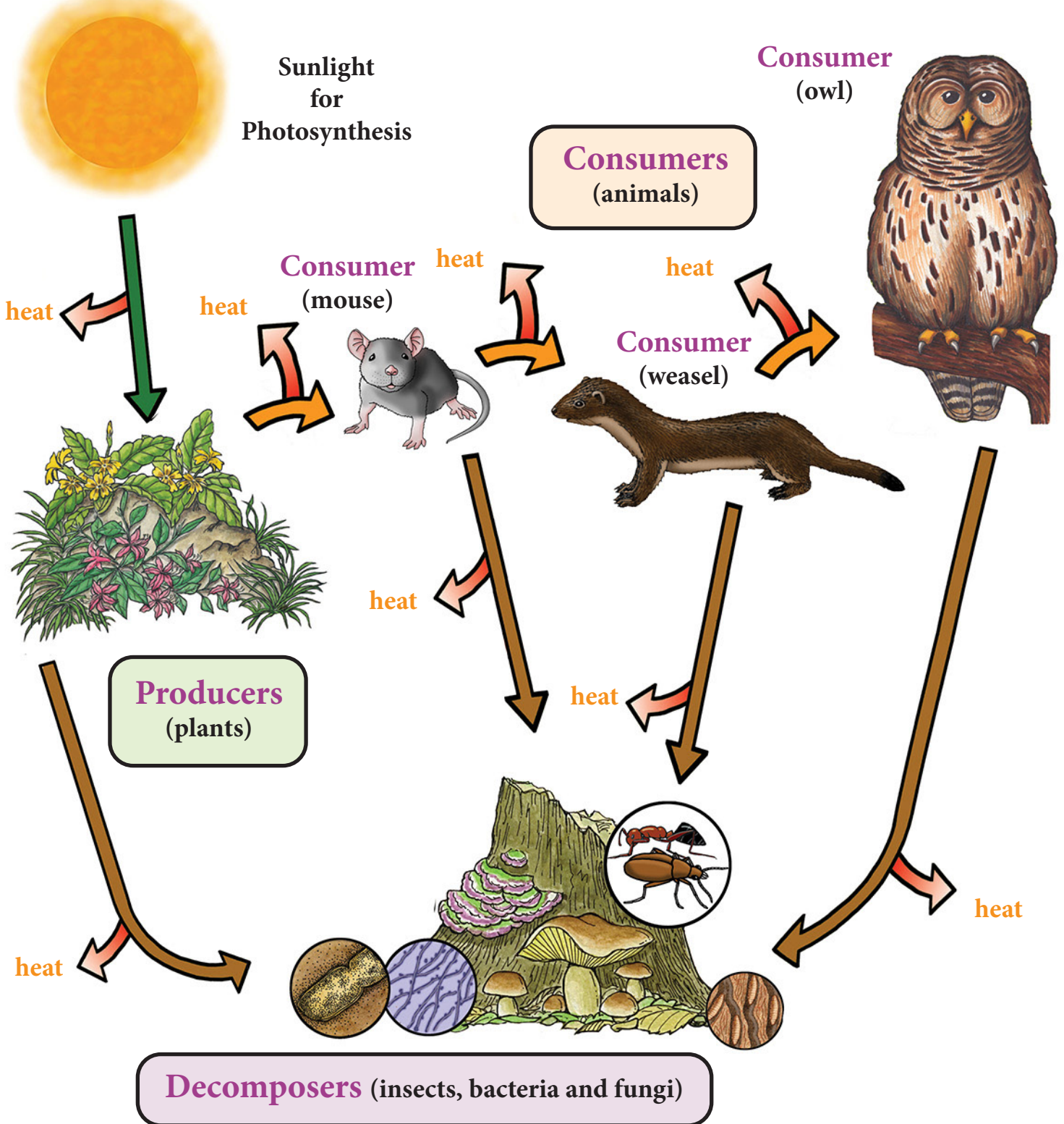


Bundle for the Grade 6-8th Grade NGSS:

Interdependent Relationships in Ecosystems and Cycles of Matter and Energy Transfer in Ecosystems

