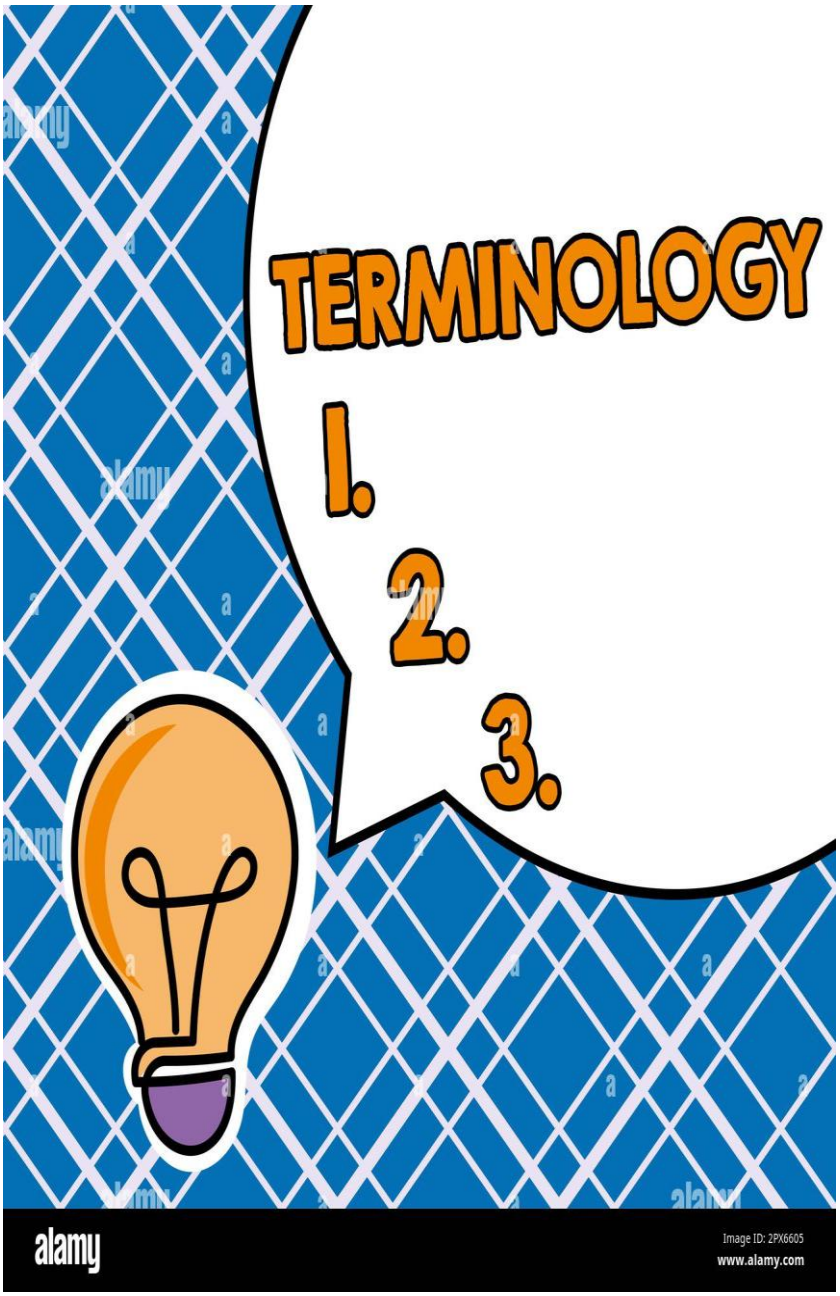
Abdelhafid Boussouf University Center of Mila
Faculty of SNV
Common Core Natural and Life Sciences

1st year

Course N-01

1.Terminology



1. **Terminology:** Consists of the study of the choice and using terms that are part of the vocabularies solely of the specialty, which can be found in all areas of knowledge: computer science, grammar, linguistics, mathematics, philosophy, Medicine, music…etc.". And which can also come from everyday language and in the various dictionaries, which lexicographers are responsible for.

Science: knowledge gained through observation and experiment.
Nature: means the physical world(things that can be seen or felt)
eg: trees plants, animals, mountains, rivers...etc.

Life: the quality belonging to human, animals, plants which distinguishes them from things which are dead (rocks, minerals)...etc.

