



2021 Annual Teaching Plan – Term 1: LIFE SCIENCES: Grade 12

Term 1 45 days	Week 1 27-29 January (3 days)	Week 2 1-5 February (5 days)	Week 3 8-12 February (5 days)	Week 4 15-19 February (5 days)	Week 5 22-26 February (5 days)	Week 6 1-5 March (5 days)	Week 7 8-12 March (5 days)	Week 8 15-19 March (5 days)	Week 9 23-26 March (4 days)	Week 10 29-31 March (3 days)
CAPS Topic	(National Examination Guideline pg. 5) DNA: The code of Life [18%]			(National Examination Guideline pg. 6) Meiosis [14%]		(National Examination Guideline pg. 7) Reproduction in vertebrates [5%]	(National Examination Guideline pg. 8) Human Reproduction [27%]			
Core Concepts, Skills and Values	DNA: location, chromosomes, genes and extra-nuclear DNA and discovery of DNA	Structure, role and replication of DNA, DNA profiling (Extract DNA and observe and examine the threads)	RNA: Types, location, structure Genetic code Protein synthesis (transcription and translation)	Structure of a chromosome and associated terminology, process of meiosis, importance of meiosis (Observe diagrams/micrographs of cells in selected stages of meiotic division)	Abnormal meiosis and consequences, similarities and differences between meiosis and mitosis	Diversity of reproductive strategies	Structure of male and female reproductive systems, Puberty, gametogenesis	Menstrual cycle, fertilisation and development of zygote to blastocyst	Implantation, gestation and the role of the placenta	
Requisite Pre-Knowledge	Grade 10: Revise cell structure with emphasis on the ribosome, cytoplasm and parts of the nucleus, nucleic acids	Grade 10: Revise cell structure with emphasis on the ribosome, cytoplasm and parts of the nucleus, nucleic acids	Grade 10: Revise cell structure with emphasis on the ribosome, cytoplasm and parts of the nucleus, nucleic acids	Grade 10: Revise mitosis and cell structure with emphasis on parts of the nucleus, the centrosome and the cytoplasm	Grade 10: Revise mitosis and cell structure with emphasis on parts of the nucleus, the centrosome and the cytoplasm	(Grade 9) reproductive system, Meiosis (Grade 12)	(Grade 9) reproductive system, Meiosis (Grade 12)			Consolidation and Revision
Resources (other than textbook) to enhance learning	Power Point slides and videos of DNA and RNA structure, replication and protein synthesis, Past examination papers	Power Point slides and videos of DNA and RNA structure, replication and protein synthesis, Past examination papers	Watch Telematics video on protein synthesis and mutations at: https://bit.ly/2kL83C	Mind the Gap diagrams of different stages of meiosis, Past examination papers	Watch Telematics video on Meiosis at: https://bit.ly/2kIX05k	Mind the Gap Study Guide, past examination papers, videos and power points	Mind the Gap Study Guide, past examination papers, videos and power points			

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Informal Assessment	Revision questions	Case studies and questions from past papers of DNA profiling, tests	Questions from past papers on transcription and translation, tests	Questions from past papers, tests:	Past examination paper questions especially application questions, tests	Past examination paper questions, tests	Questions from past papers, tests, scientific investigations			
SBA (Formal Assessment)	TASK 1: PRACTICAL (Minimum 30 marks) - SBA Weighting: 10%					TASK 2: TEST (Minimum 50 marks) - SBA Weighting: 15%				



