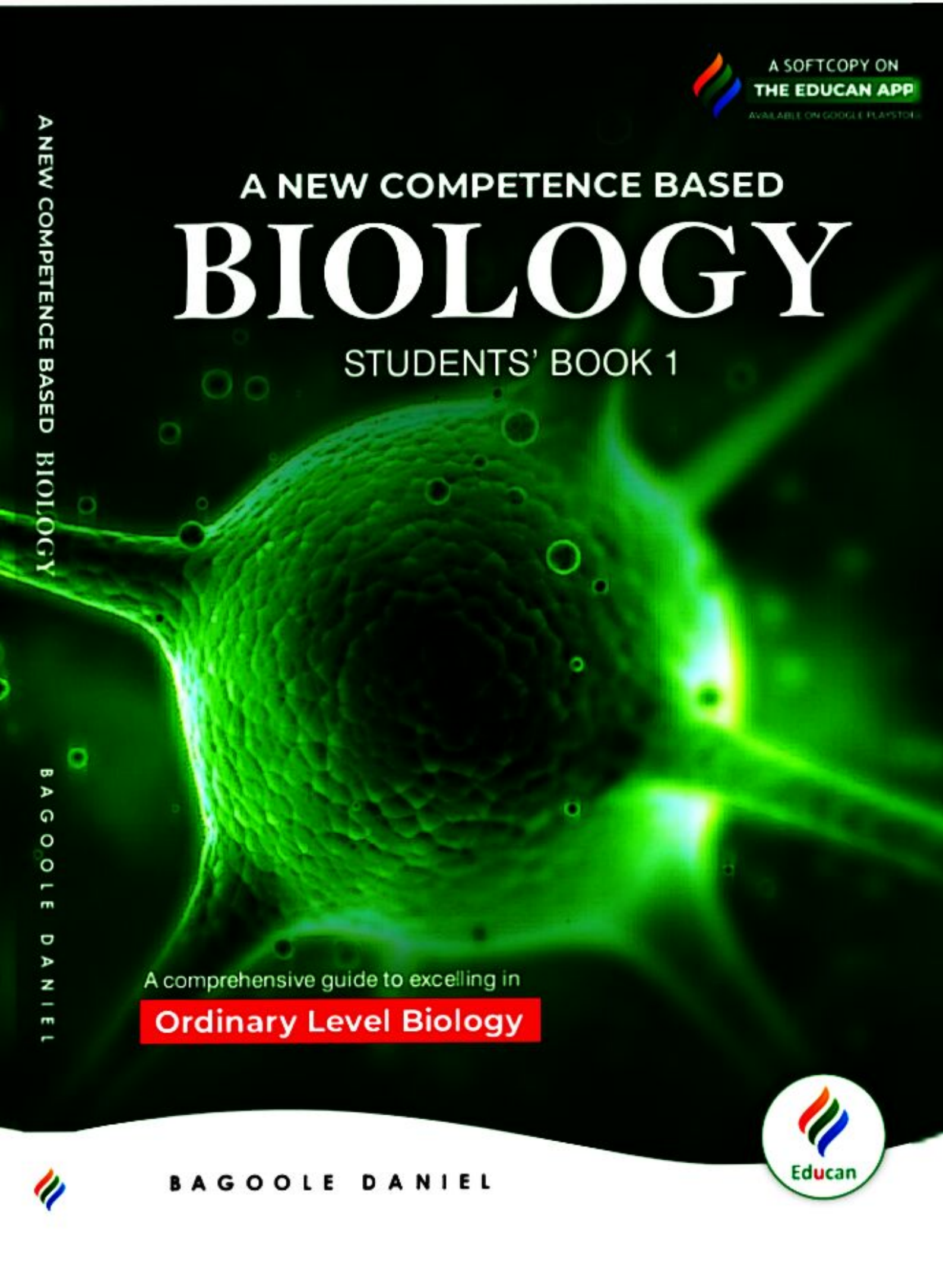
A SOFTCOPY ON
THE EDUCAN APP
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A NEW COMPETENCE BASED
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STUDENTS' BOOK 1
A NEW COMPETENCE BASED BIOLOGY
BAGOOLE DANIEL
A comprehensive guide to excelling in
Ordinary Level Biology
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CHAPTER 4 THE FIVE KINGDOM CLASSIFICATION

