



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

Curriculum and Assessment Policy

Statement:

Grade 8 and 9

AGRICULTURAL STUDIES

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1.1 BACKGROUND

The *National Curriculum Statement Grades R-12 (NCS)* stipulates policy on curriculum and assessment in the schooling sector.

To improve implementation, the National Curriculum Statement was amended, with the amendments coming into effect in January 2012. A single comprehensive Curriculum and Assessment Policy document was developed for each subject to replace Subject statements, Learning Programme Guidelines and Subject Assessment Guidelines in Grades R-12.

1.2 OVERVIEW

(a) The *National Curriculum Statement Grades R-12 (January 2012)* represents a policy statement for learning and teaching in South African schools and comprises the following:

- (i) *Curriculum and Assessment Policy Statements for each approved school subject;*
- (ii) *The policy document, National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R-12; and*
- (iii) *The policy document, National Protocol for Assessment Grades R-12 (January 2012).*

(b) The *National Curriculum Statement Grades R-12 (January 2012)* replaces the two current national curricula statements, namely the

- (i) *Revised National Curriculum Statement Grades R-9, Government Gazette No. 23406 of 31 May 2002, and*
- (ii) *National Curriculum Statement Grades 10-12 Government Gazettes, No. 25545 of 6 October 2003 and No. 27594 of 17 May 2005.*

(c) The national curriculum statements contemplated in subparagraphs b(i) and (ii) comprise the following policy documents which will be incrementally repealed by the *National Curriculum Statement Grades R-12 (January 2012)* during the period 2012-2014:

- (i) *The Learning Area/Subject Statements, Learning Programme Guidelines and Subject Assessment Guidelines for Grades R-9 and Grades 10-12;*
- (ii) *The policy document, National Policy on assessment and qualifications for schools in the General Education and Training Band, promulgated in Government Notice No. 124 in Government Gazette No. 29626 of 12 February 2007;*

- (iii) *The policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), promulgated in Government Gazette No.27819 of 20 July 2005;*
- (iv) *The policy document, An addendum to the policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), regarding learners with special needs, published in Government Gazette, No.29466 of 11 December 2006, is incorporated in the policy document, National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R-12; and*
- (v) *The policy document, An addendum to the policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), regarding the National Protocol for Assessment (Grades R-12), promulgated in Government Notice No.1267 in Government Gazette No. 29467 of 11 December 2006.*
- (d) The policy document, *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R-12*, and the sections on the Curriculum and Assessment Policy as contemplated in Chapters 2, 3 and 4 of this document constitute the norms and standards of the *National Curriculum Statement Grades R-12*. It will therefore, in terms of section 6A of the *South African Schools Act, 1996 (Act No. 84 of 1996)*, form the basis for the Minister of Basic Education to determine minimum outcomes and standards, as well as the processes and procedures for the assessment of learner achievement to be applicable to public and independent schools.

1.3 GENERAL AIMS OF THE SOUTH AFRICAN CURRICULUM

- (a) The *National Curriculum Statement Grades R-12* gives expression to the knowledge, skills and values worth learning in South African schools. This curriculum aims to ensure that children acquire and apply knowledge and skills in ways that are meaningful to their own lives. In this regard, the curriculum promotes knowledge in local contexts, while being sensitive to global imperatives.
- (b) The National Curriculum Statement Grades R-12 serves the purposes of:
- equipping learners, irrespective of their socio-economic background, race, gender, physical ability or intellectual ability, with the knowledge, skills and values necessary for self-fulfilment, and meaningful participation in society as citizens of a free country;
 - providing access to higher education;
 - facilitating the transition of learners from education institutions to the workplace; and
 - providing employers with a sufficient profile of a learner's competences.
- (c) The National Curriculum Statement Grades R-12 is based on the following principles:

- Social transformation: ensuring that the educational imbalances of the past are redressed, and that equal educational opportunities are provided for all sections of the population;
- Active and critical learning: encouraging an active and critical approach to learning, rather than rote and uncritical learning of given truths;
- High knowledge and high skills: the minimum standards of knowledge and skills to be achieved at each grade are specified and set high, achievable standards in all subjects;
- Progression: content and context of each grade shows progression from simple to complex;
- Human rights, inclusivity, environmental and social justice: infusing the principles and practices of social and environmental justice and human rights as defined in the Constitution of the Republic of South Africa. The National Curriculum Statement Grades R-12 is sensitive to issues of diversity such as poverty, inequality, race, gender, language, age, disability and other factors;
- Valuing indigenous knowledge systems: acknowledging the rich history and heritage of this country as important contributors to nurturing the values contained in the Constitution; and
- Credibility, quality and efficiency: providing an education that is comparable in quality, breadth and depth to those of other countries.

