CH. 1 – THE SCIENCE OF BIOLOGY, pp. 1-8

1-1 What is Science?

- Introductory Paragraph
  - Humans had many questions
  - They slowly started to use a scientific approach to explore the natural world

What is the goal of science?

- What Science Is and Is Not
  - Goal of science is to:
    1. investigate + understand natural world
    2. explain events in natural world
    3. use explanations to make predictions

What is science (2 definitions)?

  - science = organized way to use evidence to learn about natural world
  - science = body of knowledge built up by scientists

- Thinking Like a Scientist
  - Scientific thinking usually starts with:
    - Observation = process of gathering information in a careful, orderly way

What is observation?

    - Data = information gathered from observations. Two types of data:

What is data?

What are the two types of data?

      1. quantitative (numbers)
      2. qualitative (descriptions)
  - Scientists use data to make an Inference = a logical interpretation based on previous knowledge or experience

What is an inference?

- Explaining and Interpreting Evidence

What is a hypothesis?

  - Hypothesis = proposed scientific explanation for a set of observations
  - Hypotheses must be testable

Summary

- Science's goals = Investigate, explain, predict
- Hypotheses must be testable
- Think like a scientist (see G.O.)