






Interactions Between Living Things

(Lesson 3)

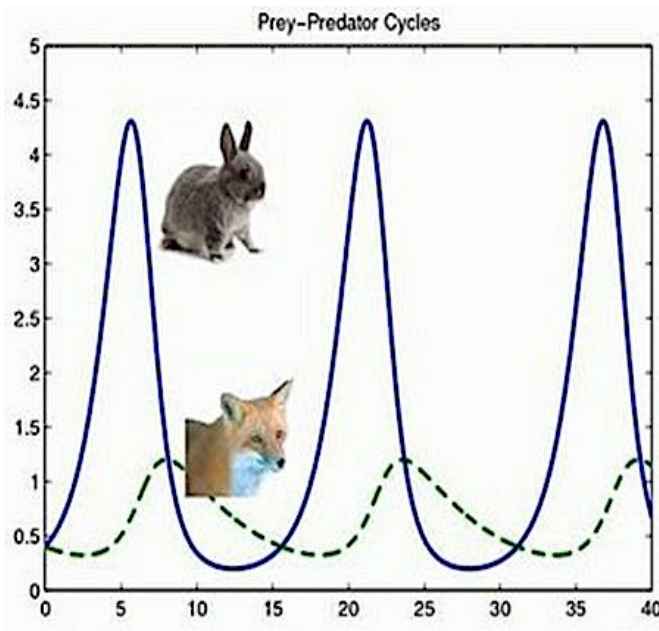
List some examples when living things interact with each other and/or with the environment (e.g., a deer drinking from a stream, tree roots grow towards water).



Interaction	Symbols	Description	Example
Mutualism		Organisms interact and both organisms benefit.	<ul style="list-style-type: none"> • Bees help flowers pollinate while getting food.
Commensalism		Organisms interact and one organism benefits while the other is unaffected.	<ul style="list-style-type: none"> • Clownfish seek shelter in the stinging tentacles of sea anemones.
Parasitism		Organisms interact and one organism benefits while the other is harmed.	<ul style="list-style-type: none"> • Mosquitoes can harm the 'host' by their annoying bites, and as a carrier of disease.
Predatism		One organism (predator) hunts another organism (prey) for food. One benefits while the other is killed.	<ul style="list-style-type: none"> • Fox hunting rabbit for food. • Wile E. Coyote trying to catch the Roadrunner.
Competition		Organisms compete for resources (i.e., food, water, mate, space, shelter), and both could be hurt. PRO = controls population sizes within an ecosystem	<ul style="list-style-type: none"> • Lions fighting over a kill. • Penguins competing for nesting space. • Trees competing for sunlight.

Predator - Prey Cycles (**Predatism**)

There is a very close relationship between the population of prey and population of predators. It is a cycle showing as a double wave pattern.



What pattern do you notice at year 5?

High prey population. With lots of food and little competition between predators, predator population increases.

What pattern do you notice at year 8?

High predator population. Large number of prey hunted will decrease prey population.

What pattern do you notice at year 12?











Low predator population. With less food and more predator competition, the predator population will decrease.

What pattern do you notice at year 17?

When the predator population gets low enough, it allows the prey population to grow again. The predator-prey relationship will cycle itself as a double-wave pattern.

Competition With Humans (**Competition**)

What are some ways that humans and the environment compete? What is outcome?

SITUATION	HUMANS	ENVIRONMENT
Cut down trees for homes and farmland.	 Make shelter.	  Habitat loss.
Use fertilizers and pesticides to control organisms.	 Crops for food.	 Destroy organisms.
Burn fossil fuels for energy.	 Create energy for use.	  Global warming.
Build homes on flood plains because of flat land.	 Flood damages homes.	 Water runoff goes to lowest point on land.