

# THANKSGIVING:

Thankful for Food Webs



Anything in **RED** will go into your notes

TITLE:

# Energy Flow in Ecosystems-

Ecological Niche

Photosynthesis : **HOW PUMPKINS GROW!**

Producers & Consumers

Herbivores, Omnivores & Carnivores

Scavenger

Food Chain

Trophic Levels

Food Webs



# Ecological Niche

- The function a species serves in its ecosystem, including what it eats, and how it behaves.

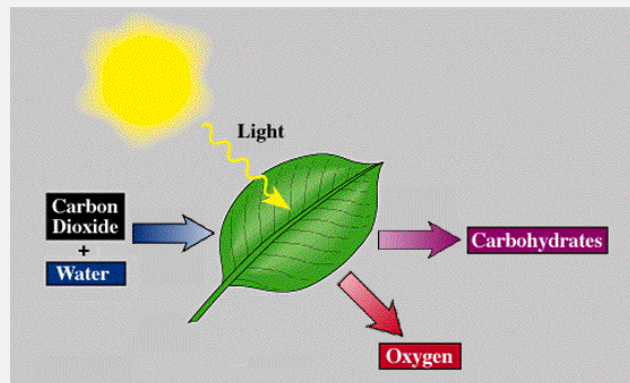


- No two species occupy identical niches.



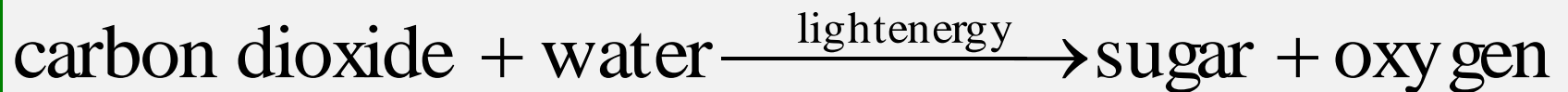
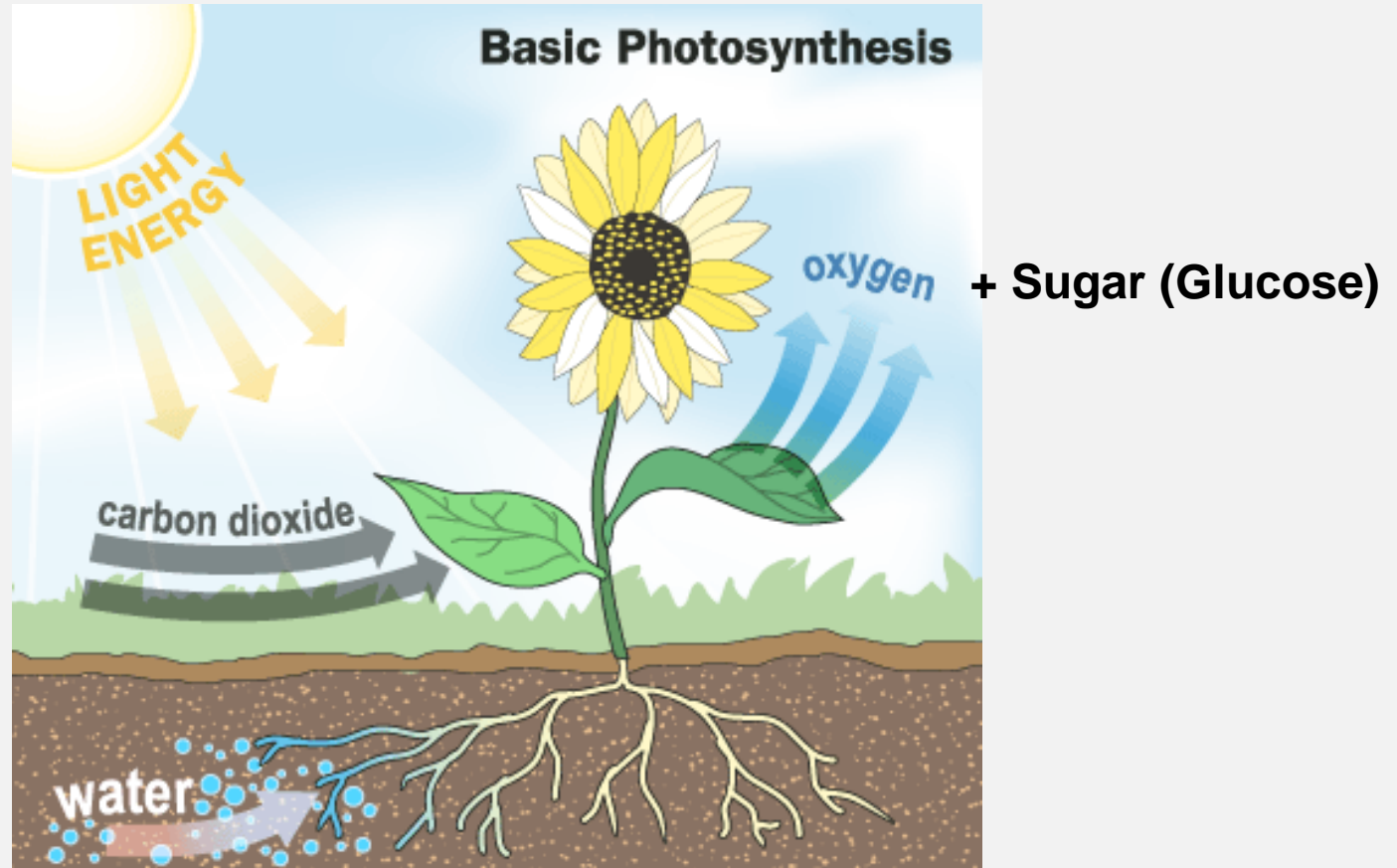
# Photosynthesis

