

ANNUAL PLAN
BIOLOGY
IGCSE LEVEL-1
SESSION 2023-24

MONTH	TOPIC CH-1 Characteristics and	CONCEPT	LEARNING OBJECTIVES
APRIL	Classification of Living Organisms CH-1 Characteristics and	1.1 Characteristics of Living Organisms	Students should be able to recognize and describe the seven characteristics of living organisms
	Classification of Living Organisms	1.2 The Biological classification system	Students should be able to find out how binomial system is used to name to the organisms.
	CH-1 Characteristics and Classification of Living Organisms	1.3 The Dichotomous Keys	Students should be able to create and solve the dichotomous keys for identifying different species of living organisms.
	CH-1 Characteristics and Classification of Living Organisms	1.4 The kingdoms	Students should be able to describe the features of five kingdoms of organisms.
	CH-1 Characteristics and Classification of Living Organisms	1.5 Groups within plant and animal kingdoms	Students should be able to identify and describe the features of different organisms within plant and animal kingdom.

	CH-1 Characteristics and Classification of Living Organisms	1.6 Viruses	Students should be able to outline the features and living status of Viruses.
	CH-2 Cells	2.1 Animal and plant cell	Students should be able to describe the structural and functional components of Animal and plant cells
	CH-2 Cells	2.2 Bacterial cell	Students should be able to describe the structural and functional components of bacterial cell.
	CH-2 Cells	2.3 Specialised cells in plants and humans	Students should be able to describe how the structures of some specialised cells are related to their functions.
	CH-2 Cells	2.4 Sizes of Specimens	Students should be able to calculate the magnification of biological specimens.
MONTH	TOPIC	CONCEPT	LEARNING OBJECTIVES
MAY	CH-3 Movement into and out of the Cells	3.1 Diffusion	Students should be able to describe the process, importance and factors affecting diffusion
	CH-3 Movement into and out of the Cells	3.2 Osmosis	Students should be able to find out how osmosis is a special kind of diffusion and investigate osmosis in plant tissues.
	CH-3 Movement into and out of the Cells	3.3 Active transport	Students should be able to describe the process and importance of Active transport
MONTH	TOPIC	CONCEPT	LEARNING OBJECTIVES
JULY	CH-4 Biological Molecules	4.1 Carbohydrates, fats and Proteins	Students should be able to describe the components of carbohydrates, fats and

			proteins. Students should be able to perform the laboratory tests to detect the presence of different biological molecules.
	CH-4 Biological Molecules	4.2 The structure of DNA	Students should be able to describe the structure and discovery of DNA.
	CH-5 Enzymes	5.1 Biological Catalysts	Students should be able to comprehend and analyse how enzymes work as biological catalysts.
	CH-5 Enzymes	5.2 Factors that affect Enzymes	Students should be able to give reason how temperature and Ph affects the nature of enzymes.
	CH-6 Plant Nutrition	6.1 Making Carbohydrate using Light Energy	Students should be able to understand the chemical reaction of photosynthesis and how plants use the products formed in photosynthesis.
	CH-6 Plant Nutrition	6.2 Leaves	Students should be able to comprehend the internal structure of leaf and how these are adapted for photosynthesis.
	CH-6 Plant Nutrition	6.3 Photosynthesis	Students should be able to understand how light, quantity of reactants and substances affect the rate of photosynthesis.
MONTH	TOPIC	CONCEPT	LEARNING OBJECTIVES
AUGUST	CH- 7 Human Nutrition	7.1 Diet	Student should be able to understand the need, importance and components of a balanced diet.
		7.2 Human digestive system	Students should be able to understand the structure and functions of human digestive

			organs.
		7.3 Digestion	Student should be able to differentiate between physical and chemical digestion.
		7.4 Absorption and Assimilation	Student should be able to understand the steps and importance of holozoic nutrition.
	CH - 8 Transport in Plants	8.1 Xylem and Phloem	Students should be able to understand the functions of Xylem and Phloem and where they are found.
		8.2 Transport of water	Students should be able to describe the pathway taken by water as it moves through a plant.
		8.3 Translocation of sucrose and amino acids	Students should be able to understand how different solutes are transported throughout the plant body.
MONTH	TOPIC	CONCEPT	LEARNING OBJECTIVES
OCTOBER	CH - 9 Transport in Animals	9.1 Circulatory system	Student should be able to understand the need, importance and components of Human circulatory system.
		9.2 The heart	Students should be able to understand the structure and functions of human heart
		9.3 Blood Vessels	Students should be able to compare the structure and functions of different types of blood vessels.
		CH - 10 Diseases and Immunity 10.1 Transmission of Pathogens	Student should be able to understand how pathogens are transmitted from one host to the other.
		10.2 The immune	Students should be able to

		response	understand how body defend itself against pathogens.
MONTH	TOPIC	CONCEPT	LEARNING OBJECTIVES
NOVEMBER	CH -11 Gas Exchange in humans	11.1 Gas exchange in cells.	Student should be able to state how gas exchange happens in lungs and the features of gas exchange surface.
		11.2 Inspired and Expired Air	Student should be able to explain the differences in composition of inspired air and expired air.
	CH -12 Respiration	12.1 Using energy through aerobic and anaerobic respiration	Student should be able to understand how the body uses energy and how different types of respiration supply this energy.
		12.2 Breathing rate and exercise	Student should be able to understand how breathing happens and how activity affects breathing rate.
	CH -13 Excretion in humans	13.1 Excretory organs	Student should be able to understand how excretion occurs and role of excretory organs in the body.
		13.2 Urine formation	Student should be able to describe the role of nephron and mechanism of urine formation.
		13.3 Homeostasis	Student should be able to describe the homeostasis and how it occurs
DECEMBER	CH-14 Coordination and response	14.1 Sensory and Motor Neurone	Students will be able to relate the responses coordinated by Nervous system and Endocrine system
		14.2 Reflex arc	The students will be able to comprehend the route of reflex action
		14.3 Neural system: The brain	The description the parts of the brain will be explained and

			understood by the students
JANUARY	CH-15 REPRODUCTION	15.1 Reproduction in plants	The students will be able to describe the various reproductive parts of the flower
		15.2 Asexual mode of reproduction	The various methods of asexual reproduction will be comprehended by the students
		15.3 Pollination and fertilization	The students will be able to understand the pollination and fertilization process in plants