Chapter Learning Outcomes

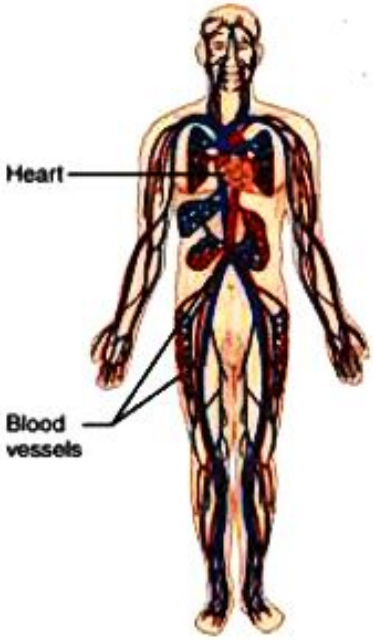
By the end of this chapter, you should be able to:

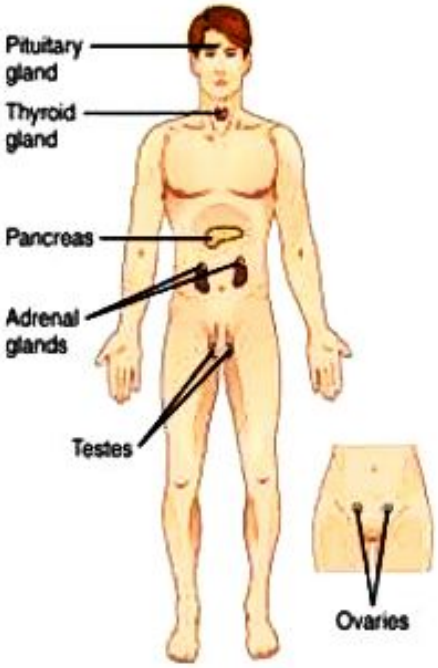
- Understand identify three characteristics (cell structure, cell organization, and mode of feeding) of organisms in kingdom Monera, kingdom Protoctista and kingdom Fungi
- Know examples of organisms belonging to kingdom Monera, kingdom Protoctista and kingdom Fungi.
- understand the value of microorganisms in food-making processes
- Identify three characteristics (cell structure, mode of feeding, and photosynthetic pigment) of organisms in kingdom plantae.
- Know examples of organisms from each of the following categories: vascular & nonvascular, angiosperms & gymnosperms, monocots & dicots in kingdom Plantae.
- Identify three characteristics (cell structure, mode of feeding, and body system) for organisms in kingdom Animalia.
- Know examples of organisms belonging to the following phyla: Platyhelminthes, Nematoda, Annelida and Mollusca.
- Identify and describe the common observable characteristics and give examples of organisms from phyla Arthropoda including its classes.
- Identify and describe the common observable characteristics (types of teeth, temperature regulation, habitat, reproduction, and gas exchange) and give examples of organisms from the phylum Chordata and its classes

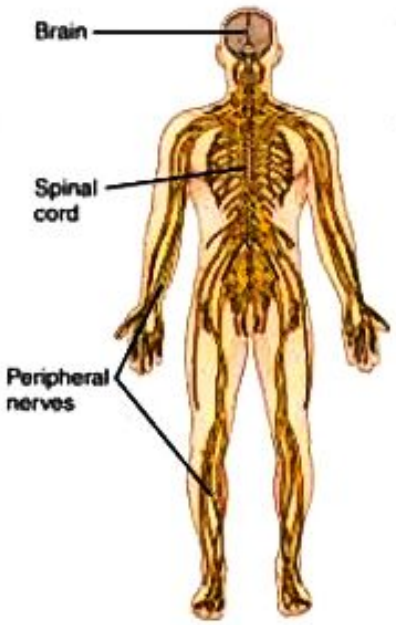
Competency: *You should understand that classification is the sorting out of living things based on their similarities.*

