Maryland Forest Food Web

A **food chain** is a model that shows how energy is passed, in the form of food, from one organism to another. A series of connected food chains make up a **food web**. Food chains and webs are organized by **trophic levels** which are feeding positions in the web. At each level of the food chain, energy is lost because it is used by the organism itself for respiration. This energy loss limits the number of steps within a food chain.

The lowest trophic level contains the **producers** (autotrophs) which manufacture their own food and the **decomposers** which break down existing organic material. Plants generally fall into producer category while fungi are typically decomposers. The organisms which feed on plants and other producers are then considered to be **primary consumers**. Anything that eats a primary consumer is then considered to be a **secondary consumer**. Animals that eat secondary consumers are known as **tertiary consumers**. Food chains and food webs are, therefore, comprised of multiple predator and prey relationships.

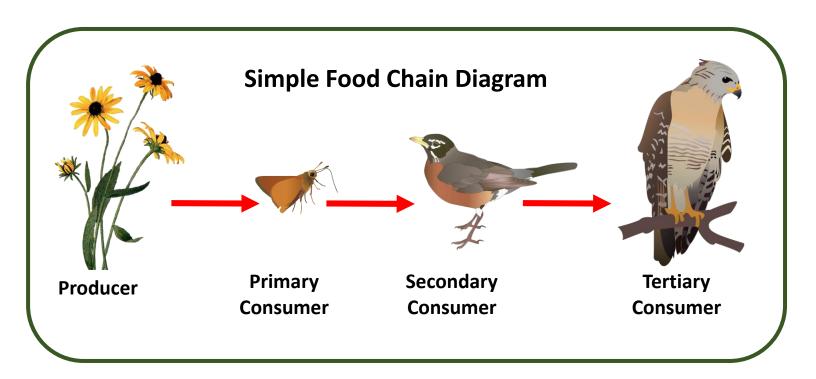
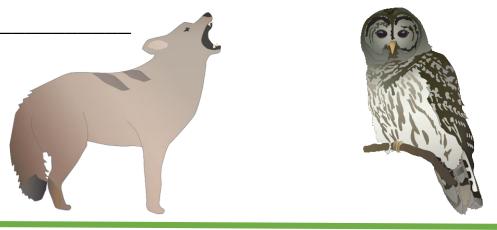


Image Credit: Food web graphics are courtesy of Tracey Saxby, Kim Kraeer, Lucy Van Essen-Fishman, and Jane Hawkey, Integration and Application Network, University of Maryland Center for Environmental Science (ian.umces.edu/imagelibrary/).

