

# Roles of Organisms in an Ecosystem

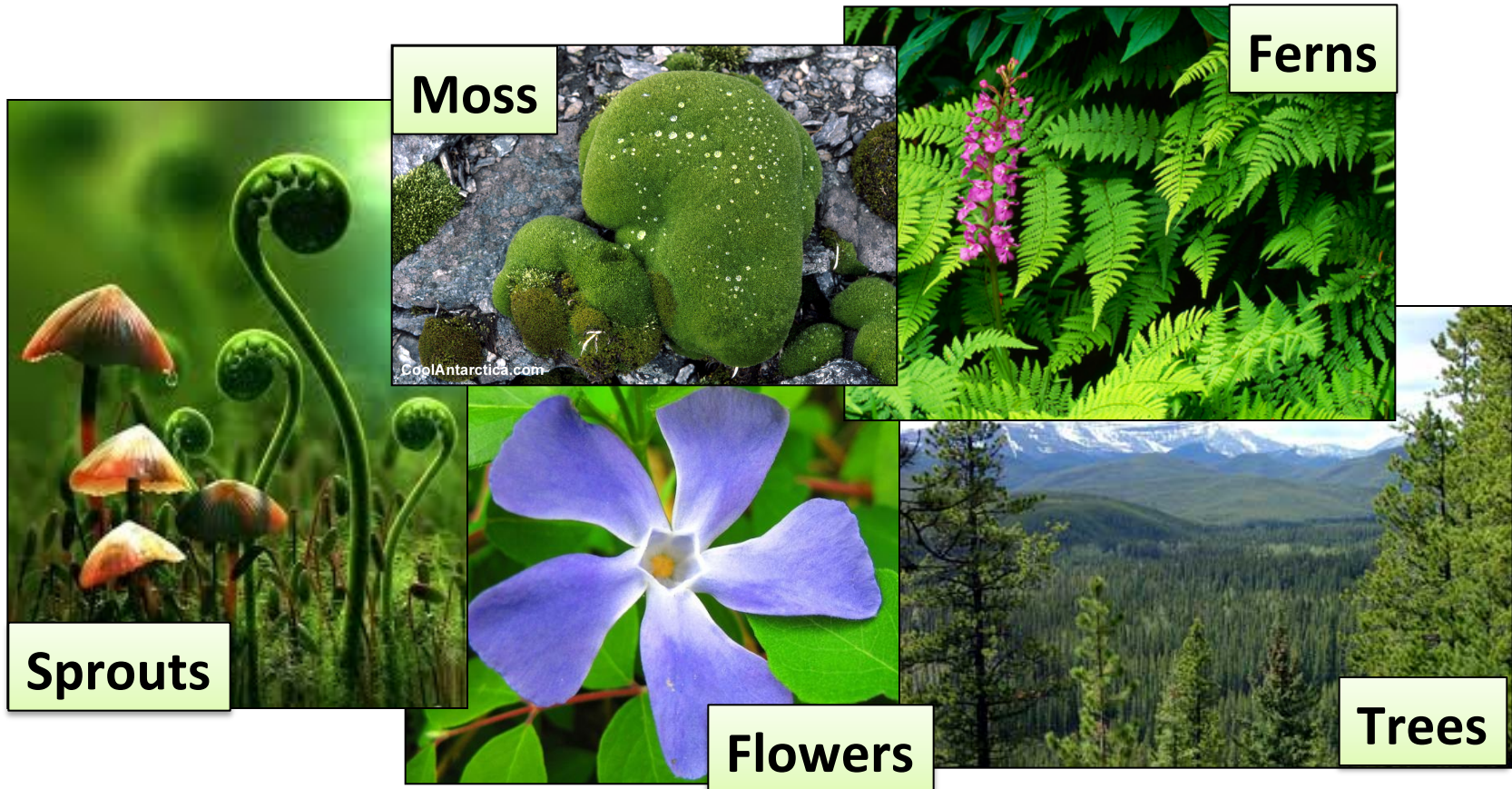
# Producers

- What are producers?
- List some examples of producers.



