Trophic Levels (5 Levels)

Although the design of a food chain can vary by ecosystem, all food chains are made up of the same basic **trophic levels**.

The first trophic level contains the greatest number of organisms and is comprised mainly of plants. The organisms in this layer are called **primary producers** because they get their energy from an abiotic source. Most primary producers get their energy directly from the sun. Primary producers are important to the whole food chain because they are the original source of energy that is then passed between other organisms.

The next three trophic levels contain organisms known as **consumers**. Consumers are organisms that get their energy from eating other organisms. The second level contains organisms that gain their energy by eating primary producers, and they are called **primary consumers**. Primary consumers are also called **herbivores**, which are organisms that have a diet comprised entirely of plants.

The third trophic level contains organisms called **secondary consumers**. Instead of eating plants like primary consumers, the secondary consumers are often referred to as **carnivores** because they eat meat, and in this case, they eat the meat of the primary consumers in the level below them. Secondary consumers may have predators.

The fourth Trophic level contains organisms known as **tertiary consumers**. Species that are tertiary consumers are often called top predators because they consume organisms in both the consumer levels below them (secondary and primary consumers). Tertiary consumers typically do not have predators, but do in some cases.

The fifth trophic level contains organisms known as **Quaternary consumers or Apex predators.** These organisms consume organisms in the consumer levels below them and **have no predators**. They are at the top of the food chain..

Decomposers are organisms that break down dead or decaying organisms. Breaking down dead matter occurs between every trophic level. Because of this, decomposers are not given a sequenced trophic level.