2021 Annual Teaching Plan – Term 2: Life Sciences: Grade 12

Term 2 51 days	Week 1 13 – 16 April (4 days)	Week 2 19 – 23 April (5 days)	Week 3 28 – 30 April (3 days)	Week 4 03 – 07 May (5 days)	Week 5 10 – 14 May (5 days)	Week 6 17 – 21 May (5 days)	Week 7 24 – 28 May (5 days)	Week 8 31 May – 4 June (5 days)	Week 9 07 – 11 June (5 days)	Week 10 14 – 18 June (4 days)	Week 11 21 – 25 June (5 days)
CAPS Topic	(National Examination Guideline pg. 9) Genetics and Inheritance [32%]				(National Examination Guideline pg. 10) Responding to the environment (humans) [36%]			(National Examination Guideline pg.12) Human endocrine system and Homeostasis in humans [23%]		(National Examination Guideline pg.13) Responding to the environment (plants) [9%]	Consolidation and Revision
Core Concepts, Skills and Values	Concepts of inheritance, Monohybrid crosses, sex determination, sex-linked inheritance	Dihybrid crosses, Blood grouping	Genetic lineages/pedigree diagrams, mutations	Genetic engineering, paternity testing and genetic links	Human nervous system – central, peripheral and autonomic, nerve, reflex arc, disorders	Human eye	Human ear	Endocrine and exocrine glands, glands, hormones and functions of hormones, Negative feedback mechanism involving TSH and thyroxin (and the result of an imbalance: thyroid disorders), Insulin and glucagon (and the result of an imbalance: diabetes mellitus)	Negative feedback mechanisms – glucose, carbon dioxide, water, salts, thermoregulation	Plant hormones, Tropisms, Plant defence mechanisms	
Requisite Pre-Knowledge	Revise cell structure and differentiate between chromatin and chromosomes, genes and alleles	Revise format of genetic cross diagrams	Interpreting pedigree diagrams	Grade 10: revise stem cell research and cloning	Human nervous system (Grade 9)		Grade 12: Revise nervous system, human reproduction Grade 11: Revise animal nutrition	Homeostatic control in nutrition, gaseous exchange and excretion (Grade 11)	Hormones (Grade 12)		
Resources (other than textbook) to enhance learning	Mind the Gap Genetic crosses, Past examination papers	Past examination papers	Past examination papers	Past examination papers, videos and power points on genetic engineering	Mind the Gap Study Guide, past examination papers, videos and power points, models of the brain, spinal cord, eye and ear Watch Telematics video on sense organs at: https://bit.ly/2IkTLv2		Mind the Gap Study Guide, past examination papers, videos and power points	Watch Telematics video on homeostasis at: https://bit.ly/2IkTLv2	Mind the Gap Study Guide, past examination papers, videos and power points		

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Informal Assessment	Past examination paper questions, practice questions on genetic crosses, pedigree diagrams, scientific investigations, tests				Questions from past papers, tests, scientific investigations				Questions from past papers, tests, scientific investigations	Past examination papers questions, tests	Past examination papers questions, tests	
SBA (Formal Assessment)	TASK 3: PRACTICAL (Minimum 30 marks) - SBA Weighting: 10%							TASK 4: TEST (Minimum 50 marks) - SBA Weighting: 15%				



