

Grade 11 Life Sciences: 2026 Pacesetter & Program of Assessment. 14 January 2026

NB: It is mandatory for the teacher to complete actual dates and signature as he/she covers content and daily assessment.

Date	Week	Strand	Topic	TERM 1 Content	INFORMAL ASSESSMENT (Daily Assessments-Class and/or Home Work)	Date: Started -- Completed	Signature
14 – 16/01 (3)	01		Orientation	BASELINE TEST (15/16.01.2026)	- Baseline assessment based on Grade 10 topics needed for Term 1 e.g. classification schemes, the nitrogen cycle. - Revise scientific skills		
19 – 23/01 (5)	02	Diversity , change and continuity	Biodiversity Microorganis ms P2:29 Marks	Structure of viruses, bacteria, protista and fungi	General characteristics and labelled diagram of viruses.		
					- General characteristics and labelled diagram of. Bacteria - General characteristics and labelled diagram of. protista		
					General characteristics and labelled diagram of fungi		
				Maintenance of balance in the environment	- The role of viruses and bacteria. - The role of protista and fungi		
26 – 30/01 (5)	03			Symbiotic relationships of bacteria	Mutualism, Commensalism and Parasitism		
				Effect and management of one disease of each group	The effects and management on any one disease caused by each of: - viruses (rabies, HIV/AIDS, influenza) - bacteria(blight, cholera, tuberculosis, anthrax)		
					Draw graphs and interpret data on any one disease caused by each of viruses and bacteria		
					The effects and management on any one disease caused by each of: - protista(malaria) - fungi (rust, thrush, ringworm, athlete's foot)		
					Draw graphs and interpret data on any one disease caused by each of protista and fungi		
02 – 06/02 (5)	04			Immunity	Immunity, including plants and animals' immune responses against the infecting micro-organisms.		
				Effect of drugs, use of microorganisms and traditional technology	- The use of drugs e.g., antibiotics; effect on micro-organisms Vaccinations (Brief discussion) - The use of micro-organisms to produce medicines (e.g., insulin and antibiotics) - Traditional technology to produce, e.g., beer, wine and cheese.		

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09- 13/02 (5)	05		Biodiversity in Plants P2:29 Marks	Bryophytes, Pteridophytes, Gymnosperms, Angiosperms	- Label drawings showing various parts of the 4 plant groups - Comparative table of simple diagrams for identification and presence of: (vascular tissue and true leaves and roots) of the 4 plant groups to show how they are grouped - Comparative table of simple diagrams for identification and presence of: (seeds/spores and fruits, dependence of water for reproduction) of the 4 plant groups to show how they are grouped,			
					INFORMAL TEST ONE (BIODIVERSITY MICRORGANISMS)(WKS 1-4) 50 MARKS DATE: 05 FEBRUARY 2026			
16– 20/02 (5)	06				Advantages and disadvantages of asexual and sexual reproduction			
					SBA TASK 1 FORMAL PRACTICAL TASK (WKS 1-6) MARKS 40 DATE: 17 FEBRUARY 2026			
23 - 27/02 (5)	07				Flowers as reproductive structures Adaptations for pollination through (different pollinators) wind, insects and birds (South African examples only) differences and similarities			
					INFORMAL TEST TWO (BIODIVERSITY IN PLANTS)(WKS 5&6) 50 MARKS DATE: 26 FEBRUARY 2026			
02 – 06/03 (5)	08		Biodiversity in Animals P2:18 Marks	Porifera, Cnidaria, Platyhelminthes, Annelida, Arthropoda, Chordata	- The concept of a phylum. - Relationship between body plan and grouping of animals in phyla. - Six animal Phyla: -Porifera, -Cnidaria, Platyhelminthes, -Annelida, -Arthropoda –Chordata.			
					INFORMAL TEST THREE (BIODIVERSITY IN ANIMALS)(WKS 7 & 8) 50 MARKS DATE: 05 MARCH 2026			