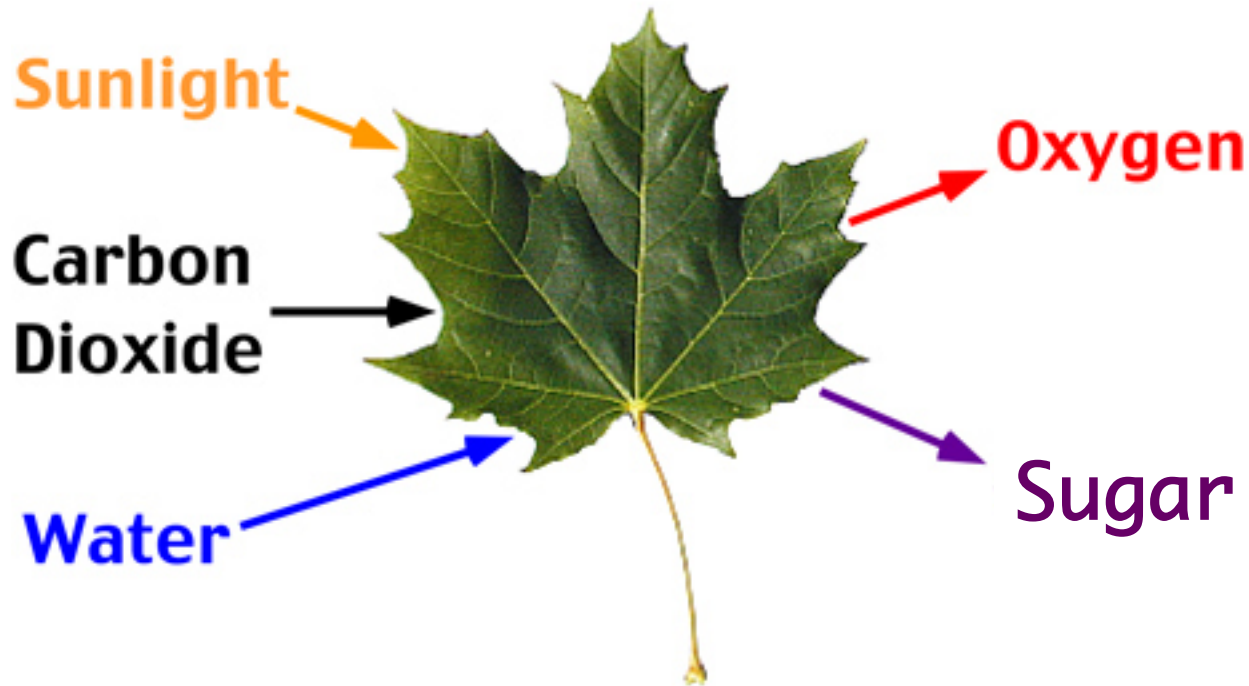
# Producers

- Organisms able to make their own food using abiotic elements (non-living).



# Producers

- Plants make their own energy (in the form of sugar) through a process called **photosynthesis**.



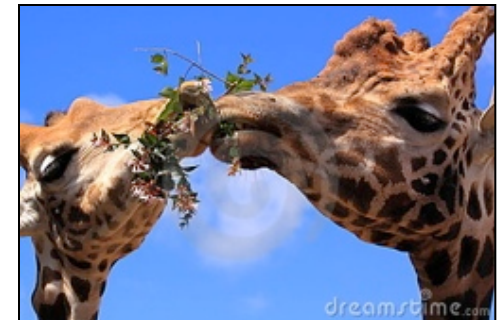
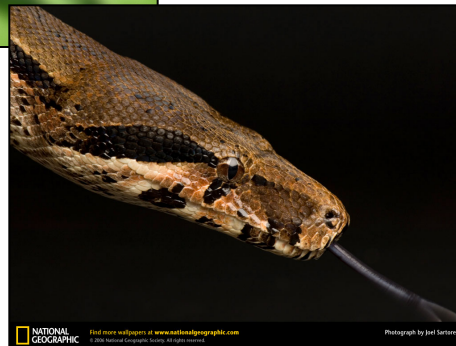
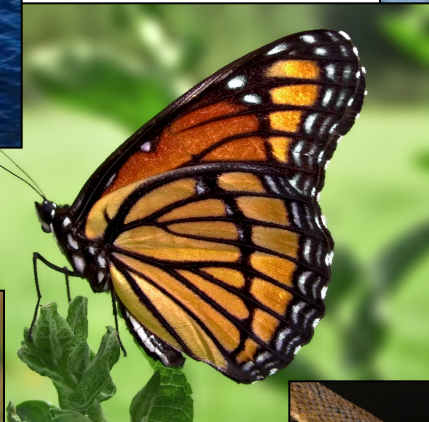
# CONSUMERS

- What are consumers?
- What are some categories of consumers?
- List some examples for each category.



# CONSUMERS

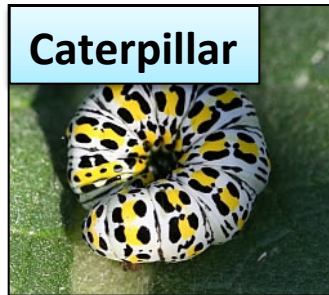
- Organisms that eat other organisms for energy.



