

# Chapter 1

## What is Earth Science?

### 1.1 Nature of Science

#### Lesson Objectives

- Explain the importance of asking questions.
- State the steps of the scientific method.
- Describe the three major types of scientific models.
- Use appropriate safety precautions inside and outside the science laboratory.

#### Introduction

Think of your favorite science fiction movie. What is it about? Maybe it's about spaceships going to distant planets, or people being cloned in laboratories, or undersea civilizations, or robots that walk among us. These entertaining imaginings are make-believe fantasies, that's why they're called science "fiction." They are not real. But why are they called "science" fiction?

The answer is that science uses a disciplined process to answer questions. In science, "disciplined" does not mean well-behaved. It means following orderly steps in order to come up with the best answers. Science involves observing, wondering, categorizing, communicating, calculating, analyzing, and much more. In order to convert creativity into reality, we need science. In order to travel beyond where anyone has gone before, we need science. In order to understand the world, make sense of it, and conserve it, we need science. In order to confirm our best guesses about the universe and the things in it, we need science. Science fiction stories extend and expand on all the ideas of science and technology in creative ways.