

## Grey Wolf

*Canis lupus*



## Grizzly Bear

*Ursus arctos*



## Bald Eagle

*Haliaeetus leucocephalus*



## Beaver

*Castor canadensi*



## Elk

*Cervus canadensis*



## Willow Tree

*Salix boothii*



## Deer Mouse

*Peromyscus maniculatus*



## Coyote

*Canis latrans*



## Grey Wolf

*Canis lupus*

The Grey Wolf help control ecosystems by keeping ungulate numbers low through predation, and keep coyote populations low by out-competing them for food.

In this simulation, each summer they:

- produce two offspring per pair
- lose one member to natural death
- lose no members to predation

## Grizzly Bear

*Ursus arctos*

The Grizzly Bear (or Brown Bear) help ecosystems by distributing seeds and help regulate ungulate populations.

In this simulation, each summer they:

- produce two offspring per pair
- lose one member to natural death
- lose no members to predation

## Bald Eagle

*Haliaeetus leucocephalus*

The Bald Eagle keeps small mammal populations down through predation. They are also skilled scavengers and rely on wolves and bears for carcasses.

In this simulation, each summer they:

- produce four offspring per pair
- lose two members to natural death
- lose no members to predation

## Beaver

*Castor canadensi*

Beavers are the biggest contributors to landscape manipulation (after humans) as they flood plains and create dams. They provide essential landscape for many plants and animals.

In this simulation, each summer they:

- produce four offspring per pair
- lose one members to natural death
- lose one member to predation for every two coyotes

## Elk

*Cervus canadensis*

Elks help ecosystem by aerating soil with their hooves, but if there are too many elk, over-grazing can lead to serious issues in the ecosystem.

In this simulation, each summer they:

- produce three offspring per pair
- lose two members to natural death
- lose one member to predation per four wolves

## Willow Tree

*Salix boothii*

Willow trees provide habitat and protection to several small mammals and birds. They rely elk and small mammals to distribute their seeds.

In this simulation, each summer they:

- produce four offspring per pair (dioecious)
- lose one members to natural death
- lose one member to grazing by elk

## Deer Mouse

*Peromyscus maniculatus*

Small mammals such as deer mice are essential to many animal's diets such as coyotes and raptors. If there are too many coyotes, they will outcompete with the raptors for food.

In this simulation, each summer they:

- produce six offspring per pair
- lose four members to natural death
- lose one member to predation per coyote

## Coyote

*Canis latrans*

Coyotes help keep the small mammal population down, but unless there are wolves to compete with coyotes, often their populations will increase dramatically, causing detrimental effects to the ecosystem.

In this simulation, each summer they:

- produce three offspring per pair
- lose one member to natural death
- lose one member to predation/out-competition per five wolves

Note to teachers: If a colour printer is not available, use felts or pencil crayons to indicate which colour each species is.