(d) The National Curriculum Statement Grades R-12 aims to produce learners that are able to:

- identify and solve problems and make decisions using critical and creative thinking;
- work effectively as individuals and with others as members of a team;
- organise and manage themselves and their activities responsibly and effectively;
- collect, analyse, organise and critically evaluate information;
- communicate effectively using visual, symbolic and/or language skills in various modes;
- use science and technology effectively and critically showing responsibility towards the environment and the health of others; and
- demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.

- (e) Inclusivity should become a central part of the organisation, planning and teaching at each school. This can only happen if all teachers have a sound understanding of how to recognise and address barriers to learning, and how to plan for diversity.

The key to managing inclusivity is ensuring that barriers are identified and addressed by all the relevant support structures within the school community, including teachers, District-Based Support Teams, Institutional-Level Support Teams, parents and Special Schools as Resource Centres. To address barriers in the classroom, teachers should use various curriculum differentiation strategies such as those included in the Department of Basic Education's *Guidelines for Inclusive Teaching and Learning* (2010).

1.4 TIME ALLOCATION

1.4.1 Foundation Phase

- (a) The instructional time in the Foundation Phase is as follows:

SUBJECT	GRADE R (HOURS)	GRDES 1-2 (HOURS)	GRADE 3 (HOURS)
Home Language	10	8/7	8/7
First Additional Language		2/3	3/4
Mathematics	7	7	7
Life Skills	6	6	7
• Beginning Knowledge	(1)	(1)	(2)
• Creative Arts	(2)	(2)	(2)
• Physical Education	(2)	(2)	(2)
• Personal and Social Well-being	(1)	(1)	(1)
TOTAL	23	23	25

- (b) Instructional time for Grades R, 1 and 2 is 23 hours and for Grade 3 is 25 hours.

(c) Ten hours are allocated for languages in Grades R-2 and 11 hours in Grade 3. A maximum of 8 hours and a minimum of 7 hours are allocated for Home Language and a minimum of 2 hours and a maximum of 3 hours for Additional Language in Grades 1-2. In Grade 3 a maximum of 8 hours and a minimum of 7 hours are allocated for Home Language and a minimum of 3 hours and a maximum of 4 hours for First Additional Language.

(d) In Life Skills Beginning Knowledge is allocated 1 hour in Grades R – 2 and 2 hours as indicated by the hours in brackets for Grade 3.

1.4.2 Intermediate Phase

(a) The instructional time in the Intermediate Phase is as follows:

SUBJECT	HOURS
Home Language	6
First Additional Language	5
Mathematics	6
Natural Sciences and Technology	3,5
Social Sciences	3
Life Skills	4
<ul style="list-style-type: none"> • Creative Arts • Physical Education • Personal and Social Well-being 	(1,5) (1) (1,5)
TOTAL	27,5

1.4.3 Senior Phase

(a) The instructional time in the Senior Phase is as follows:

SUBJECT	HOURS
Home Language	5
First Additional Language	4
Mathematics	4,5
Natural Sciences	3
Social Sciences	3
Technology	2
Economic Management Sciences	2
Life Orientation	2
Creative Arts	2
In Grade 8, a maximum of two subjects can be selected from the list of thirteen Elective Occupational subjects to replace any two of the following: Technology, Creative Arts and/or Economic and Management Sciences. The instructional time for these subjects is 2 hours each.	
TOTAL	27,5

Elective Occupational Subjects (Not more than 2)	
1. Agricultural Studies	

2. Art and Design	Time Allocation per week: 2 hours each
3. Digital Technology	
4. Early Childhood Development	
5. Mechanical Technology	
6. Electrical Technology	
7. Civil Technology	
8. Personal Care: Hairdressing, Nail and Beauty Technology	
9. Ancillary Health Care Studies	
10. Services: Maintenance and Upholstery	
11. Consumer Studies	
12. Hospitality Studies	
13. Wholesale and Retail Studies	

1.4.4 Grades 10-12

(a) The instructional time in Grades 10-12 is as follows:

SUBJECT	TIME ALLOCATION PER WEEK (HOURS)
Home Language	4,5
First Additional Language	4,5
Mathematics	4,5
Life Orientation	2
A minimum of any three subjects selected from Group B <i>Annexure B, Tables B1-B8 of the policy document, National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R-12, subject to the provisos stipulated in paragraph 28 of the said policy document.</i>	12 (3x4h)
	27,5

The allocated time per week may be utilised only for the minimum required NCS subjects as specified above and may not be used for any additional subjects added to the list of minimum subjects. Should a learner wish to offer additional subjects, additional time must be allocated for the offering of these subjects.