# CONSUMERS

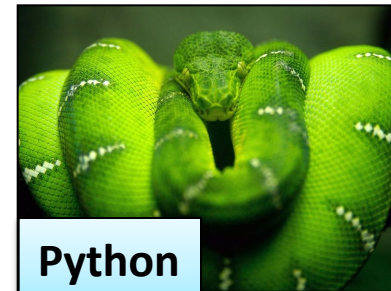
## HERBIVORES

- Organisms that eat plants for energy.



## CARNIVORES

- Organisms that eat animals for energy.



# CONSUMERS

## OMNIVORES

- Organisms that eat BOTH plants and animals for energy.



Fox



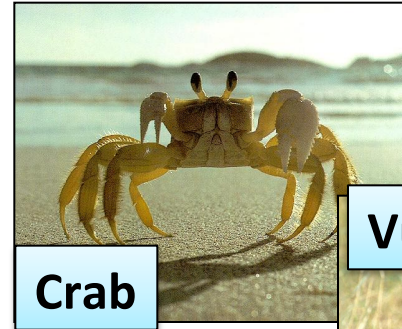
Brown Bear



Blue Bird

## SCAVENGERS

- Organisms that eat already dead organisms for energy.



Crab



Vulture



Hyena



# CONSUMERS

- What are detritivores and decomposers?
- List some examples for each.



# CONSUMERS

## DETRIVORES

- Organisms that eat dead organic material and waste for energy.



Beetle



Clam



Slug



Shrimp



Worm



Millipede

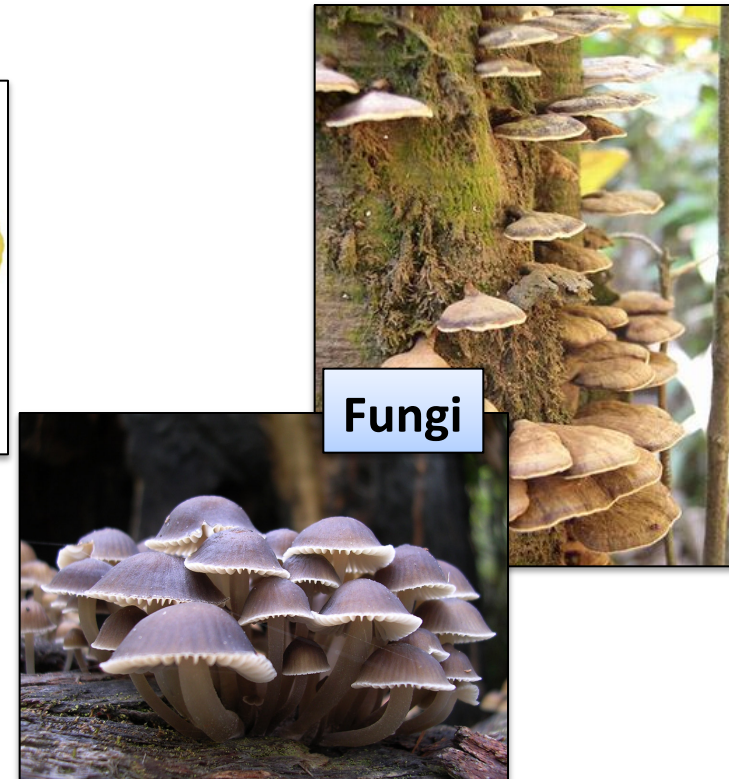
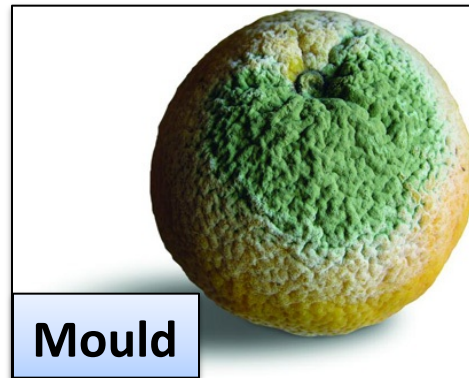
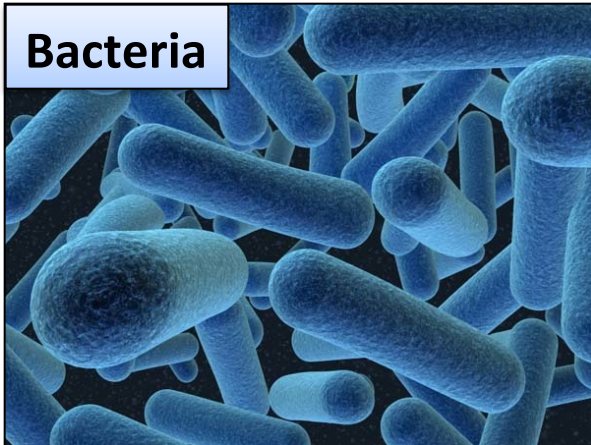


Fly

# CONSUMERS

## DECOMPOSERS

- Organisms that break down dead plants and animals, and recycle nutrients back into the ecosystem.