- Occurs in PLANTS!!
- **Producer** – an organism that makes its own food through **PHOTOSYNTHESIS**
- On land, major producers are green plants
- Chloroplasts in plant cells



Photosynthesis Intro  
SONG

# Photosynthesis



# Photosynthesis and Life

- We completely rely on the Sun!
- No Sun = No Photosynthesis  
= No Food for plants = No  
Food for animals = No food  
for larger animals
- No Sun = No life on Earth
- This is the basis behind the dinosaur extinction

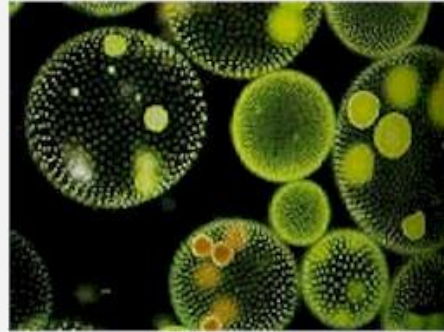


# To Photosynthesize or not to Photosynthesize that is the question

- Many organisms cannot photosynthesize (done by plants) they are called consumers
- Consumers – an organism that obtains its energy from consuming other organisms

# Producers vs. Consumers

- Producers are most always plants (e.g. trees, grass, algae, etc.)



Algae



- Consumers are living things that eat producers and other consumers (e.g. animals)





## Types of Consumers-

# Herbivores

- Organisms that **eat plants** or other producers



# Carnivore

- Organisms that eat other animals





# Omnivore

- Organisms that eat both plants and animals



# Scavenger

- Organism that feeds on the remains of another organism





# Where does all the waste go?

Decomposer – breaks down wastes and dead organisms for use in the ecosystem.