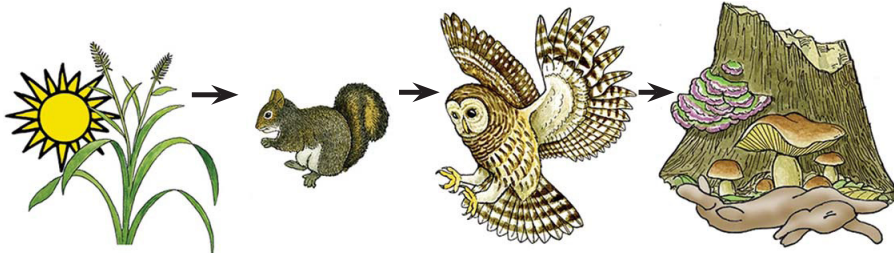


Interdependent Relationships in Ecosystems

Cycles of Matter and Energy Transfer in Ecosystems

Grade 6-8

From Ecosystems: Interactions, Energy, and Dynamics



This bundle includes 21 resources (53 pages total) including: Reading, Color Diagrams, Performance Tasks and Assessment to enhance fulfillment of NGSS. Copyright © 2021 Sheri Amsel • All rights reserved by author. Permission to copy for classroom use only. Electronic distribution limited to classroom use only.

Resources included in this 6-8 NGSS Curriculum Bundle:

- Next Generation Science Standards covered in this Bundle
 - Rubric Building Resources (3 pages)
- 1) Cycles of Matter and Energy Transfer in Ecosystems - Reading (1 page)
 - 2) Cycles of Matter and Energy Transfer in Ecosystems – Food Webs – Color Diagram (1 page)
 - 3) Parts of the Food Web – Matching with Answer Key (2 pages)
 - 4) Deciduous Forest - Interdependent Relationships in Ecosystems with Worksheet and Answer Key (4 pages)
 - 5) Amazon Rainforest - Interdependent Relationships in Ecosystems with Worksheet and Answer Key (4 pages)
 - 6) North American Prairie - Interdependent Relationships in Ecosystems with Worksheet and Answer Key (4 pages)
 - 7) The Ocean - Interdependent Relationships in Ecosystems with Worksheet and Answer Key (4 pages)
 - 8) Forest Food Web - Cycles of Matter and Energy Transfer in Ecosystems - Complete the Diagram with Solutions (2 pages)
 - 9) African Grassland - Cycles of Matter and Energy Transfer in Ecosystems - Complete the Diagram with Possible Solutions (2 pages)
 - 10) Antarctica - Cycles of Matter and Energy Transfer in Ecosystems - Complete the Diagram with Solutions (2 pages)
 - 11) Desert Food Web - Cycles of Matter and Energy Transfer in Ecosystems - Complete the Diagram with Possible Solutions (2 pages)
 - 12) Wetland Food Web - Cycles of Matter and Energy Transfer in Ecosystems - Complete the Diagram with Possible Solutions (2 pages)
 - 13) Resource Availability in Food Webs - Critical Thinking Activity with Color Diagram (2 pages)
 - 14) Yellowstone Wolves - The Effects of Resource Availability on Organisms and Populations of Organisms in an Ecosystem – Reading, Diagram (2 Pages)
 - 15) Yellowstone Wolf Project - Population Study and Graphing Task and Possible Solutions (3 pages)
 - 16) Levels of Organization in Ecosystems – Diagram (1 page)
 - 17) Food Webs - Authentic Performance
 - 18) Cycling of Matter in the Soil – Reading (1 page)
 - 19) Soil Food Web – Diagrams (Color and BW) (2 pages)
 - 20) Soil Food Web Organisms – Matching with Answer Key (2 pages)
 - 21) Cycles of Matter and Energy Transfer in Ecosystems - Multiple Choice Test with Answer Key (2 pages)

Cycles of Matter and Energy Transfer in Ecosystems - Food Webs

Energy flows through an **ecosystem** as animals eat plants or other animals forming overlapping **food webs**.



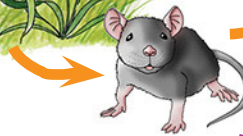
Plants absorb sunlight and, through the process of **photosynthesis**, convert it into the energy they need to grow (increasing their matter for consumption by animals).



Animals are **consumers**.

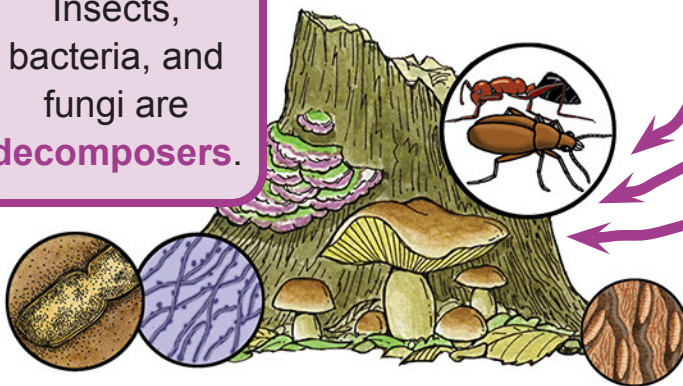


Plants are **producers**.



