Student Worksheet

Use this worksheet to record information about the interactions between organisms.

DIORAMA: Alaska Brown Bear
Observe the diorama, read the information on the panel to the left, and discuss what you see with classmates.

List the organisms in this diorama and explain how they are interacting:

Read the panel on the right called “Bears and Salmon.”
How do the brown bears and salmon “help support the riverside ecosystems?”

How do you think a change in bear population will affect the fish population and the grass population?
Explain:
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DIORAMA: Wapiti
Observe the diorama, read the information on the panel to the left, and discuss what you see with classmates.

List the organisms in this diorama and explain how they are interacting:

Read the panel on the right called “Wapiti and Aspen.”
How do the wapiti and aspen interact?

How do wolves regulate the interaction between wapiti and aspen, and help maintain a healthy ecosystem?

What other organisms benefit from a healthy ecosystem?
Student Worksheet

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Diorama: Canada Lynx and Snowshoe Hare
Observe the diorama, read the information on the panel to the left, and discuss what you see with classmates.

List the organisms in this diorama and explain how they are interacting:

Read the panel on the right called “Predator and Prey.”
What does it mean that these two species have an “unusually tight predator-prey relationship?”

Sketch and describe the graph showing “population cycles.”

What population falls first? Why do the populations recover over time?
Student Worksheet

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DIORAMA: Alaska Brown Bear
Observe the diorama, read the information on the panel to the left, and discuss what you see with classmates.

List the organisms in this diorama and explain how they are interacting:

(This diorama has bears, fish, an otter, and grass. The bears and otter are eating the fish. The grass may also provide food for the bear.)

Read the panel on the right called “Bears and Salmon.”
How do the brown bears and salmon “help support the riverside ecosystems?”

(Droppings and fish carcasses left behind by feeding bears help transfer nutrients to other parts of the ecosystem. These nutrients help the grasses grow.)

How do you think a change in bear population will affect the fish population and the grass population? Explain:

(Because bears are predators of salmon, if there are more bears, there will probably be fewer salmon over time because many are eaten. If there are fewer bears, more salmon will survive. Without many bears, the plants may suffer because bears help move nutrients from fish to the grass.)
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DIORAMA: Wapiti
Observe the diorama, read the information on the panel to the left, and discuss what you see with classmates.

List the organisms in this diorama and explain how they are interacting:
(This diorama has wapiti, grass, trees, and a bird. The wapiti eat the plants. The bird uses the tree as a place to rest and may also eat plant material.)

Read the panel on the right called “Wapiti and Aspen.”
How do the wapiti and aspen interact?
(The wapiti are herbivores and so they eat the young aspen trees for food, as well as many other plants.)

How do wolves regulate the interaction between wapiti and aspen, and help maintain a healthy ecosystem?
(Wolves regulate the wapiti population because they are predators that eat the wapiti. More wolves mean fewer wapiti, and that means there can be more aspen since fewer wapiti are eating them. Aspen and other plants are important to a healthy ecosystem because they provide food or shelter to many animal species and because their roots help prevent erosion.)

What other organisms benefit from a healthy ecosystem?
(Bison and beavers are herbivores too so they normally compete with wapiti for food. In a healthy ecosystem, wapiti won’t eat all of the plant food. Songbirds live in aspen trees so they too benefit from having a good balance between the number of wolves and the number of wapiti. In a healthy ecosystem, there are plenty of trees for songbirds to use.)
**Student Worksheet**

Use this worksheet to record information about the interactions between organisms.

**DIORAMA: Canada Lynx and Snowshoe Hare**

Observe the diorama, read the information on the panel to the left, and discuss what you see with classmates.

List the organisms in this diorama and explain how they are interacting:

(This diorama has a lynx, hare, and plants. The lynx eats the hares. The hares eat plants and also use plants for shelter.)

**Read the panel on the right called “Predator and Prey.”**

What does it mean that these two species have an “unusually tight predator-prey relationship?”

(These two organisms have an almost exclusive predator-prey relationship. That means the lynx almost only eats hares, and the hares are almost only eaten by lynx. As a result, the population of one species will affect the population of the other.)

Sketch and describe the graph showing “population cycles.”

(This graph shows the size of a lynx population and a hare population over many years. The populations rise and fall over and over again in a wave-like pattern.)

What population falls first? Why do the populations recover over time?

(The hare population falls first and then soon after, the lynx population falls rapidly. This is because the lynx eat most of the hares and then run short on food. With little food to eat, the lynx population either starves or leaves the area. With fewer predators, the hares make a dramatic recovery, allowing the lynx to also recover.)