

Biology

Chapter 1 Objectives:

Themes of Biology

- Characteristics of living organisms
- Unifying themes of Biology

Biology in Your World

- Solve real world problems related to Biology

Scientific Processes

- Stages of Scientific Investigations
- Difference between independent and dependent variables, control and experimental groups

Vocabulary

biology
cell
reproduction
metabolism
homeostasis
gene
heredity
mutation
evolution
species
natural selection
ecology
genome
HIV
cancer
cystic fibrosis
gene therapy
observation
hypothesis
prediction
experiment
control group
independent variable
dependent variable
theory

At the end of this unit, you should be able to:

- Identify the seven properties that all living organisms share.
- Relate three of the seven major themes of biology to the life of a harp seal.
- Name the very small, organized structure, that is bound by a membrane and that is the basic unit of structure and function in all organisms.
- Define homeostasis and metabolism, and describe their differences.
- Describe the relationship between scientific research and the use of environmental resources.
- Explain how genetic engineering can improve food supplies.
- Summarize how scientists use observations, hypotheses, predictions, and experiments in scientific investigations.
- Differentiate between independent and dependant variables.