



GRADE 12 LIFE SCIENCES PACESETTER 2021

TERM 1

Date	Wk	Strand	Topic	Content	Programme of Assessment	Date Complete	Sign
15/02 -19/02	1	Life at Molecular level	DNA: The code of Life (2½wks) (P2) CAPS p54 (Refer to Grade 10 Pacesetter Week 3)	Orientation to Gr 12: Pacesetter, Exam Guidelines. Introduction to Nucleic acids DNA: location, structure & functions	Task 1: Practical Task 1 Marks: 40 SBA weighting: 10% Date: Weeks (1 – 5) DNA/ Meiosis		
22/02 - 26/02	2			Brief history of discovery of DNA structure DNA replication & DNA profiling			
01/03 - 05/03	3			RNA: location, structure & function. Protein synthesis			
08/03- 12/03	4		Meiosis (2 wks) (P1 & P2) CAPS p55	Structure of chromosomes, revision of Mitosis Process of Meiosis: Interphase, Meiosis I & Meiosis II. (Refer to Grade 10 Pacesetter Week 7)			
15/03 -19/03	5			Importance of Meiosis, abnormal Meiosis, comparison between Meiosis and Mitosis			
23/03 - 26/03 (4 days)	6	Life processes in animals	Reproduction (3 wks) (P1) CAPS p55&p56	Diversity of reproductive strategies, review of human life cycle (meiosis, mitosis, fertilization) Structure of human male & female reproductive systems	Task 2: Controlled Test 1 Marks: 80 SBA weighting: 15% Weeks (1 – 9) DNA, Meiosis and Reproduction Date:		
29/03 - 01/04 (4 days)	7			Puberty; Gametogenesis: spermatogenesis & oogenesis			
06/04 – 09/04 (4 days)	8			Menstrual cycle: ovarian & uterine cycles. Hormonal control & negative feedback Fertilization & development: zygote to blastocyst Implantation, gestation, role of placenta			
12/04 - 16/04	9	Life at Molecular level	Genetics (2 wks) (P2) CAPS p57	Introduction: Mendel, Father of Genetics Concepts of inheritance: terminology Monohybrid crosses: format for a genetic cross			
19/04 - 23/04	10			Mendel's Principles: Dominance, Segregation, Sex determination, sex-linked inheritance, blood groups, solving Genetics problems			

SCHOOL HOLIDAYS: 24 APRIL – 02 MAY 2021

TERM 2

03/05 -07/05	1	Life at Molecular level	Genetics (2 wks) (P2) CAPS p57	Mendel's Principle of Independent Assortment, Dihybrid crosses, Pedigree diagrams, sex chromosomes	Term 1 SBA Moderation: Task 3: Practical Marks: 40 SBA weighting: 10% Week: (10- 13) Genetics and inheritance		
10/05 - 14/05	2			Mutations: Gene and chromosomal, disorders, Genetic engineering, paternity testing; tracing ancestry			
17/05 - 21/05	3	Life processes in animals	Responding to environment (4 wks) (P1) CAPS p58&p59	Human nervous system: CNS, peripheral & autonomic NS	Task 4: Controlled Test SBA weighting: 15% MARKS: 80 Weeks: (10-18) Genetics and Responding to the environment		
24/05 - 28/05	4			Neurons: type, structure, function Reflex arc and action, disorders of CNS			
31/05 - 04/06	5			Receptors: Eye: structure & function Accommodation & pupillary mechanism Visual defects			
07/06 - 11/06	6			Receptors: Ear: Structure & function (hearing & balance), hearing defects			
14/06 - 18/06	7			Life processes in animals		Human Endocrine system (1½wks) (P1) CAPS p60	Endocrine glands: location, hormones, functions, negative feedback mechanism
21/06 - 25/06	8	Homeostasis (1wk) (P1) CAPS p60	Importance of homeostasis, Negative feedback mechanism: glucose, CO ₂ , H ₂ O, salts, thermo-regulation. (Refer to Grade 11 Pacesetter Week 25)				
28/06 – 02/07	9		Revision/ Examinations				
05/07 - 09/07	10			Examinations			

SCHOOL HOLIDAYS: 10 – 25 JULY 2021

TERM 3

Date	Wk	Strand	Topic	Content	Programme of Assessment	Date Complete	Sign
26/07 - 30/07	1	Life processes in Plants	Responding to environment: Plants (1wk) (P1) CAPS p61	Plant hormones: Auxins, gibberellins, abscisic acid. Geotropism & phototropism, Defensive mechanisms	Term 2 SBA Moderation: Task 5: Assignment Marks : 60 SBA weighting: 20%		
02/08 - 06/08	2	Diversity, change & evolution	Evolution by Natural selection	Definition of biological evolution, species, population. Origins of ideas, Artificial selection, Natural selection	Task 6: Preparatory Examinations: 2 x 2½hrs (2x150)		

10/08 - 13/08 (4 days)	3		(2½wks) (P2) CAPS p61&p62	Speciation: Formation /emergence of new species Mechanisms for reproductive isolation	P1: ●Reproduction ●Responding to Environment ●Human endocrine system & ●Homeostasis ●Plants responding to the environment P2: ●DNA/ RNA ●Meiosis ●Genetics ●Evolution		
16/08 - 20/08	4			Evolution in present times			
23/08 - 27/08	5		Human evolution (2½wks) (P2) CAPS p63	Evidence of common ancestors for living hominids: genetics, culture Interpretation of phylogenetic trees Anatomical differences between African apes & humans			
30/08 - 03/09	6		(Refer to Grade 10 Pacesetter Week 33)	Out of Africa hypothesis: evidence: fossil sites in Africa, genetics. Timeline for different Homo species, Phylogenetic trees			
06/09 - 10/09	7 - 10			Preparatory examinations			
13/09 – 17/09							
20/09 – 23/09							
27/09 – 01/10							
SCHOOL HOLIDAYS: 04 - 10 OCTOBER 2021							
TERM 4							
11/10 – 29/10		3 wks		Revision	Term 3 SBA Moderation:		
01-12/11		2 wks		Study Leave			
15/11 -15/12		5 wks	End of year exams	Final Examinations	Same as Preparatory Exams		

NB: This document must be placed in Learners Activity Books, Teacher's file and SBA file