



PROVINCE OF THE
EASTERN CAPE
EDUCATION

DIRECTORATE:
FET CURRICULUM FET PROGRAMMES
LESSON PLANS
TERM 4
LIFE SCIENCES GRADE 11

FOREWORD

The following Grade 11 Lesson Plans were developed by Subject Advisors during August 2009. Teachers are requested to look at them, modify them where necessary to suit their contexts and resources. It must be remembered that Lesson Plans are working documents, and any comments to improve the lesson plans in this document will be appreciated. Teachers are urged to use this document with the following departmental policy documents: Subject Statement; The new content framework in Circular S7 of 2007; SAG 2008 and Provincial CASS Policy / Guidelines.

Lesson planning is the duty of each and every individual teacher but it helps when teachers sometimes plan together as a group. This interaction not only helps teachers to understand how to apply the Learning Outcomes (LOs) and Assessment Standards (ASs) but also builds up the confidence of the teachers in handling the content using new teaching strategies.

It must please be noted that in order to help teachers who teach across grades and subjects, an attempt has been made to **standardise lesson plan templates** and thus the new template might not resemble the templates used in each subject during the NCS training. However, all the essential elements of a lesson plan have been retained. This change has been made to assist teachers and lighten their administrative load.

Please note that these lesson plans are to be used only as a guide to complete the requirements of the Curriculum Statements and the work schedules and teachers are encouraged to develop their own learner activities to supplement and /or substitute some of the activities given here (depending on the school environment, number and type of learners in your class, the resources available to your learners, etc).

Do not forget to build in the tasks for the Programme of Assessment into your Lesson Plans.

Strengthen your efforts by supporting each other in clusters and share ideas. Good Luck with your endeavors to improve Teaching, Learning and Assessment.

SUBJECT: LIFE SCIENCES GRADE: 11 LESSON PLAN 1 TERM 4 TIME: 12Hrs

Focus Learning Outcome/s:	LO 1: AS1, 2 and 3
Integrated Life Sciences LOs and ASs:	LO 2: AS 1, 2, 3; LO3: AS 3
Possible integration with other subjects	Geography, Mathematics, English
Knowledge Area	Diversity, change and Continuity
Prior Knowledge	Air, land and water borne diseases; Human impact on the environment
Topic	Population Studies
Links to next lesson	Revision

LEARNING OUTCOME 1:		LEARNING OUTCOME 2:		LEARNING OUTCOME 3:	
Scientific Inquiry & problem Solving Skills.		Constructs & Application of Life Sciences Knowledge.		Life Sciences and its relationships to Technology, Society and the Environment.	
AS1: Learner identifies and questions phenomena and plans an investigation	√	AS1: Learner accesses knowledge	√	AS1: Learner explores & evaluates scientific ideas of past and present cultures	
AS2: Learner conducts an investigation by collecting and manipulating data	√	AS2: Learner interprets and makes meaning of knowledge	√	AS2: Learner compares & evaluates uses and developments of resources and their products & their impact on the environment & society.	
AS3: Learners analyses, synthesizes, evaluates data and communicates findings	√	AS3: Learner shows understanding of how Life Sciences knowledge is applied in everyday life	√	AS3: Learner compares the influence of different beliefs, attitudes and values on scientific knowledge	√
TEACHING ACTIVITIES		LEARNERS ACTIVITIES		RESOURCES	ASSESSMENT
ACTIVITY 1: Characteristics of populations LO1:AS 2 & 3; LO2:AS1, 2 & 3 Introduces terms like species community, populations and their characteristics (size, distribution, density) Introduces population parameters and how they affect population size Introduces various methods of estimating population		Take notes and ask questions for clarity. Do calculations involving use of the mark		Textbooks Charts	Informal Classwork / Homework
					DATE COMPLETED