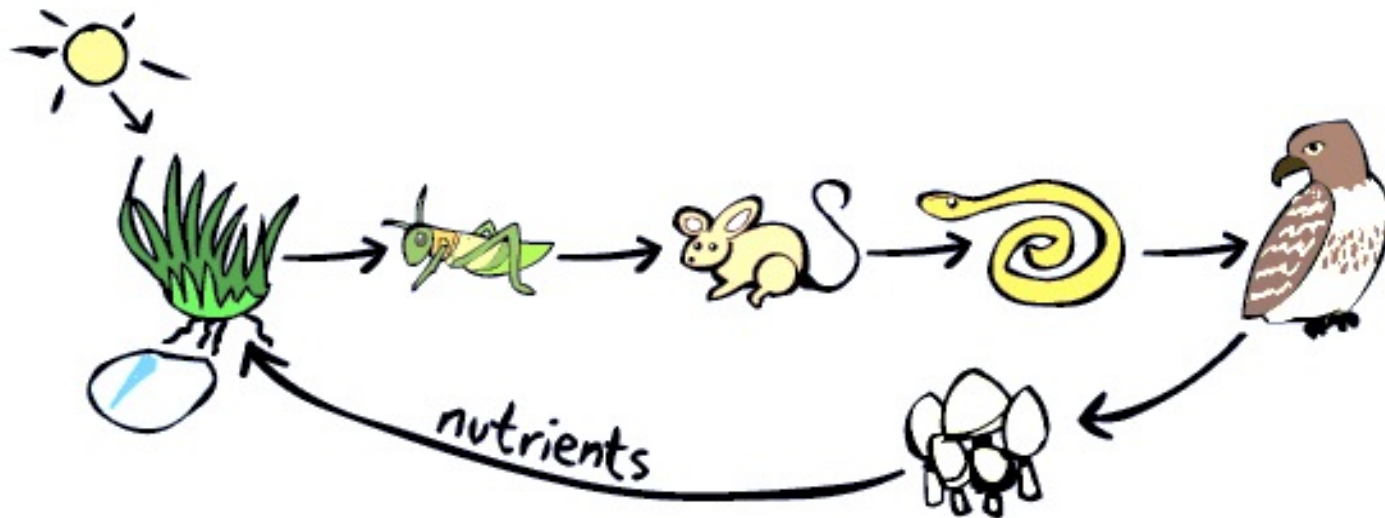
# Food Chains

- What is a food chain?
- List some examples of a food chain.