Animals consume plant matter and other animal matter – so are called **consumers** in a food web.

Insects, bacteria, and fungi are **decomposers**.



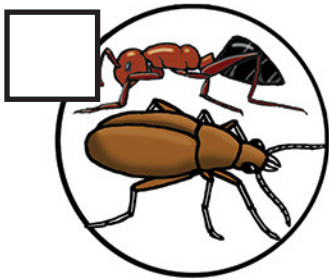
Living things eat and recycle dead animal and plant matter. They are the **decomposers** and include insects, bacteria, mushrooms and other fungi. Decomposers break down dead matter and **recycle it back into the soil**.

Organisms in an ecosystem form a **balance** between plant producers, animal consumers, and decomposers to create healthy, stable **food webs**.

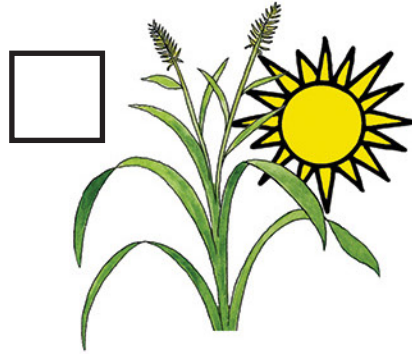
Parts of the Food Web - Matching

Energy flows through a *food web* as the sun shines, plants grow, animals eat, reproduce, age, die and decompose, their nutrients enriching the soil, so the cycle can start again. Look at the pictures below. Write in the number of what each picture represents in the food web.

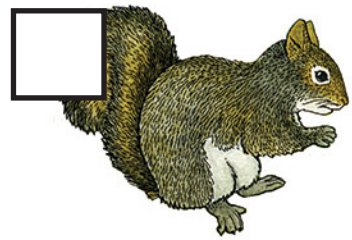
- 1 - Producer
- 2 - Primary Consumer
- 3 - Secondary Consumer
- 4 - Decomposer