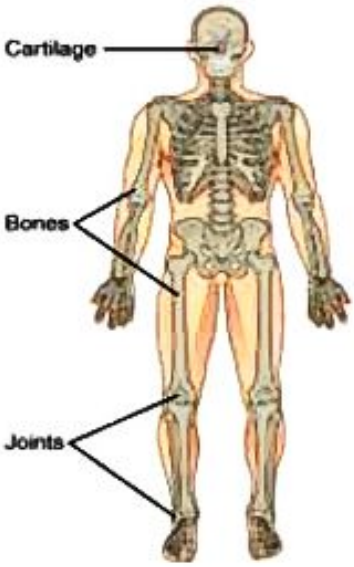
system	Uterus, Vagina, Testis	Nerve tissue, Epithelial tissue, Erectile tis

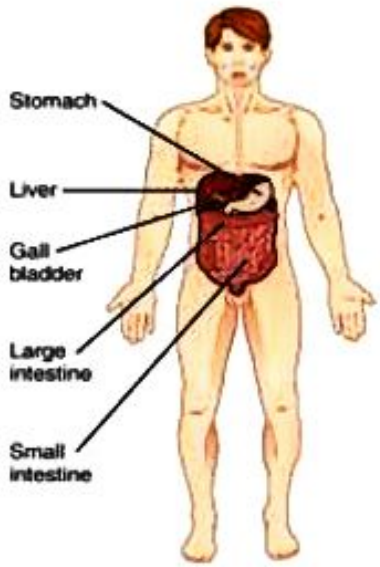
Identify the following body systems in the human body











THE BIOLOGY LABORATORY

A laboratory is a facility that provides controlled conditions in which scientific or technological research, experiments, and measurement may be performed.
As stated earlier, Biology is a laboratory science, which implies the concepts we study about in Biology can easily be demonstrated in the Biology laboratory.

Biology, like other science subjects, involves practical work that can be done in a laboratory, in a classroom, or outside the classroom.
You will use a variety of materials, chemicals, pieces of apparatus and equipment. You will also use animals and plants. To prevent accidents from happening when we work with these different items, we must take certain safety precautions.

