

# Building a Web of Life



## Next Generation Science Standards Disciplinary Core Idea: LS4.D Biodiversity and Humans

Populations live in a variety of habitats and change in those habitats affects the organisms living there.

### Science and Engineering Practice:

Obtaining, evaluating, and communicating information

### Crosscutting Concept:

Systems and system models

### Common Core State Standards:

**CCSS.ELA-Literacy.W.3.7:** Conduct short research projects that build knowledge about a topic.

## ACTIVITY DESCRIPTION

In this Pre Field Study Activity, each student will research information about an organism that lives in one of our local habitats: prairie, woodlands, or wetlands. Students will then play a game that explores how the organisms they researched are connected to each other.

## GUIDING QUESTIONS

- What are characteristics of organisms that live in our local habitats?
- How are these organisms connected to each other?

## OBJECTIVE

Students will demonstrate their understanding of how organisms interact in a habitat through researching organisms in a local food web.

## VOCABULARY

**Organism** - an individual animal, plant, or single-celled life form

**Predator** - an organism that hunts and kills other animals for food

**Prey** - an animal that is hunted and killed by another animal for food

## MATERIALS

PER STUDENT:

- Printed copies of the Web of Life card
- Crayons, colored pencils, or markers
- Science notebook

PER CLASS

- Whiteboard, chalkboard or chart paper to display a **KWL** chart  
(**K**now, **W**ant to Know, **L**earned)

## PREPARATION

Make a copy of the Web of Life card for each student. Create a KWL chart for the class.

## SUPPLEMENTARY MATERIALS

PER STUDENT:

- Computer or mobile device if available

This time can be  
divided across  
multiple days



70  
MINUTES

## Building a Web of Life Procedures

### Engage | 10 minutes

1. Create a KWL chart. (**K**now, **W**ant to Know, **L**earned)
2. Ask students to name organisms (plants and animals) that live in their neighborhoods. List these organisms under the “**K**” column of the KWL chart.
3. Discuss how these organisms interact in their habitat. Do some of the organisms eat each other for food? Discuss the terms prey and predator as they come up. Do some organisms use each other for shelter such as... ? Remind students that humans are organisms as well.
4. Explain that students will be taking a field trip to a local habitat where they will see many organisms and can observe how they interact. Under the “**W**” column of the KWL chart, record what students would like to learn during the field trip.
3. Instruct students to walk around the room and find another student with an organism card that their organism is connected to. Once two students have discovered that they are connected, ask them to stop and stand next to each other.
4. When all students have formed pairs, ask students to explain to the class the connection between their organisms. For example, a student with a monarch butterfly organism card could pair up with a student with a milkweed organism card and explain that the monarch butterfly eats the milkweed.
5. Repeat the game a few times, encouraging students to find a different pair each time.
6. Ask students to return to their seats and write a few sentences describing how their organism is connected to another organism in their science notebook.

### Explore | 30 minutes

1. Tell students that they will each research more information about one organism to become the class “expert” on that organism. Distribute a Web of Life card to each student and explain that they will record what they learn by making a scientific drawing of their organism and answering the questions on the card.
2. Refer to the list of Organisms to Research (see page 8) and assign or ask students to choose an organism to research.
3. Provide students time and access to a computer or mobile device to conduct research and complete the Web of Life card. Instagrok (instagrok.com) is an educational search engine that provides students with an interactive concept for easily accessible information. If students do not have access to computers or mobile devices, provide time and access to reference materials.

### Explain | 10 minutes

1. Ask each student to present the information they learned about their organism with the class.
2. After each presenter, ask students to share new ideas that can be added to the “**L**” column of the KWL chart.

### Elaborate | 15 minutes

1. Ask students to consider what they need to survive (food, water, shelter). Explain that different organisms rely on one another for food and sometimes shelter. In this way all organisms in an environment are inter-connected.
2. Ask all students to stand up and hold their *Web of Life* card in front of them.

### Evaluate | 5 minutes

Ask students to complete the summative questions in their science notebooks or as an exit slip.

Summative Questions:

1. What is one thing you learned about the organism you researched?
2. What is one thing you learned about another organism?
3. Describe how your organism is connected to another organism.

### Differentiation

**Extension:** Ask students to choose one of the questions under the “**W**” column of the KWL chart and do some research to answer this question for the class.

Notes on Modifications for Your Diverse Learners:

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## Building a Web of Life Web of Life Card

Name of organism: \_\_\_\_\_

Drawing of organism:



What plants and animals does  
this organism need to survive?

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What plants and animals depend  
on this organism to survive?

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## Building a Web of Life Organisms to Research

### Prairie

bluestem grass  
Indian grass  
northern prairie dropseed  
prairie dock  
compass plant  
yellow headed coneflower  
grasshopper sparrow  
northern harrier  
smooth green snake  
bumblebee  
badger  
American toad  
coyote  
monarch butterfly  
milkweed  
worm  
human

### Woodland

downy woodpecker  
white oak tree  
white trillium  
scarlet tanager  
red-headed woodpecker  
squirrel  
raccoon  
Cooper's hawk  
blue-spotted salamander  
gray tree frog  
gray fox  
white-tailed deer  
short-tailed shrew  
walking stick  
June bug  
shelf fungus  
human

### Wetland

cattail  
muskrat  
willow tree  
dragon fly  
bullfrog  
arrowhead  
painted turtle  
great blue heron  
red winged blackbird  
duckweed  
northern water snake  
crayfish  
mushroom  
human