**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. |
| **Air** | * Air contains oxygen gas, which animals breathe. * Air contains carbon dioxide gas, which plants use to make their food. |
| **Water** | * Plants combine water with carbon dioxide to make food and to grow. * Animals need water to digest food. * Some organisms live in water. |
| **Soil** | * Soil contains minerals as well as pieces of organisms that were once living. * Soil provides a home for many animals. |
| **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. |
| **Water** | * Animals need water to digest food and carry oxygen and food through their bodies. |
| **Food** | * Animals need food for energy and to grow. Plants make their own food. |
| **Suitable place to live** | * Many creatures find shelter in the environment. Some living things build protective shelters. |