size and give learners exercises on estimation of population size.	recapture and quadrant methods.			
TEACHING ACTIVITIES	LEARNERS ACTIVITIES	RESOURCES	ASSESSMENT	DATE COMPLETED
<p>ACTIVITY 2: identification of different populations in a habitat</p> <p>LO1:AS1, 2 & 3; LO2:AS1, 2 & 3</p> <p>Divide learners into groups. Take them out to the field. Each group will be assigned a particular site as their study area. Learners are to identify the different populations in their site and study how these are adapted to their environment and how they interact with each other.</p> <p>Consolidates the learner activity and clarifies any misconceptions.</p>	<p>Learners identify the various species at the site and record their findings about the adaptations and interactions and report back in class.</p>	<p>School yard Textbooks Workbooks Brochures</p>	<p>Informal: Observation sheet Teacher /Peer</p>	
<p>ACTIVITY 3: Population growth forms and environmental changes affecting population size</p> <p>LO1:AS1, 2 & 3; LO2:AS1, 2, 3; LO3: AS3</p> <p>Introduces population growth forms (logistic and geometric growth forms).</p> <p>Provides hypothetical figures/case study on population studies conducted over a period of time.</p> <p>Introduces the effects of environmental changes (volcanoes, earthquakes, tornadoes, droughts etc.) and limited resources (food, space) on population size and growth. Instructs learners to find articles on natural disasters and their effect on populations. Instructs</p>	<p>Draw graphs using figures given by the teacher and respond to questions based on figures or case study.</p> <p>Research on natural disasters like tsunami, volcanoes, earthquakes, tornados, hailstorms, veld fires, etc.</p>	<p>Case study Newspapers geographical magazines</p>	<p>Informal assessment of poster by Teacher/ Peer</p>	

learners to summarise their findings on a poster to be displayed in class.	Present findings on posters to the class. Posters are then viewed through a gallery walk.																		
Enrichment / Expanded opportunities:																			
Teacher Reflections:																			
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SUBJECT: LIFE SCIENCES GRADE: 11 LESSON PLAN 2 TERM 4 TIME: 8 Hrs

Focus Learning Outcome/s:	LO 2 AS1, 2 and 3				
Integrated Life Sciences LOs and ASs:	LO 1: AS 1, 2 and 3; LO 3: AS 3				
Possible integration with other subjects	Geography				
Knowledge Area	Diversity, change and Continuity				
Prior Knowledge	Population Studies; Human impact on the environment				
Topic	Social behavior				
Links to next lesson	Revision				
LEARNING OUTCOME 1:		LEARNING OUTCOME 2:		LEARNING OUTCOME 3:	
Scientific Inquiry & problem Solving Skills.		Constructs & Application of Life Sciences Knowledge.		Life Sciences and its relationships to Technology, Society and the Environment.	
AS1: Learner identifies and questions phenomena and plans an investigation	√	AS1: Learner accesses knowledge	√	AS1: Learner explores & evaluates scientific ideas of past and present cultures	
AS2: Learner conducts an investigation by collecting and manipulating data	√	AS2: Learner interprets and makes meaning of knowledge	√	AS2: Learner compares & evaluates uses and developments of resources and their products & their impact on the environment & society.	
AS3: Learners analyses, synthesizes, evaluates data and communicates findings	√	AS3: Learner shows understanding of how Life Sciences knowledge is applied in everyday life	√	AS3: Learner compares the influence of different beliefs, attitudes and values on scientific knowledge	√
Teacher Activities		LEARNER ACTIVITY		RESOURCES	ASSESSMENT
ACTIVITY 1: Introduction: in-born and acquired behaviour LO3: AS 3; LO2: AS1, 2 & 3 Asks learners how they think behavior can affect population growth. Consolidates learner responses and introduces concepts of preservation, conservation, sustainability – predation, competition, instinct and socially learnt behaviour.		Respond to questions asked by teacher. Take notes and ask questions for clarity.		Textbooks Nature Magazines	Informal Teacher
					DATE COMPLETED

