**1.1 Abiotic and Biotic Environments**

 Ecolo **Ecology** is the study of the interactions among organisms, as well as the interactions between organisms and their environment.

An **ecologist** is someone who observes and studies these relationships.

An **ecosystem** is all the interacting organisms that live in an environment, as well as the abiotic parts of the environment that affect the organisms.

**Biomes** are regions within ecosystems that have similar temperatures and similar amounts of rain every year.

Canada’s 4 major biomes: tundra, boreal forest, temperate forest, and grassland. The majority of B.C. is considered boreal forest.

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| **Abiotic (Non-Living) Parts of an Environment** |
| **Temperature and Light** | * Temperature determines where organisms live.
* Sunlight provides warmth for many animals.
* Green plants need light to make food- the number of hours of daylight is important.
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| **Air** | * Air contains oxygen gas, which animals breathe.
* Air contains carbon dioxide gas, which plants use to make their food.
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| **Water** | * Plants combine water with carbon dioxide to make food and to grow.
* Animals need water to digest food.
* Some organisms live in water.
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| **Soil** | * Soil contains minerals as well as pieces of organisms that were once living.
* Soil provides a home for many animals.
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| **Climate** | * Climate is the average weather pattern of an area over a period of time.
* Climate affects where and how plants and animals live.
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| **Four Things That All Biotic (Living Things) Need to Survive** |
| **Oxygen gas or carbon dioxide from the air** | * Animals need oxygen gas because it helps them break down food for energy.
* Plants need carbon dioxide gas because they use it with energy from the sun to make their own food.
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| **Water** | * Animals need water to digest food and carry oxygen and food through their bodies.
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| **Food** | * Animals need food for energy and to grow. Plants make their own food.
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| **Suitable place to live** | * Many creatures find shelter in the environment. Some living things build protective shelters.
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