

# The Forest Web

## A Self-Guided Field Trip for Grades 3--5

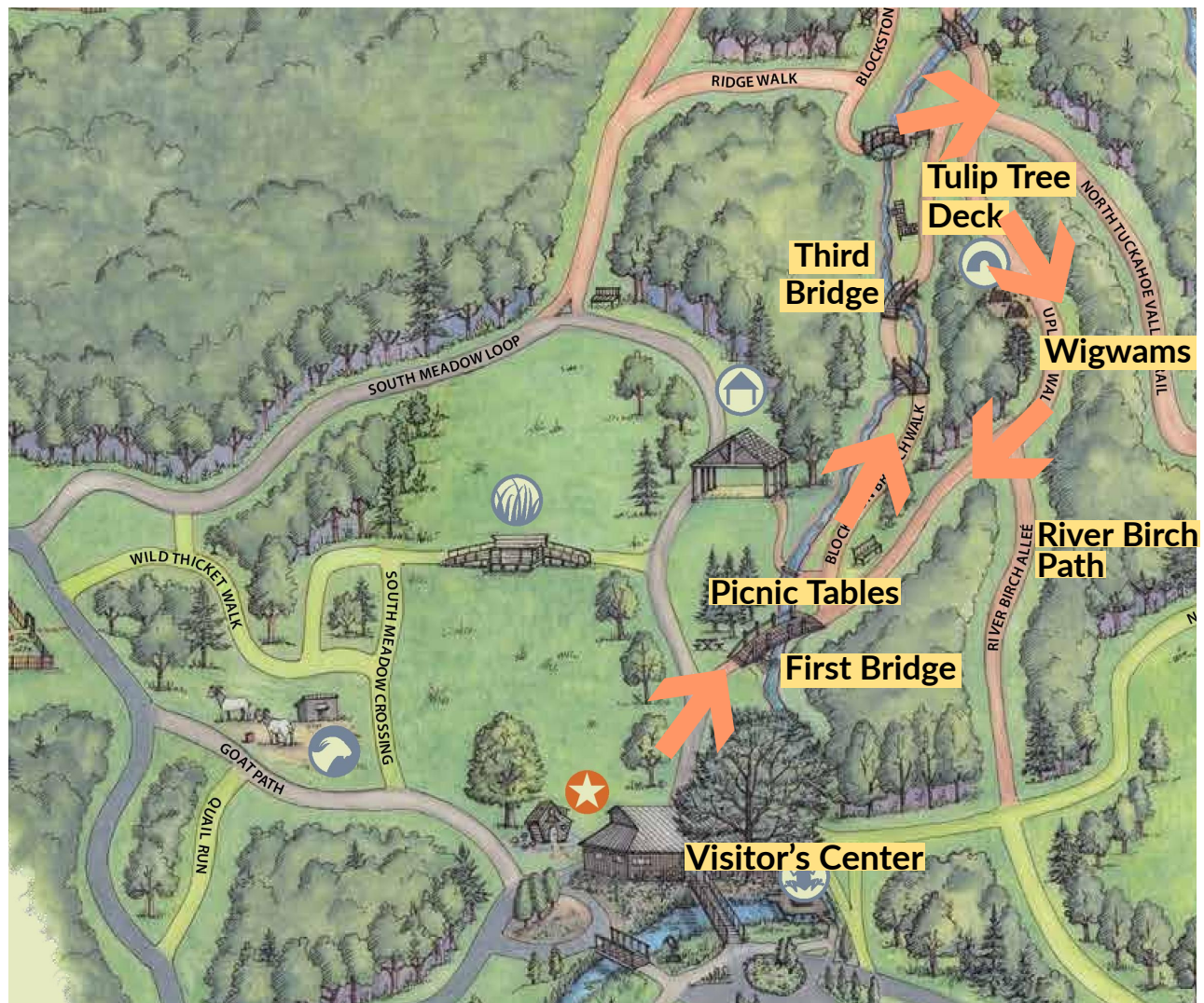
Welcome to Adkins Arboretum! The Arboretum is a 400-acre native garden and plant preserve. Native plants have been evolving here since the last polar ice age, 10,000 years ago. Animals depend on native plants for food and shelter.

Self-guided field trips **MUST** be scheduled in advance. To schedule yours, email Madison Palmer at [mpalmer@adkinsarboretum.org](mailto:mpalmer@adkinsarboretum.org).

Fee: \$5/student.