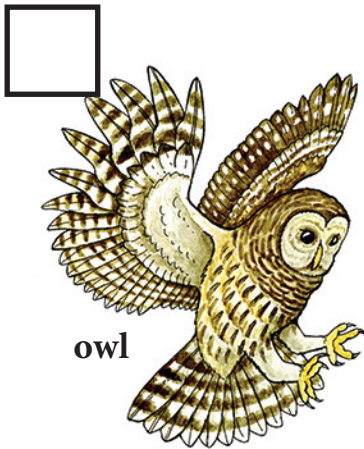
insect scavengers



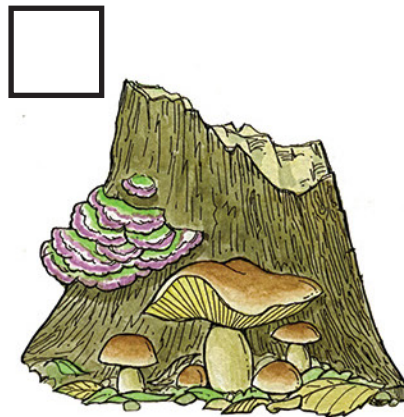
plants



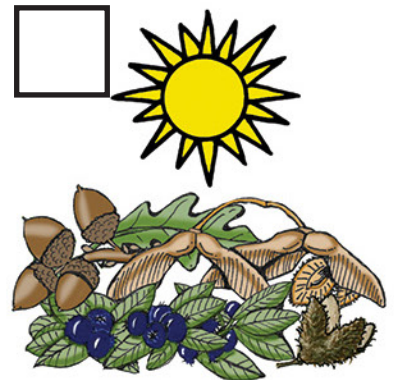
squirrels



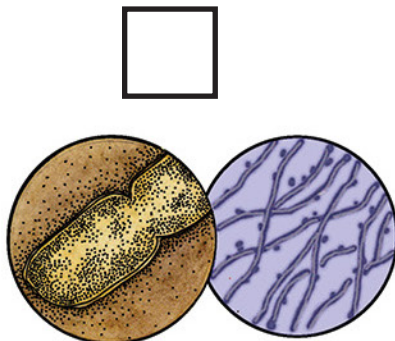
owl



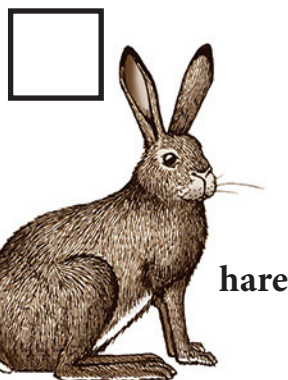
fungi



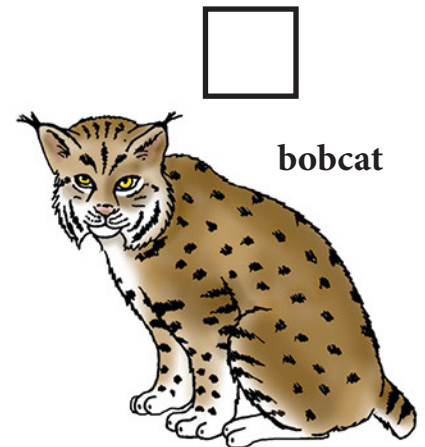
nuts, seeds and fruits



bacteria and fungi

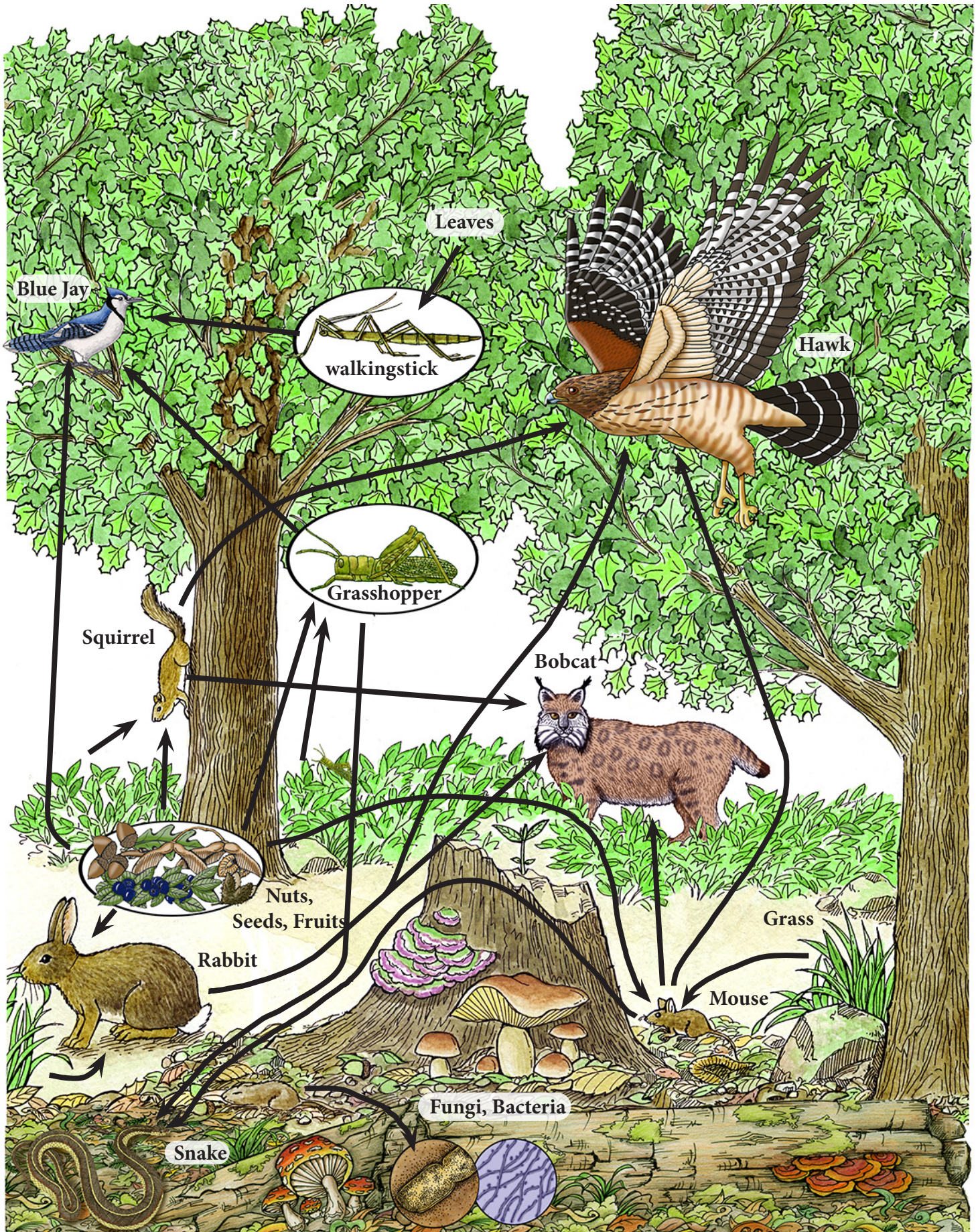


hare



bobcat

Deciduous Forest - Interdependent Relationships in Ecosystems



Deciduous Forest

Interdependent Relationships in Ecosystems

Name the organisms that fit into the different parts of the food web:

