

**St. Mary's College**  
**Form 4 Course Outline**  
**Biology**

<b>Term</b>	<b>Topic</b>	<b>Subtopic</b>	<b>Week</b>
<b>1</b>	Cells, Tissues and Organs		
		Structure and function of plant and animal cells	1-2
		Tissue, organs and systems	
		Cell specification in multicellular organisms	
	Cell Transport		
		Diffusion, Osmosis and active transport in living systems	3-4
	Plant Nutrition		
		Photosynthesis- process, structure of leaf and environmental factors	5-6
	Animal Nutrition	Enzymes	7-10
		Structure and function of the alimentary canal	
		Fate of digested materials	
	Respiration		
		Aerobic and anaerobic processes	11-13
		Gaseous exchange in living organisms	
<b>2</b>	Excretion		
		Importance of excretion and egestion	1-3
		Metabolic wastes from both plant and animals	
		Osmoregulation and excretory function of the kidney	
	Classification		
		Classifying organisms into groups based on similarities and differences	4-5
	Ecology	Abiotic and Biotic factors	6-7

		Feeding relationships	
		Growth and survival population	
	Human impact on the environment		
		Negative impact on the environment	8-9
		conservation and restoration of the environment	
	Asexual Reproduction		
		Process by which identical offspring are made	10-11
<b>3</b>	Sexual Reproduction		
		Reproductive systems in animals	1-4
		Menstral cycle in man	
		Gamete, foetus and embryo formation in man	
		Methods of birth control in man	
		Reproduction in plants	
		Pollination and fertilisation	
		Formation of fruit and seed dispersal	
	Germination and growth		
		Processes taking place during germination	5
	Inheritance		
		DNA, chromosomes and genes	6-9
		Mitosis and Meiosis	
		Dominant and recessive conditions	
		Sex determination and sex linked diseases	
	Variation		
		Importance of variation	10
		Continuous and discontinuous variation	