

BIOLOGY – FORM 2 SCHEME OF WORK – Term 1

WEEK	TOPIC	SYLLABUS OBJECTIVES	NUMBER OF SESSIONS	ACTIVITIES/LABS
1	Guidelines	1. Guidelines for biological drawings, tables and graphs	3	Sample work given for students to mark.
2- 3	Cells	2. What is a cell? 3. Form and function of the cell 4. Generalized and specialized cells 5. Basic structure of generalized plant cell 6. Basic structure of generalized animal cell 7. Differences between plants and animal cells	4	Draw and label cells Make models of plant and animal cells and present to class View mounted slide of onion cells (plant cells) and prepared slide of animal cells under light microscope.
3- 4	Organ Systems	1. What is an organ? 2. Development from cell to tissue to organ 3. Organs working together to form organ systems 4. What is the need for organ systems 5. Not all organisms have organ systems	4	Name the various organ systems found in the human body.
4 - 6	Diffusion and osmosis	1. What is Brownian motion? 2. What is osmosis? 3. What is diffusion? 4. How substances move in and out of cells	6	Show onion cells or potato strips in concentrated salt solution and pure water and see differences in length after some time. Perfume scent travel from one corner of the room to the other end Colouring in water to show diffusion.
7 - 10	Excretion	1. What is excretion? 2. What is metabolic waste? Faeces is not metabolic waste. 3. Types of metabolic waste; accumulation harmful to organisms 4. Organs responsible for excretion: Kidneys, Skin, Lungs, Liver 5. Structure and function of the urinary system 6. Malfunctioning kidneys	8	Construct table of organs and their excretory products. Use chart to show the flow of urine from kidneys to urethra. Identify the following structures of the nephron: Bowman’s Capsule, Proximal convoluted tubule, loop of Henle, distal convoluted tubule, and collecting duct. Relate the structure of the parts of the nephron to the following processes: ultrafiltration, selective reabsorption, reabsorption of water. Include role of ADH Research kidney transplant and dialysis.

