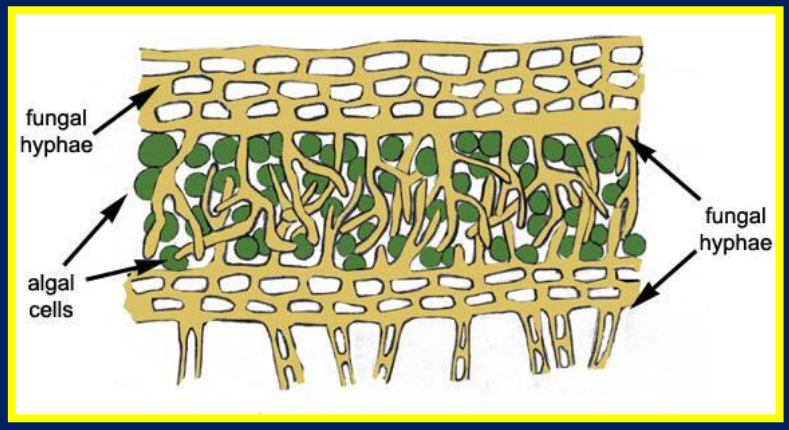
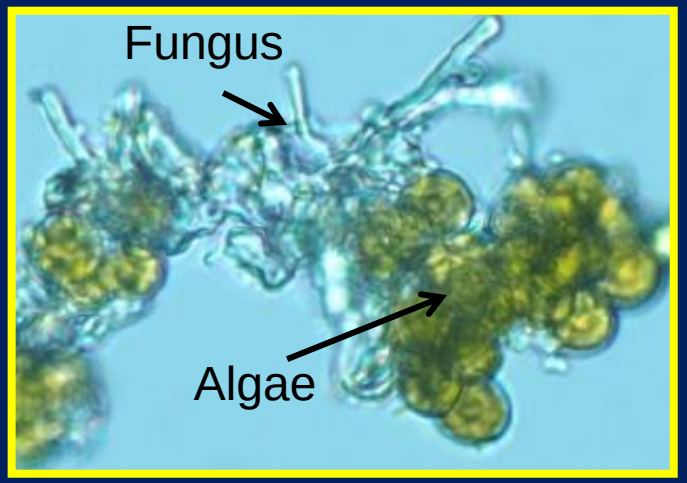
Species Interactions

Symbiosis

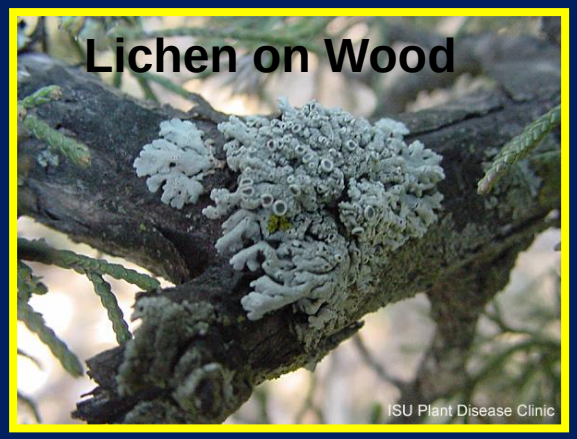
When two species form a close and permanent relationship, it called symbiosis.

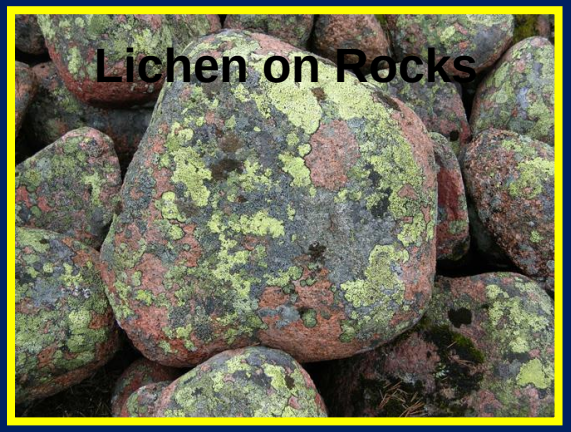




Symbiosis

Because of this symbiotic relationship, lichen can be found in a wide range of habitats, including the arctic tundra.





Reindeer feed mainly on lichen during the winter.

