



## 1.1 What Is Science?

# I. What Science Is and Is Not

- Science is NOT just a collection of never-changing **facts** or unchanging **beliefs** about the world.
- **Science is constantly changing.**

## A. Science as a Way of Knowing

- Science is an organized way of gathering and analyzing **evidence** about the natural world.

For example, researchers can use science to answer questions about how whales communicate, how far they travel, and how they are affected by environmental changes.

- Science deals only with the **natural** world.

## A. Science as a Way of Knowing

- Scientists **collect** and **organize** information in an orderly way, looking for patterns and connections among events.
- Scientists propose explanations that are based on **evidence**, not **belief**. Then they test those explanations with more **evidence**.

## B. The Goals of Science

- One goal of science is to provide natural **explanations** for events in the natural world.
- Science also aims to use those **explanations** to understand patterns in nature and to make useful **predictions** about natural events.

## C. Science, Change, and Uncertainty

- Despite all of our scientific knowledge, much of nature remains a mystery. Almost every major scientific discovery raises more **questions** than it **answers**. This constant change shows that science continues to advance.
- Science rarely “proves” anything in **absolute** terms. Scientists aim for the best understanding of the natural world that current methods can reveal.

# EXIT SLIP

- Use your notes to answer the exit slip questions on the back of your guided notes.