TEACHER ACTIVITIES	LEARNER ACTIVITY	RESOURCES	ASSESSMENT	DATE COMPLETED
<p>ACTIVITY 2: Examples of social behaviour</p> <p>LO1:AS1, 2, 3; LO2:AS1, 2 & 3</p> <p>Instructs learners to observe animal behavior at home or do some research on animal behavior with reference to density dependent and density independent factors. (refer to scarcity of resources, scarcity of mating partners, etc.)</p> <p>Consolidates on instinctive behaviours such as: Competitive behavior, Mating behavior, predation, altruism, territoriality and emphasizes social behavior as a survival strategy by different species.</p>	<p>Learners observe /research on animal behavior and report to the rest of the class on their findings.</p> <p>Learners take notes</p>	<p>Textbooks, Learners, Textbooks, Nature Magazines, Internet</p>	<p>Informal</p> <p>Teacher/ Peer</p> <p>Rubric</p>	
Enrichment/Expanded opportunities:				
Teacher Reflections:				
SIGNATURES				
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TEACHER	DATE	HOD / SMT	DATE	

SUBJECT: LIFE SCIENCES GRADE: 11 LESSON PLAN 3 TERM 4 TIME: 8 Hrs

Focus Learning Outcome/s:	LO 3 AS1, 2 and 3
Integrated Life Sciences LOs and ASs:	LO 2 # AS 1, 2, 3; LO 1 # 1, 2 and 3
Possible integration with other subjects	Geography, Mathematics, Life Orientation and Physical Sciences
Knowledge Area	Diversity, change and Continuity
Prior Knowledge	Population Studies; Human impact on the environment
Topic	Managing populations
Links to next lesson	Revision

LEARNING OUTCOME 1:		LEARNING OUTCOME 2:		LEARNING OUTCOME 3:	
Scientific Inquiry & problem Solving Skills.		Constructs & Application of Life Sciences Knowledge.		Life Sciences and its relationships to Technology, Society and the Environment.	
AS1: Learner identifies and questions phenomena and plans an investigation	√	AS1: Learner accesses knowledge	√	AS1: Learner explores & evaluates scientific ideas of past and present cultures	√
AS2: Learner conducts an investigation by collecting and manipulating data	√	AS2: Learner interprets and makes meaning of knowledge	√	AS2: Learner compares & evaluates uses and developments of resources and their products & their impact on the environment & society.	√
AS3: Learners analyses, synthesizes, evaluates data and communicates findings	√	AS3: Learner shows understanding of how Life Sciences knowledge is applied in everyday life	√	AS3: Learner compares the influence of different beliefs, attitudes and values on scientific knowledge	√

TEACHER ACTIVITIES	LEARNER ACTIVITY	RESOURCES	ASSESSMENT	DATE COMPLETED
ACTIVITY 1: Biodiversity of life on earth LO1:AS1, 3; LO2:AS1,2 & 3 Asks questions on biodiversity, endangered and red data listed species. Consolidate discussions.	Respond to questions. Take notes and ask questions.	Textbooks Brochures	Informal Question & Answer	

TEACHER ACTIVITIES	LEARNER ACTIVITY	RESOURCES	ASSESSMENT	DATE COMPLETED
<p>ACTIVITY 2 : Significance and value of Biodiversity LO1:AS1, 3; LO2:1,2 & 3</p> <p>Divides learners into groups. Instructs the learners to investigate and report on the significance of plant and animal biodiversity to human survival.</p> <p>Consolidates the learner responses on the significance and value of biodiversity in ecosystems.</p> <p>Refers learners to the resources supplied to read on threats to biodiversity. Asks learners to state how human actions threaten biodiversity.</p> <p>Consolidates learner discussions and clarifies any misconceptions</p>	<p>In their groups the learners report their findings to the class.</p> <p>Report to class how human actions threaten biodiversity.</p>	<p>Textbooks brochures leaflets magazines</p>	<p>Informal assessment of presentations by the teacher</p>	
<p>ACTIVITY 3: Revision and preparation for examinations</p>				
<p>Homework:</p>				
<p>Enrichment/Expanded opportunities:</p>				

Teacher Reflections:

SIGNATURES

TEACHER

DATE

HOD / SMT

DATE