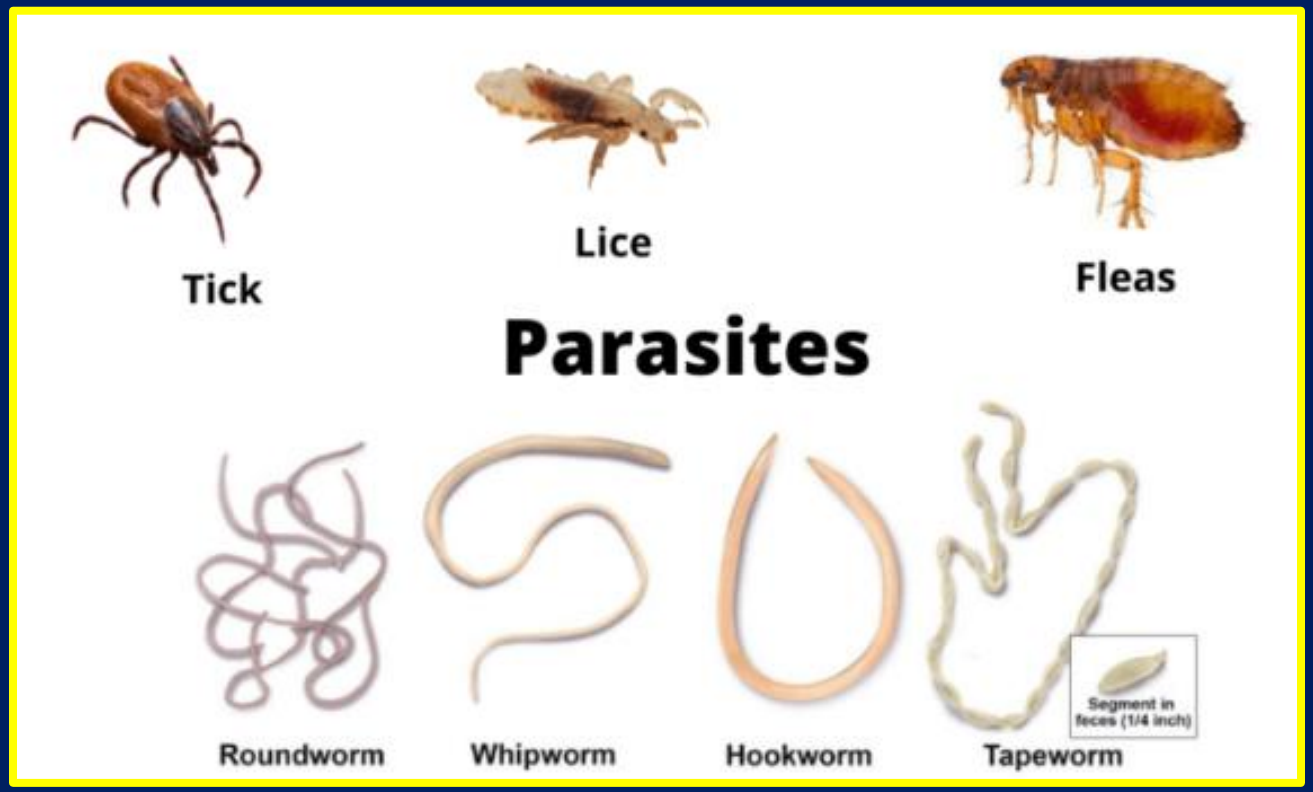
Mutualism

Mutualism is a symbiotic relationship in which both species benefit

Nemo's Science Question

Parasitism

Parasitism is a symbiotic relationship in which one species benefits and one is harmed.



Parasitism

The species that benefits is called the parasite and the species that is harmed is called the host.

Host

Parasite

Parasitism

There can also be a third species involved, called a vector, that carries the parasite from a current host to a new host.

