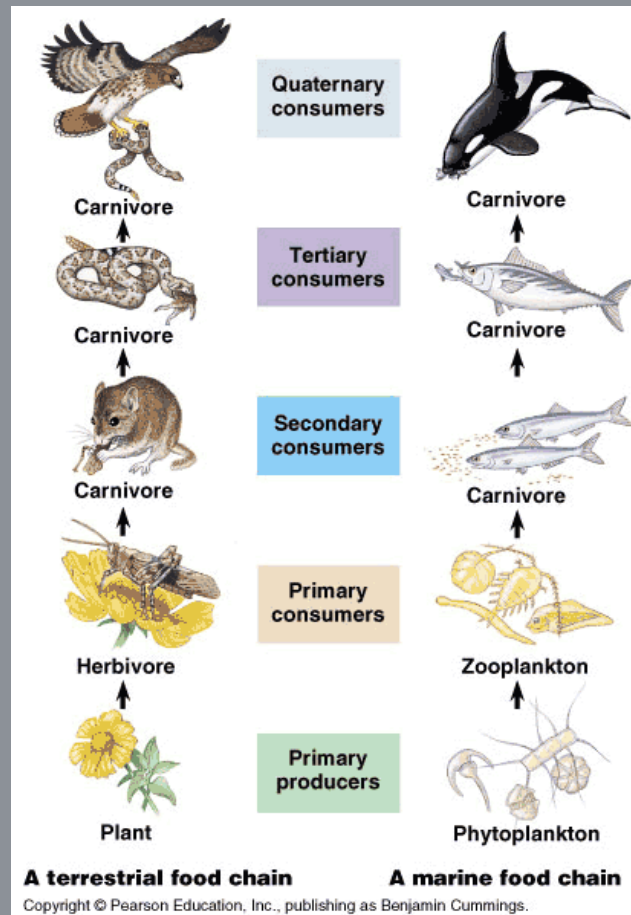


# Food Chains and Food Webs

# What is a food chain?

- A food chain is “a sequence of organisms, each of which uses the next, lower member of the sequence as a food source<sup>1</sup>”



# Important facts about food chains

- In a food chain each organism obtains energy from the one at the level below.
- Plants are called producers because they create their own food through photosynthesis<sup>3</sup>
- Animals are consumers because they cannot create their own food, they must eat plants or other animals to get the energy that they need.

# Primary Producers

- Primary producers are “organisms capable of producing their own food<sup>4</sup>”
- We can also say that they are photosynthetic, use light energy.
- Examples of primary producers include algae, phytoplankton, and large plants.
- Primary producers are eaten by primary consumers (herbivores)

# Primary Producers of NJ Marshes



**Cattails**



**Marsh Mallow**

[http://www.nicerweb.com/doc/class/pix/PRAIRIE/2005\\_07\\_18/Typha\\_angustifolia.jpg](http://www.nicerweb.com/doc/class/pix/PRAIRIE/2005_07_18/Typha_angustifolia.jpg)

[http://www.ncdot.org/doh/Operations/dp\\_chief\\_eng/roadside/wildflowerbook/graphics/images/page14a.jpg](http://www.ncdot.org/doh/Operations/dp_chief_eng/roadside/wildflowerbook/graphics/images/page14a.jpg)



**Blue Flag Iris**



**Marsh Fern**

<http://www.ontariowildflower.com/images/blueflag2.jpg>

<http://wisplants.uwsp.edu/scripts/detail.asp?SpCode=THEPALvPUB>

# Four types of consumer

- Herbivores: animals that eat only plants<sup>3</sup>
- Carnivores: animals that eat only other animals<sup>3</sup>.
- Omnivores: animals that eat animals and plants<sup>3</sup>.
- Detritivores: Animals that eat dead materials and organic wastes

# Other Ways to Classify Consumers

1. Primary Consumers: Herbivores<sup>3</sup>.

2. Secondary Consumers: Carnivores that eat herbivores<sup>3</sup>.

3. Tertiary Consumers: Carnivores that eat other carnivores<sup>3</sup>.



# Primary Consumers in Marshes

Muskrat (eats mostly Cattails)



<http://www.advancedwildlifecontrolllc.com/images/muskrat.jpg>



<http://wdfw.wa.gov/wlm/living/graphics/muskrat1.jpg>



# Primary Consumers in Marshes

- Wood Duck eats seeds like those of the Swamp Marsh Mallow and Blue Flag Iris



# Primary Consumers in Marshes

- **Glassy-winged Toothpick Grasshopper** – eats leaves of plants like cattail and pickerelweed



# Secondary Consumers

- Black Rat Snake eats eggs of animals like wood duck



# Secondary Consumers

- Swamp Sparrow eats seeds but also insects like the toothpick grasshopper



# Tertiary Consumers

- Eat other animals in marsh including snake and sparrow

**Osprey**





# Omnivore

- Raccoon eats seeds, fruits, insects, worms, fish, and frogs... and pretty much anything else they can get their paws on!





# Detritivore

- Worms are common detritivores in many ecosystems including marshes



# What is a food web?

A food web is “an interlocking pattern of food chains”

