



## What is Environmental Science: Reading



**VIEWED FROM SPACE**, our home planet resembles a small blue marble suspended against a vast inky-black backdrop. Earth may seem vast here on its surface, but an astronaut's perspective reveals that Earth and its natural systems are limited. It has become clear that as our population and technological powers increase, so does our ability to change our planet and possibly damage the very systems that keep us alive.

### Our Environment

 Environmental scientists study how the natural world works, and how humans and the environment affect each other.

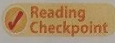
From space, Earth looks simple—blue oceans, green and brown land masses, white clouds—but this is not a complete picture of the environment. The **environment** includes all the living and nonliving things with which organisms interact. It includes the continents, oceans, clouds, and icecaps visible in the photo of Earth from space, but it also includes the animals, plants, forests, and farms that you cannot see from such a great distance. The environment includes remote areas rarely visited by people, but it also includes all of the buildings, urban centers, and houses that people have built, as well as the complex webs of social relationships that shape our daily lives.

**Humans and the Environment** Unfortunately, *environment* is often used to mean the nonhuman or “natural” world. But humans are part of nature. Like all other species on Earth, we interact with our environment and rely on a healthy, functioning planet for everything we need—including air, water, food, and shelter. Without a healthy environment, we cannot survive. Studying environmental science reminds us that we are part of the natural world and how we interact with it matters a great deal.

**Understanding Human Influences** Many people today enjoy longer life spans, better health, and greater material wealth than ever before. We can fly around the world with ease and cure previously incurable diseases with a pill. However, these improvements have often harmed the natural systems that sustain us, destroying habitats and polluting the water and atmosphere. The discovery that synthetic chemicals were harming Earth's ozone layer served as a wake-up call, illustrating how human influences can ultimately threaten long-term health and survival.

**Environmental science** is the study of how the natural world works, how our environment affects us, and how we affect our environment. Understanding interactions between humans and the environment is the first step toward solving environmental problems. The size and scope of these problems can seem overwhelming. However, with these problems also come countless opportunities for devising creative solutions. In the case of ozone depletion, a very real and effective solution has been found to a seemingly impossible problem. Scientists now predict that within fifty years, ozone depletion will be reversed and the ozone hole will be gone.

Environmental scientists study issues that are important to our world and its future. Right now, global conditions are changing quickly, but so is our knowledge and understanding of the natural world. With such large challenges and opportunities, this particular moment in history is a very exciting time to be studying environmental science.

 **Reading Checkpoint** Why do people need the natural world?

1. Why do people need the natural world?
2. Why is their conflict between humans and the natural world?
3. What is the driving force behind the conflict?