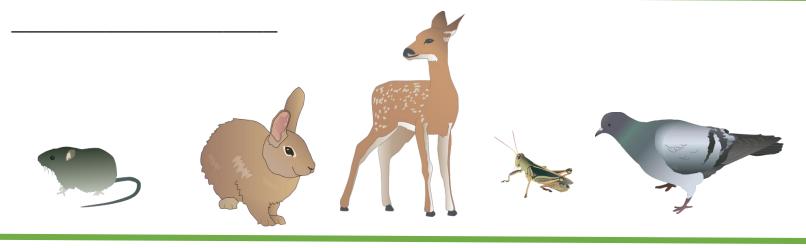


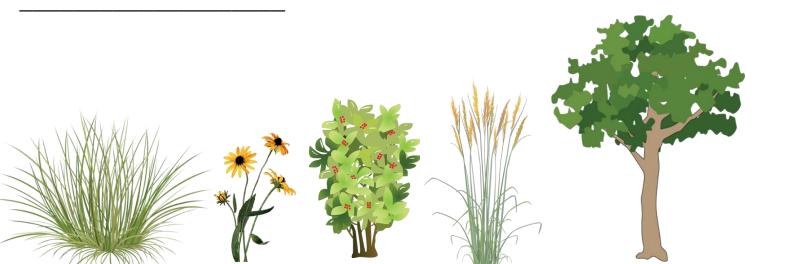
Forest Food Web

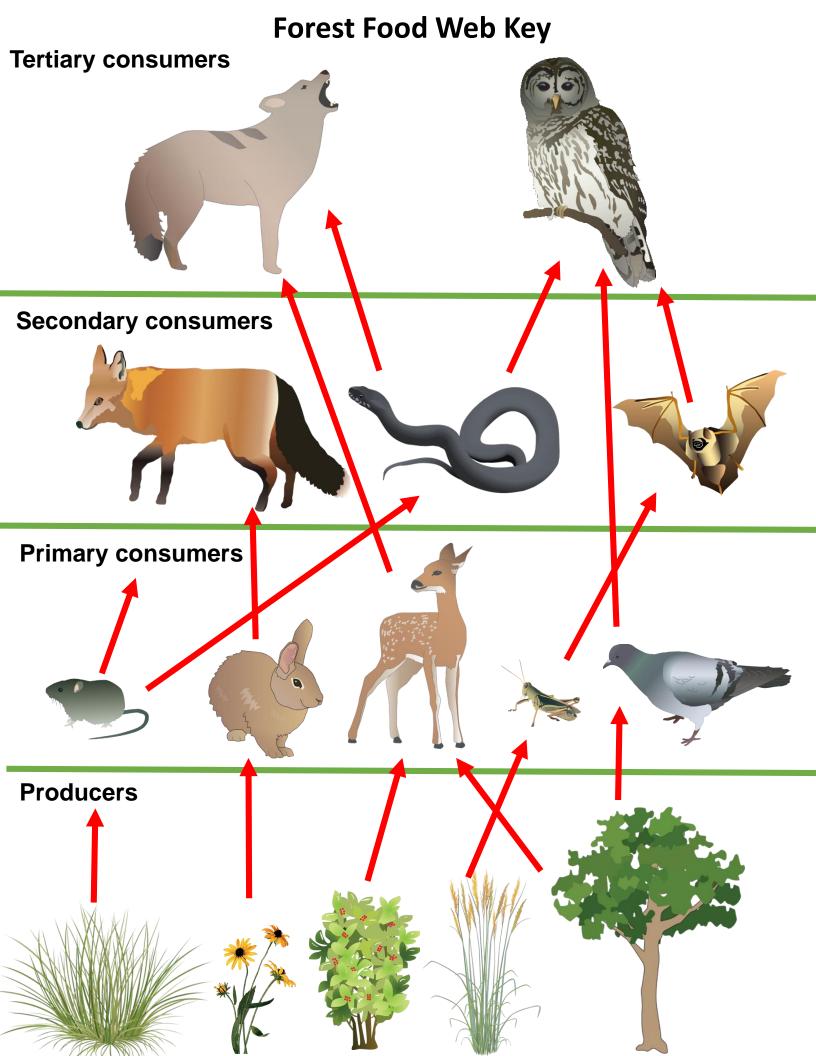
Label the trophic levels and add arrows to depict the flow of energy.













Tertiary Consumer

<u>Eats:</u> Small mammals, plants, fawns (occasionally)



Tertiary Consumer

<u>Eats:</u> Small mammals, other birds



Red Fox
Secondary Consumer
Eats: Small mammals, birds,
plants



Eastern Ratsnake
Secondary Consumer
Eats: Small mammals, birds,
and eggs



Big Brown Bat
Secondary Consumer
Eats: Moths, beetles,
grasshoppers, and other
insects



White-tailed Deer Primary Consumer <u>Eats:</u> Plants



Eastern Cottontail
Primary Consumer
Eats: Plants



White-footed Deer Mouse
Primary Consumer
Eats: Plants



PigeonPrimary Consumer
<u>Eats:</u> Plants, seeds, and nuts

Grasshopper Primary Consumer Eats: Plants, seeds, and nuts	Sedge Producer	Black-eyed Susan Producer
Holly Producer	Indiangrass Producer	White Oak Producer



<u>Trophic level:</u> <u>Eats:</u>



Trophic level:
Eats:



Red Fox Trophic level: Eats:



Eastern Ratsnake
Trophic level: 2.5
Eats: 2.5



Big Brown Bat Trophic level:
Eats:



White-tailed Deer
Trophic level:
Eats:



Eastern Cottontail
Trophic level:
Eats:



White-footed Deer Mouse
Trophic level:
Eats:



Pigeon
Trophic level:
<u>Eats:</u>

Grasshopper Trophic level: Eats:	Sedge Trophic level:	Black-eyed Susan Trophic level:
Holly Trophic level:	Indiangrass Trophic level:	White Oak Trophic level:
 Trophic level: Eats:	 Trophic level: Eats:	 Trophic level: Eats: