Name:_____ Date:_____

# Unit 1 – Interactions and Ecosystems

## UNIT OVERVIEW

During the Interaction and Ecosystems unit, you will look at four major areas that have influenced our understanding of animals and the environments that they live in.

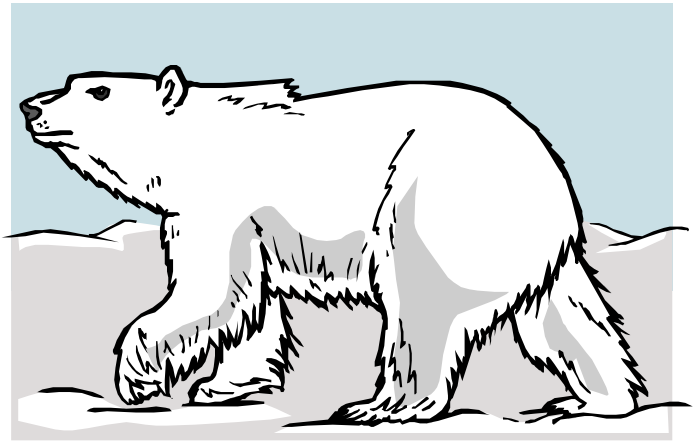
1. The relationships that humans have with their environment and how these interactions influence human activities.

2. How does energy and matter flows within the ecosystem and gets passed from organism to organism?

3. How do we monitor an ecosystem and how do environmental factors of that ecosystem effect the growth and health of the organisms in it.

4. Finally, we will be looking at how the relationships among knowledge, decisions and actions are responsible for maintaining life-supporting environments.

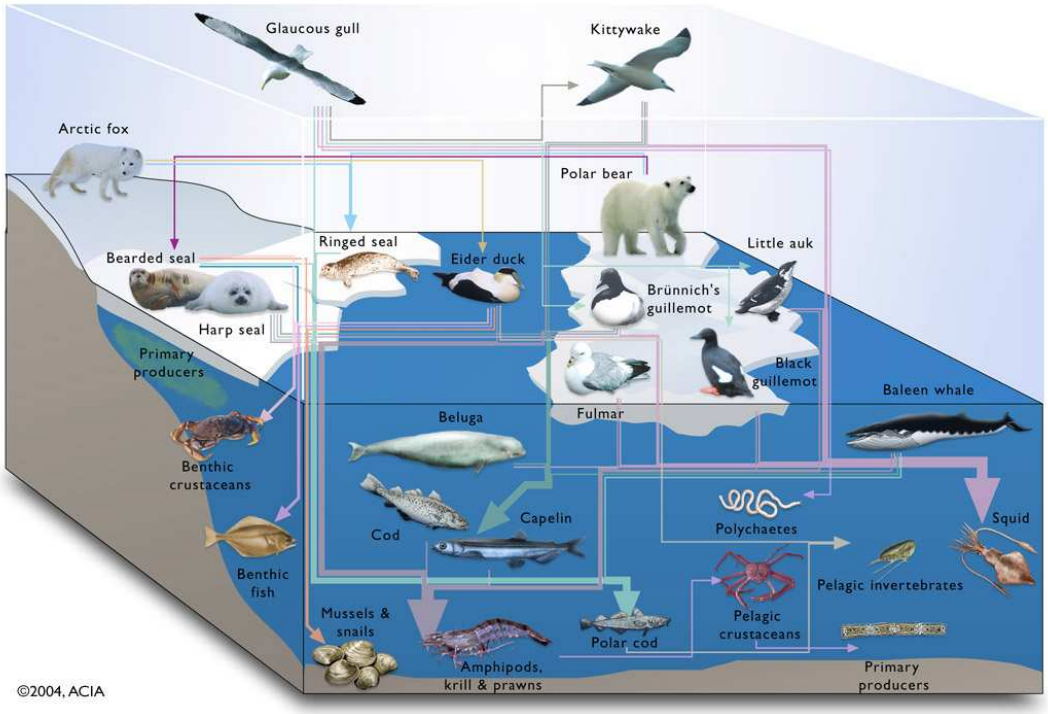
As you work this unit, you will need to provide evidence of your understanding of concepts that related to Interactions and Ecosystems. Use this table so keep track of your progress and where you have shown clear understanding.



Unit A: Interactions and Ecosystems

Name:_____ Date:_____

| Science 7 Interactions and Ecosystems Knowledge Outcomes | Still Learning | On My Way | With Ease |
|---|---|---|---|
| 1. Investigate and describe relationships between humans and their environments. | | | |
| **The big ideas/Enduring Understandings (Rocks)** | **Include evidence.** | | |
| **Can I describe examples of interaction within an ecosystem** *(e.g. parasitism, mutualism, commensalism, adaptations, etc.)?* | | | |
| **Can I analyze the link between human impact on the ecosystem and our wants and needs** *(e.g. ecological footprint, modern vs. aboriginal cultures)?* | | | |
| **Can I illustrate how environments meet the needs of living things for nutrients/energy sources, moisture, suitable habitat, and exchange of gases?** | | | |
| **Important to know and be able to do (Sand)** | **Include evidence.** | | |
| **Can I use science to analyze decisions that consider environmental impacts?** | | | |



Unit A: Interactions and Ecosystems

Name:_____ Date:_____

| Science 7 Interactions and Ecosystems Knowledge Outcomes | Still Learning | On My Way | With Ease |
|---|---|---|---|
| 2. Trace and interpret the flow of energy and materials within an ecosystem. | | | |
| **The big ideas/Enduring Understandings (Rocks)** | **Include evidence.** | | |
| **Can I identify biotic and abiotic components and describe interactions among them?** | | | |
| **Can I identify producers, consumers and decomposers in an ecosystem?** | | | |
| **Can I describe the process of the carbon cycle?** | | | |
| **Can I describe the process of the water cycle?** | | | |
| **Can I describe how matter is recycled in an ecosystem through interactions among living things?** | | | |
| **Important to know and be able to do (Sand)** | **Include evidence.** | | |
| **Can I describe and give examples of energy and nutrient storage in plants and animals?** | | | |
| **Can I interpret food webs, and predict the effects of changes to any part of a web?** | | | |
| **Can I identify how pollutants enter and move through the environment *(e.g. bioaccumulation acid rain, mercury, PCBs, DDT)*?** | | | |

Unit A: Interactions and Ecosystems

Name:_____ Date:_____

| Science 7 Interactions and Ecosystems Knowledge Outcomes | Still Learning | On My Way | With Ease |
|---|---|---|---|
| 3. Monitor a local environment, and assess the impacts of environmental factors on the growth, health and reproduction of organisms in that environment. | | | |
| **Important to know and be able to do (Sand)** | **Include evidence.** | | |
| **Can I investigate a habitats and interpret distribution patterns of living things found in those habitats?** | | | |
| **Can I investigate and interpret evidence of interaction and change?** | | | |
| **Can I identify signs of ecological succession** *(primary and secondary) in local ecosystems?* | | | |

| Science 7 Interactions and Ecosystems Knowledge Outcomes | Still Learning | On My Way | With Ease |
|---|---|---|---|
| 4. Describe the relationships among knowledge, decisions and actions in maintaining life-supporting environments. | | | |
| **The big ideas/Enduring Understandings (Rocks)** | **Include evidence.** | | |
| **Can I identify intended and unintended consequences of human activities?** | | | |
| **Important to know and be able to do (Sand)** | **Include evidence.** | | |
| **Can I analyze a local environmental issue or problem and identify possible actions and consequences?** | | | |
| **Can I describe and interpret scientific investigations that inform environmental decision making** *(e.g. types of ecosystem monitoring)?* | | | |
| **Worth being familiar with (Water)** | **Include evidence.** | | |
| **Can I illustrate, through examples, the limits of scientific knowledge in making decisions about environments?** | | | |