Mushrooms and Bacteria

Movie Clip

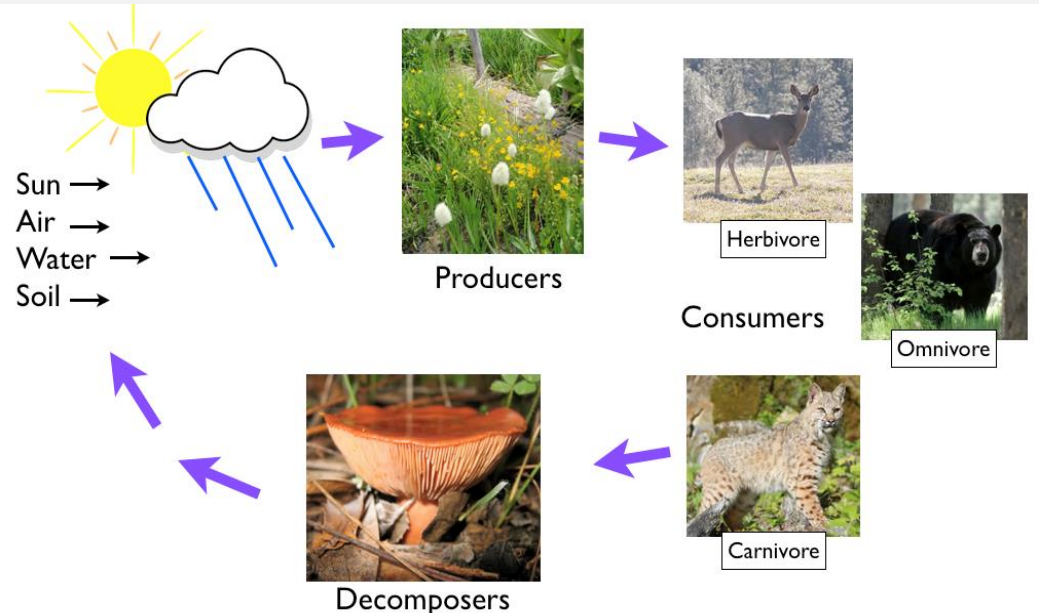


# Food Chains

- A sequence of organisms each feeding on the next, showing how energy is transferred from one organism to another.

pine cone → red squirrel → weasel → goshawk

- The arrow points to the consumer
- Food chains do not exist in nature. They simply show feeding relationships





# Make Your Own Food Chain

With your table mates create a food chain that will incorporate everyone in your table group.

Use Your White Boards to write the name of the organism you are.

POSSIBLE IDEAS- Ecosystems

1. Rainforest
2. Pond
3. Ocean
4. Desert
5. Forest



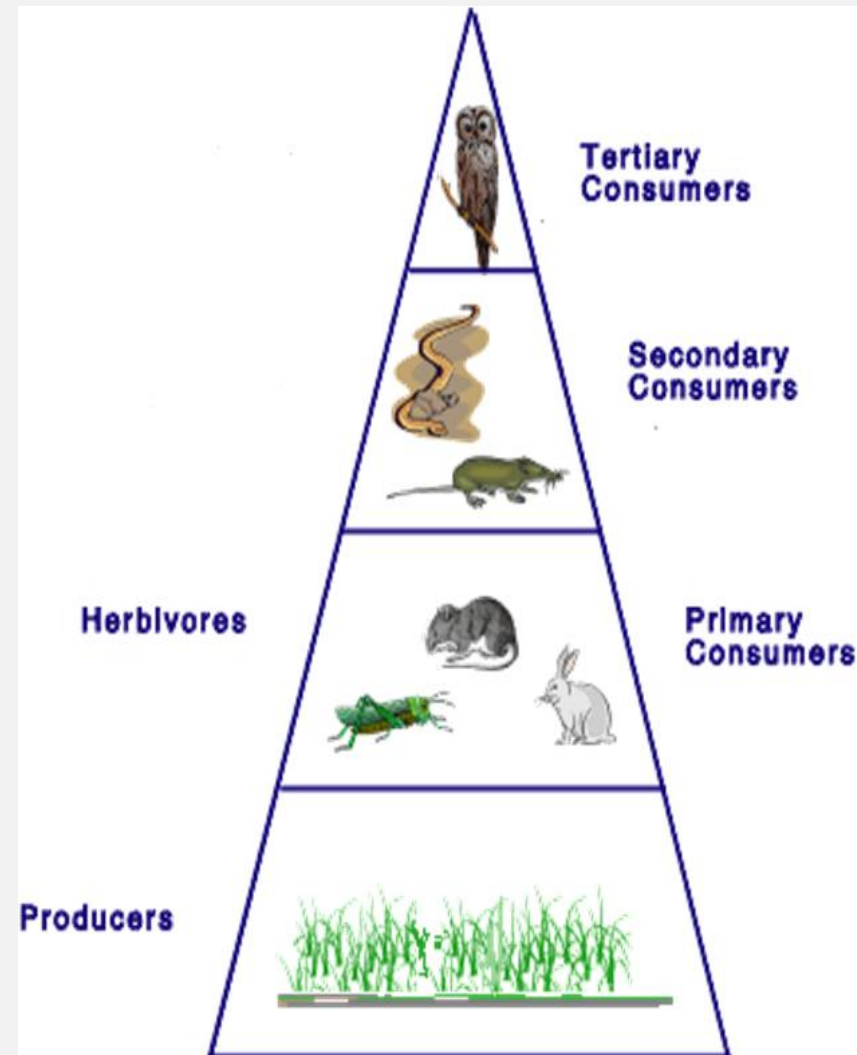
# THANKSGIVING FOOD CHAINS:

# Trophic Levels

The trophic level of an organism in an ecosystem depends on its **feeding position along a food chain.**

