SESEMAT KASESE REGION AS 16/12/2024

CONTENT FRAME WORK

Class: Senior One

Subject: Biology

GRADUATE PROFILE OF THE SUBJECT: Graduate who understands, communicates and applies biological concepts to address, successfully manage health, environmental and sustainability challenges facing the society.

COMPETENCY	TOPIC/THEME	LEARNING OUTCOME(S) (LOs)	KEY IDEA(S) (KIs)	LEVEL OF DEMAND		
				LOW LEVEL OF DEMAND	MEDIUM LEVEL OF DEMAND	HIGH LEVEL OF DEMAND
Learner understands biology as a study of life and that all living organism experience common life processes.	**Theme: Diversity of living things** **Topic one** Introduction to biology	a) Appreciate that biology is the study of life	• Meaning of biology	a) Appreciates that biology is the study of life		

		b) Appreciate that biology is applied in everyday life	• Branches of biology	b) Appreciates that biology is applied in everyday life		
		c) (i)Appreciate that life processes are common to all living things	• Characteristics of living things	c) (i) Appreciates that life processes are common to all living things		
		(ii) Appreciate that life processes are manifested differently in different organisms.	• How different living organisms carry out different life processes		(ii) Appreciates that life processes are manifested differently in different organisms.	
The learner appreciates the cell as the basic unit of living organisms	**Topic two** Cells	a) Know that the basic unit of living	• Meaning of a cell	a) Knows that the basic unit of living organisms is a cell		

including how the structures of different specialized cells relating to their functions		organisms is a cell.				
		b) Know and understand the structure and functions of a typical animal and plant cell.	• Structure of animal and plant cell • Functions of the parts • Differences between animal and plant cell • Examples of animal and plant cells	b) Knows and understands the structure and functions of a typical animal and plant cell		
		c)Understand the structure of specialized cells in terms of their functions in an organism.	• Examples of specialized cells • Adaptations of specialized cells. • Functions of specialized	c)Understands the structure of specialized cells in terms of their functions in an organism		
		d) Understand levels of organisation in	• Meaning of each level	d)Understands levels of organisation in		

		organisms (cell, tissue, organ, system and organism)	• Examples of each level	organisms (cell, tissue, organ, system and organism)		
The understands that classification is the sorting out of living organisms basing on their similarities	**Topic three** Classification	a) Understand the concept of classification of organisms at different levels	• Meaning of classification • Levels of classification • Importance of classification	a) Understands the concept of classification of organisms at different levels		
		b) Understand that each organism has a Latin name consisting of genus followed by the species	• Binomial nomenclature • Rules of how to write a scientific name. • Examples of organisms and their scientific names	b) Understands that each organism has a Latin name consisting of genus followed by the species		

TERM 2

COMPETENCY	TOPIC/THEME	LEARNING OUTCOMES	KEY IDEAS	LEVELS OF DEMAND		
				LOW LEVEL OF DEMAND	MIDDLE LEVEL OF DEMAND	HIGH LEVEL OF DEMAND
The learner knows the key characteristics of the five kingdoms of living organisms and is able to identify examples of organisms from each kingdom.	**Topic**: The five kingdoms of living organisms	(a) identify three characteristics (cell structure, cell organization and mode of feeding) of organisms in Kingdom Monera, Kingdom protoctista and Kingdom fungi.	• Characteristics of the three kingdoms (kingdom monera, kingdom protoctista, kingdom fungi)	(a) (a) identifies three characteristics (cell structure, cell organization and mode of feeding) of organisms in Kingdom Monera, Kingdom protoctista and Kingdom fungi.		
		(b) know the examples of	• Examples of organisms in	(b) knows the examples of		

		organisms belonging to Kingdom Monera, Kingdom protoctista and Kingdom fungi.	kingdom Monera, Kingdom protoctista and Kingdom fungi	organisms belonging to Kingdom Monera, Kingdom protoctista and Kingdom fungi		
		(C) understand the value of microorganisms in food processing	• Economic importance microorganisms in food processing for example yogurt making		(C)Understands the value of microorganisms in food processing	
		(d) Identify three characteristics (cell structure, mode of feeding and photosynthetic pigments) of organisms in Kingdom plantae	• Characteristics of organisms in Kingdom plantae.	(d) Identifies three characteristics (cell structure, mode of feeding and photosynthetic pigments) of organisms in Kingdom plantae		