ADKINS ARBORETUM



**This program is aligned with:**

- **Next Generation Science Standard LS2-1 Ecosystems: Interactions, Energy, and Dynamics**
- **Environmental Literacy Standard 3: Flow of Matter and Energy**

# Lesson Plan

1. Walk students to the picnic tables near the woodland entrance. Seat in small groups at each table. “We’re going to take a walk through the forest! Before we begin, I’m going to give each table a bag of forest pictures. I want you to work together to sort the pictures into groups. There’s no wrong way to sort them as long as you can explain your method. For example, if I asked you to sort the students in this class, your method might be by hair color. Or it might be by height. Any questions?”
2. Pass out bags. After about five minutes, call on groups to explain how they sorted the pictures.
3. “One way to organize these organisms would be by their role in the food chain. What is a food chain? A food chain is the transfer of energy and material through several organisms as each one is fed upon by the next.” Use the food chain visual to teach:

- All energy comes from the sun. Producers (plants) capture the sun’s energy to produce their own food through photosynthesis.
- Organisms that can’t produce their own food are known as consumers. There are three types of consumers: herbivores (plant eaters), carnivores (meat eaters), and omnivores (eat both plants and animals.)
- Decomposers obtain nutrients by breaking down organic matter from dead organisms.
- The different levels of the food chain are known as trophic levels. Each time energy is passed from to the next, about 90% is lost, some as heat and some as incompletely digested food. This loss of energy limits most food chains to four to six links.



4. Have students work together to regroup their pictures by their role in the food chain. Check answers. Share: “Organisms along the food chain depend on one another for survival. They are interconnected. Food webs are the multiple food chains within an ecosystem.” Share pictures of a forest food web. “In your groups, you are going to go on a forest scavenger hunt. Think about which items on the hunt are part of the forest food web and which aren’t.” Give each group a scavenger hunt and something to write with.



5. Walk students to the first bridge. Tell them that they have ten minutes to look for the items on their scavenger hunt between this bridge and the third bridge, where an adult will be waiting. When the time is up, gather students and proceed to the Tulip Tree Observation Deck. Review which items each group found with a thumbs up/thumbs down. Question students: are the items producers, herbivores, omnivores, carnivores, decomposers, or non-living?



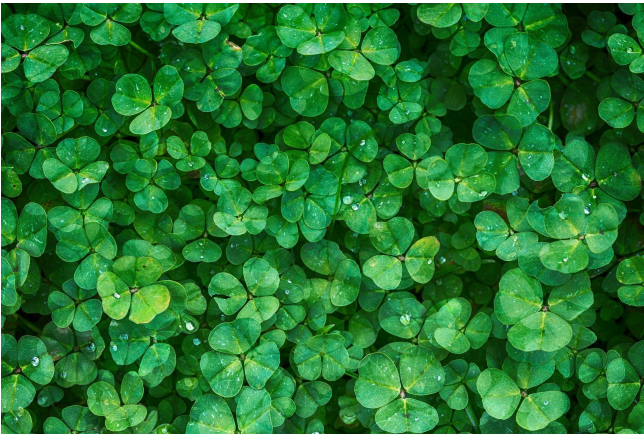
6. Continue walking. Make a right when the path splits, then another right at the top of the hill. Stop by the wigwams. “Eastern Woodland Indians lived in wigwams like these. Humans are part of the food chain, too. Native Americans understood the importance of living in balance with nature. Like them, we should be careful not take too much or give too little.” If time allows, let students explore the wigwams. Continue straight along the path to exit the forest. Ask students to share something they learned.

**Extension: Play a food chain game!**

[https://cpaws-southernalberta.org/wp-content/uploads/2018/06/Animal\\_Game.pdf](https://cpaws-southernalberta.org/wp-content/uploads/2018/06/Animal_Game.pdf)



# Organism Cards to Sort (1)





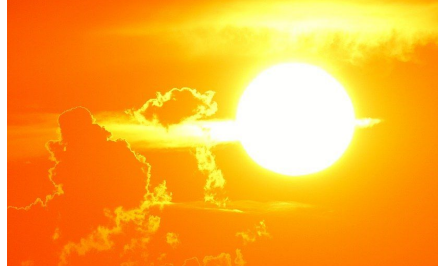
# Organism Cards to Sort (2)