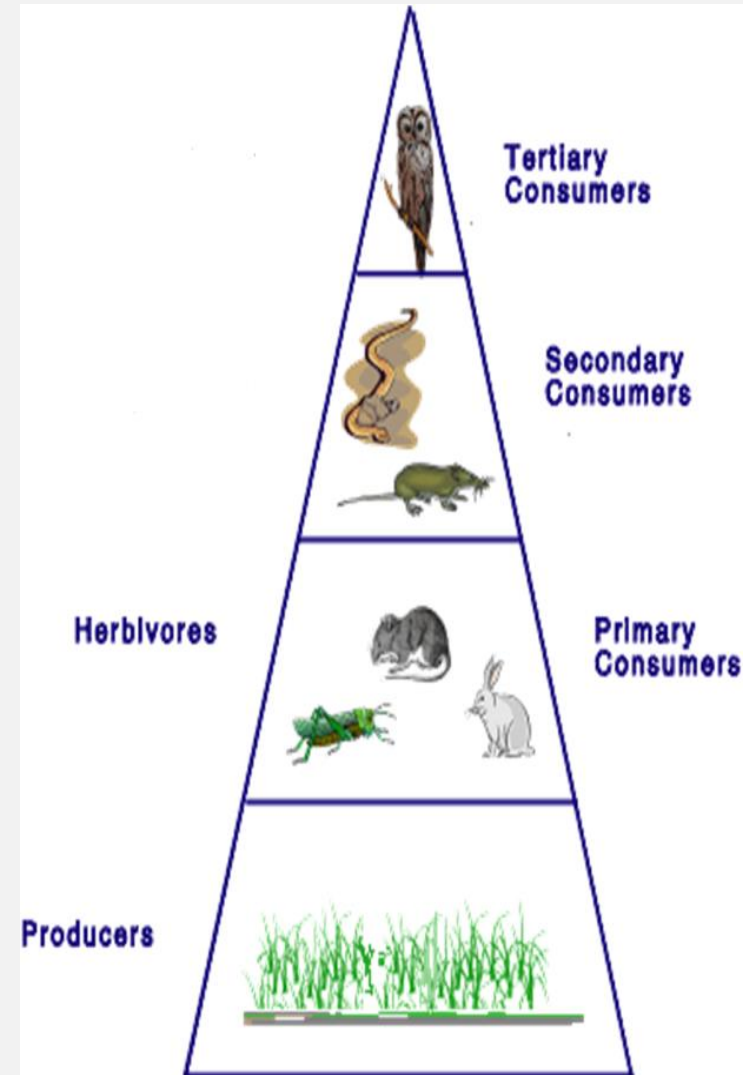
- First trophic level – Producers
- Second trophic level – Primary consumers
  - Will eat producers only

Who is Having What For Dinner?



# Trophic Levels

- Third trophic level – Secondary consumers
  - Can eat primary consumers and producers
- Fourth trophic level – Tertiary consumers
  - Can eat secondary consumers, primary consumers, producers