Natural Science: a science such as physics, chemistry or biology that studies the physical and natural world or the events that happen in nature.

Life Science: an area of science that deals with living things and life processes.

The term table comes under both the furniture terminology and agronomic terminology

1.1. Main terms used in Biology

Français	English	Définition
Tissue	**Tissues**	are groups of cells that have a similar structure and act together to perform a specific functions.
ADN	**DNA**	Deoxyribonucleic acid, or ADN is a biological macromolecule present in almost all cells as well as in many viruses. ADN contains all the genetic information, called genome, allowing the development, functioning and reproduction of living beings.
La génétique	**Genetics**	is the study of the transmission of hereditary characteristics in living beings. It aims to determine the modes of transmission and to document the variations in genes between individuals of the same person. It also aims to carry out the study of gene function.
Atome	**Atom**	a basic unit of matter that cannot be broken down by normal chemical reactions

Cytoplasme	**Cytoplasm**	refers to the fluide that fills the cell. Which includes the cytosol along with filaments protein ions and macromolecular structure as well as the organelle suspended in the cytosol.
Empreinte génétique	**Genetic imprint**	fine structural characteristics of a specific region of DNA allowing the identification of a cell and its filiation.
épitope	**Epitope**	part of a molecule capabl of stimulating the production of an antibody.
Géminine	**Geminine**	protein of multicellular animal organisms. which contributes to a single DNA replication taking place during the cell cycle
Histone	**Histone**	basic protein major constituent of the nucleosome.
liaison génétique	**Genetic Link**	Gene Associations located on the same chromosome .What is usually transmitted en bloc to the offspring.
Enzyme	**Enzyme**	any of numerous complex proteins that are produced by living cells and catalyze specific biochemical reactions at body temperatures.
Cytologie	**Cytology**	is a discipline of biology studying cells and their organelles, the vital processes that take place there as well as the mechanisms allowing their survival (reproduction, metabolism).
Histologie	**Histology**	a branch of anatomy that deals with the minute structure of animal and plant tissues as discernible with the microscope.
Nucléotide	**Nucleotide**	A compound consisting of a nucleoside bound to phosphoric acid and it is the group of chemical compounds found in living cells in nucleic acids such as DNA and RNA.
Molécule	**Molecule**	a group of two or more atoms that form the smallest identifiable unit into which a pure substance can be divided and still retain the composition and chemical properties of that substance.
Ribosome	**Ribosome**	ribosome is a complex of RNA and ribosomal proteins associated with a membrane or free in the cytoplasm
Mitochondrie	**mitochondrion**	A mitochondrion is an organelle, possessing all the characteristics of a prokaryotic organism, surrounded by a double membrane each composed of a double phospholipids layer, and found in most eukaryotic cells.
Membrane plasmique	**Cell membrane**	is a biological membrane separating the interior of a cell, called the cytoplasm, from its external environment.

La bactérie	**The bacterium**	The bacterium is a ubiquitous, unicellular and nucleusless micro-organism (prokaryote) whose genome consists of DNA. This consists of a single chromosome, and the presence of plasmids may be noted.
vVirus	**virus**	A virus is an infectious agent requiring a host, often a cell, whose constituents and metabolism trigger replication.
Cellule	**Cell**	the smallest structural and functional unit of an organism, which is typically microscopic and consists of cytoplasm and a nucleus enclosed in a membrane.
Protéines	**Proteins**	are large biomolecules and macromolecules that comprise one or more long chains of amino acid residues
		Mutation :Mutation: a change in the genetic material (DNA) that may lead to a change in the characteristics of the offspring.
Microscope	**Microscope**	an optical instrument used for viewing very small objects, such as mineral samples or animal or plant cells, typically magnified several hundred times.
Chromosome	**Chromosome**	a threadlike structure of nucleic acids and protein found in the nucleus of most living cells, carrying genetic information in the form of genes.
ARN	**RNA**	Ribonucleic acid (RNA) is a polymeric molecule essential in various biological roles in coding, decoding, regulation and expression of genes.
Phagocyte	**Phagocyte**	a type of cell within the body capable of engulfing and absorbing bacteria and other small cells and particles.
Botanique	**Botany**	branch of biology that deals with the study of plants, including their structure, properties, and biochemical processes. Also included are plant classification and the study of plant diseases
Neurone	**Neuron**	a neuron is a cell of the nervous system specialized in communication and information processing
ATP	**ATP**	Adenosine triphosphate (ATP) is often called the energy currency of the cell because this molecule plays a key role in metabolism, particularly in transporting energy within cells. The molecule doubles the energy of the processes of exogenous and energizing energy, making strongly unfavorable chemical reactions able to proceed.
Immunologie	Immunology	biological science that studies immunity or the immune system.
Eucaryotes	**Eukaryote**	any cell or organism that possesses a clearly defined nucleus. The eukaryotic cell has a nuclear membrane that surrounds the nucleus, in which the well-defined

