

# Ways of Classifying Living Things

## 2.1

When you classify things, such as books or DVDs, you put the things that have similar characteristics together. These characteristics could be topic, author, or size. Sorting things into groups makes it easier to keep track of them.

Organizing things according to their similarities and differences is called classification. You used a **classification system** to sort living and non-living things in Chapter 1. You found that living things share the same characteristics and needs.

But how could you further classify all the thousands of living things around you? People use different systems, depending on what they want to know and what is important to them. For example, if you were on a deserted island, the first thing you would probably want to know is which plants you could eat and which plants you couldn't. Eventually, you would need and want to know much more. Grouping living things according to your observations helps you keep track of your knowledge.

### TRY THIS: GROUP ORGANISMS

**Skills Focus:** observing, classifying

Look at the organisms in **Figure 1**. You can group them in many different ways. For example, you can group them by how they move, what they eat, where they live, and what they look like.

1. Explain how you would group these organisms.
2. What characteristics did you use to group these organisms?



**Figure 1**



## Traditional Ways of Classifying Living Things

All people use classification systems to organize their knowledge of the living things around them. In the past, people relied on their detailed knowledge of living things to help them survive on the plants and animals that were available to them.

Aboriginal peoples, for example, use classification systems that are based on careful observation of the living world. The Aboriginal peoples of the northwest coast of British Columbia, for example, have classified over 200 different plants according to their uses, such as food and medicine (**Figure 2**). This information has been passed from generation to generation.



**Figure 2**

Some Aboriginal peoples use the leaves and twigs of the wild lilac plant to treat pain.

Aboriginal peoples also classify animals according to important characteristics. For example, they classify animals according to which animals are useful and which are dangerous, or where the animals are found. They also classify animals on the basis of helpful information, such as the season in which the animals can be hunted or the animals' use as a source of clothing or food.

# Scientific Ways of Classifying Living Things

Scientists use classification systems to help understand the diversity of life on Earth. They examine the internal structures (cells and organs) and external structures (what the organism looks like) of living things to discover how organisms are similar and how they are different. They use microscopes and other forms of technology to compare organisms in a very detailed way (Figure 3). For example, they can compare the cell structure of different organisms. They can also compare organisms from around the world to discover how different organisms may be related.



**Figure 3**  
A scientist uses an electron microscope to look at an organism.

## CHECK YOUR UNDERSTANDING

1. Copy the following chart into your notebook. List at least five classification systems that you use to organize things. Explain how each classification system makes your life simpler. The first row is filled in for you.

1. Different Classification Systems		
Classification system	Use	How it makes life simpler
alphabetical order	telephone book	find names quickly

2. Explain how Aboriginal peoples classify organisms. How does their system differ from the way scientists classify organisms? How is it the same?