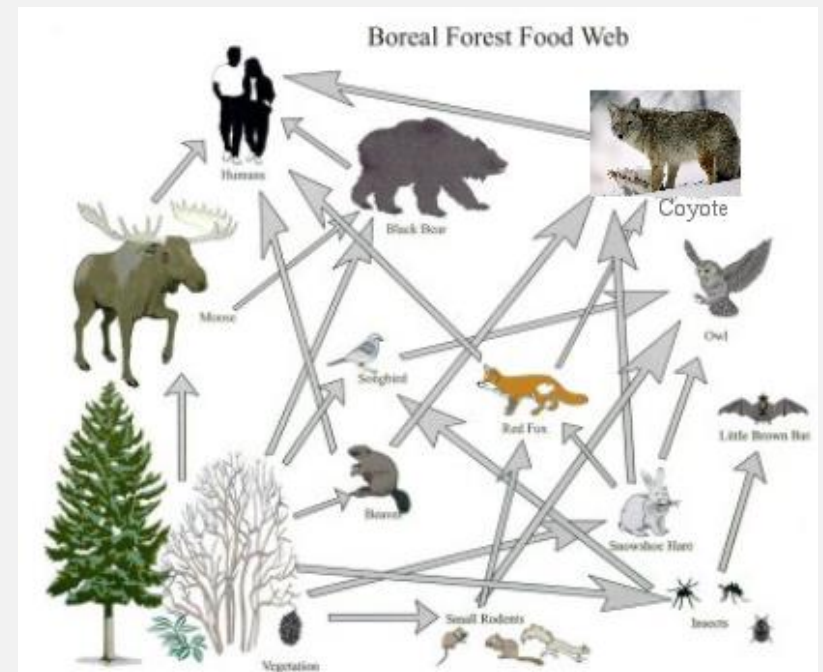


# Bill Nye: The Food Web Guy



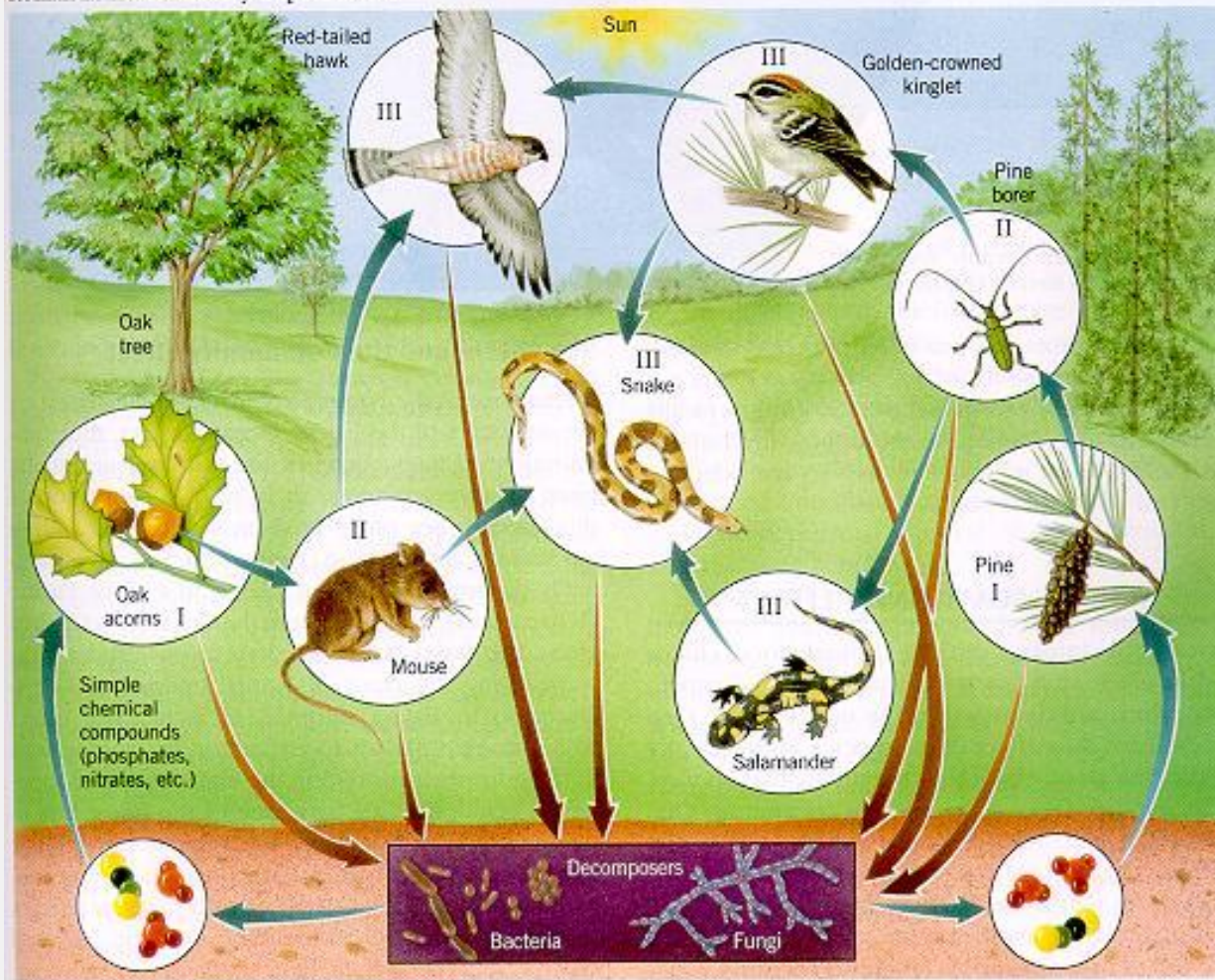
# Food Webs

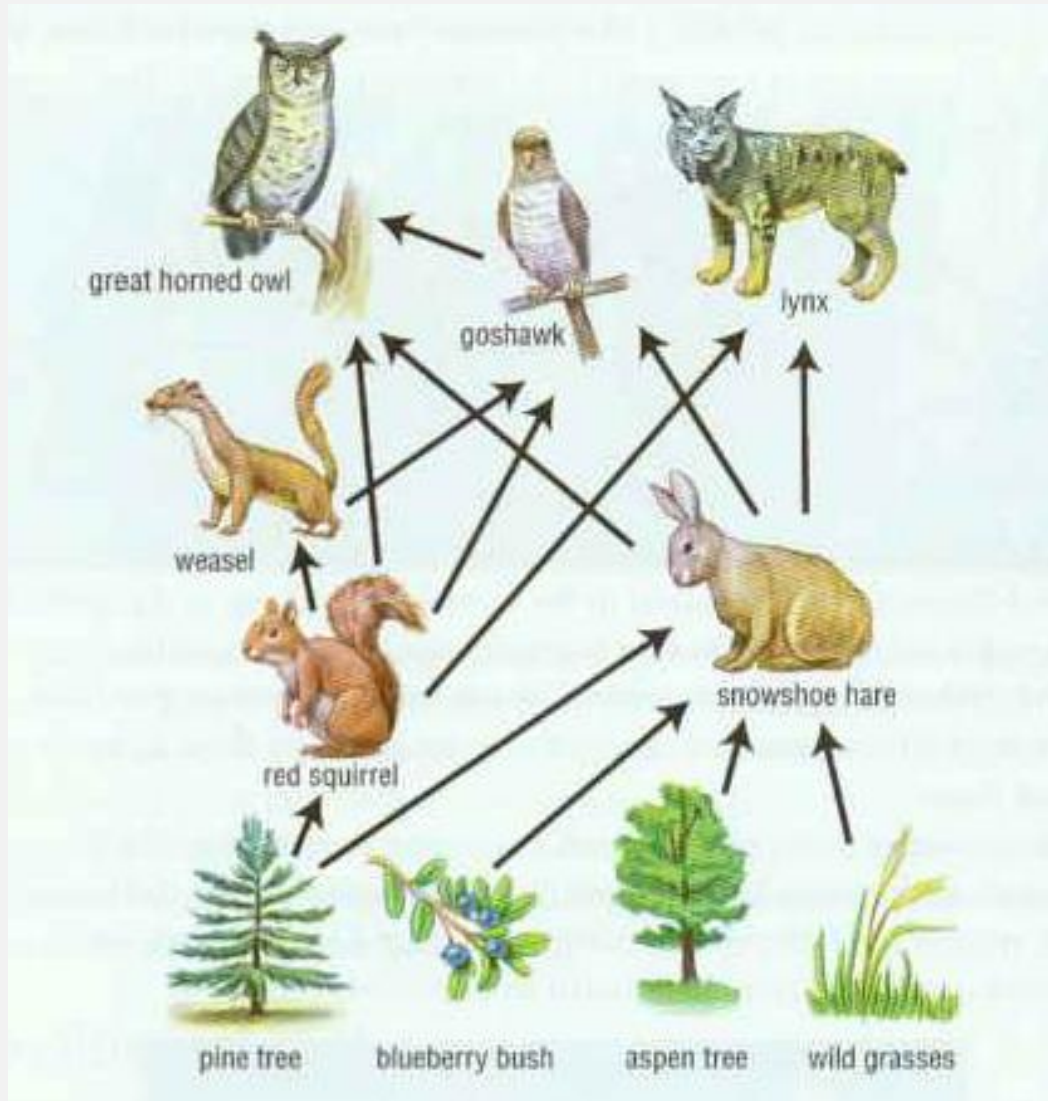
- A much more accurate display of who eats who
- A representation of the feeding relationships within a community.
- Consumers feed on many species
- As in food chains, the arrow points from the thing being eaten to the thing eating it
- Overlapping food chains



# Food Webs

FIGURE 6.3 Food webs: (a) a typical terrestrial food web. Roman numerals identify trophic levels.





- E.g. In this food web, the goshawk is eaten by the Great Horned Owl.

- What two animals eat all the plants?

# Food Webs

- Are very useful when figuring out what may happen when a species is removed from or added to an ecosystem
- If a species is removed the number of animals that would normally eat it would decrease, why?
- **The introduction of a new species can also dramatically alter the food web as new feeding patterns are established**

# When you return....

You will start in Chapter 1 Section 3:  
**Chemical Compounds in Cells**

Over the long weekend give it a quick read if you wish.



# Ms. Heyer will miss every single one of you!

## Exit Ticket

On your note card-

1. Name on Top
2. On one side answer:

What happens when one organism is removed from a food chain?

What about a food Web?

3. On the other side answer:

What is something that you feel like Ms. Heyer needs to improve on to be an effective teacher?