SAFETY PRECAUTIONS IN THE BIOLOGY LABORATORY

Activity

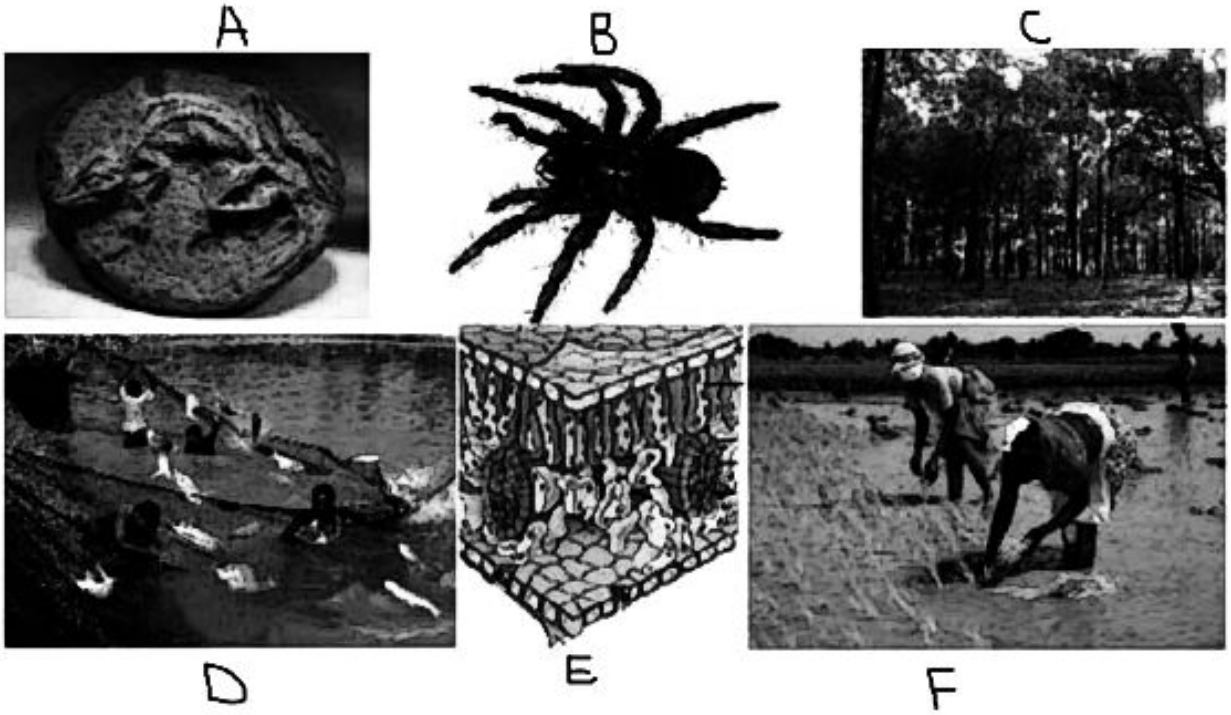
Below is a photograph of senior one student in a Biology laboratory during a practical lesson. Study it carefully and answer the questions that follow.

life, disease, treatment etc.;

9. Genetic Engineering: Science associated with gene technology and its utilities;

to environment and its conservation.

Activity I.1: ***Looking at the pictures below, present each of them in a list under the biological branch they belong to.***



