SCHEMES OF WORK 2022
BIOLOGY FORM 2

This PDF consists of part of the schemes for the named class.

SCHEME OF WORK FORM TWO BIOLOGY TERM ONE 2022

WK NO	***L/ NO***	***TOPIC/ SUBTOPIC***	***LESSON / SPECIFIC OBJECTIVES***	***TEACHING / LEARNING ACTIVITIES***	***MATERIALS / RESOURCES***	***REFERENCES***	***REMARKS***
1	1	**TRANSPORT IN PLANTS AND ANIMALS** Introduction. **Transport in plants** Transport in simple plants.	***By the end of the lesson, the learner should be able to:*** Define transport. Explain importance of transport in plants and animals. Describe transport in simple plants.	Q/A and discussion; Discuss transport in simple animals and plants e.g. mosses.		*K.L.B. BOOK 2 Page 1*	
	2	External structure of the root.	Relate the external structure of the root to its function. State primary functions of roots.	Class experiment- to examine a piece of a taproot. Drawing and labeling a diagram of the taproot. Discussion of adaptation of the root hairs to their functions. Q/A: Functions of roots.	Tap root, bean / pea seedlings. Petri-dish Razor blade.	*K.L.B. BOOK 2 Pages 1-2*	
	3,4	Internal structure of the root.	Relate the internal structure of a root to its functions.	Drawing and labeling diagrams of sections of roots and root hairs for monocotyledon and dicotyledonous roots. Discuss functions of the labeled parts.	Permanent slides of roots, microscope, wallchart.	*K.L.B. BOOK 2 Pages 2-4*	

2	1	Structure and functions of the stem.	To describe structural organization of stems. To state primary functions of the stem.	Observing permanent stem slides under a microscope. Detailed discussion.		*K.L.B. BOOK 2 Page 5*	
	2	Internal structure of the stem.	To draw and label internal stem structures.	Drawing and labeling transverse sections of stems.	Wall charts - Internal structure of the stem.	*K.L.B. BOOK 2 Pages 5- 7*	
	3,4	Absorption of water and mineral salts.	To explain processes through which water and mineral salts move through plants.	Discussion and Explanations.	Wall charts – Root hairs.	*K.L.B. BOOK 2 Pages 7 - 9*	
3	1	Significance and types of Transpiration.	To explain significance of transpiration. To state and explain types of transpiration.	Probing questions, Discussion, Explanations.	Wall charts – Internal structure of a leaf.	*K.L.B. BOOK 2 Pages 9-10, 12*	
	2	Factors affecting rate of transpiration.	To state and explain factors affecting transpiration.	Q/A: Discussion Explanations.		*K.L.B. BOOK 2 Pages 12- 14*	
	3-4	The Xylem tissue. Forces involved in transport of water and mineral salts.	To describe the structure of xylem tissue. To explain the forces involved in transport of water and mineral salts.	Q/A: Discussion Explanations Drawing diagrams.	Wall charts- The xylem tissue.	*K.L.B. BOOK 2 Pages 10-12*	

4	1	Rates of transpiration on leaf surfaces.	To describe simple experiments to show rates of transpiration on leaf surfaces. To describe simple experiments to show rates of transpiration on leaf surfaces.	Class experiments: Transpiration on both sides of a broad leaf. Making observations on colour changes of cobalt II Chloride paper. Discuss above observations. Draw graphs to show rates of transpiration on leaf surfaces. Answer questions.	Cobalt II Chloride paper Forceps. Potometer.	*K.L.B. BOOK 2 Pages 14 - 18*	
	2	Translocation of organic compounds.	To define translocation. To describe the structure of phloem tissue.	Q/A: To review photosynthesis. Discussion and explanations of structure of phloem tissue. Drawing and labeling phloem tissue.	Chart - phloem tissue.	*K.L.B. BOOK 2 Page 17*	
	3-4	**Transport in Animals.** Open and closed circulatory systems. Open circulatory system in insects.	 To differentiate between open and closed circulatory systems. To discuss open circulatory system in insects.	 Exposition and discussion. Drawing and labeling diagrams.	 Charts- Circulatory systems.	*K.L.B. BOOK 2 Pages 18 - 19*	
5	1-4	***MID TERM BREAK***					

6	1	Single and double circulatory systems.	To differentiate between single and double circulatory systems.	Exposition and discussion. Tracing the path followed by blood from a point and back to the same point.	Chart- Mammalian double circulation system.	*K.L.B. BOOK 2 Pages 18-20*		
	2	The mammalian heart – external structure & internal structure	To describe the external structure of the heart. Draw compartments of the heart and label major parts.	Exposition; Identifying compartments of the heart. Drawing and labeling a diagram of a mammalian heart.	Model of a heart.	*K.L.B. BOOK 2 Pages 21 - 23*		
	3-4	Pumping mechanism of the heart.	To differentiate between systolic and diastolic heart movements.	Discussion and Explanations. Experiment- To investigate pulse rate at the wrist.	Stopwatches.	*K.L.B. BOOK 2 Pages 23 - 24*		
7	1	Pulse rate. Structure of arteries. Major arteries.	Explain the origin of pulse. Explain effect of exercise on pulse rate. To describe the structure of arteries. To identify major arteries in the circulatory system.	Record number of pulses before and after an exercise. Brief discussion. Discussion Drawing and labeling internal structure of an artery.	Stopwatches. Chart- cross-section of an artery. Chart- circulatory system.	*K.L.B. BOOK 2 Pages 30 – 31,25*		

	2	Veins. Capillaries.	To describe the structure of veins. To explain the need for valves in veins. To state differences between veins and arteries. To describe the structure of capillaries. To explain the role of capillaries in transport	Drawing and labeling diagram of an artery. Discussion and explanations.	Chart-cross-sections of major blood vessels in the body.	*K.L.B. BOOK 2 Pages 25-29*	
	3-4	Diseases and defects of the circulatory system.	To discuss various diseases and defects of the circulatory system.	Discussion of various diseases and defects of the circulatory system. Suggest methods of prevention and control.		*K.L.B. BOOK 2 Pages 31 - 32*	
8	1	**Composition of blood.** The plasma. Red blood cells.	To state the constituents of blood plasma. To identify functions of plasma. To state the functions of red blood cells. To explain the functions of haemoglobin in r.b.c.	Detailed discussion and explanations.	Wall charts.	*K.L.B. BOOK 2 Pages 32 - 34*	

	2	White blood cells. Platelets. Blood clotting.	To describe the structure of white blood cells,platelets To state functions of white blood cells,platelets. To describe the blood clotting process. To explain importance of blood clotting.	Detailed discussion and explanations.		*K.L.B. BOOK 2 Pages 34 - 36*	

	3-4	Blood groups, Antigens and antibodies. Blood transfusion.	To identify the four blood groups. To identify compatible blood groups. To define blood transfusion. To identify compatible blood groups. To identify the universal donor and universal recipient.	Completing a table of blood groups and the corresponding antigens and antibodies present. Q/A: Identifying compatible blood groups. Open discussion. Completing a table of compatible blood groups.	Chart-blood groups, antigens and antibodies. *Blood transfusion resource person.*	*K.L.B. BOOK 29-31 Pages*	
9-10		***END OF TERM ONE EXAMINATIONS***					