2021 Annual Teaching Plan – Term 3: Life Sciences: Grade 12

Term 3 52 days	Week 1 13 – 16 July (4 days)	Week 2 19 – 23 July (5 days)	Week 3 26 – 30 July (5 days)	Week 4 02 – 06 August (5 days)	Week 5 10 – 13 August (4 days)	Week 6 16 – 20 August (5 days)	Week 7 23 – 27 August (5 days)	Week 8 30 Aug. – 03 Sept (5 days)	Week 9 06 – 10 Sept (5 days)	Week 10 13 – 17 Sept (5 days)	Week 11 20 – 23 Sept (4 days)																															
CAPS Topic	(National Examination Guideline pg. 13) Evolution [36%]						Data response questions, case studies, questions from past papers Revision-Mind the Gap Study Guide, past examination papers, videos and power points																																			
Core Concepts, Skills and Values	Introduction to evolution e.g. biological evolution, hypothesis, theory. evidence for evolution and variation	Lamarckism, Darwinism and Punctuated equilibrium, Artificial selection and speciation	Reproductive isolation mechanisms evolution in present times	Evidence of common ancestors for living hominids, including humans	Out of Africa hypothesis	TRIAL EXAMINATION																																				
Requisite Pre-Knowledge	Revise fossil record and biogeography (Grade 10), Genetics (Grade 12)	Revise genetics and variation (Grade 12). Human skeleton (Grade 10)		Revise genetics and variation (Grade 12). Human skeleton (Grade 10)	Consolidation and Revision																																					
Resources (other than textbook) to enhance learning	Past examination papers, videos and power points on an introduction to evolution	Watch Telematics video on natural selection, punctuated equilibrium and speciation at: https://bit.ly/2lq6LzI		Mind the Gap Study Guide, past examination papers, videos and power points	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr style="background-color: #d9ead3;"> <th colspan="2" style="text-align: left;">PAPER 1</th> <th colspan="2" style="text-align: left;">PAPER 2</th> </tr> <tr> <td colspan="2" style="padding: 5px;">Marks: 150 Time: 2½ hours Learners must answer all 3 questions.</td> <td colspan="2" style="padding: 5px;">Marks: 150 Time: 2½ hours Learners must answer all 3 questions.</td> </tr> <tr style="background-color: #d9ead3;"> <th style="text-align: left; padding: 5px;">TOPIC</th> <th style="text-align: left; padding: 5px;">MARKS</th> <th style="text-align: left; padding: 5px;">TOPIC</th> <th style="text-align: left; padding: 5px;">MARKS</th> </tr> <tr> <td style="padding: 5px;">Reproduction in vertebrates</td> <td style="text-align: center; padding: 5px;">8</td> <td style="padding: 5px;">DNA: Code of life</td> <td style="text-align: center; padding: 5px;">27</td> </tr> <tr> <td style="padding: 5px;">Human reproduction</td> <td style="text-align: center; padding: 5px;">41</td> <td style="padding: 5px;">Meiosis</td> <td style="text-align: center; padding: 5px;">21</td> </tr> <tr> <td style="padding: 5px;">Responding to the environment (humans)</td> <td style="text-align: center; padding: 5px;">54</td> <td style="padding: 5px;">Genetics and inheritance</td> <td style="text-align: center; padding: 5px;">48</td> </tr> <tr> <td style="padding: 5px;">Human endocrine system and Homeostasis</td> <td style="text-align: center; padding: 5px;">34</td> <td style="padding: 5px;">Evolution (Evolution through natural selection)</td> <td style="text-align: center; padding: 5px;">54</td> </tr> <tr> <td style="padding: 5px;">Responding to the environment(plants)</td> <td style="text-align: center; padding: 5px;">13</td> <td></td> <td></td> </tr> </table> <p style="margin-top: 10px;">Cognitive levels: Knowing Science – 40%; Understanding Science-25%; Applying scientific knowledge-20%; Evaluating, analysing and synthesising – 15%</p> <p>Degrees of difficulty for examination and test questions: Easy - 30%; Moderate - 40%; Difficult - 25%; Very difficult - 5%</p>						PAPER 1		PAPER 2		Marks: 150 Time: 2½ hours Learners must answer all 3 questions.		Marks: 150 Time: 2½ hours Learners must answer all 3 questions.		TOPIC	MARKS	TOPIC	MARKS	Reproduction in vertebrates	8	DNA: Code of life	27	Human reproduction	41	Meiosis	21	Responding to the environment (humans)	54	Genetics and inheritance	48	Human endocrine system and Homeostasis	34	Evolution (Evolution through natural selection)	54	Responding to the environment(plants)	13		
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basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

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Informal Assessment	Past examination papers questions, tests	Questions from past papers, tests, scientific investigations		Questions from past papers, tests, scientific investigations							
SBA (Formal Assessment)	TASK 5: FORMAL ASSIGNMENT (Minimum 50 marks), 1-1 ½ HRS - SBA Weighting: 20%						TASK 6: TRIAL EXAMINATION (150 marks) SBA Weighting: 30%				



2021 Annual Teaching Plan – Term 4: Life Sciences: Grade 12

Term 4 47 days	Week 1 05 – 08 October (4 days)	Week 2 11 – 15 October (5 days)	Week 3 18 – 22 October (5 days)	Week 4 25 – 29 October (5 days)	Week 5 01 – 05 November (5 days)	Week 6 08 – 12 November (5 days)	Week 7 15 – 19 November (5 days)	Week 8 22 – 26 November (5 days)	Week 9 29 Nov – 03 Dec (5 days)	Week 10 06 – 08 Dec (3 days)																							
CAPS Topic	Revision-Mind the Gap Study Guide, past examination papers, videos and power points Data response questions, case studies, questions from past papers			STUDY LEAVE FOR GRADE 12/NSC CANDIDATES		FINAL EXAMINATION																											
Core Concepts, Skills and Values						PAPER 1 Marks: 150 Time: 2½ hours Learners must answer all 3 questions.			PAPER 2 Marks: 150 Time: 2½ hours Learners must answer all 3 questions.																								
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