



**PROVINCE OF KWAZULU-NATAL
DEPARTMENT OF EDUCATION**

LIFE SCIENCES

Grade 12

Annual Teaching Plan

Version 1

Post Covid-19 Lockdown

June 2020

Life Sciences - Grade 12 - CAPS (2020)

Annual Teaching Plan - TERM ONE (10 weeks)

Planned Date (week ending)	Completion Date	Topic for the week	INFORMAL ASSESSMENT Classwork/Homework	TICK	FORMAL ASSESSMENT - SBA
17 Jan		Nucleic acids; Location of DNA; Discovery of DNA	Task 1 <ul style="list-style-type: none"> Label/draw diagrams of DNA and RNA Tabulate differences and similarities between DNA and RNA Describe DNA replication and its significance Interpret diagrams on protein synthesis to identify the different events in transcription and translation 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Practical (20%) (30 marks) March Test (10%) (1 hour - 60 marks) <div style="border: 1px solid black; padding: 5px;"> Monitoring by HOD (Date, signature and comment on progress with ATP) </div>
24 Jan	DNA Structure, DNA replication; DNA profiling				
31 Jan	RNA: Types, location and structure; Protein Synthesis				
07 Feb		Review of mitosis; Process of meiosis (events of various phases)	Task 2 <ul style="list-style-type: none"> Identify, with reasons, for the various phases of meiosis from diagrams Explain the significance of meiosis Tabulate differences between Meiosis I and Meiosis II State the consequence of non-disjunction during meiosis Tabulate the differences between mitosis and meiosis 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
14 Feb	Importance of Meiosis; Abnormal meiosis; Comparison of Mitosis and Meiosis				
21 Feb		Diversity of Reproductive Strategies Human Reproduction	Task 3 <ul style="list-style-type: none"> Identify and state functions of parts of the male and female reproductive system Draw a labelled diagram of a sperm cell 	<input type="checkbox"/> <input type="checkbox"/>	
28 Feb		Human Reproduction			
06 March		Human Reproduction	Task 4 <ul style="list-style-type: none"> Interpret graphs showing the menstrual cycle and role of hormones in the menstrual cycle Identify and state the functions of the different parts associated with the development of the foetus in the uterus Draw graphs using data relating to reproduction 	<input type="checkbox"/> <input type="checkbox"/>	
13 March		Test			
20 March		Test			

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Annual Teaching Plan - TERM TWO (8 weeks)

Planned Date (week ending)	Completion Date	Topic for the week	INFORMAL ASSESSMENT Classwork/Homework	TICK	FORMAL ASSESSMENT - SBA
Week 1		Concepts in inheritance; Monohybrid crosses Types of Dominance; Sex Determination	Task 5 <ul style="list-style-type: none"> Solve monohybrid genetic problems Solve genetic problems on blood grouping and sex-linked characteristics Interpret pedigree diagrams 	<input type="checkbox"/>	Test (10%) (1 hour - 60 marks) <div style="border: 1px solid black; padding: 5px; text-align: center;"> Monitoring by HOD (Date, signature and comment on progress with ATP) </div>
Week 2		Blood Grouping; Mutations; Sex-linked inheritance; Pedigree		<input type="checkbox"/>	
Week 3		Genetic engineering; Paternity Testing; Genetic links; Dihybrid crosses	Task 6 <ul style="list-style-type: none"> Describe cloning, stem cell research and genetic modification as examples of genetic engineering Solve genetics problems on dihybrid crosses 	<input type="checkbox"/>	
Week 4		Human nervous system: Neurons; Brain	Task 7 <ul style="list-style-type: none"> Label and give functions of parts of the brain and spinal cord Make a labelled drawing of a sensory or motor neuron Describe an example of a reflex action 	<input type="checkbox"/>	
Week 5		Human nervous system: Spinal Cord; Reflex arc; Disorders, Injuries; Effects of Drugs		<input type="checkbox"/>	
Week 6		Receptors: Eye; Ear	Task 8 <ul style="list-style-type: none"> Label and give functions of parts of the eye Use diagrams to explain accommodation and the pupillary mechanism Draw/interpret graphs using data related to the eye Task 9 <ul style="list-style-type: none"> Label and give functions of parts of the ear Describe the processes of hearing and balance 	<input type="checkbox"/>	
Week 7		Human Endocrine system; Negative Feedback: TSH and thyroxin; Insulin and Glucagon	Task 10 <ul style="list-style-type: none"> Identify from diagrams the location of various endocrine glands & name and state the function/s of the hormones that they secrete Using an example, describe how a negative feedback mechanism occurs Using a diagram of the skin, describe the role of the sweat gland and blood vessels in maintaining a constant body temperature 	<input type="checkbox"/>	
Week 8		Negative feedback for glucose, carbon dioxide, water and salts; Temperature Regulation		<input type="checkbox"/>	

