A Lesson on Breaking the Food Chain
by Stephanie Shuerger

Grade Level: Grade 4
Subject Area: English Language Arts
Lesson Length: 2 hours
Lesson Keywords: food chain, food web, disruption, cause and effect, science, fourth grade
Lesson Description: This lesson is modeled for a fourth grade class on the aspects and detail of the food chain. The lesson will not only provide the student with ample research material, but have the student actively thinking about the cause and effect process as well as integrate tier 3 words.

Common Core Standards Covered with This Lesson
CCSS.ELA-Literacy.RL.4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
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CCSS.ELA-Literacy.RI.4.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
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CCSS.ELA-Literacy.W.4.1: Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
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CCSS.ELA-Literacy.W.4.9b : Apply grade 4 Reading standards to informational texts (e.g., ?Explain how an author uses reasons and evidence to support particular points in a text?).
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CCSS.ELA-Literacy.L.4.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.
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CCSS.ELA-Literacy.L.4.6: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation).
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Lesson Content: Book/Story/Reading Passage

Instructions: Please read the following reading passage as many times as needed (aloud and silent) before starting to go through other lesson pages. Understanding the content of this passage is very important since the lesson activities will be all about this content. Feel free to print the passage if needed.

Breaking the Food Chain
by

Content: A food chain is a link between plants and animals. It starts with a plant. The next?part of the link is a plant eater. When the prairie plants were uprooted, the animals that?depended on them lost their food source. So while the farmers produced more food for?people, they broke the animals food chain. For example, if a bird needs seeds to eat and?the plant is gone, that bird will not be able to survive. And the animals that ate that bird?wont have any food, either.?

A food chain is part of a bigger system called a food web. That web links the living?things in an environment. The herbivores in that system depend on the plants. If the plants?are removed, the herbivores cannot survive. Herbivores in Chicago include rabbits,?squirrels, and many insects. Long ago, they used to include bison and deer. Today you will?find some deer in some parts of this area, but you wont find them in the city.?

When herbivores lose their food, they die out. Then the carnivores, the animals that?eat other animals, lose their food, too. Wolves used to depend on the deer for their food.?Without deer, the wolves lost their food. Foxes died out, too. They had hunted birds, even?catching ducks when they were on the side of ponds.?

Remove just one kind of plant from an environment and you disrupt a food chain.?Plow up the land and you destroy the whole system.?

What happened in Chicago? People moved in. They built homes. They built?streets. They took away land from nature. Look at this timeline and youll see how more?and more people moved here. We dont have the numbers for the bison or deer. But we?know that today there are no bison in Chicago, you will only find them at the zoo.?

1880 The population of the city is 503,185; farms continue to expand?

1890 The population of the city is 1,099,850?

1900 The population is 1,698,676?

1910 Factories expand in the city; population is 2,185,283?

1920 The citys population has grown to 2,701,705?

1930 The citys population is 3,376,438

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Task 1: Vocabulary

Instructions: Please complete the following vocabulary activity by choosing the correct meaning of each word selected from the passage and use of each word correctly in a sentence.

Q: 1 **WordPhrase**: herbivores **WordPhraseTier**: 3
Question: The author of this nonfiction reading mentions that herbivores include rabbits and squirrels. What does the author mean by "herbivores" in this reading?
A: Herbivores are animals that eat only grass.
B: Herbivores eat plants.
C: Herbivores eat other herbivores.
D: Herbivores eat both plants and other animals.

Question: Which one of the sentences below uses "herbivore" correctly?
A: The class voted on getting a class pet, and chose to get a snake, which is an herbivore.
B: My friend got a pet that eats both plants and animals, which is called an herbivore.
C: I got a rabbit for Christmas. I love herbivores!
D: An herbivore eats snow.
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Q: 2 **WordPhrase**: carnivores **WordPhraseTier**: 3
Question: The author said that wolves are carnivores. What does the author mean by "carnivores" in this reading?
A: Carnivores eat plants.
B: Carnivores eat plants and animals.
C: Carnivores only drink water.
D: Carnivores are animals that eat other animals.

Question: Which one of the sentences below uses "carnivore" correctly?
A: A rabbit is most certainly a carnivore.
B: I had a lot of fun at the carnivore.
C: The class pet, a snake, was a carnivore.
D: Dinosaurs that eat plants are called carnivores.
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Q: 3 **WordPhrase**: food chain **WordPhraseTier**: 2
Question: The author says "A food chain is part of a bigger system..." What does "food chain" mean in this sentence?
A: A food chain in the line that you wait in for lunch.
B: A food chain is a link between plants and animals.
C: A food chain is a lunch order made by teacher's weekly.
D: A food chain consists of only herbivores.

Question: Which of the following sentences uses "food chain" correctly?
A: Wolves and smaller animals are a part of the food chain.
B: The food chain was so long, I didn't have time to eat lunch today.
C: I love the food chain McDonald's.
D: Food chains are great ways to stay in contact with your friends.
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Q: 4 **WordPhrase**: disrupt **WordPhraseTier**: 2
Question: The author mentions "Remove just one kind of plant from an environment and you disrupt a food chain."
What does "disrupt" mean in this sentence?
A: Disrupt means help in any way possible.
B: Disrupt means stop, or halt the process or system.
C: Disrupt means slow down.
D: Disrupt means to not affect in any way.

Question: Which of the following sentences uses "disrupt" appropriately?
A: The class pet escaping from it's cage caused a disruption in the math lesson.
B: I disrupt with your opinion.
C: I don't believe Tony and disrupt him a lot.
D: I will help the teacher prepare for the lesson and disrupt the materials.
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Task 2: Forum Discussion

Instructions: This discussion forum will have questions for students to respond. Read the posted questions, and respond to each. Students are responsible for posting one initial and and two peer responses for each topic.

1 - Why is the food chain important?

Why is the food chain so imporant? Why does the author stress how bad the disruption of a food chain would be?

2 - What would happen if the food chain switched?

What would happen if the roles in the food chain switched? What if carnivores became herbivores and herbivores became carnivores? Would that change anything, or would the role reversal equal out?

3 - How do rural and urban areas compare?

The author makes an example of Chicago. Do you think the food chain is the same in all places, or that it can change between rural and urban areas?

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Task 3: Writing Activity
Instructions: If a link of the food chain was removed, what do you think would happen to the rest of the food chain? Would it affect the levels below it? Would it affect the levels above it? What kind of effect would removing the link from the food chain would have on the land? Please be specific and provide a detailed reponse to all questions. (250 word minimum)

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