**Patterns in Population Growth: Orcas, Salmon, and Plankton**

**Populations of Orcas, Salmon, and Plankton**

(sample data, only for use if absent for activity)

|  |  |  |  |
| --- | --- | --- | --- |
| **Generation** | **Orcas** | **Salmon** | **Plankton** |
| **1** | 2 | 7 | 11 |
| **2** | 4 | 11 | 5 |
| **3** | 8 | 10 | 2 |
| **4** | 11 | 4 | 5 |
| **5** | 4 | 3 | 13 |
| **6** | 2 | 6 | 12 |
| **7** | 2 | 10 | 8 |

Make a line graph of your populations on one graph below.

KEY:

**Label** your axes and include a **key** for the three populations.



1. What does this graph show about the populations of orcas, salmon and plankton?
2. How is the population of orcas dependent on plankton, and vice versa?

*When \_\_\_, we see \_\_\_\_. OR If \_\_\_\_, then \_\_\_.*

1. What would happen if all the salmon were removed from the ecosystem? Explain your response.

*If there were no salmon in the ecosystem, we predict \_\_\_, because \_\_\_.*

1. What would happen if all the orcas were removed from the ecosystem? Explain your response.

*If there were no orcas in the ecosystem, we predict \_\_\_, because \_\_\_.*

1. What other factors could affect the sizes of the orca or salmon populations? Come up with at least 4.

*\_\_\_ would [increase/decrease] the [orca/salmon] population because \_\_\_.*