 **INTERACTIVITY**

**Food Webs and Invasives**

How do invasive species affect an ecosystem?

# RECORD OBSERVATIONS AND DATA

## Part 1

1. Which organisms in this ecosystem are producers, herbivores, carnivores, and omnivores? Record your answers in the table.

|  |  |
| --- | --- |
| **Producers** |  |
| **Herbivores** |  |
| **Carnivores** |  |
| **Omnivores** |  |

## Part 2

The notebook in the Interactivity and the data table below both describe how each organism obtains energy in this environment. Use the table to help you complete the food web.

|  |  |  |
| --- | --- | --- |
| **Organism** | **Type** | **Feeds On/Energy Source** |
| Algae or other Phytoplankton | Producers | Uses sunlight to carry out photosynthesis |
| Bluegill | Omnivore | Zooplankton, algae, animals such as snails and crayfish |
| Cattail | Producer | Uses sunlight to carry out photosynthesis |
| Crayfish | Omnivore/ Detritivore | Algae, animals such as snails, detritus |
| Freshwater Snail | Herbivore/ Detritivore | Plants such as cattails, algae, detritus |
| Largemouth Bass | Carnivore | Animals such as crayfish, snails, bluegill, turtles |
| Muskrat | Omnivore | Plants such as cattails, animals such as bluegill, crayfish, and snails |
| Western Pond Turtle | Omnivore | Animals such as snails, and carrion |
| Zooplankton | Herbivore | Phytoplankton |
| Bacteria and fungi | Decomposers | Breaks down other organisms and releases nutrients |

1. Use the space provided to draw the food web for this pond ecosystem.

## Part 3

1. Add the nutria to your drawing and show what it feeds on.

# ANALYZE AND CONCLUDE

Refer to the completed food web from Part 2 to answer the following question.

1. List any organisms that appear in more than one trophic level. How is it that an organism can be in more than one trophic level in an ecosystem? Include an example in your explanation.

Refer to the completed food web from Part 3 to answer the following question.

1. Draw two food chains from the food web that involve the nutria.
2. How can the introduction of nutria affect a pond ecosystem food web?

#  CONNECT TO THE UNIT PROBLEM

1. Think about the invasive species you chose to research in the Problem Launch. What is the role of this species in your local food web? Is it a producer? herbivore? carnivore? Find out about a few other species in your local ecosystem. Populate the chart by listing your invasive species in the first row, its food or energy source and its role in the ecosystem. Then fill out rows for four other populations in your local ecosystem.

|  |  |  |
| --- | --- | --- |
| **Population** | **Food or Energy Source** | **Role** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1. How might your invasive species be affecting the native species in your local food web? What resources might it be using in order to thrive?