Producers: _____

Primary Consumers:

1. _____

2. _____

3. _____

4. _____

6. _____

Secondary Consumers:

1. _____

2. _____

3. _____

4. _____

Scavengers and Detritivores:

1. _____

2. _____

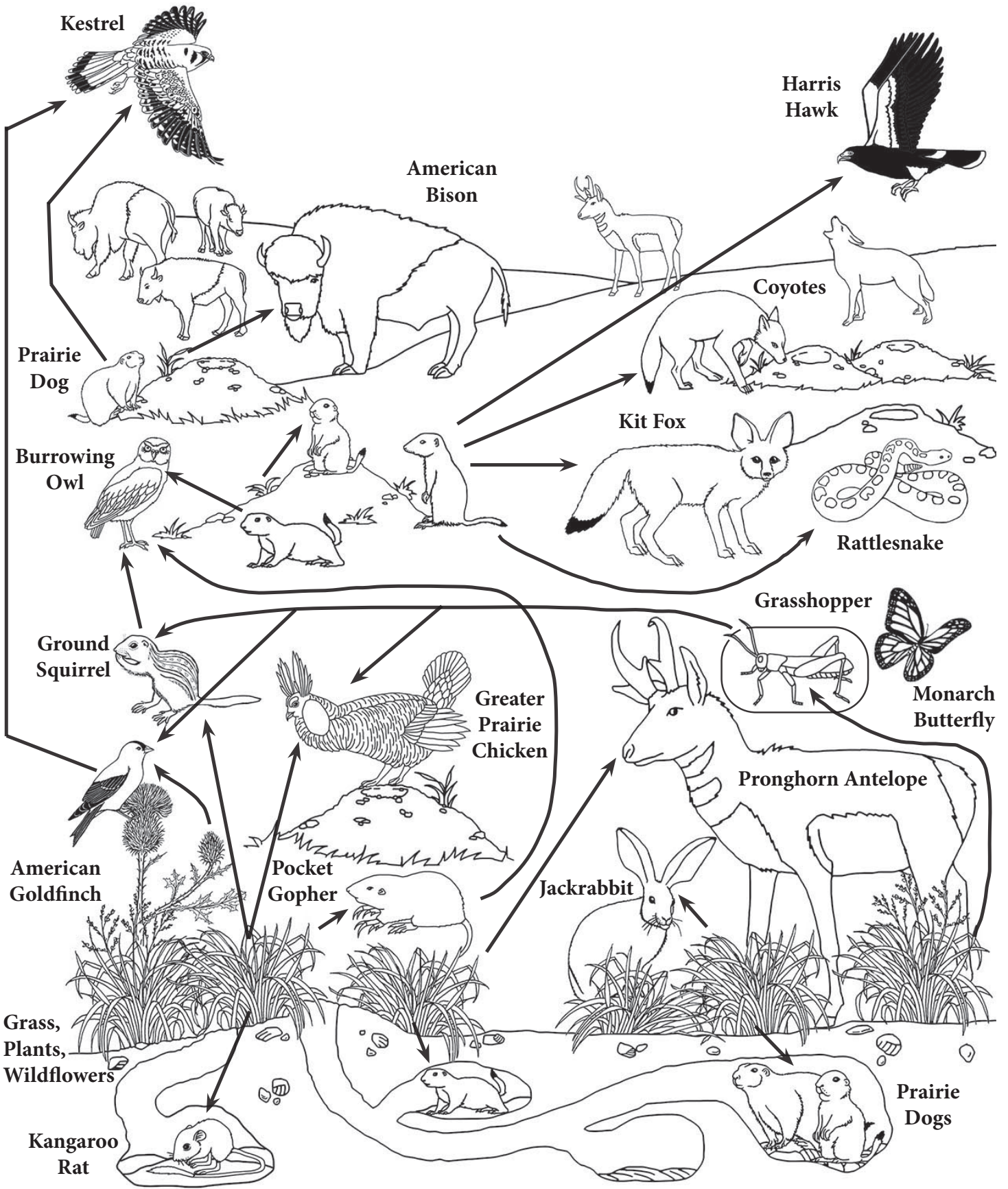
3. _____

Abiotic Components of this Ecosystem: _____

LS2.A: Interdependent Relationships in Ecosystems - Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors.