Test yourself

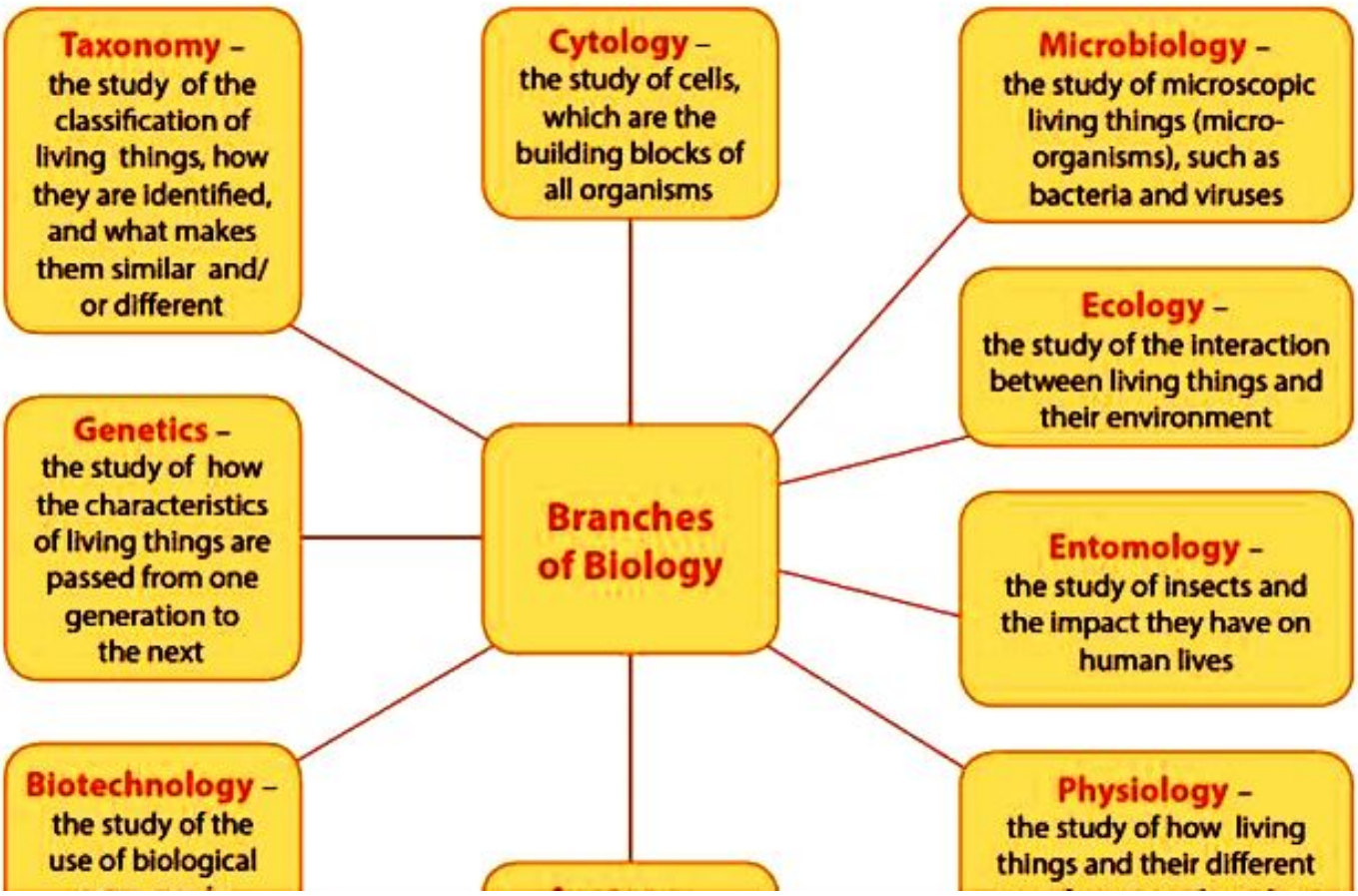
1. ***Explain why the study of ecology is important to both human beings and planet Earth.***
2. ***Imagine that a team of biologists is studying the impact of pollution on a forest. Which specialists do you think would be in the team? Give a reason for your answer.***

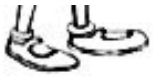
giving an example of their neighbour, Mr. Mugemeso who works at Mulago hospital and very successful in life. John is however still hesitant.

TASK

As a student that has acquired knowledge about Biology and the different fields in biological science, write a friendly letter to John, to help him change his attitude towards the subject.

BRANCHES OF BIOLOGY





about what the subject is all about and what one could become after studying it.

WHY DO WE STUDY BIOLOGY?

Being one of the most interesting, the most rewarding, the most prestigious and the most selling subject around the world, Biology is by far worth a subject to study at the secondary level of education.

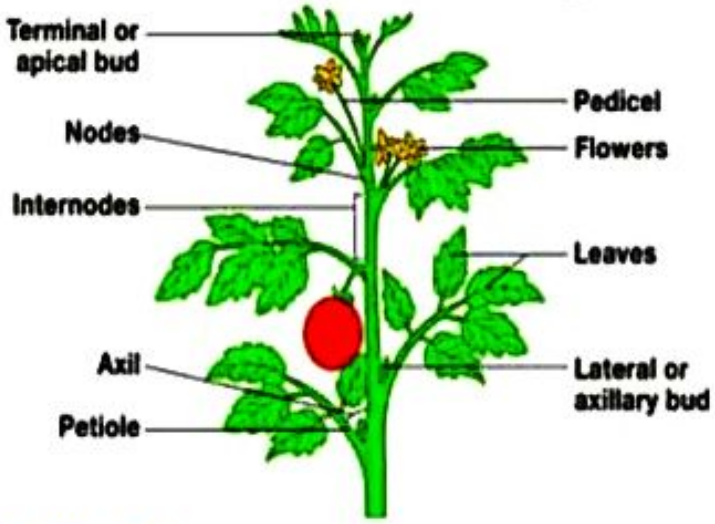
Biology is a science that is growing and developing quickly in the 21st century. Scientists who study Biology are known as biologists. There are many reasons why we study Biology.

