



Pakistan Urdu School- Kingdom of Bahrain
Curriculum Implementation Plan for Biology Grade XII

No.	Month/Week	Starting Date	Topics from Textbook or Others (Specify Unit Titles and Numbers)	National Curriculum References (Competency, Standards, Themes)	Total Periods
1	May	20-05-18	<p style="text-align: center;">Unit 15 – Homeostasis</p> <p>Mechanism of Homeostasis</p> <ul style="list-style-type: none"> • Osmoregulation • Excretion • Excretory system of man • Disorders of Urinary system • Thermoregulation 	<p>Understanding</p> <p>Students will:</p> <ul style="list-style-type: none"> • Describe three elements i.e. receptors, control center and effectors which operate the Homeostatic mechanisms • Relate the homeostatic mechanisms with the negative and positive feedback system. • Explain different methods of osmoregulation in different habitats. • Explain homeostasis by taking example of a hormone • List out and explain various excretory products in relation to the habitats <p>Skills</p> <p>(Initiating and planning)</p> <p>Students will:</p> <ul style="list-style-type: none"> • Investigate why positive feedback mechanism in human are sometimes associated with severe health problems • List some of the behavioral responses of the animals to maintain homeostasis. 	10

				<p>(Interpreting and communicating) Students Will: Draw a flow chart to show negative feedback mechanism by taking an example of a hormone.</p> <p>STS Connections Students will:</p> <ul style="list-style-type: none"> Describe the importance of kidney donation for the benefit of kidney failure patients. Name some important kidney centers in the world. 	
2	August/ September	28-08-18	<p>Unit – 16 Support and Movement</p> <ul style="list-style-type: none"> Support in Plants Movement in Plants Support and movement in animals Human Skeleton 	<p>Understanding Students will:</p> <ul style="list-style-type: none"> Explain the urinary system and its disorders 	30
3	September		<p>Unit – 17 Coordination and Control</p> <ul style="list-style-type: none"> Co-ordination in plants Co-ordination in animals Nervous co-ordination Neurons Nerve Impulse Synapse Human Nervous system Chemical co-ordination 		16
4	September/ October		<p>Unit – 18 Reproduction</p> <ul style="list-style-type: none"> Reproduction in plants Seed Dormancy Photoperiodism Vernalisation 		8

			<ul style="list-style-type: none"> • Reproduction in animals • Reproduction in man • Birth • Sexually transmitted diseases(STD's) 		
5	October		Unit – 19 Growth and Development <ul style="list-style-type: none"> • Differentiation and growth correlations • Growth and development in animals • Development in Chick • Mechanisms of development • Concept of differentiation • Embryonic induction • Aging • Regeneration • Abnormal developments 		12
6	October		Unit – 20 Chromosomes and DNA <ul style="list-style-type: none"> • Types and composition of Chromosomes • Chromosomal theory of inheritance • DNA as a hereditary material • DNA replication • Gene expression • RNA and Protein synthesis • Mutation 		6
7	November		Unit – 21 Cell Cycle <ul style="list-style-type: none"> • Mitosis • Cancer • Meiosis • Meiotic errors • Necrosis and Apoptosis 		6
8	November		Unit – 22 Variation and Genetics <ul style="list-style-type: none"> • Genes, Alleles and gene pool • Mendel's Laws of Inheritance • Dominance Relations 		12

			<ul style="list-style-type: none"> • Blood group systems • Epistasis and Pleiotropy • Continuously varying traits • Gene linkage and crossing over • Sex determination • Sex linkage • Diabetes mellitus and its genetic basis 		
	November/ December		<p>Unit – 23 Biotechnology</p> <ul style="list-style-type: none"> • Gene cloning • DNA Analysis • DNA Sequencing • Human Genome Project • Transgenic Bacteria, Plants and Animals • Tissue Culture • Genetic Engineering • Production of Biotechnology Products 		12
9	January	06-01-19	<p>Unit – 24 Evolution</p> <ul style="list-style-type: none"> • Concept of Evolution • Evolution from Prokaryotes to Eukaryotes • Inheritance of Acquired Characters • Lamarckism • Darwinism • Neo Darwinism • Evidences of Evolution • Population, Gene pool, genotype frequencies • Endangered Species • Concept of Evolution • Evolution from Prokaryotes to Eukaryotes 		18
10	January		<p>Unit – 25 Ecosystem</p> <ul style="list-style-type: none"> • Ecosystem 		2

			<ul style="list-style-type: none"> • Components of Ecosystem • Ecological Succession • Biogeochemical cycles • Flow of Energy in food chain • Aquatic Ecosystem • Intervention of man in aquatic ecosystem • Terrestrial Ecosystem • Forest Ecosystem • Some major ecosystems in Pakistan • Grassland ecosystem • Desert ecosystem • Tundra ecosystem • Humans and Ecosystems 		
11	January		<p>Unit – 26 Man and His Environment</p> <ul style="list-style-type: none"> • Renewable and Non-renewable Resources • Degradation and Depletion of resources • Human Impact on environment • Pollution • Health and diseases 		4

Prepared By **Hafiz M Ahsan Ali**