The Struggle Against Extinction

The diversity of life on Earth is amazing. Scientists believe that, of the total number of species that ever existed on Earth, most have died out, or have become extinct. Some extinctions are because of extreme environmental changes, such as ice ages and meteorite strikes. Groups of organisms disappear during these mass extinctions and are replaced with new species. This is what scientists believe happened to the dinosaurs 65 million years ago (Figure 1). Other species become extinct because they are not able to adapt to changing environments or changing food sources.

Endangered Organisms

Many plants and animals are in danger of becoming extinct. These organisms are endangered. In Canada, 72 plant species and 95 animal species are endangered. Habitat destruction, hunting, and pollution are the main causes of species becoming endangered.

Figure 1

At the end of the Cretaceous Period, 65 million years ago, there was a mass extinction in which half of all life forms died out, including all the remaining dinosaurs.
In Canada, we keep track of many organisms that are endangered. Environment Canada and the Canadian Wildlife Service are two agencies that help to manage and protect Canada’s vast number of creatures. These agencies monitor organisms that seem to be disappearing. They conduct research into wildlife issues and work with other countries to preserve the world’s diversity.

Let’s look at three endangered species in British Columbia. As you read about these species, think about how their environment has been changed and what impact these changes have had.

**The Tiger Salamander**
The tiger salamander (Figure 2) lives in the often-dry Southern Okanagan Valley. Its habitat has been changed in two very important ways. First, fish that feed on the salamander have been introduced into some of the lakes where the salamander lives. Second, livestock that live in the area are trampling nearby plant life. This has affected the water quality of the lakes, making it more difficult for the salamander eggs to hatch. Both of these changes have affected the salamander’s ability to survive.

**The Viceroy Butterfly**
The Viceroy butterfly (Figure 3) lives in wetlands in southern Canada and throughout the United States. The Viceroy butterfly looks very much like the Monarch butterfly. **Mimicry** is an adaptation where an organism looks like another to help it survive. The Monarch butterfly tastes bitter and birds have learned not to eat it. Since the Viceroy looks like the Monarch butterfly, birds do not eat the Viceroy butterfly either.

The Viceroy butterfly feeds on the nectar of fruit trees. The butterfly is endangered in British Columbia because of the pesticides that fruit growers are using in their orchards. The pesticides kill the Viceroy butterfly along with the insects that harm the fruit.
The Vancouver Island Marmot

The Vancouver Island marmot (Figure 4) lives in the mountains of Vancouver Island. It likes alpine and sub-alpine areas, which have steep slopes, meadows, and rocky debris at the bases of cliffs. The Vancouver Island marmot is one of British Columbia’s most endangered species. There are fewer than 50 left in the wild. The marmot is endangered because of loss of habitat. Although its habitat is now protected, the marmot is not reaching the suitable patches of land. Instead, it is remaining in areas that have been clearcut, where it is an easy target for predators, such as golden eagles, cougars, and wolves.

Figure 4
The Vancouver Island marmot is a small animal that lives in burrows. It eats grasses and other plants, and it hibernates during the winter.

TRY THIS: IDENTIFY TRAITS

Skills Focus: predicting, inferring

Look at the information about the three endangered species.

1. Identify a characteristic that has helped one of the species survive until now.

2. Think of another characteristic that would help this species survive in its changing environment.

CHECK YOUR UNDERSTANDING

1. What is an endangered species?

2. Why do some organisms become endangered?

3. Choose one of the endangered animals discussed in the text. What do you think are some things that can be done to protect this animal?

4. Do you think that humans could become extinct? Explain your answer.