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Date	Week	Strand	Topic	TERM 1 Content	INFORMAL ASSESSMENT (Daily Assessments-Class and/or Home Work)	Date:		signature
						Started	Completed	
09-13/03 (5)	09				• Use simple diagrams to identify an example of each phylum. • Comparative table to demonstrate the following in the six phyla: • Key features in respect of body plans: - symmetry and cephalisation; - the number of tissue layers developed from embryo; - the number of openings in the gut; - coelom and blood system.			
					SBA TASK 2 FORMAL TEST 1: (WEEK 1 – 9) 60 MARKS			
					DATE: 13 MARCH 2026			
16-20/03 (5)	10				• The role of invertebrates in agriculture and ecosystems (e.g., pollination, decomposition, soil aeration etc.			
23-27/03	11	REVISION AND CONSOLIDATION						

Date	Week	Strand	Topic	TERM 2 Content	INFORMAL ASSESSMENT (Daily Assessments-Class and/or Home Work)	Date: Started	Date completed	Signature	
08- 10/04 (3)	01	Life processes in Animals and Plants	Transformation to Sustain Life P1:32 Marks	Orientation	- Revise basic cell structure with focus on the chloroplast, leaf structure mitochondria - Revise plant and animal tissues from grade 9 and grade 10.				
					Revise basic photosynthesis and respiration from grade 8				
13-17/04 (5)	02				Photosynthesis	- Process of photosynthesis using words and symbols: - The intake of raw materials, trapping and storing of energy, formation of food in chloroplasts and its storage.			
			The release of oxygen. Mention only of light and dark phase (no biochemical detail of light and dark phases are required)						
			Importance of photosynthesis: release of oxygen, uptake of carbon dioxide from atmosphere, food production (trapping energy)						
20 –24/04 (5)	03		Effects of variable amounts of light, carbon dioxide and temperature on the rate of photosynthesis						
			Improve crop yields in greenhouse systems, role of ATP as energy carrier in the cell						
			- ONE investigation to explain the principles of the Scientific process: - Light is necessary for photosynthesis (Infuse investigation throughout the topic)						
INFORMAL TEST FOUR (PHOTOSYNTHESIS)(WKS 1 – 3) :50 MARKS DATE: 23 April 2026									
28-30/04 (3)	04		Energy Transformation to Sustain Life P1:23 Marks	Cellular Respiration – aerobic and anaerobic	Process of respiration: - Aerobic respiration: in cytoplasm and mitochondria; use words and symbols: glycolysis, Krebs cycle and oxidative phosphorylation (no biochemical detail is required) - Anaerobic respiration: production of lactic acid in muscles during exercise; word and symbols (no biochemical detail of process is required): - The role of anaerobic respiration in the industry, e.g., beer brewing and bread making. - Comparison between aerobic and anaerobic respiration - TWO investigations to explain the principles of the Scientific process: - O₂ is required by respiration, - CO₂ is produced by living organisms during respiration (Infuse investigations throughout the topic)				
04 – 08/05 (5)	05								
INFORMAL TEST FIVE (CELLULAR RESPIRATION)(WKS 4 & 5) :50 MARKS DATE: 12 MAY 2026									
SBA TASK 3 PROJECT (WEEK 1-5)						100 MARKS	DATE: 20 MAY 2025		

Grade 11 Life Sciences: 2025 Pacesetter & Program of Assessment.

Date	Wk	Strand	Topic	TERM 2 Content	INFORMAL ASSESSMENT (Daily Assessments-Class and/or Home Work)	Date: Started	Date completed	Signature
11- 15/05 (5)	06	Life processes in Animals and Plants	Animal Nutrition P1:32 Marks	Dentition and Human nutrition	The differences in dentition for herbivorous, carnivorous and omnivorous lifestyles in terms of nutritional requirements and energy relationships (link with ecology – food)			
					Human nutrition The macro-structure of the alimentary canal and associated organs and the functions of the different parts			
18 –22/05 (5)	07			Digestion	The process of ingestion, digestion, absorption, assimilation and egestion and the significance of each: Mechanical or physical digestion: types and functions of different kinds of teeth, processes of chewing. Peristalsis Chemical digestion: Enzymes: functions of carbohydrases, proteases and lipases: where produced; substrate, pH and end-products (Specific enzymes need not be named – link to enzyme activity)			
				Fate of food	The process of absorption, assimilation and egestion and the significance of each: Absorption: small intestine as a region of most absorption of digested food; adaptations to increase surface area. Structure (to tissue level) and significance of villi. Importance of hepatic portal system in the transport of absorbed food to the liver and then through hepatic vein to the rest of the body.			
25 -29 /05 (5)	08			Homeostasis	Assimilation: incorporation of glucose and amino acids, and the breakdown of alcohol, drugs and hormones. Egestion Homeostatic control, which involves the hormonal control of blood sugar levels (Links with Gr 12)			
				INFORMAL TEST SIX (ANIMAL NUTRITION)(WKS 6 – 8) : 50 MARKS DATE: 28 MAY 2026				
01-26/06 (18)	09-11			SBA TASK 4 JUNE EXAMINATION ONE PAPER 150 MARKS: WEEK 1 – 8 CONTENT SAME DATE AS IN GRADE 12				
				REVISION AND CONSOLIDATION				