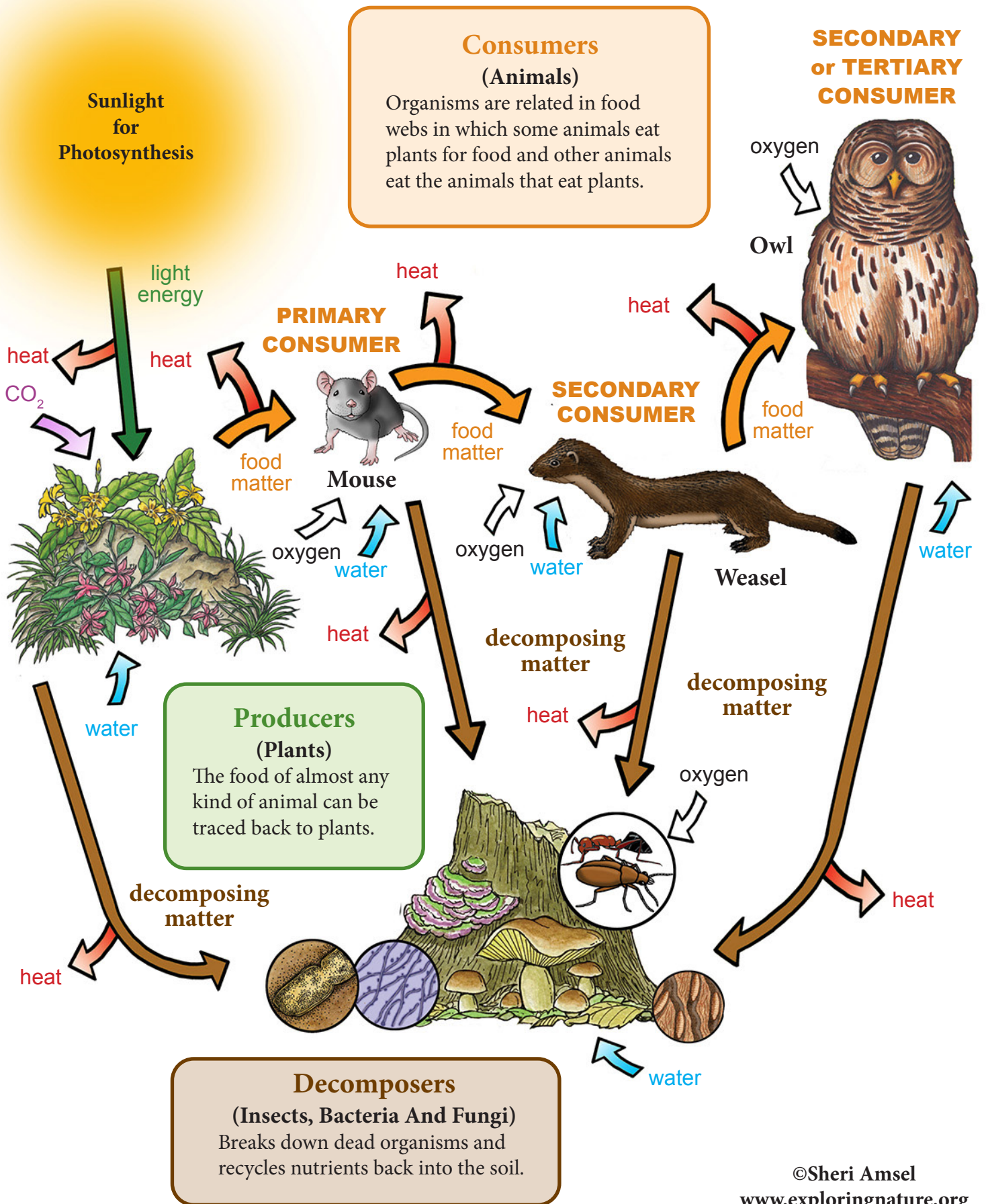
North American Prairie

Interdependent Relationships in Ecosystems

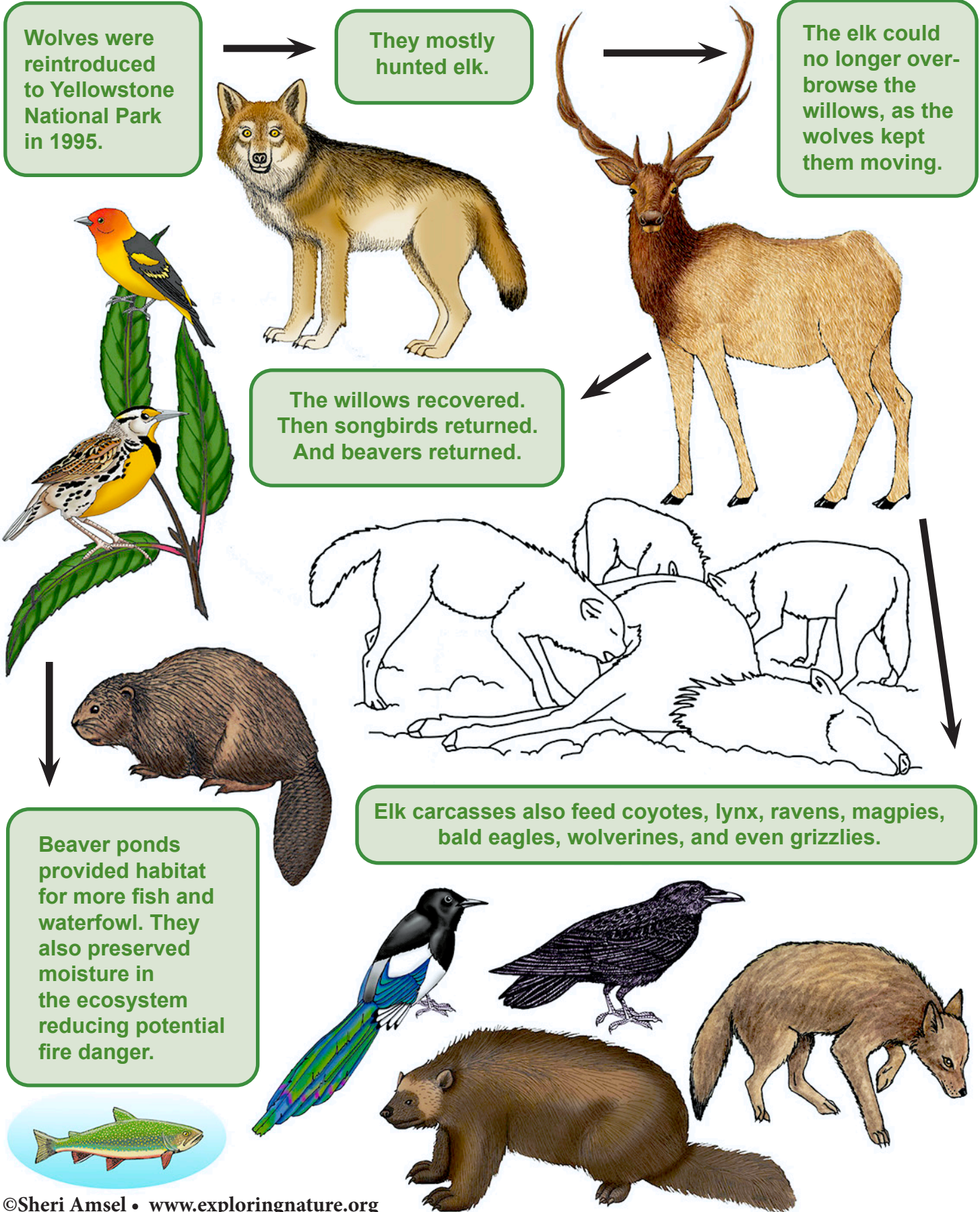


Resource Availability in Food Webs

Cycling of matter and flow of energy among living and nonliving parts of an ecosystem.



