

Provincial CASS Guidelines

GRADE 10-12

2008

AGRICULTURAL SCIENCES

Siyasebenzisana • Working Together • Samewerking

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1. INTRODUCTION TO ASSESSMENT

This document is intended to guide Subject Advisors and Teachers in the implementation and management of Assessment in Agricultural Sciences. This document must be read in consultation with the Agricultural Sciences, National Assessment Guideline (**SAG**) **2007** and **2008**. Where differences are noted in the interpretation of SAG's, the **National Policy** will take precedent. The aim is to determine the competencies of learners in scientific inquiry, problem solving, critical thinking, construction and application of knowledge relevant to Agricultural Sciences. Assessment in Agricultural Sciences is driven by the four **Learning Outcomes (LO's)** through the relevant Assessment Standards. When the **Assessment Standards (AS)** are achieved, then the relevant Learning Outcomes will be considered achieved. The Assessment Standards can be attained through a variety of assessment tasks.

2 CONTINUOUS ASSESSMENT(CASS)

Continuous Assessment (CASS) involves assessing activities that are undertaken throughout the year, using various kinds of assessment forms, methods and tools. In Grades 10–12 continuous assessment comprises two different but related activities: namely, **informal Daily** assessment and **formal Programme of Assessment**.

Continuous assessment (CASS) through informal daily assessment and the formal Programme of Assessment should be used to:

- Develop learners' knowledge, skills and values
- Assess learners' strengths and weaknesses
- Provide additional support to learners
- Motivate and encourage learners to pursue Agricultural related careers

2.1 DAILY ASSESSMENT IN AGRICULTURAL SCIENCES

Daily assessment in Agricultural Sciences provides learners with multiple opportunities to improve and master their scientific inquiry, problem solving, critical thinking and application of gained knowledge in real life settings. **Daily assessment is developmental in nature** and a variety of assessment tasks can be used to develop learners' Agricultural Sciences competencies e.g. debates enhance communication skills;

practical investigations, enhance manipulation of apparatus, accurate measuring & observation skills.

Other examples of assessment tasks are: class tests, practicals, drawing and interpretation of graphs, calculations, translation activities, analysis and interpretation of different forms of data. Individual learners, groups of learners or the teacher can mark these assessment tasks. Self-peer and group assessment actively involve learners in assessment.

As daily assessment tasks are not used for a promotion mark, qualitative, analytical, holistic rubrics, checklists and rating scales can be used to monitor learner progress.

2.2 PROGRAMME OF ASSESSMENT

2.3 PROGRAMME OF ASSESSMENT IN GRADES 10 &11

The Programme of Assessment for Agricultural Sciences in Grades 10 and 11 consists of **seven** tasks which are internally assessed. Of the seven tasks, the six tasks which are completed during the school year make up 25% of the total mark for Agricultural Sciences, while the end-of-year examination is the seventh task and makes up the remaining 75%.

Table 2.3.1 Programme of Assessment in Grades 10 & 11

	PROGRAMME OF ASSESSMENT (FORMS OF ASSESSMENT)						
	25%						75%
	Practic al	Assi gnm ent	Resea rch project	Controlled Tests		Mid-year Exams	End of year Exam
Number of pieces	1	1	1	2		1	1
Minimum marks	50	50	60	100	100	150	
Converted marks	20	20	20	10	10	20	
Subtotal	100						300
Grand Total	400						

The tasks for the Programme of Assessment are to be done at certain times of the academic year and the following table indicates when the tasks are to be completed.

TERM 1	TERM 2	TERM 3	TERM 4
Practical task	Research Project	Simulation	End of year exam
Controlled Test 1	Mid-year Exam	2 Controlled Tests	

Practical tasks

There are two practical tasks: namely a hands-on activity and hypothesis testing. Learners will be assessed on their ability to:

- Follow instructions.
- Designing procedures/action plan
- Access information from various sources
- Make accurate observations.
- Work safely.
- Manipulate and use apparatus effectively.
- Measure accurately.
- Handle materials appropriately.
- Organize data (gather & record data in tables, graphs, interpret, analyze data, and draw conclusions).