Grade 11 Life Sciences: 2026 Pacesetter & Program of Assessment. TERM 3 (21 JULY- 23 SEPTEMBER 2026)

Date	Week	Strand	TERM 3 Topic	INFORMAL ASSESSMENT (Daily Assessments-Class and/or Home Work)	Date: Started	Date complete	Signature
21 - 24/07 (4)	01	Life processes in plant & animals	ORIENTATION)	Revise relevant body systems from Grade 9 and ecology from Grade 8			
27/07 - 31/07 (5)	02		Gaseous exchange P1:32 Marks (NB: reduced from 4 wks to 3 wks)	Gaseous exchange - Distinguish between cellular respiration, breathing and gas exchange. - Requirements of efficient gas exchange organs: - Large surface area, thin, moist, well ventilated, protected, transport system			
				Human Gas exchange: The structure (macro and tissue level), location, adaptations and functioning of the ventilation system: trachea, epiglottis, bronchi, bronchioles, lungs, ribs, intercostal muscles, diaphragm, alveoli			
03 -07/08 (5)	03			- Ventilation of the lungs: Gaseous exchange in alveoli - The transport of gases around the body Gaseous exchange in tissues; and Composition of inspired air vs. expired air – analyse			
				INFORMAL TEST SEVEN (GASEOUS EXCHANGE) (WEEKS 1 – 3) : 50 MARKS DATE: 06 AUGUST 2026			
				SBA TASK 4 PRACTICAL TASK 2 (WEEK 1-3) 40 MARKS DATE: 12 AUGUST 2026			
11 -14/08 (4)	04			Homeostatic control of breathing. (Links with Gr 12)			

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Date	Week	Strand	TERM 3 Topic	INFORMAL ASSESSMENT (Daily Assessments-Class and/or Home Work)	Date: Started	Date complete	Signature
17 -21/08 (5)	05		Excretion – urinary system: structure, functions, adaptations P1:32 Marks (NB: reduced from 3 wks to 2 wks)	Excretion in various organs: - Brief role of the following: -lungs; -kidneys -bladder; -liver; -alimentary canal (gut); -skin. - Substances secreted by each and the origins of these substances. Urinary system - The structure of the: - Urinary system: position of kidneys, ureters, bladder, urethra .			
24-28/08	06			Urinary system - Kidney:-Structure and functioning, removal of urea and excess water and salts, re-absorption of glucose and some salts. - Nephron: structure and functioning: ultra-filtration, re-			
				INFORMAL TEST EIGHT (EXCRETION) (WEEKS 5-6) : 50 MARKS DATE: 27 AUGUST 2026			

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Date	Week	Strand	TERM 3 Topic	INFORMAL ASSESSMENT (Daily Assessments-Class and/or Home Work)	Date: Started -- Completed		Signature
31/08-04/09-	07	Environmental Studies	Population Ecology P2:37 Marks (NB: reduced from 3 wks to 2 wks)	Population size:			
07-11/09	08			Interactions in the environment:			