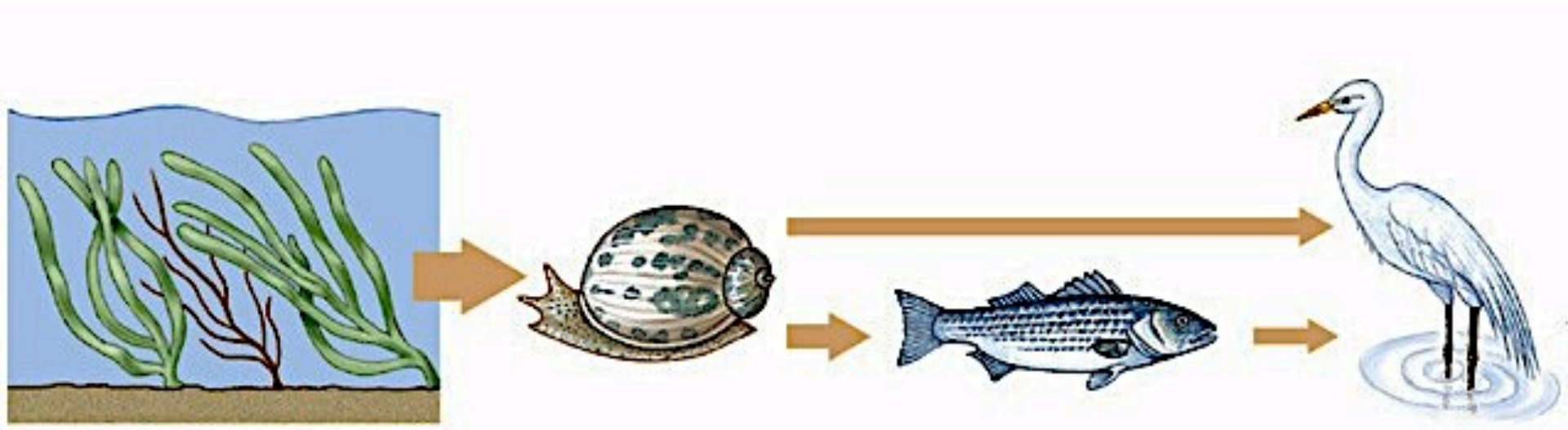
# Food Chains

- A **food chain** is a model to show how **energy** and **nutrients** flow from one organism to another in an ecosystem.



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Carnivore

Quaternary consumers



Carnivore



Carnivore

Tertiary consumers



Carnivore

- *There are different 'levels' to a food chain.*



Carnivore

Secondary consumers



Carnivore

- *What patterns or trends do you notice with food chains (as you move up the chain)?*