Research projects

When designing a Research Project task, Teachers must ensure that:

- it is an investigative task;
- it addresses the four Learning Outcomes(LO1- LO4)
- a written and oral presentation could be supported with a relevant model; or alternatively a model should be accompanied by a written or oral presentation;
- It is a long term task & its' progress need to be monitored at intervals by the teacher;
- detailed guidelines are provided and where appropriate, relevant resources should be made known and/ or provided to learners;

- it focuses on accessing knowledge through literature research and primary sources such as **people(indigenous knowledge LO3)**, magazines, newspapers, various texts, and
- It promotes communication, organizational and interpersonal skills.

2.3 Programme of Assessment in Grade 12

In Grade 12, Assessment consists of two components: namely **internally** assessed Programme of Assessment which makes up 25% of the total mark for Agricultural Sciences and **externally** assessed end-of-year Examination, which makes up the remaining 75%.

Table 2.4.1 Programme of Assessment in Grades 12

FORMS OF ASSESSMENT	PROGRAMME OF ASSESSMENT					EXTERNAL ASSESSMENT
	Assessment Tasks					End-of-year assessment
	25%					75%
	Project	Assign	Research	Controlled Tests	Mid-year and Trial Exams	End-of-year Exam
Number of pieces	1	1	1	2	2	1
Minimum marks	50	50	60	100	150	
Converted marks	20	20	20	20	20	
Subtotal	100					300
Grand Total	400					

The tasks for the Programme of Assessment are to be done at certain times of the school year and the following table indicates when the tasks are to be completed.

TERM 1	TERM 2	TERM 3	TERM 4
Project	Research	Assignment	
Controlled Test		Controlled Test	
	Mid-year Exam	Trial exam	End of year exam

Practical Tasks

These are the same as for Grades 10 and 11. However, in addition Grade 12 learners will be assessed on their ability to:

- Make deductions and evaluations
- Synthesis and analysis
- Higher order thinking skills
- Observations

Controlled Tests and Internal Exams

- The controlled test in **First term** assesses work done in the **First term**
- The mid-year **Examination** assesses work done in the **First and Second terms**.
- The controlled test in the **third term** assesses work done in the **third term**.
- Third term examinations (**September/Trial**) assess all the year's work done up until that point.
- All Learning Outcomes must be assessed using the knowledge areas that were covered in the particular term/s.
- **Controlled tests and examinations must be balanced according to the cognitive levels e.g. Bloom's Taxonomy, learning outcomes (LO's) and Assessment Standards (AS).**
- Controlled tests and Examinations should be analyzed diagnostically and appropriate remedial or intervention strategies should be instituted.

2. MODERATION OF THE ASSESSMENT TASKS IN THE PROGRAMME OF ASSESSMENT

Moderation of Assessment tasks should take place at three levels.

LEVEL	MODERATION REQUIREMENTS
School	Each task which is to be used as part of the Programme of Assessment should be submitted to the Subject Head for moderation before learners do the task. Teacher portfolios and evidence of learner performance should be moderated on regular basis by the head of the subject.
Cluster/District	Teacher portfolios and a sample of evidence of learner performance must be moderated twice during the first three terms. Teachers must bring their portfolios with the tasks prescribed for each moderation session and 10% of learner performance evidence (minimum of 5 learner portfolios if there are fewer than 50 learners in the school).
Provincial/ National	This only applies to Grade 12. Teacher portfolios and a sample of evidence of learner performance must be moderated once a year after the second cluster moderation.



EASTERN CAPE DEPARTMENT OF EDUCATION

School Stamp

..... DISTRICT

GRADE 10/11 AGRICULTURAL SCIENCES LEARNER PROGRAMME OF ASSESSMENT 200...