- The knowledge we obtain from Biology teaches us how our body functions and how we fit in the natural world.
- It empowers us to handle problems related to life, such as improvement on nutrition, medicine and agriculture.
- To know about the plants and animals in our environment.

Internode: the section of stem between two successive nodes.

Axillary bud: Found at the node. It develops into a branch / leaf / flower.

Terminal bud: located at the tip of the stem or branch. It increases the length of the stem forming new leaves and axillary buds.



Primary Functions of the Stem

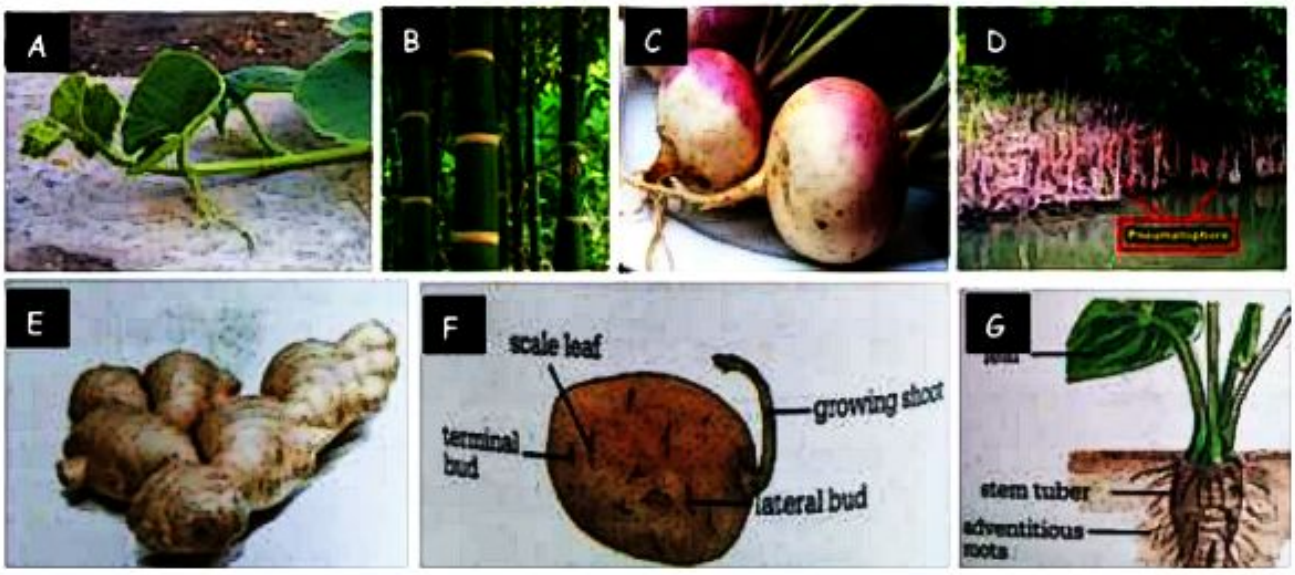
- Conduct water and mineral salts from the roots to the leaves.
- Carry food from the leaves to other parts of the plant.
- Help in formation of buds, leaves and flowers.
- Support leaves in good light conditions to maximize photosynthesis.
- Support flower in position for pollination.
- Hold fruits in better position for dispersal.

Modified Stems

Some stems are adapted to carrying out other functions. These stems are called modified stems.
Stems can be modified:
To protect the plant from animals that eat it; to store food and water; for vegetative reproduction
To give support to the plant.

Activity 7.40

Study the pictures below and discuss the different ways how stems can be modified to perform different functions. Make a write up and present to the rest of the class.





Task

Design a poster you would use to sensitize the people in the area about the dangers of their activities and the importance of conserving plants in the environment.

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