# The Food Chain

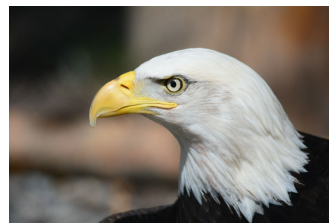
## Sun



## Producers



## Consumers

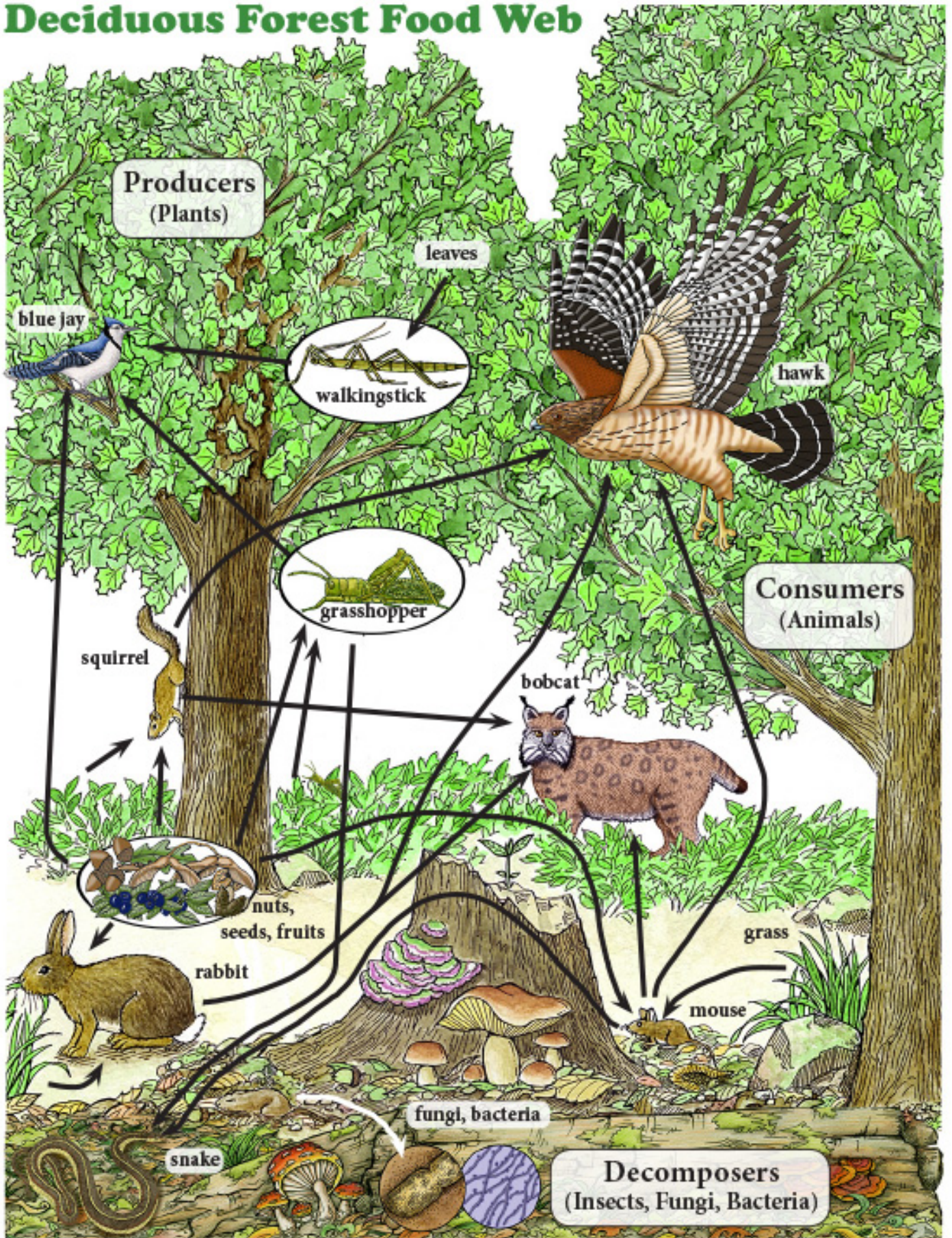


## Decomposers



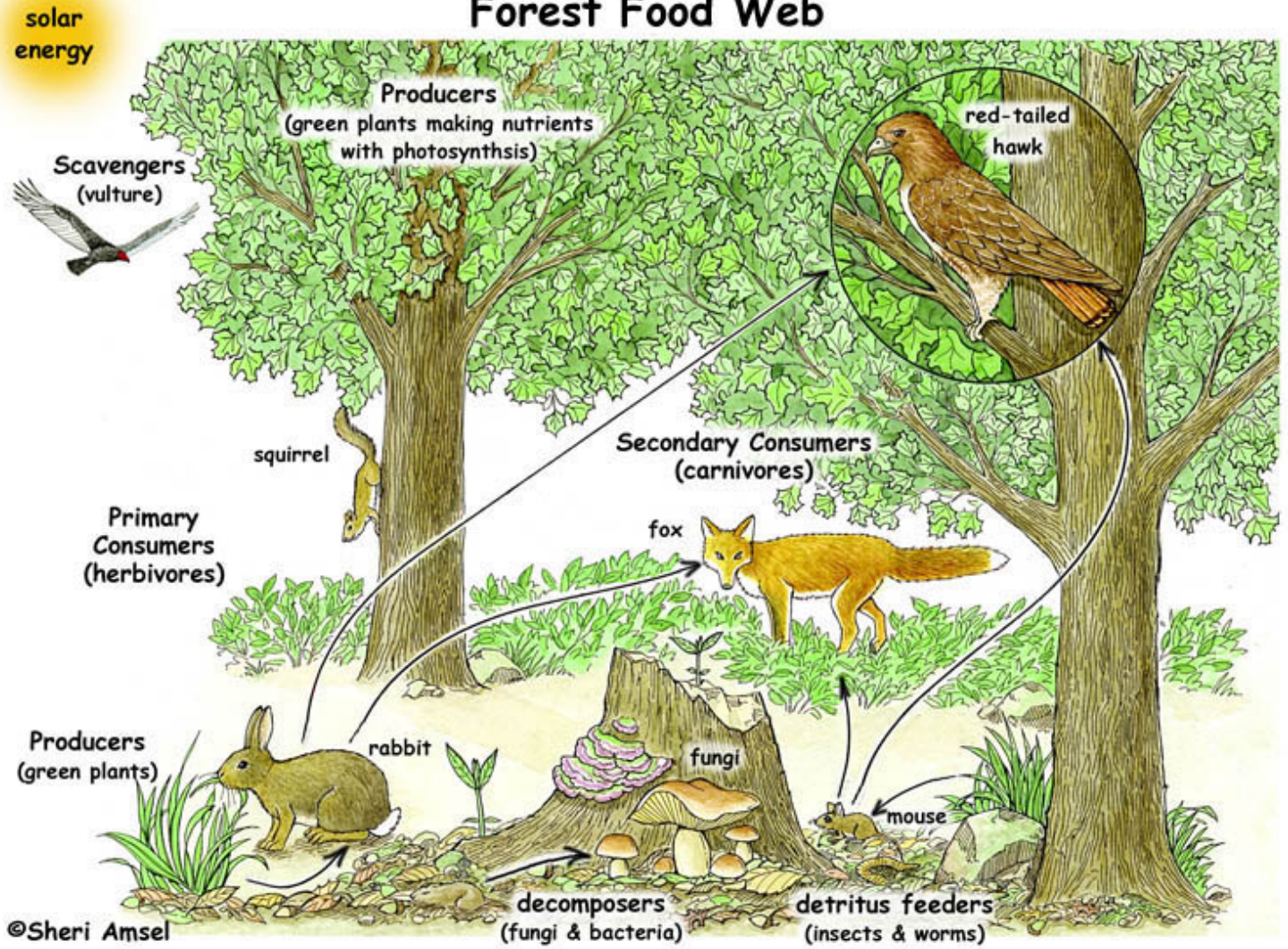


# Deciduous Forest Food Web











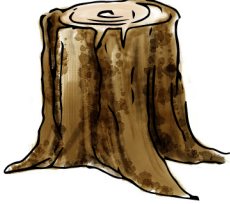

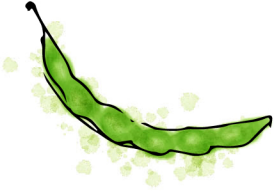
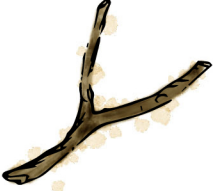






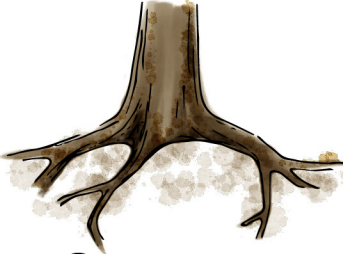



# Forest Food Web







# Hiking Scavenger Hunt with **make and takes**

 <input type="radio"/> green leaf	 <input type="radio"/> brown leaf	 <input type="radio"/> pine cone	 <input type="radio"/> mushroom
 <input type="radio"/> log	 <input type="radio"/> animal tracks	 <input type="radio"/> tree stump	 <input type="radio"/> moss
 <input type="radio"/> seed pod	 <input type="radio"/> y-shaped branch	 <input type="radio"/> spider	 <input type="radio"/> rocks
 <input type="radio"/> acorn	 <input type="radio"/> tree hole	 <input type="radio"/> animal hole	 <input type="radio"/> flowers
 <input type="radio"/> tree roots	 <input type="radio"/> insect	 <input type="radio"/> fern	 <input type="radio"/> grass