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Annual Teaching Plan - TERM THREE (4 weeks + Trial Exam - 3 weeks)

Planned Date (week ending)	Completion Date	Topic for the week	INFORMAL ASSESSMENT Classwork/Homework	TICK	FORMAL ASSESSMENT - SBA
Week 1		Plant hormones; Geotropism & phototropism; Defense mechanisms	Task 11 <ul style="list-style-type: none"> • Describe the role of auxins in geotropism and phototropism • Interpret data/ draw graphs on geotropism and phototropism 	<input type="checkbox"/> <input type="checkbox"/>	Test (10%) (1 hour - 60 marks) Trial Exam (50%) P1 - 2½ hours – 150 marks P2 - 2½ hours - 150 marks <div style="border: 1px solid black; padding: 5px;"> Monitoring by HOD (Date, signature and comment on progress with ATP) </div>
Week 2		Evidence for Evolution; Variation; Historical Development; Lamarckism	Task 12 <ul style="list-style-type: none"> • List various sources of variation • Describe different lines of evidence for evolution • Describe Lamarckism, Natural Selection and Punctuated equilibrium • State the benefits of artificial selection 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Week 3		Darwinism; Natural and Artificial selection; Punctuated equilibrium		<input type="checkbox"/> <input type="checkbox"/>	
Week 4		Speciation; Reproductive isolation; Evolution in present times	Task 13 <ul style="list-style-type: none"> • Describe how speciation occurs • List reproductive isolating mechanisms that keep species separate • Describe one example of evolution in current times 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

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Annual Teaching Plan - TERM FOUR (4 weeks)

Planned Date (week ending)	Completion Date	Topic for the week	INFORMAL ASSESSMENT Classwork/Homework	TICK	FORMAL ASSESSMENT - SBA
Week 1		Evidence for Human Evolution; Similarities and Differences between Humans and the African Apes	Task 14 <ul style="list-style-type: none"> List similarities and tabulate differences between Humans and the African apes Interpret diagrams/phylogenetic trees to show progressive evolution using fossil evidence. Describe evidence for the "Out of Africa" hypothesis 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Final Examination P1 - 2½ hours – 150 marks P2 - 2½ hours - 150 marks <div style="border: 1px solid black; padding: 5px;"> Monitoring by HOD (Date, signature and comment on progress with ATP) </div>
Week 2		Similarities and Differences between humans and the African Apes; Out of Africa hypothesis			
Week 3		Human Impact - revision	Task 15 <ul style="list-style-type: none"> Describe factors that influence the atmosphere and climate change and ways of reducing their negative impact Describe factors that influence the availability and quality of water Describe factors that have an impact on food security 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Week 4		Human Impact - revision	Task 16 <ul style="list-style-type: none"> Describe factors that have an impact on biodiversity Describe ways of managing the disposal of solid waste Draw/interpret information on all aspects of 'Human Impact' in the form of tables and graphs 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	