

Teacher Solutions – Keys and Webs

Key Words

- **carnivore:** an animal that eats meat (e.g. a cougar)
- **herbivore:** an animal that eats plants (e.g. deer)
- **omnivore:** an animal that eats both animal and vegetable matter (e.g. grizzly bear)
- **decomposer:** an organism that breaks down organic matter (e.g. worm)
- **predator:** an animal that hunts, captures and kills another animal (the prey) for food
- **prey:** an animal that is a source of food for a predator
- **producer/autotroph:** an organism that makes its own food (e.g. green plant)
- **heterotroph:** a consumer organisms that cannot produce its own food and must rely on eating other organisms to meet its energy requirements
- **consumer:** an organism that feeds upon those below it in a food chain (e.g. herbivores that eat grass are consumers)
- **primary consumer:** herbivores that feed upon green plants or producers
- **secondary consumer:** carnivores or omnivores that feed upon herbivores
- **tertiary consumer:** carnivore that feeds on other carnivores
- **food web:** a complex system of interdependent food chains in a given ecosystem
- **Law of Conservation of Energy:** during a physical or chemical change energy is neither created nor destroyed, but may be changed in form and moved from place to place

Biology 30 Extension

- **Intraspecific competition:** competition between members of the same species for limited resources, such as food, water or space
- **Interspecific competition:** competition between members of different species
- **Commensalism:** an interaction between two species that benefits one species, while the other is not affected
- **Mutualism:** a mutually beneficial relationship between two species
- **Parasitism:** a relationship that benefits one species, but harms the other

Rocky Mountain Organisms Dichotomous Key:

COMMON NAME	SCIENTIFIC NAME
Mountain bluebird	<u>Sialia currucoides</u>
Hoary marmot	<u>Marmota caligata</u>
Long-tailed salamander	<u>Ambystoma macrodactylum</u>
Red-tailed hawk	<u>Buteo jamaicensis</u>
Yellow glacier-lily	<u>Erythronium grandiflorum</u>
Moose	<u>Alces alces</u>
Wolverine	<u>Gulo gulo</u>
Mallard Duck	<u>Anas platyrhynchos</u>
Willow shrubs	<u>Salix spp.</u>
Lynx	<u>Lynx canadensis</u>
Snowshoe hare	<u>Lepus americanus</u>
Grizzly bear	<u>Ursus arctos</u>

Gray wolf	<u>Canis lupus</u>
Bighorn sheep	<u>Ovis canadensis</u>
Northern sweet-vetch	<u>Hedysarum boreale</u>
Canada buffaloberry	<u>Shepherdia canadensis</u>
Wood Ant	<u>Formica spp.</u>
Water Vole	<u>Microtis richardsoni</u>

Some examples interactions to add to the food web:

- Lynx – snowshoe hare: *predation*
- Stream – mountainside rocks: *erosion*
- Willow – buffaloberry: *competition* (for water, nutrients, space, etc.)
- Lynx – wolf: *competition* (for prey)
- Canada buffaloberry – grizzly bear: *mutualism* (berries get distributed and fertilized)
- Grizzly bear – grizzly bear: *intraspecific competition* (for food in the harsh rockies)
- Hoary marmot – water vole: *interspecific competition* (for willow shrubs)
- Willow shrubs – lichens that grow on them: *commensalism* (no harm to willows)
- Wood ticks – moose: *parasitism* (tick outbreaks can harm moose populations)