Herbivore

Primary consumers

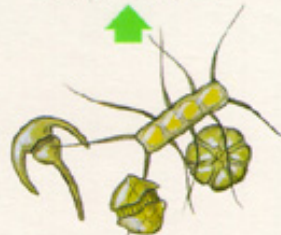


Zooplankton



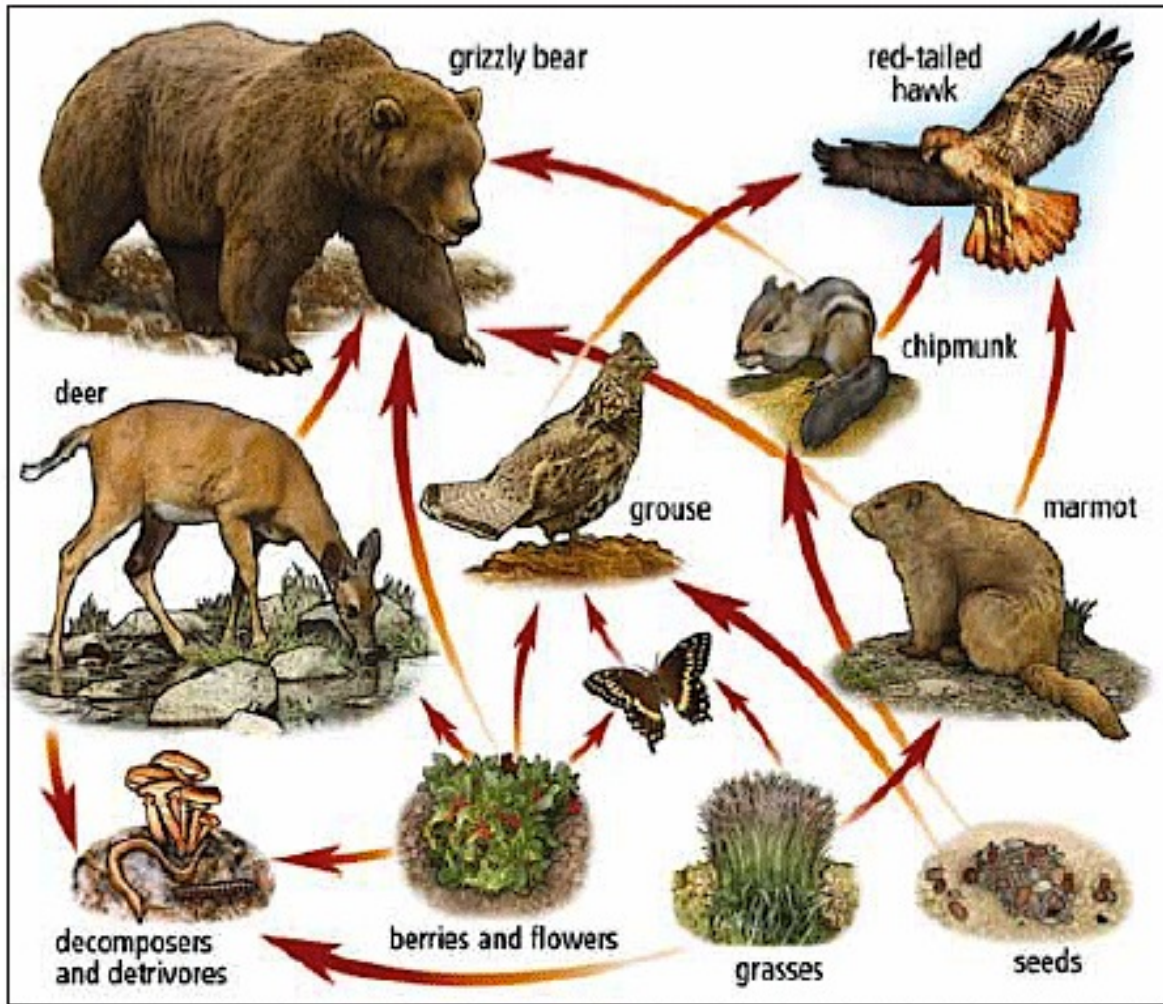
Plant

Primary producers



Phytoplankton

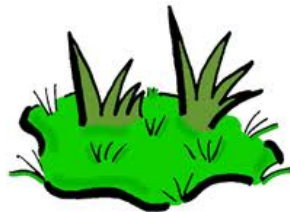
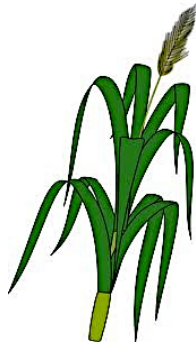
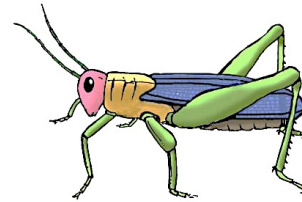
