**Lesson Plan for the**
**NMU Information Literacy and Leadership Institute**

**Tags:** Environmental Science, Biology, Ecology, Wildlife, US History, Social Studies, Conservation

**Title of Lesson Series:** Wolf Controversies and its Influence on Ecology Today

**Subject Area:** Biology, Environmental Science, or US History

**Grade Level:** 9-12

**Approximate Time to Do Series:** Four 50-minute class periods.

**Lesson Overview:** The theme of this lesson is the idea that misconceptions and misunderstandings about nature from generations ago still impact our treatment of wildlife and the subject of ecology today. The lesson will take place in three portions and will be primarily reading, brainstorming, and discussion-based. The first portion will have students reflect on their personal feelings towards wildlife, primarily wolves. The second portion will develop students' understanding of the treatment of wolves in US history. The third portion will address critical information literacy by having students examine primary sources and consider how the ideas presented in said sources can still impact people's perceptions of wildlife today.

**Standards Addressed:**

Science
HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.

HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

Social Studies
6.1.4 Growth and Change – explain the social, political, economic, and cultural shifts taking place in the United States at the end of the 19th century and beginning of the 20th century

**Modifications for Diverse Learning Needs:**

Part 1:

- The word web can be made digitally instead of on paper for those who struggle with writing.

Part 2:

- The reading level of the article can be lowered through an AI platform or some other similar program.
- The teacher could choose to read the article aloud and have students follow along, rather than have the students read it individually.
- The three lists that students will make while reading could be reduced to just two or one.

Part 3:

- The teacher should read the sources aloud.
- The number of questions can be reduced throughout the worksheet to accommodate students who need more time for completion of assignments.

**Lesson Objectives:**

Students will work to answer the following questions during this lesson series:

- What are the various thoughts and feelings that people have about wildlife, especially wolves?
- How do perceptions of wildlife from centuries ago still affect peoples' perceptions today?
- How has our treatment of wildlife then and now affect the biodiversity and health of ecosystems today?

**Lesson Procedures:**

Part 1: Wolf Perceptions Digital Collage
Materials Necessary:

- Pen/pencil
- Loose paper or science journal
- Chromebooks/another Google Slides compatible device

The teacher will begin by putting up a picture of a wolf on the projector or whiteboard without any words or context. They will ask students to silently observe this image. In a science journal or on a piece of paper, students will make a word association web of whatever comes to their mind about a wolf as they observe the image of the wolf for about 5 minutes.

When 5 minutes has elapsed, the teacher will ask students to share their word web in partners for 1 minute. Once students have shared, the teacher will ask students to share a word or phrase from their partner's word web with the class.

The teacher should explain to students at this point that we're trying to develop and dig into our current perceptions of wolves. In pairs of 2 or 3, students will create a digital collage with Google Slides that represents the word webs they created. They should use images, graphics, or designs to represent the content of their word webs. They should refrain from using any words or phrases on the collage. Both/all 3 partners' word webs should be represented on the digital collage. This should take students up to 45 minutes.

Upon completing their collages, groups should present their collages in some method. Students could present them in front of the class, as a gallery walk, or in some other method. The teacher will then ask students to write a reflection on the collages they made/saw which answers the question "why do you believe that you and others perceive wolves in the way that we do?" which will lead into a class discussion on the topic.

Part 2: The History of Wolf Wars in America
Materials Necessary:

- Pen/pencil
- Accompanying worksheet
- Accompanying slides, if desired

The teacher will describe early perceptions of wolves in North America. First, they will share with the class some beliefs that Native Americans had about wolves (they represented courage, strength, loyalty, were portrayed in many stories and lessons throughout N. America, etc.) and may do so with a slide if they so choose.

Then, students will do an article interaction with a PBS article called "Wolf Wars." While they read they should complete the accompanying worksheet.

After students read, they will discuss in groups their thoughts and reactions to the article. The teacher will then ask them to answer the following questions and be prepared to discuss as a class:

- "What were the reasons that peoples' feelings about wolves changed over the course of American history?
- Are these feelings still impacting the US today? Why or why not?

Part 3: The Nature Fakers Source Examination
Materials Necessary:

- Pen/pencil
- Accompanying worksheet

The teacher will guide the class through a guided worksheet that helps students evaluate the "Nature Fakers" letters and interviews. The second page

requires the teacher to find three images from the early 1900s that portray animals and how people perceived them at the time. Some recommended images are the bison skull tower image taken in Michigan and the wolf skin image from the PBS article previously used.

As the primary sources are at a difficult reading level, it is recommended that they are read aloud by the teacher. The teacher can then allow students to work through the questions in groups, go over them, and then move onto the next section.

**Assessment:**

Formative: The teacher will formatively assess all throughout Part 3 of the assignment by chunking the worksheet and going over the questions as a class to check for understanding before moving on to the next section.

Summative: Students will work towards completing a project where they pick a commonly misunderstood/misrepresented organism and correctly portray their ecological niche and significance. This will be in the form of a poster or other displayable format.

**Supporting Materials:**

The only supporting material needed is the accompanying worksheets referenced previously.

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