



### Session 4.3: Keystone Species Level 6-8

In this activity, your child will learn about keystone species and how they affect ecosystems. Included you will find a few short videos, followed by an activity for your child to complete.

#### Suggested Materials:

- Technology to watch videos linked below
- Technology to print/use wolves changing rivers timeline cards (below)

#### Lesson:

In ecosystems, a variety of plant and animal species operate together and depend on each other in a living, breathing system. There are some species that, if lost from the ecosystem, affect the system's operations much more drastically than other species in the system. This is called a **keystone species**. In other words, the other species rely heavily on the keystone species in order to survive.

Show both of the following videos to your child:

Video #1: [3 Animals That Keep Their Whole Ecosystem Together](#)

Video #2: [How Wolves Change Rivers](#)

#### Activity:

*Part 1:* Print and cut out the ecological event cards on the next page. Have your child put the event cards in order based on Video #2: How Wolves Change Rivers. Answer key at bottom

#### Discussion Questions:

- Who was a keystone species in Yellowstone National Park?
- What is a trophic cascade?

*Part 2:* Have your child complete research on your local ecosystem. Try to find information on a keystone species found in that system. Complete the following discussion questions.

- What are some examples of other species that depend on your keystone species? Name at least three.
- What are some drastic changes that would happen to this ecosystem if the keystone species is removed? Name at least five.

A.

Coyote populations decreased in size

B.

Regenerating forests stabilized riverbanks

C.

Birds of prey returned and other smaller predators increased in numbers

D.

Erosion along the rivers decreased, making the rivers more fixed in their course

E.

Wolves are established again in Yellowstone

F.

Dams provided habitat for otters, muskrats, ducks, fish and other reptiles/amphibians

G.

Migratory and song bird numbers increased

H.

The number of beavers in the rivers increased

I.

The number of rabbits and mice increased

J.

Trees started to grow taller and recovered in other areas where they had been wiped out

K.

Bears ate leftovers from wolves and berries on the plants that grew back, increasing numbers

L.

Deer populations decrease in size and change their behavior

Answer Key: E, L, J, G, H, F, A, I, C, K, B, D