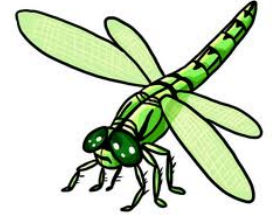
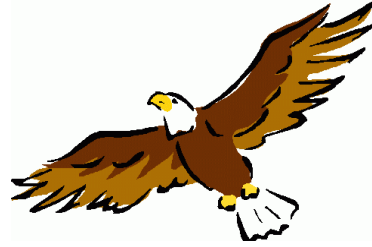
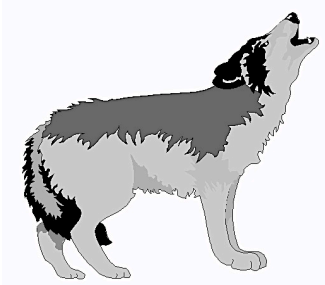
# Food Webs



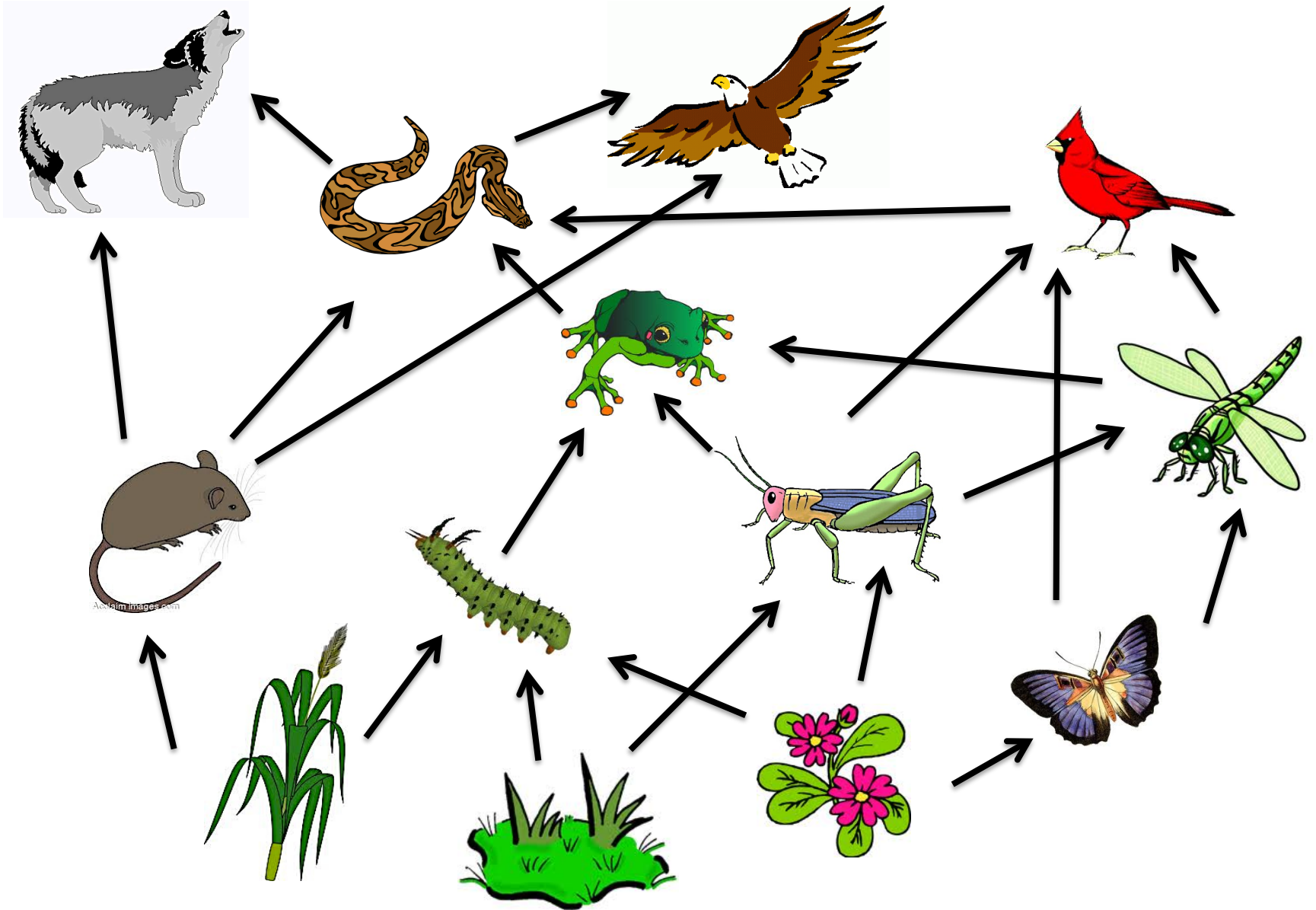
- A **food web** is a model that shows the connections between several different food chains.
- It always starts with producers and branches off.