NAME OF SCHOOL			GRADE	
NAME OF LEARNER			CENTRE NUMBER	
NAME OF TEACHER			SIGN	DATE
Assessment Task	Maximum Mark	Mark Obtained		Programme of Assessment maximum mark
Project	60			20
Controlled Tests:				
Test 1	100			10
Test 2	100			10
Total controlled tests	200			20
Practical investigations	50			20
Simulation	50			20
Mid-year exam	300			20
End of year exam	300			
Total marks for Programme of Assessment				100

HOD..... Signature.....Date.....

Principal.....Signature.....Date.....

Moderation panel

NAME IN PRINT	SIGNATURE	DATE
Moderator		
Moderator		
Moderator		
Cluster Leader		
District Official		



EASTERN CAPE DEPARTMENT OF EDUCATION

DISTRICT-----

SCHOOL STAMP

Grade 12 AGRIC SCIENCES LEARNER PROGRAMME OF ASSESSMENT 200...

NAME OF SCHOOL		EXAMINATION NUMBER	
NAME OF LEARNER		CENTRE NUMBER	
NAME OF TEACHER		SIGN:	DATE:
Assessment Task	Maximum Mark	Mark Obtained	Programme of Assessment mark
Assignment	50		20
Controlled Tests:			
Test 1	150		10
Test 2	150		10
Total Controlled tests	300		20
Practical Investigation	50		20
Research Project	50		20
Total practical Tasks	100		40
Midyear exam	300		10
Trial/September exam	300		10
Total of June & Trial exams	600		20
Total marks for Programme of Assessment			100

HOD.....Sign.....Date.....

Principal.....Sign.....Date.....

Moderation panel

NAME IN PRINT	SIGNATURE	DATE
Moderator		
Moderator		
Moderator		
Cluster Leader		
District Official		

Mid-year and year-end examination papers for Grade 10-11

Suggested outline for examination papers in Grade 10

There will be one mid-year paper in Grade 10 and two examination papers at the end of the year.

PAPER 1: DURATION: 2 HOURS

CONTENT	SECTION A	SECTION B	TOTAL MARKS
➤ Agro-ecology	Question 1	Question 2-4	150
➤ Agric-industry	45	105 marks	
➤ Animal Sciences		35 marks/questions	

PAPER 2: DURATION: 2 HOURS

CONTENT	SECTION A	SECTION B	TOTAL MARKS
➤ Soil Sciences	Question 1	Question 2-4	150
➤ Plant Sciences	45	105	
➤ Optimal resource use		35 marks/question	

The format of possible questions to be asked in section A and B should be in line with examples for Grade 12 examination papers

Guideline for cognitive levels when setting questions:

COGNITIVE LEVELS	WEIGHTING %	MARKS
Knowledge	30	45
Comprehension	20	30
Application	30	45
Analysis, evaluation and synthesis	20	30

There will be two papers in Grade 11 mid-year and end-of-year examinations

Suggested outline for the two examination papers in Grade 11

PAPER 1: DURATION: 2 HOURS

CONTENT	SECTION A	SECTION B	TOTAL MARKS
➤ Basic Chemistry	Question 1	Question 2-4	150
➤ Soil sciences	45	105 35 marks/question	

PAPER 2: DURATION: 2 HOURS

CONTENT	SECTION A	SECTION B	TOTAL MARKS
➤ Plant sciences	Question 1	Question 2-4	150
➤ Optimal resource use	45	105 35 marks/question	

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Suggested outline for examination papers in Grade 12

PAPER 1: DURATION: 2 HOURS

CONTENT	SECTION A	SECTION 2	TOTAL MARKS
➤ Soil sciences	Question 1	Question 2-4	150
➤ Plant sciences	45	105	
➤ Optimum resource use		35 marks/question	

