



Science Virtual Learning

Populations and the Predator - Prey Relationship

April 9, 2020



8th Grade Science

Lesson: April 9, 2020

Objective/Learning Target:

I can explain and give examples of PREDATION, and then use that information to predict those Interactions in an Ecosystem.



Bellwork

Please watch the Videos below about Predator-Prey Relationships

[Predator-Prey Interactions](#)

[Predator-Prey Relationships](#)



Important Terms to Remember

Niche - The role and position a species has in its environment; how it meets its needs for food and shelter, how it survives and how it reproduces.

Predation - An Interaction between organisms in which one organism kills and eats another organism for food.

Predator - An animal that naturally preys on and eats other animals for food.

Prey - An animal that is hunted by another for food.

Keystone Species - A species on which other species in an Ecosystem largely depend on, such that if it were removed the Ecosystem would change drastically.

Population - The number of organisms of the same species that live in a particular geographic area at the same time with capability of interbreeding.

Species - Group of physically similar organisms that can reproduce and their offspring can reproduce.



Some Practice for you

1. Write down the three (3) questions below on your own sheet of paper.
2. Click on the video link below and answer the questions.

[The Stonefish as a Predator](#)

1. What allows the Stonefish to capture its Prey?
2. What does the Stonefish eat?
3. Where does the Stonefish hide?

Answers to the Stonefish questions.

1. What allows the stonefish to capture its Prey?

The stonefish looks like its surroundings. The stonefish uses camouflage to blend in with the ocean floor.

2. What does the Stonefish eat?

The stonefish eats small fish.

3. Where does the stonefish hide?

The stonefish hides in plain sight in the sand next to rocks and coral.



How does this Predator-Prey relationship affect Populations?

A good read below - this is good stuff!

Well generally speaking, as the Population of the Prey go up, the Population of the Predator(s) will soon go up as well. Why you ask - because there is more food available for the Predator to eat, therefore reproduce and have more offspring survive.

BUT, as the Predator Population rises, there will reach a point where the Prey Population will begin to fall or decrease. As the Prey Population decreases, soon thereafter the Predator Population will also begin to decrease - because there is now less food for the Predator to eat and therefore less offspring survive.



[Interactions Among Living Things](#)

Click on the activity above and put your answers on a separate sheet of notebook paper. Do not click on the next slide until you have answered all the questions.

Well, now let's see how you did!

1. Organisms with characteristics that are well suited to their environment survive to reproduce and pass those characteristics along to their offspring. The offspring also survive and reproduce. In this way, successful characteristics passed on through generations. Organisms that poorly suited to their environment generally do not survive and reproduce, and their characteristics may disappear from the population. Over time, this process produces adaptations in the species.
2. A niche is an organism's role in its habitat-the food it eats, how it obtains food, which organisms eat it, how it reproduces, and so forth.
3. Organisms' adaptations enable them to specialize in obtaining food, shelter, and other ecosystem resources so they do not compete directly with other species.
4. The lynx increased too because they had more food.
5. The hares decreased because there were more lynx to prey on them.
6. Lack of food or shelter; disease; predation by other predators such as coyotes, wolves, and eagles.

Answers continued

7. With the lynx population decreasing, the hare population would increase again, resulting in another increase in the lynx population.
8. **Predation** - an interaction between organisms in which one kills the other organism for food (energy). **Predator**- the organism that does the killing. **Prey** - the organism that is killed. Answers will vary for examples.
9. **Mutualism** - a relationship between two species in which both species benefit; **Commensalism** - a relationship in which only one species benefits and the other is neither helped or harmed; **Parasitism** - a relationship in which one species is benefits and the other is harmed, often killed.
10. The struggle between organisms as they attempt to use the same limited resources.