Lesson Plan #3:
Reading Graphs and Analyzing Data- Wildlife Vehicle Collisions

Objectives
Students will:
- uncover the correlation between wildlife-vehicle collisions (WVCs) and their frequent occurrence near or between crucial habitat features.
- identify local roads and highways as hotspots for iconic wildlife species.
- utilize Google Forms to submit their completed assignment.
- practice reading and analyzing data related to local wildlife-vehicle collisions in Teton County, WY.

Overview
Wildlife plays a critical role in maintaining the ecological and economic well-being of Jackson Hole. However, there is still significant room for improvement in making our community safer for drivers and less harmful to wildlife.

Materials
- [Wildlife-Vehicle Collision Survey](#)

Background InformationWildlife Vehicle Collision Survey (Google Form)
- Teton County reported 220 wildlife-vehicle collisions (WVCs) from May 2019 to April 2020 and 165 WVCs from May 2020 to April 2021.
- The three-year average from 2019 to 2021 was around 217, lower than the previous peak of approximately 274 during 2016-2018. The severe winter of 2016-2017 may have increased WVCs by causing more animals to congregate near roads.
- The number of reported WVCs from May 2020 to April 2021 was lower than the ten-year average of 234 WVCs per year.
- The dataset has primarily included ungulate species, with elk representing 16%, moose 7%, and mule deer 67% of the total reported WVCs. Other species, including coyotes, North American porcupines, red foxes, striped skunks, and white-tailed deer, comprised approximately 1% of the WVCs during the ten years. In 2020-2021, 19 striped skunk WVCs were reported out of 35 WVCs. The remaining species each represented less than 1% of the data set.

Procedure
1. Please raise your hand if you have witnessed a dead animal on the roadside.
2. Raise your hand if you or someone you know has been involved in a wildlife collision.
3. Raise your hand if you know someone seriously injured in such an incident.
4. Explain that the purpose of this activity is to raise awareness about WVCs and

uncover the correlation between these collisions and their frequent occurrence near or between crucial habitat features.

5. To complete the questionnaire on wildlife-vehicle collisions in Teton County, WY, please refer to the figures and appendix in this Google Form, Wildlife-Vehicle Collision Survey. Additionally, students can access the May 2019 - April 2021 Teton County Wildlife-Vehicle Collision Database Summary Report by copying (control/command C) this link: http://jhwildlife.org/wp-content/uploads/2019/07/WVC_2019_SummaryReport_Teton-County_WY.pdf.

6. Next, instruct students to open a new tab on their browser by clicking on the "+" sign at the top of the screen.

7. Then instruct students to paste (control/command V) the link into the browser and click enter to access the report.

Reflection/Evaluation

As a reflection and evaluation activity, students can answer the following questions:
Correct/sample answers:

1. What <u>2 years</u> had over 300 wildlife-vehicle collisions, according to Figure 2? *(2010-2011, 2016-2017)*

2. What <u>else</u> does Figure 2 reveal about the total annual wildlife-vehicle collisions by year? *(Sample answer: The number of collisions was fewer than 75 from 1990-1991 and close to 400 from 2010-2011.)*

3. What is one specific fact or observation you can determine using the line graph in Figure 3? Please write a complete sentence.
Potential answers:
-WVCs have increased in Teton County, WY, over the last 30 years, from 50/year in 1990 to over 250/year in 2016.
-The greatest significant decrease in WVCs was from 2018-2021.

4. According to Figure 4, which two major highways have the highest number of wildlife-vehicle collisions? *(Hwy 89 South and WY 22)*

5. What were the <u>2 years</u> with the fewest numbers of elk hit on the same roads, according to Figure 5? *(2012-2013 and 2015-2016)*

6. Using Appendix B, which three species were involved in the most wildlife-vehicle collisions. *Check 3 boxes! HINT: Use totals at the end of the rows (horizontal) on the right side of the table. *(Elk, Moose and Mule Deer)*

7. From 2010- 2011, 2015-2016, and 2017-2018, how many TOTAL moose were hit on WY 22, according to Figure 7? *(15+ 5+ 14= 34)*

8. Which major roadway had the highest number of Mule Deer WVCs, according to Figure 9? *(US 89)*

9. According to Figure 11, which month had the highest number of TOTAL wildlife-

vehicle collisions from 2010-2021? *(September)*

10. **Create (1) a question similar to one** in this form using any tables and/or graphs. Please include **(2) the answer** AND **(3) which figure/appendix** should be referenced.
Sample answer: (1) Q: How many North American Porcupines were killed from 2011-2021? (2) A: 29 (3) Appendix B