Date	Week	Strand	TERM 4 Topic	INFORMAL ASSESSMENT (Daily Assessments-Class and/or Home Work)	Date: Started -- Completed		Signature
06- 09/10 (4)	01		Human Impact: On the Environment P2:37 Marks	• Causes and Consequences of the following in South Africa:			
				The atmosphere and climate change : Describe/interpret data			
				- Carbon dioxide emissions and Carbon footprint - Deforestation - Greenhouse effect ,enhanced - Greenhouse effect and global warming: desertification, drought and floods - Methane emissions and - Ozone depletion			
12-16/10 (5)	02			• Water			
				- Describe problems and possible solutions on water availability and quality			
				- Draw/interpret graphs and tables on water quality and availability			
				• Food Security			
- Describe problems and possible solutions in making food available for an increasing human population - Draw/interpret graphs and tables on food security							
19-23/10 (5)	03			• Loss of Biodiversity			
				- Describe threats to biodiversity and ways in which biodiversity can be maintained			
				- Draw/interpret graphs and tables on biodiversity			
				• Solid Waste Disposal			
				- Managing dumpsites for rehabilitation and prevention of soil and water pollution.			
				- The need for recycling.			
				- Using methane from dumpsites for domestic use: heating and lighting; and - Safe disposal of nuclear waste			
		INFORMAL TEST TEN (HUMAN IMPACT) (WKS 1 - 3) : 50 MARKS DATE: 23 OCTOBER 2026					

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26/10-09/12	04-10		NOVEMBER EXAMINATIONS: PAPER 1 AND 2
			FINAL EXAMINATION (Two papers) PAPER 1 Marks: 150 Time: 2 ½ hours Topics and marks: <i>Photosynthesis – 32</i> <i>Animal nutrition – 32</i> <i>Respiration – 22</i> <i>Gaseous exchange – 32</i> <i>Excretion – 32</i> PAPER 2 Marks: 150 Time: 2 ½ hours Topics and marks: <i>Biodiversity and classification of micro-organisms – 29</i> <i>Biodiversity in plants and reproduction – 29</i> <i>Biodiversity in animals – 18</i> <i>Population Ecology – 37</i> <i>Human Impact on the environment – 37</i> Cognitive levels: Knowing science - <u>40%</u>; Understanding science - <u>25%</u>; Applying scientific knowledge - <u>20%</u>; Evaluating, <u>analysing</u> and synthesising science knowledge - 15% Degrees of difficulty for examination and test questions: Easy - <u>30%</u>; Moderate - <u>40%</u>; Difficult - <u>25%</u>; Very difficult - 5% End-of-year examinations Weighting: 60%

Elaboration on the different tasks of the Programme of Formal Assessment

1. TESTS AND EXAMINATIONS

- All formal and informal tests as indicated in the program must be written on the **specified date**.
- The test and examinations covers all work as indicated in the pace setter.
- Each formal test must be 100 marks.
- Mainly specific Aims 1 and 3 are covered.
- Specific aim 2 (knowledge and understanding of investigations and practical work) is also included but in a smaller proportion compared to Specific Aims 1 and 3.
- Tests and examinations are balanced in terms of cognitive levels and topic weightings. In this regard weightings grids should be used.
- Tests and examinations must be analysed diagnostically and appropriate remedial and intervention strategies instituted.
- Tests and examinations follow the external examination in its design, rigour and format

2. ASSIGNMENT

- The assignment is a long task (1½ - 2 hours under controlled conditions)
- It is out of 100 marks
- Is completed at school and not at home
- Covers a variety of topics
- Includes as many as possible of the following:
 - Analysing and interpreting data
 - Making drawings
 - Plotting graphs and Drawing tables
 - Performing calculations
 - Justifying conclusions

3. PRACTICAL TASKS

- 30 – 40 marks are allocated to a practical task
- Each practical task assesses at least 3 of the 7 skills and must include skill 6 and/or 7
- At least ONE of the practical tasks includes manipulation of apparatus and/or collection of data
- All 7 skills are covered annually
 1. Follow instructions
 2. Handle apparatus
 3. Make observations
 4. Record data
 5. Measure
 6. Interpret
 7. Design/plan investigations

Plan and design investigations by:

- Identify a problem
- Hypothesising
- Selecting apparatus or equipment and/or materials
- Identifying variables
- Suggesting ways of controlling variables
- Planning an experiment
- Suggesting ways of recording results
- Understanding the need for replication or verification / reliability and validity

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