

Chapter 1 Introduction

Biology is the study of life

Life's Hierarchical Order

Life is a hierarchy (Figure 1.2)

The whole is greater than the parts

Cells are life's building blocks (Figure 1.4)

Inheritance and DNA

Form fits function

Organisms interact with their environment

Regulation ensures balance (Figure 1.8)

Evolution, Unity and Diversity

Diversity and unity

Taxonomy - branch concerned with naming and classifying organisms

(See attached figure)

Evolution is the core theme in biology

Science as a Process

Testable hypothesis

Five rules for good hypotheses

1. Hypotheses are possible explanations
2. Hypotheses reflect past experiences
3. Multiple hypotheses should be proposed whenever possible
4. Hypotheses should be testable
5. Hypotheses can be eliminated but not confirmed

Biotechnology and Society

All Life

Monera

Protista

Plantae

Fungi

Animalia

All Life

Bacteria

Archaea

Eukarya

Protista

Plantae

Fungi

Animalia