

**Weekly Lessons/Overview and Goals:** Students will understand how changes in the ecosystem affect the food web.

**TEKS: 4.9A & B**

4.9 Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment. The student is expected to:

4.9A investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food

4.9B describe the flow of energy through food webs, beginning with the Sun, and predict how changes in the ecosystem affect the food web

**TEKS ABOVE AND BELOW**

**Fifth Grade:**

5.9A observe the way organisms live and survive in their ecosystem by interacting with the living and non- living components (R)

5.9B describe the flow of energy within a food web, including the roles of the Sun, producers, consumers, and decomposers ®

**Third Grade:**

3.9A observe and describe the physical characteristics of environments and how they support populations and communities of plants and animals within an ecosystem (S)

3.9B identify and describe the flow of energy in a food chain and predict how changes in a food chain affect the ecosystem such as removal of frogs from a pond or bees from a field

## Key Vocabulary

TEK 4.9A	TEK 4.9B	
<b>producer</b>	<b>food web</b>	<i>herbivore</i>
sunlight	food chain	<i>carnivore</i>
<b>consumer</b>	ecosystem	<i>omnivore</i>
<b>carbon dioxide</b>	flow	<i>predator</i>
organism	<i>perish</i>	<i>survive</i>
oxygen	<i>thrive</i>	<i>prey</i>
water / <b>agua</b>		source

## HELPFUL LINKS:

[Caraway Library Resources](#)

[Human Impact on the planet \(more for you as background or to share\)](#)

[Human Impact on the oceans](#)

**STEAM CHALLENGE WEEK (1 FIELD TRIP DAY, 3 PLANNING DAYS AND 1 DAY TO SHARE)**

**Monday:**

- Mission Day for Zeb, Schermerhorn and Marshall (self-contained all day)
- Field trip day for Rinehart (Rivera), Baird and Wilder

**Tuesday:**

- Mission Day for Rinehart (Rivera), Baird and Wilder (self-contained all day)
- Field trip day for Zeb, Schermerhorn and Marshall

**Theme:** How do changes made by humans in an ecosystem affect a food web?

1. VR Field TRIP!
2. Introduction to STEAM week. Students will be asked: How can we educate others about the importance of protecting ecosystems?
3. [ASK/IMAGINE](#): Share this image with students. Begin brainstorming ideas with class. To help guide students, talk about things humans do that affect ecosystems: water contamination via pollution, deforestation, air pollution. {Question: *In what way do humans do the most harm? How could we educate others about the importance of protecting ecosystems? Why does this matter to humans?*}
4. See [Engineering Design Process](#) presentation.
5. Planning! Create teams. Allow time to plan.  
{Using your prior knowledge, what can you do to reach others and educate them on how ecosystems are impacted by humans?} Ideas: PSA using green screen, podcast, stop motion video, poster

**PLANNING DAY 2:** Science Class Time

- Meet with individual teams and check progress. Today students will work on products.

**PLANNING DAY 3:** Science Class Time

- Meet with individual teams and check progress. Today students will complete products.

**PLANNING DAY 4: Mission Accomplished!**

- **SHARE:** Mission Accomplished ([View STEAM Day Schedule](#))
- 8:00-9:00 Teams finalize completion of the mission.
- 9:00-10:00 Gallery Walk with buddy class (25 minutes each per class)