

Introduction to Biology

Biology is the study of living organisms and their **vital** processes. Because biology covers such a broad area, it has been traditional to separate the study of **plants (botany)** from that of animals (zoology), and the study of structure of **organisms (morphology)** from that of **function** (physiology). Despite their apparent differences, all the subdivisions are interrelated by basic principles, so current practices investigate those biological **phenomena** that all **living things** have in common. The advancement of knowledge and technology has resulted in further categorizations that include : **cell** biology, population biology, **ecology**, **genetics**, **biochemistry**, molecular biology, microbiology, physical anthropology, and other categorizations.

1. Answer the following questions.

a) What is biology ?

Biology is a branch of science that deals with living organisms (insects, animals, plants, human beings) and their vital processes.

b) What are the divisions of biology ?

Biology encompasses diverse fields, including botany, zoology, morphology, physiology, cell biology, population biology, ecology, genetics, biochemistry, molecular biology, microbiology, physical anthropology.

c) How are the subdivisions of biology interrelated ?

The subdivisions of biology are interrelated by basic principles (cell theory, gene theory, homeostasis, evolutionary theory, and the laws of thermodynamics).

d) Translate the words in bold type ?

Biology : **biologie**

Vital : **vital**

Plants : **plantes**

Botany : **botanique**

Organisms : **organismes**

Morphology : **morphologie**

Function : **fonction**

Phenomena : **phénomènes**

Living things : **êtres vivants**

Cell : **cellule**

Ecology : **écologie**

Genetics : **la génétique**

Biochemistry : **Biochimie**

2. Match the following terms with their corresponding definitions.

A	B
1. Viruses	A : A scientist who studies the natural processes of living things.
2. Cell	B : A living being with an organized structure to carry on the activities of life.
3. Bacteria	C : The smallest yet basic building block of life.
4. Organism	D : Small infectious agents that can replicate only inside the living cells of organisms.
5. Biologist	E : Microscopic single-celled organisms with no nucleus.

1=**D**, 2=**C**, 3=**E**, 4=**B**, 5= **A**

3. Fill in the blanks with the correct words.

ecosystems, population, cell, biologists, microscope, bacteria.

- The first person to see a live cell with a **microscope** was Antonie van Leeuwenhoek, in 1674.
- Those who study fish and ocean plants are called marine **biologists**.
- **Bacteria** are extremely small and are made up of just one cell.
- Ecology is the study of **ecosystems** and how organisms interact with their environment.
- In biology, **population** is referred to organisms of a species that live together in a group at a particular place.
- **Cell** is responsible for the living and functioning of organisms.