PAPER 2: DURATION: 2 HOURS

CONTENT	SECTION A	SECTION	TOTAL MARKS
➤ Animal sciences	Question 1	Question 2-4	150
➤ Agricultural management	45	105	
➤ Basic chemistry and genetics		35 marks/question	



EASTERN CAPE DEPARTMENT OF EDUCATION

COMPOSITE CASS MARK SCHEDULE

GRADE 10: SCHOOL.....CENTRE NO.....DATE.....SCHOOL STAMP
 AGRICULTURAL SCIENCES

	TERM 1					TERM 2							TERM 3						
SURNAME AND INITIALS	Practical	Convert	Controlled test	Convert	Subtotal	Research project	Convert	Jun p1	Jun p2	subtotal	Convert	subtotal	Control test	Convert	Simulation	Convert		Total year	mod mark
	50	20	150	10	30	100	20	150	150	300	20	40	150	10	50	20		100	
												</							

Term 1 Educator.....Sign.....HOD.....Sign.....Principal.....Sign.....District official.....Date.....

Term 2 Educator.....Sign.....HOD.....Sign.....Principal.....Sign.....District official.....Date.....

Term 3 Educator.....Sign.....HOD.....Sign.....Principal.....Sign.....District official.....Date.....

[illegible]



Agricultural Sciences: Mark sheet: Grade: 12 Term : 01

District

SchoolDate.....

Surname & Initials	March Test/ Controlled test	practicals	Total
	150	50	200
01			
02			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
Total Marks			
Class Average			
Average %			

Educator's name.....Signature.....Date.....

H.O.D's name.....Signature.....Date.....

Principal's name.....Signature.....Date.....

Official Stamp



Agricultural Sciences: Mark sheet: Grade 12

Term : 02

District.....

School.....Date.....

Surname & Initials	Total term 01	June Test			Practical Work	Research Project	Total
		P1	P2	Total			
	200	150	150	300	50	100	450
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
Total Marks							
Class average							
Average %							

Educator's name.....Signature.....Date.....

HOD's name.....Signature.....Date.....

Principal's name.....Signature.....Date.....

Official Stamp



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DEPARTMENT OF EDUCATION

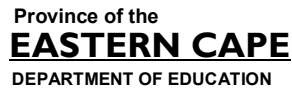
Steve Vukile Tshwete Education Complex * Zone 6* Zwelitsha * Private Bag X0032 * Bhisho * 5605 *
REPUBLIC OF SOUTH AFRICA * ref 11/2/7/1/14

Agricultural Sciences: Mark sheet: Grade 12 Term: 03
District.....
School.....Date.....

Surname & Initials	Total term 02	Trial			tests	Assignment	Total
		P1	P2	Total			
	450	150	150	300	150	50	500
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
Total Marks							
Class average							
Average %							

Educator's name.....Signature.....Date.....
HOD's name.....Signature.....Date.....
Principal's name.....Signature.....Date.....

Official Stamp



Agricultural Sciences: Moderation Tool: Grade 10-11-12

Portfolio Organization

: Name of District.....
: Name of School.....
: Name of Educator.....
: Name of Subject.....
: Year.....
: Grade.....

: Are page numbers indicated?.....

: Are there dividers in the portfolio?.....

: LPG, SAG, NATIONAL PROTOCOL ON ASSESSMENT

: Subject Statement.....

: Other relevant documents.....

**: is the work in learner portfolio in accordance with
workschedule.....**

: National Assessment Guidelines available?.....

: School Moderation Plan & Report available?.....

: School Moderation Tool & Policy available?.....

: Statistical Moderation Report available?.....

: Mark sheet available?.....

: is there evidence of qualitative feedback.....

: is there evidence of developmental work?.....

: Is it at least out of 50 Marks?.....

: Are calculations correct?.....

: Is there evidence of remedial work?.....

: Is it out of 50 Marks?.....

: Is memo/rubric/worksheet available?.....

