**Introduction to Seabirds**

**Flights at Sea**

We are all familiar with birds. These animals are found in many earth habitats, from the poles to the tropics, deserts to lush rainforests, and even towns and cities. Did you know that there are many species of birds that spend most of their lives at sea? This information is not that surprising, when you consider that 71% of the Earth’s surface is covered by ocean, and that the ocean contains 97% of all of the water on the planet. The ocean is considered to be Earth’s “final frontier” in terms of scientific exploration, because there is still so much for us to learn about the ocean, its features, and the creatures that depend on its habitats.

This lesson will focus on two species of seabirds, birds that depend mostly on the ocean for their survival. The two species are the Black-footed Albatross (Hawaiian name: ka‘upu) and the Laysan Albatross (mōlī). Both species are found throughout the Pacific Ocean, including near the Hawaiian Islands and California. To get an idea of how these birds look, search online for an image.

**Life at the Sea Surface**

The majority of living space on our honua, planet, is in the kai, ocean. The ocean is three-dimensional; living things, **organisms**, are found at its surface and at its deepest depths. Marine organisms range from tiny to huge, from microscopic organisms to the blue whale, which is the largest animal to have ever lived on earth. While most of us are more familiar with marine animals such as manō (sharks), koholā (whales), nai‘a (dolphins), i‘a (fish), honu (sea turtles), and ‘ōpae (shrimp), microscopic organisms outnumber these animals by far.

Organisms that can only be seen with microscopes are called **microbes** or microorganisms. In the ocean, it is microbes that support life, including those huge blue whales. Tiny plant-like microbes are called **phytoplankton**. Phytoplankton take energy from lā, the sun, and change it into sugar. This process is known as photosynthesis. On land, plants, including grasses and trees, do photosynthesis. In the ocean, it is the phytoplankton that take on this role.

Phytoplankton are eaten by animal-like organisms called **zooplankton**, which use the energy in the phytoplankton for their own life processes, including respiration and making proteins. The zooplankton are in turn eaten by animals such as krill, sponges, and corals. Other animals feed on these animals. For instance, some whales eat krill, and some sea turtles eat sponges. In this way, the energy captured by the phytoplankton is passed on to many other organisms. This transfer of energy is called a food chain. **Food chains** are a simple way of describing this energy transfer. In real life, food chains are very complex because most animals eat several different types of food. Diagrams that show a variety of overlapping food chains are known as **food webs**.