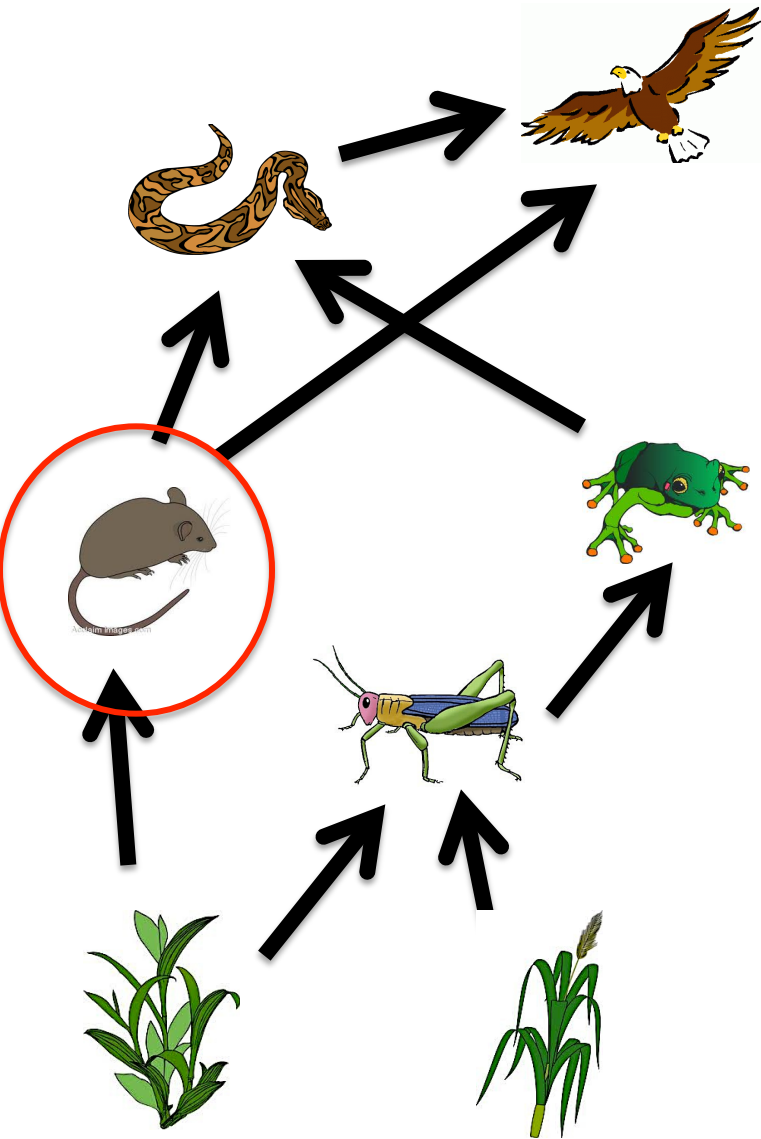
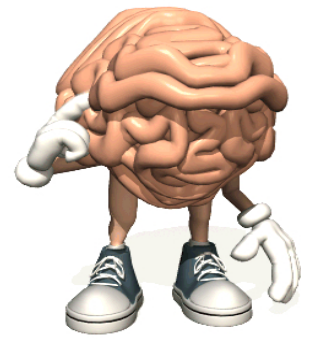
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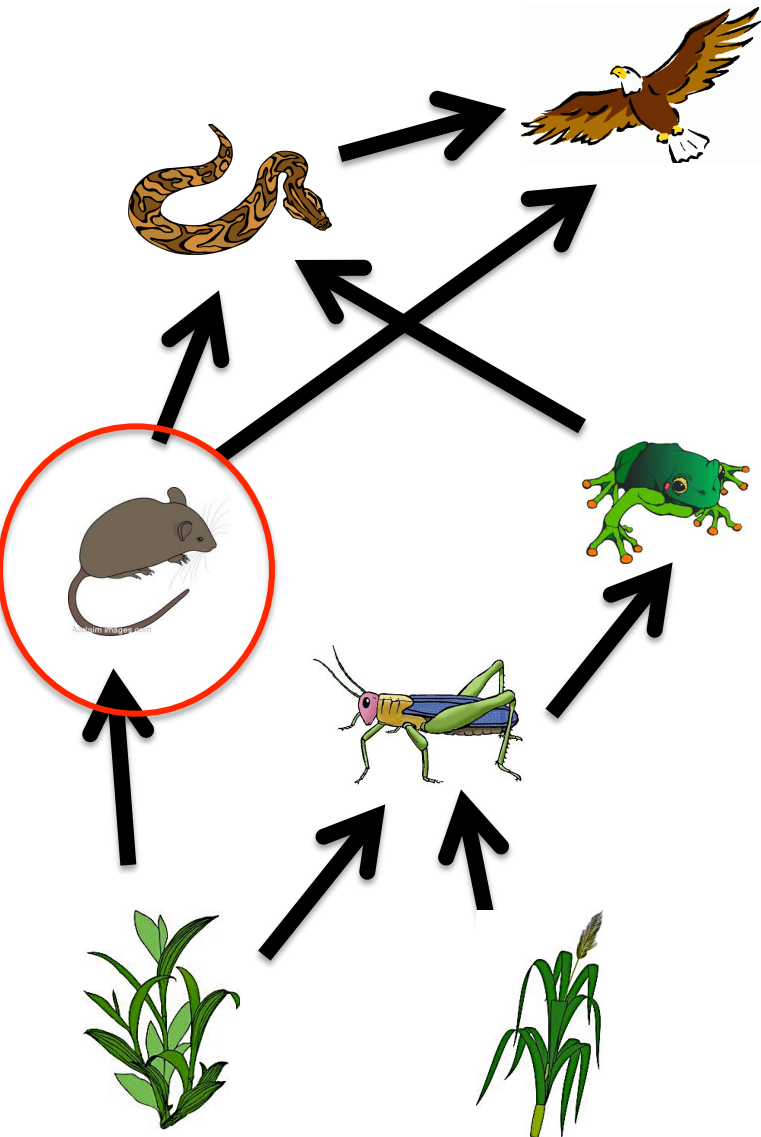
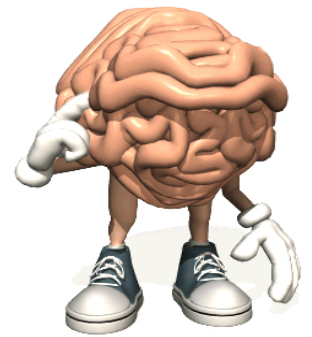


# Think About It?



- *Everything in nature is connected in some way.*
- *What would happen to the food web if the **mice** were eliminated?*
- *[Hint: Think about how each organism would be affected.]*

# Think About It?



Problem	Affect on Food Chain
1	<ul style="list-style-type: none"><li>Increases the pop'n of wild grass.</li><li>Decreases the pop'n of snakes.</li><li>Decreases the pop'n of hawks.</li></ul>
2	<ul style="list-style-type: none"><li>With fewer snakes, the frog pop'n would greatly increase.</li></ul>
3	<ul style="list-style-type: none"><li>Increases the grasshopper pop'n as there is more food (wild grass) and less competition with the mice.</li><li>With more grasshoppers, they might eat too many plants.</li></ul>
4	<ul style="list-style-type: none"><li>With no mice, and less snakes, the hawk's food sources are greatly reduced. The hawks will need to find a new food source or they will die.</li></ul>