[illegible]

Teachers must report regularly and timeously to learners and parents on the Progress of learners. Schools will determine the reporting mechanism but it could include written reports, parent-teacher interviews and parent's days. Schools are required to provide written reports to parents once per term on the Programme of Assessment using a formal reporting tool. This report must indicate the percentage achieved in the subject and include the following seven-point scale.

RATING CODE	RATING	MARKS %
7	Outstanding achievement	80-100
6	Meritorious achievement	70-79
5	Substantial achievement	60-69
4	Adequate achievement	50-59
3	Moderate achievement	40-49
2	Elementary achievement	30-39
1	Not achieved	0-29



**EASTERN CAPE DEPARTMENT OF EDUCATION
DECLARATION FORM
GRADE 10/11 OR
GRADE 12 (NATIONAL SENIOR CERTIFICATE)
DECLARATION BY LEARNER**

SCHOOL:.....

NAME OF LEARNER
(Surname and Name).....

GRADE.....

EXAMINATION/ID
NO.....

CENTRE NUMBER.....

TEACHER'S/ NAME
(Surname and Initials).....

I hereby declare that all pieces of assessment tasks contained in this portfolio (evidence of performance), are my own, original work and that if I have made use of any source, I have acknowledged this.

I agree that if it is determined by the competent authority that I have engaged in any fraudulent activities whatsoever in connection with my Continuous Assessment (CASS), I shall forfeit completely the marks gained for this assessment.

CANDIDATE'S / LEARNER'S
SIGNATURE.....DATE.....

As far as I know, the above statement by the candidates is true and I accept that the work submitted belongs to him/her

TEACHER'S / EDUCATOR'S
SIGNATURE.....DATE.....

Grade 12 Workschedule 2008

TERM 1: 16 JANUARY – 20 MARCH 2008 (10 WEEKS): GRADE 12 AGRICULTURAL SCIENCES

WEEK No.	CONTEXT	CONTENT DESCRIPTION	LOs	ASSESSMENT	DATE COMPLETED	CONTROL BY HOD/SMT
1	BASIC CHEMISTRY (Revision) <ul style="list-style-type: none"> Compounds 	-Overview of the general atomic structures of the compounds most important to Agriculture Formation of simple and organic compounds.	LO 1 LO 2 LO 3	Informal Assessment		
2	SOIL SCIENCE (Revision) <ul style="list-style-type: none"> Profile and characteristics 	-Physical and morphological characteristics (e.g. texture, structure, colour, air, temperature, moisture, soil pores)	LO 1 LO 2 LO 3	Informal Assessment		
2	<ul style="list-style-type: none"> Chemical and colloidal properties 	-inorganic and organic adsorption and exchange acidity, alkalinity, salinity (dangers and reclamation)	LO 1 LO 2 LO 3	Informal Assessment		
3 4 5 6	ANIMAL SCIENCES <ul style="list-style-type: none"> Nutrition 	-Alimentary canal and digestion -Components of feed and digestibility -Biological value, energy value and types of feeds -Supplements and planning of a feeding programme	LO 1 LO 2 LO 3	Informal Assessment Informal Assessment		
7	<ul style="list-style-type: none"> Production 	-Increasing of production through shelter, handling and behaviour of farm animals.	LO 1 LO 2 LO 3			
8 9	<ul style="list-style-type: none"> Reproduction 	-Reproductive organs (male and female) -Parturition and Artificial Insemination Embryo and milk production	LO 1 LO 2 LO 3	Informal Assessment		
10		FORMAL ASSESSMENT		PRACTICAL		

				TASK CONTROLLED TEST		
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TERM 2: 14 APRIL – 27 JUNE 2008 (11 WEEKS) GRADE 12 AGRICULTURAL SCIENCE

