Predator-Prey Relationships

**Objective:** I can describe how changes in the populations of predators and prey affect one another.

**Standards:** 6.1g, 6.3a
Look at the cartoon and observe what happens over time.

Why do you think the scenario started with more predators, but ends with less predators?

Post your response in your guided notes and discussion board.
Mini-Lesson

• **Predator**: the organism that hunts for food (example: cheetah, lion, shark, owl, snake, etc.)

• **Prey**: the organism that gets eaten (example: deer, mouse, small fish, etc.)
1. When predators and prey coexist, the predators will eat the prey.
2. The prey will begin to go down in number.
3. Predators will breed and multiply and go up in number.
4. They will continue to eat the prey until there is very little prey left.
5. When there is very little prey, the predator will be left with little to no food.
6. Predators will starve and die.
7. Prey will breed and multiply. Prey numbers will go back up again.
8. The cycle repeats.
Mini-Lesson
Predator-Prey: The Cycle Simplified

1. When predator goes up, prey goes down.
2. When prey goes down, predator goes down.
3. Predator goes down, prey goes up.
4. Prey goes up, predator goes down.
Look at the predator-prey relationship graph shown.

1. Identify the predator
2. Identify the prey
3. Which colored line represents the predator?
4. Which colored line represents the prey?
5. What should the y-axis be labeled?
6. What should the x-axis be labeled?
7. Tell the story using the four steps discussed in the cycle (appropriately identify the predator and prey)
Regents Questions

Base your answer to the following question on the diagram below and on your knowledge of biology.

**Wolf and Moose Populations, 1960 to 1999**

An observable trend in the wolf and moose data between 1980 and 1995 is
A) as the wolf population decreases, the moose population increases
B) as the wolf population decreases, the moose population decreases
C) the numbers of wolves and moose are relatively constant
D) the numbers of wolves and moose appear to be unrelated

During its annual migration, the red knot, a medium-size shorebird, flies the entire length of North and South America. During one critical stop to feed on the eggs of horseshoe crabs, the birds nearly double their body mass. The relationship between the red knot and the horseshoe crab is that of
A) parasite–host
B) consumer–producer
C) scavenger–producer
D) predator–prey

Which row in the chart below shows a direct relationship that can exist between two living organisms?

<table>
<thead>
<tr>
<th>Row</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>producer – carnivore</td>
</tr>
<tr>
<td>(2)</td>
<td>predator – prey</td>
</tr>
<tr>
<td>(3)</td>
<td>parasite – prey</td>
</tr>
<tr>
<td>(4)</td>
<td>carnivore – host</td>
</tr>
</tbody>
</table>

A) 1  B) 2  C) 3  D) 4

Two interactions between organisms are shown in the table below. X and Y do not represent the same organisms in the two interactions.

<table>
<thead>
<tr>
<th>Interaction 1</th>
<th>Organism X</th>
<th>Organism Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predator</td>
<td>Prey</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interaction 2</th>
<th>Organism X</th>
<th>Organism Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parasite</td>
<td>Host</td>
<td></td>
</tr>
</tbody>
</table>

Which statement best describes the relationship between organism X and organism Y in each interaction?
A) Organism X is positively affected by the relationship and organism Y is negatively affected.
B) Organism X is negatively affected by the relationship and organism Y is positively affected.
C) Both organisms are positively affected by the relationship.
D) Both organisms are negatively affected by the relationship.
Closure

• How do humans disrupt predator-prey dynamics?

• Post your response on the guided notes and discussion board.
Extended Practice

• Complete the attached pdf or castle learning homework.