Focussing Questions

- How does climate influence the distribution of plants and animals on Earth?
- How does climate create similar regions in different parts of the world?
- What are some natural causes of climate change and how do these changes affect the distribution of plants and animals?
- Do the natural zones of vegetation found on Earth change?
Scientists recently discovered bacteria that live at the South Pole, where mid-summer temperatures rarely go higher than \(-18^\circ\text{C}\). In the tree canopies of the Amazon rain forest there are animals that never touch the ground. Some plants survive in the desert even though it might rain only every few years. What do these examples illustrate? Environments are shaped and influenced by climate, and species survive if they adapt to their environments.

The photographs shown here are examples of different climates that are found in various locations on Earth. The desert looks barren because many animals that live in the desert come out only at night when it is cool. The monkeys thrive in the rainforest but would not survive in the prairies. Elk, moose, and bear are some of the species that are common to the mountains. A variety of plant and animal species are adapted to survive in nearly every climate on Earth. What is the relationship between climate and the types of vegetation throughout the world? Are similar vegetation patterns found in different parts of the world?

In this chapter, you will investigate and explore the way in which climate determines the distribution of plants and animals around the planet. What are the major patterns of vegetation found on Earth? Do climates change over time? These are only a few of the questions that you will explore in this chapter.

In what ways do climates change naturally? In what ways do human activities contribute to climate change? You will be discussing these questions in the End of Unit Issue Analysis: Proof or Consequences. As you read through Chapter 11, you will discover ways of classifying Earth's climate regions and consider natural climate change. Watch for information in this chapter and in the media about evidence of past changes in climate. Think about how these changes affect the way species survive and adapt. Continue to add to your news clippings file.