WEEK NO	CONTEXT	CONTENT DESCRIPTION	LO	ASSESSMENT	DATE COMPLETED	CONTROL BY HOD/ SMT
11	SOIL SCIENCE (Revision) <ul style="list-style-type: none"> • Soil Microbiology • Soil classification 	-Importance and role in Agriculture Necessity and principles	LO 1 LO 2 LO 3	Informal assessment		
11	PLANT SCIENCES (Revision) <ul style="list-style-type: none"> • Plant Nutrition • Mineral nutrition 	Role of photosynthesis, absorption and storage of water and nutrients. Fertilization practices, availability of nutrients and essential minerals, organic and inorganic fertilizers, nutritional elements and analysis.	LO 1 LO 2 LO 3	Informal Assessment		
12	OPTIMUM RESOURCE UTILIZATION <ul style="list-style-type: none"> • Soil surveying and planning • Water use • Soil cultivation 	-Aims and principles leading to precision farming. Irrigation, scheduling of irrigation and drainage Aims and methods (e.g. mulching, bare soil)	LO 1 LO 2 LO 3	Informal assessment		
	ANIMAL SCIENCES (continued)					

13	<ul style="list-style-type: none"> Protection and control 	-Diseases (viral, fungal, metabolic, bacterial and protozoan) and pests	LO 1 LO 2 LO 3	Informal assessment		
14	AGRICULTURAL MANAGEMENT <ul style="list-style-type: none"> Marketing Labour relations Entrepreneurial skills Production factors 	-Price determination and the market Methods of marketing. Imports and exports -Problems and challenges Legislation Entrepreneurship Business planning Use of equipment Sustainable use of resources FORMAL ASSESSMENT -Soil Labour -Capital Management process	LO 1 LO 2 LO 3 LO 4 LO 4 LO 4 LO 4 LO 4 LO 4 LO 1 LO 2 LO 3	Informal Assessment Informal Assessment Research Project Mid-year EXAMS		
15						
16-19						
20						
21						

TERM 3: 14 JUNE – 26 SEPTEMBER 2008 (11 WEEKS) GRADE 12 AGRICULTURAL SCIENCE

WEEK No.	CONTEXT	CONTENT DESCRIPTION	LO	ASSESSMENT	DATE COMPLETED	CONTROL BY HOD/ SMT
22	PLANT SCIENCE • Reproduction	-Plant improvement Methods of asexual and sexual reproduction Pollination	LO 1 LO 2 LO 3	Informal Assessment		
23	• Protection	-Weed control Plant pests and diseases and their control (inter-pest management control – IPM) Insect control in seed and grass The role of the state in protection	LO 1 LO 2 LO 3	Informal assessment		
24	OPTIMUM RESOURCE UTILISATION • Crop rotation • Controlled agricultural production	The concept Greenhouse, hydroponics, tunnels, aquaculture, others	LO 1 LO 2 LO 3	Informal Assessment		
25-26	BASIC AGRICULTURAL GENETICS • Heredity, selection, variation and breeding	Mechanisms	LO 1 LO 2 LO 3	Informal Assessment	CONTROLLED TEST ASSIGNMENT TRIAL EXAMS	
27-28		Mono-hybridism and di-hybridism				
29-32		REVISION FORMAL ASSESSMENT				

TERM 4: 06 OCTOBER – 05 DECEMBER 2008 (09 WEEKS) GRADE 12 AGRICULTURAL SCIENCE PACESETTER

WEEK No.	CONTEXT	CONTENT DESCRIPTION	LO	ASSESSMENT	DATE COMPLETED	CONTROL BY HOD/ SMT
33 34	BASIC AGRICULTURAL GENETICS (cont.) • Heredity, selection, variation and breeding	-Mendel's law -Segregation and mole pendent recombination of characteristics	LO 1 LO 2 LO 3	Informal Assessment		
35	• Plants and animals	-Plants and animals	LO 1 LO 2 LO 3	Informal Assessment		
36	• Growth and genetic manipulation	-Genetically modified crops and their purpose	LO 1 LO 2 LO 3	Informal Assessment		
37		REVISION				
38-41		FORMAL ASSESSMENT		End – of – year EXAMS		