Parasite

Vector

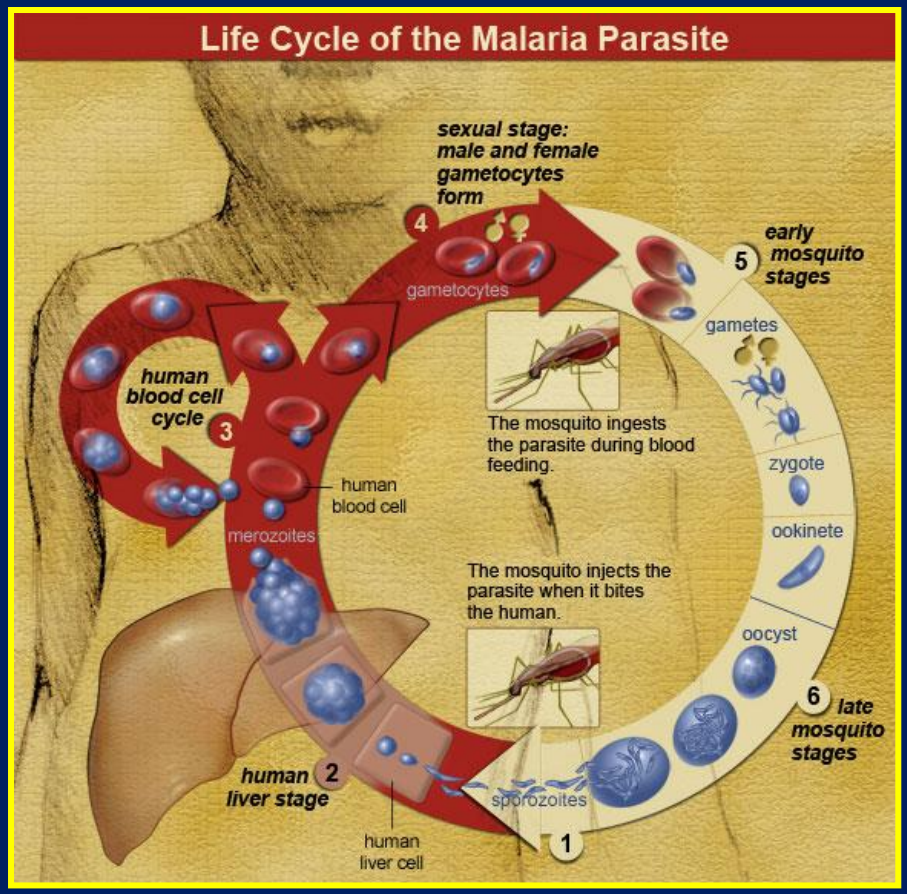
Host

Elephantitis

Parasitism

Malaria is caused by a parasitic microscopic organism called a protozoan that uses the mosquitoes and humans to help complete its reproductive cycle.

1. Mosquito injects parasite when it bites the human.
2. Protozoan parasite travels to liver cells and then red blood cells.
3. Another mosquito bites an infected human and ingests the protozoan parasite.
4. Protozoan parasite sexually reproduces in the gut of the mosquito.



Commensalism

Commensalism is when one species benefits and the other species is not affected

Other Relationships

Two other types of interactions found in ecosystem are competition and predator-prey relationships.

Competition

Predator-Prey

Although these relationships involve interactions between different species, they are not as species specific as the symbiotic relationships.

Competition

Competition between two different species can occur when share the same resource such as food, water, and space.

Predator-Prey

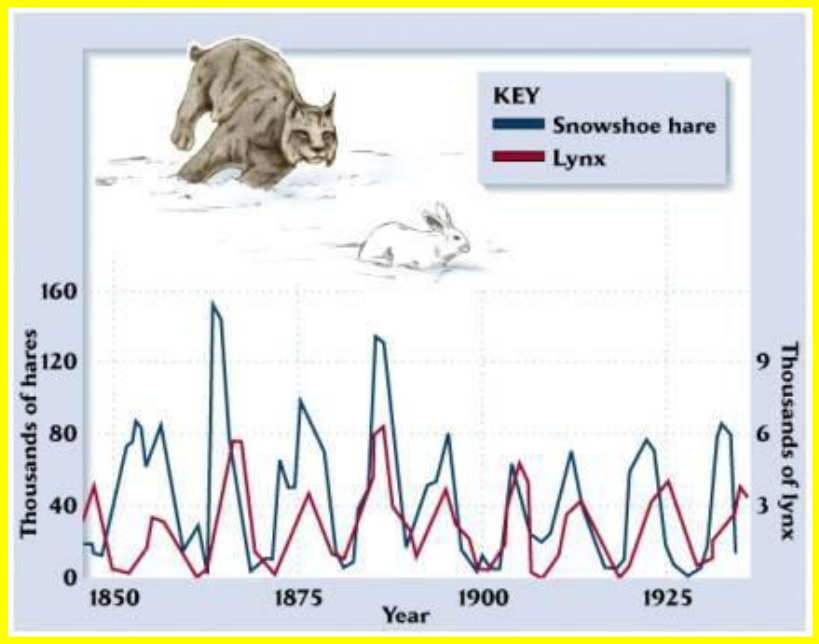
Predator-prey relationships occur when the predator species kills and eats the prey species.

Prey

Predator

Predator-Prey

The natural predator-prey relationship is crucial in keeping the ecosystem in balance.



Too many grazers results in overgrazing and starvation.

Natural predators, keep the number of grazers down.

However, too many predators results in overhunting and eventual starvation of predators.

As the number of predators decrease, the grazer populations begin to increase again and the cycle repeats itself.

The End