Science Learning Packet
Grade 7:
Populations & Resources, Lesson 8

Science learning activities for SPS students during the COVID-19 school closure.

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Due to the COVID-19 closure, teachers were asked to provide packets of home activities. This is not intended to take the place of regular classroom instruction but will help supplement student learning and provide opportunities for student learning while they are absent from school. Assignments are not required or graded. Because of the unprecedented nature of this health crisis and the District’s swift closure, some home activities may not be accessible.

If you have difficulty accessing the material or have any questions, please contact your student’s teacher.
Lesson 8

What do you think would happen to the lion population if the hyena population increases in size? Assume that the populations were stable before this change (circle one)

- The lion population would increase
- The lion population would decrease
- The lion population would not change

Explain your thinking:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Last time we collected evidence about how populations that are in competition for a resource population can affect one another. What ideas do you have about other forms of competition between populations of organisms?
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Plan and conduct an investigation in the digital model to collect evidence about whether organisms that are not directly affecting one another could cause changes to a population.

To the right is a food web of the six populations.
Can populations that are not directly connected on a food web still affect one another?

Collect evidence on each scenario and record your observations.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>The clawcats have no consumer population.</td>
<td>1.</td>
</tr>
<tr>
<td>Find <strong>two ways</strong> you could cause a decrease in their population.</td>
<td>2.</td>
</tr>
<tr>
<td>The greenleafs have no resource population.</td>
<td>1.</td>
</tr>
<tr>
<td>They are something called producers and make their own energy from the sun!</td>
<td>2.</td>
</tr>
<tr>
<td>If the sun is constant all year round, <strong>find two ways</strong> that you could decrease the weebug population.</td>
<td></td>
</tr>
</tbody>
</table>
Applying this to the Moon Jelly Problem:

Pick one of the following populations to write about and explain how a change in that population could have caused a change in the moon jelly population:

- Algae
- Orca
- Walleye Pollock

Vocabulary Bank:

- Consumer Population
- Resource Population
- Energy Storage Molecule
- Births
- Deaths
- Reproduction
- Direct Effect
- Indirect Effect
Try to use some of our science vocabulary words in your response!