April 2021

Outline - Coyote Wildlife Management

Center for Urban Resilience

LESSON #5: Coyote Wildlife Management

OVERVIEW:
The purpose of this lesson is to facilitate student acquisition of knowledge on topics related to human and coyote interactions. This will focus on how humans and coyotes interact in urban areas and ways in which scientists can mitigate conflicts between the two species. Students will research and present their findings via a PowerPoint presentation.

SUB-QUESTIONS:
- What are the benefits of coyotes in human areas?
- How do coyotes benefit from humans?
- In what ways do humans and coyotes conflict in urban areas?
- What have other cities done to mitigate these conflicts?
- How can we consider all stakeholders and create an effect coyote management plan?

WAYS OF KNOWING URBAN ECOLOGY:

	Students will…
Understand	. Learn about interactions between humans and coyotes.
Talk	. Research in sub-groups how to mitigate conflict between the two species.
Do	. Organize material for presentation to a larger audience.
Act	. Create a presentation and present it to peers.

SAFETY GUIDELINES:
None for this lesson.

PREPARATION:
Time: Four (4) class periods (50 mins ea).

MATERIALS:
Activity 5.1 (1ˢᵗ class; 20 minutes): PowerPoint – Coyote Wildlife Management
- Laptop
- Projector & Screen
- Instructional PowerPoint Slides – Coyote Wildlife Management
- Student Handout for note-taking (M12_L5_A5.1_SH1)

Activity 5.2 (1st class; 5 minutes): Activity – Backyard Survey
- Laptop
- Projector & Screen
- Backyard Survey Handout (M12_L5_A2_SH2)
- Instructional PowerPoint Slides – Coyote Wildlife Management

Activity 5.3 (remainder of 1st class and entire 2ⁿᵈ class): Activity – Coyote Wildlife Management Science Probe
- **Assign students to six groups**
- Student laptops or access to computer lab for research
- Student Science Probe Handouts (M12_L5_A1_SH1_GRP1 through M12_L5_A1_SH1_GRP6)
- Pens/pencils

Activity 5.4 (3ʳᵈ class): Activity – Develop Coyote Wildlife Management Plan
- **Assign students to 10 groups**
- Student laptops or access to computer lab for research
- Student Handout for note-taking (M12_L5_A5.1_SH1)
- Pens/pencils

Activity 5.5 (4ᵗʰ class): Present Coyote Wildlife Management Plan
- Laptop
- Projector & Screen

Instructional Sequence (4 class periods):

Activity 5.1 (1st class; 20 minutes): PowerPoint – Coyote Wildlife Management

- Step 1: Present introductory PowerPoint slides to students. These will introduce students to human and coyote interactions as well as plans to mitigate negative interactions.
- Step 2: Have students take notes as they will spend the third class researching similar coyote management plans and preparing a presentation.
- Step 3: Allow time for questions and clarify understanding and any misconceptions.

Activity 5.2 (1st class; 5 minutes): Activity – Backyard Survey

- Step 1: When you reach slide 34, remind students about coyote diets and ways in which they use cities for resources. Explain that human behavior attracts coyotes to urban areas.
- Step 2: Explain to students that they can help a current research project and become Citizen Scientists by taking the survey in their own yard and the yards of friends and relatives. Give them the handout and allow them to take as many as they would like.
- Step 3: Tell them that they can present their results in the final class when they do their final presentations. All handouts will be collected at the end to be used for the research project at Loyola Marymount University.

Activity 5.3 (remainder of 1st class and entire 2nd class): Activity – Coyote Wildlife Management Science Probe

- Step 1: Divide students into six groups.
- Step 2: Assign each group to a certain role based on the handouts provided. Students will be assigned to be a rancher, tree nursery owner, farmer, airport safety director, bird conservationist or local resident.

- Step 3: Have them read their assigned scenario and research the best methods for solving the problem. Prepare each group to give a presentation and then debate the solutions with the other groups in the next class period.
- Step 4: Students can gather at their laptops/computer stations to begin research/printing out their visual aids.
- Step 5: Begin the second class period by allowing students an additional 15 minutes to prepare their presentation.
- Step 6: Give each group 3-4 minutes to present their solution.
- Step 7: Engage students in a debate where they discuss what each group likes and dislikes about the other presentations, staying in character. Can they find a compromise?
- Step 8: Allow a few minutes at the end to clear up any misconceptions and ask students what they have learned.

Activity 5.4 (3ʳᵈ class): Activity – Develop Coyote Wildlife Management Plan
- Step 1: Divide students into 10 groups.
- Step 2: Explain to them that they will be creating a PowerPoint presentation on an effective coyote management plan for their city.
- Step 3: Have them use at least three city coyote management plans as their guide. Tell them that at least one of those must be from outside the state of California, as many of the California plans look similar.
- Step 4: Students can gather at their laptops/computer stations to begin research/printing out their visual aids.
- Step 5: Suggest that their PowerPoints include a little bit about what problems they see coyotes presenting in their city and what they think the best solutions would be.

Activity 5.5 (4ᵗʰ class): Present Coyote Wildlife Management Plan
- **Pre-Lesson:** Have students send you their presentations ahead of time so you can have them prepared for the students to present.
- Each group should have 3-4 mins to give their presentations, allowing 1-2 minutes for Q&A.
- Conclusion / Wrap-up / Exit Activity: Audience Q&A
- Note: It is always a nice idea to invite the Campus Administrators (Principal, Asst Principal), so they can see the great work students are doing in science!
- Note: It is also a nice idea to take pictures and post them to a classroom blog or the classroom web site to showcase student work.

Summary Notes/Conclusion: By the end of Lesson 5, students will be able to (SWBAT):
- Understand interactions between humans and coyotes
- Understand viewpoints of various stakeholders and conduct a debate where different ideas are considered
- Take notes during PowerPoint presentations
- Conduct research on coyote management plans
- Work as a team to successfully complete a project
- Create a presentation about a topic
- Present work to a larger audience