		chromosomes (bodies containing the hereditary material) are located.
Exocytose	**Exocytosis**	is the process of moving materials from within a cell to the exterior of the cell . this process requires enrgy and is therefore a type of active transport .exocytosis is an important process of plant and animal cells as it performs the opposite function of endocytosis

1.2. Human body

Integumentary system: (skin, hair, nails). Forms the external body covering and protects deeper tissues from injury.

Lymphatic system: (red bone marrow, thymus, lymphatic vessels, spleen). Returns leaked fluid from blood vessels to the blood and supports cardiovascular and immune system.

Endocrine system: (pituitary gland, thyroid gland, thymus, adrenal gland, pancreas, ovary). Secrete hormones that regulate many processes like growth, metabolism, and reproduction.

Cardiovascular system– (heart, blood vessels) The heart pumps blood and blood vessels transport it. Blood carries oxygen, carbon dioxide, nutrients, waste and more throughout the body.

Urinary system– (kidney, ureter, urinary bladder) Eliminates nitrogenous wastes from the body. Regulates acid-base, electrolyte and WATER balance of blood.

Reproductive system: The main function of the reproductive system is to produce offspring.

1.3. Plant Parts

1.3.1. Botanical definitions:

Roots:The underground part of the plant.Roots act like straws absorbing water and minerals from the soil. Tiny root hairs stick out of the root, helping in the absorption. Roots help to anchor the plant in the soil so it does not fall over. Roots also store extra food for future use.
Stems:The above ground part of the plant that bears the reproductive parts, leaves and buds. Stems do many things. They support the plant, act like the plant's plumbing system, conducting water and nutrients from the roots and food in the form of glucose from the leaves to other plant parts. Stems can be herbaceous like the bendable stem of a daisy or woody like the trunk of an oak tree.
Leaves:Most plants' food is made in their leaves. Leaves are designed to capture sunlight which the plant uses to make food through a process called photosynthesis.

Flowers:Flowers are the reproductive part of most plants. Flowers contain pollen and tiny eggs called ovules. After pollination of the flower and fertilization of the ovule, the ovule develops into a fruit.
Fruit:The structure that develops from the ovary wall as the seeds develop inside.
Fruit provides a covering for seeds. It can be fleshy like an apple or hard like a nut.
Seeds:The seed contains all the components needed for a new plant to grow. Seeds form in fruit.
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1.3.2. Botanical terms

Plant: any organism that contains chlorophyll and can manufacture its own food.
Herbaceous:Plants with stems that are usually soft and bendable. Herbaceous stems die back to the ground every year.
Woody: Plants with stems, such as tree trunks, that are hard and do not bend easily. Woody stems usually don't die back to the ground each year.
Chlorophyll: green pigment found in a specializedcell called a chloroplast that absorbs sunlight and providing the energy used in photosynthesis.
Chloroplast: small structures in plant cells that contain chlorophyll and which the process of photosynthesis takes place.
Phloem: plant tissue consisting of elongated cells that transport carbohydrate from the leaves throughout the plant.
Xylem: plant tissue consisting of elongated cells that transport water and mineral from the roots to the stems and leaves.
Stomata: pores in the surface of leaves.
Transpiration: evaporation of water in the form of water vapour from the stomata.
Photosynthesis: a process by which a plant produces its food using energy from sunlight, carbon dioxide from the air, water and nutrients from the soil and releasing oxygen as a product.
Pollination:The movement of pollen from one plant to another. Pollination is necessary for seeds to form in flowering plant