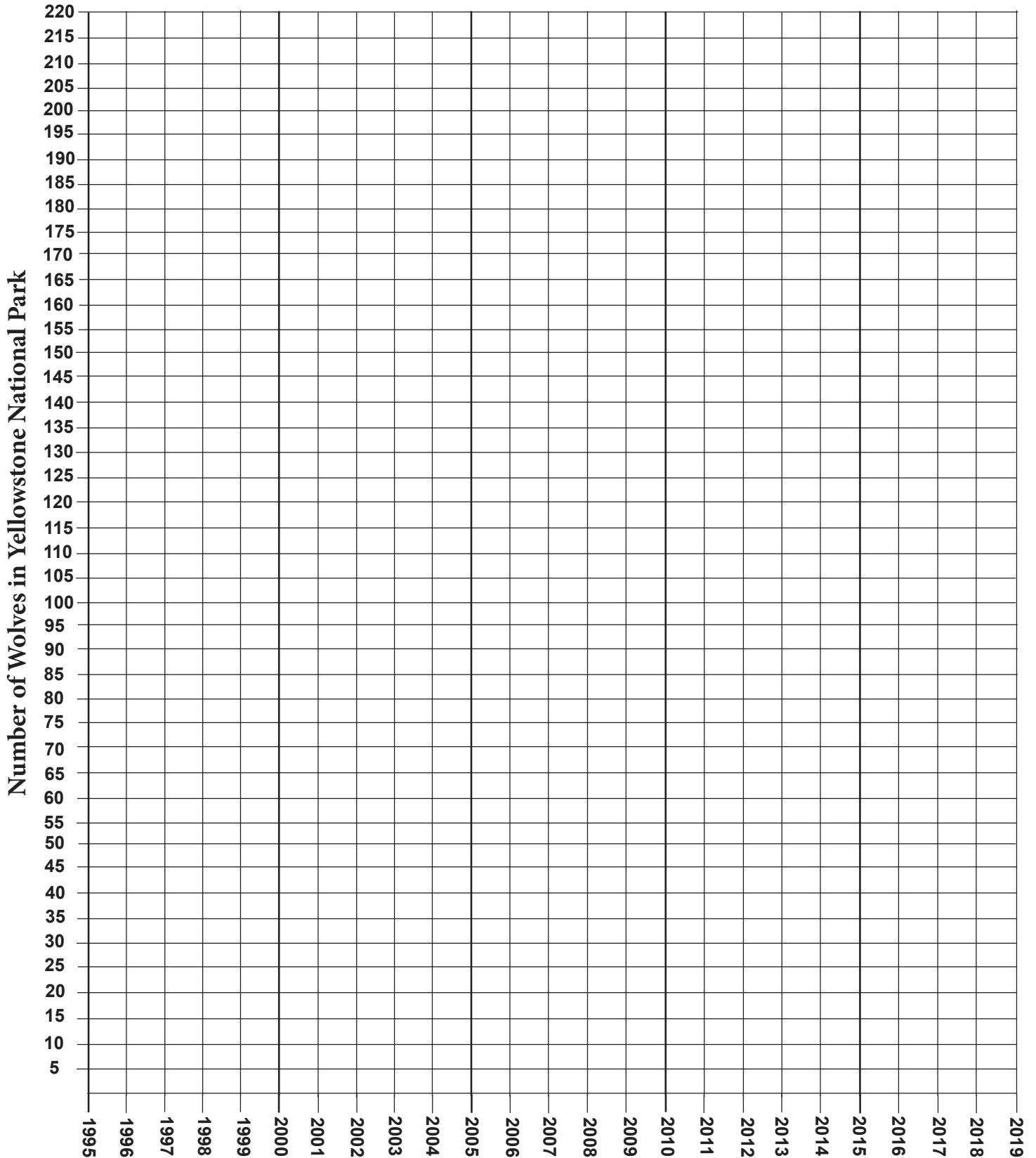
Yellowstone Wolf Project – The Effects of Resource Availability on Organisms and Populations of Organisms in An Ecosystem



Yellowstone Wolf Project - Graphing Task

The Effects of Resource Availability on Organisms and Populations of Organisms in an Ecosystem

Mark points on the graph to chart out the wolf population changes over time.



Soil Food Web Organisms - Matching

Write in the correct organism above its description.

are single-celled **microorganisms** that can be important **decomposers** and also act to filter and break down some pollutants. There are millions of them in every ounce of soil.

are single-celled **microorganisms** that eat bacteria, release ammonium and are food for nematodes.

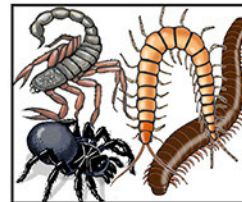
grow through the soil in long filamentous runners called **hyphae**. They are **decomposers**, helping to bulk up the organic matter in the soil and can also help to break down some pollutants.

are **beneficial to the soil** ecosystem feeding on bacteria, fungi and other harmful, root-eating nematodes.

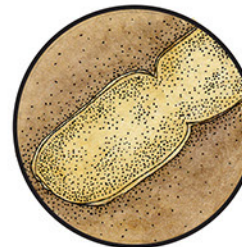
are **beneficial to the soil** ecosystem by decomposing organic matter and moving through the soil making it looser for root growth, water and air movement.

range in size from microscopic to a eight inches long. They are **beneficial to the soil** ecosystem by shredding organic matter that can then be more easily decomposed. They also burrow so move organic matter around in the soil. Some are harmful – feeding on plant roots.

Arthropods



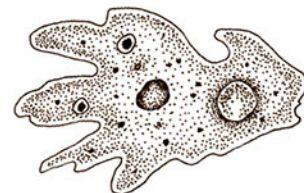
Bacteria



Nematodes



Protozoa



Earthworms



Fungi