		(e)know examples of organisms from each of the following categories: vascular and non-vascular, angiosperms, gymnosperms, monocots and dicots in Kingdom plantae	• Examples of vascular and non-vascular plants, angiosperms and gymnosperms, monocots and dicots.	(e) knows examples of organisms from each of the following categories: vascular and non-vascular, angiosperms, gymnosperms, monocots and dicots in Kingdom plantae		
		(f) identify three characteristics (cell structure, mode of feeding and body system) for organisms in Kingdom Animalia.	• Characteristics of organisms in Kingdom Animalia	(f) identifies three characteristics (cell structure, mode of feeding and body system) for organisms in Kingdom Animalia.		
		(g) know the examples of organisms	• Examples of organisms under	(g) knows the examples of organisms		

		belonging to the following phyla: Platyhelminthes, nematoda, Annelida, Mollusca. (no characteristics required)	Platyhelminthes, nematoda, Annelida, Mollusca.	belonging to the following phyla: Platyhelminthes, nematoda, Annelida, Mollusca. (no characteristics required		
		(h) identify and describe the common observable characteristics and give examples of organisms from phylum arthropoda including its classes.	• Observable characteristics of organisms in phylum arthropoda • Classes of phylum arthropoda • Examples of organisms in each class of phylum arthropoda.	(h) identifies and describes the common observable characteristics and give examples of organisms from phylum arthropoda including its classes.		
		(i) identify and describe the common observable	• Characteristics of chordates • Examples of chordates	i) Identifies and describes the		

		characteristics (types of teeth, temperature regulation, habitat, reproduction and gas exchange) and give examples of organisms from the phylum Chordata and its classes.	• Classes of chordates and their characteristic features	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.		
The learner understands the charaacteristics of viruses, their means of infection and	**Topic: viruses**	(a) understand that viruses have characteristics similar to other living	• meaning of viruses • Examples of viruses • Similarities and	a) understands that viruses have characteristics similar to other living organisms and key differences		

transmission as well as the symptoms of some key examples		organisms and key differences	differences between viruses and other living organisms			
		(b) Understand the symptoms, transmission and prevention of the following viruses: HIV, Ebola, hepatitis and cassava mosaic	• symptoms of diseases caused by different viruses • transmission and prevention of diseases caused by different viruses (HIV, hepatitis, Ebola, cassava mosaic)	(b) Understands the symptoms, transmission and prevention of the following viruses: HIV, Ebola, hepatitis and cassava mosaic		

TERM: THREE

COMPETENCY	**TOPIC/THEME**	**LEARNING OUTCOMES (LOS)**	**KEY IDEAS (KIS)**	**LEVEL OF DEMAND**		
				LOW LEVEL OF DEMAND	**MIDDLE LEVEL OF DEMAND**	**HIGH LEVEL OF DEMAND**
The learner understands the characteristics of insects, relates structures to their functions in some common insects and appreciate that insects have direct or indirect effect on the wellbeing of other organisms	**Topic;** Insects	(a) Identify the observable external features of a housefly, cockroach, mosquito, termite, bee, and butterfly.	• Observable external features of a housefly, cockroach, mosquito, termite, bee, and butterfly. • Location of the features on the different body parts. • Adaptations of the features.	(a) Identifies the observable external features of a housefly, cockroach, mosquito, termite, bee, and butterfly.		

		(b) Construct a dichotomous key (c)Appreciate the useful and	• Functions of the features. • Similarities and differences • Contrasting features • Principles for constructing a dichotomous key. • Economic importance housefly, cockroach, mosquito,	c)Appreciates the useful and harmful effects of a housefly, cockroach,		(b) Constructs a dichotomous key.

		harmful effects of a housefly, cockroach, mosquito, bee, and butterfly (d) know the different methods of controlling the harmful stages of a housefly, cockroach, mosquito, and butterfly	bee, and butterfly • harmful stages of housefly, cockroach, mosquito, bee, and butterfly • methods of controlling the harmful stages of housefly, cockroach, mosquito, bee, and butterfly	mosquito, bee, and butterfly.	(d) knows the different methods of controlling the harmful stages of a housefly, cockroach, mosquito, and butterfly	

The learner understands that different parts of flowering plants carry out different functions and understands how the parts are suited to their function	**Topic:** Flowering plants	(a)Know the external parts of a typical flowering plants (b)Understand how the structure of	• structure of a flowering plant • meaning of monocots and dicots	(a)Knows the external parts of a typical flowering plants b) Understands how the structure of monocot		

		monocot and dicot roots, stems, leaves flowers and fruits suit their function (c)Classify leaves	• structure of parts of a flowering plant. • Adaptations of the different parts of monocots and dicots to their function. • Differences and similarities of leaves	and dicot roots, stems, leaves flowers and fruits suit their function.	c) Classifies leaves	