audubon
- Outdoor cats and their effects on birds-Cornell Lab of Ornithology
- Toxoplasmosis in seals from cats-NOAA