SECTION 2:

INTRODUCTION TO AGRICULTURAL STUDIES

2.1 What is Agricultural Studies?

What is Agriculture?

In Agriculture, resources are involved for growing plants and animals to be used for human and animal consumption. **(Nearly everything we eat; wear and use came from a plant or an animal raised on a farm).** It encompasses production agriculture, but also everything before and after the production process on the farm too.

Agricultural studies include science, technology, and engineering. It involves

- the production processes, processing and value adding, of the plants and animals produced and their products
- genetics to improve the seeds and animals' farmers purchase to increase production to feed the people in SA.

Agriculture includes business: It involves

- development, design, production and sales of everything farmers use – tractors, equipment, buildings, fertilizer, and more.
- marketing, sales and distribution of the plants and animals produced and their products to earn a living
- financial and legal aspects of acquiring land and other assets needed to farm. Farming is a job, a way to earn money,

All this should be done through the protection/conservation of the natural resources used to produce these products.

The subject teaches the learner, agricultural practices and specifically focusing on:

- General farming / Tools and equipment / Safety and communication
- Plant production and Gardening (Horticulture)
- Soil and conservation
- Animal Production and
- Business practices / Entrepreneurship / Value adding and Processing.

This subject reflects and need to achieve the skills needed in the agricultural industry, to produce and maintain entrepreneurs/farmers, researchers, workers etc.

2.2 Topics to be studied in Agricultural Studies:

1. General farming / Tools and equipment / Safety and communication
2. Plant Production and Gardening (Horticulture)
3. Soil and conservation
4. Animal Production
5. Business practices / Entrepreneurship / Value adding and processing

2.3 Specific Aims:

The purpose of Agricultural studies provides the basis for the introduction of agriculture for the learner through the inclusion of a wide spectrum of competencies required for the future studying of the Agricultural subjects in the FET band.

The focus of the subject is as follows:

2.3.1 General farming and resources / Agricultural Practices/Tools and technology

The learner should be able to:

1. Understand the basic resources for farming:
2. Explain and understand the importance and conservation of natural resources.
3. Explain and understand the essential buildings/structures needed on a farm for production
4. Define the following farming systems- Subsistence, commercial, intensive & extensive
5. Explain and understand the purpose/function of basic farm implements
6. Identification, use and maintenance of hand tools
7. Identification, use and maintenance for power tools, machines and workshop equipment
8. Select the appropriate tool for use in a specific task
9. Demonstrate how to use, care for and maintain tools and equipment
10. Understand Safety and legislation on the Farm - Occupational Health and Safety (OHS), applicable to the farm workshop and general laws in agriculture.
11. Name and understand the alternative sources of energy that can be used on the farm:

2.3.2 Plant Production and Gardening (Horticulture)

The learner should be able to:

1. Explain soil as a medium for production. -
2. Demonstrate an understanding of soil cultivation using hand tools and machines-
Methods and purpose
3. Name and understand the use of alternative planting mediums
4. Explain and understand the requirements of optimal plant growth
5. Manipulate crops to increase production
6. Explain and understand the economic importance, of crop production in your area
7. Explain and understand the importance of Integrated pest and disease control.
8. Identify and control of weed, pests and diseases
9. Demonstrate an understanding of composting and the benefits of adding organic enrichments to the soil
10. Identify and installing different methods/types of irrigation appropriate to the environmental circumstances

11. Gardening

- a. Propagate plants from seed and vegetative and planting into open ground
- b. Care for ornamental seedlings and landscape areas and transplanting from containers.

2.3.3 Animal Production

The learner should be able to:

1. Explain and understand the economic importance of animal production and their products
2. Understand the basic requirements for optimal animal production:
 - a. Environmental Factors
 - b. Management (Health and nutrition, breeding and selection, housing)
 - c. Behaviour (Defensive and other)

2.3.4 Business practices/Entrepreneurship/Value adding and Processing

The learner should be able to:

1. Describe entrepreneurship in agricultural context
2. Understand basic costing, planning and budgeting (income / expenditure), Basic marketing
3. Explain the importance of:
 - a. Harvesting
 - b. Storage
 - c. Value adding
 - d. Processing
 - e. Packaging

2.4 Requirements for Agricultural Studies as a subject

2.4.1 Time Allocation

The total number of hours allocated for the subject in a five-day cycle is 2 hours. Enough time must be allocated in the school timetable (during school or after hours) for the practical work required to be done.

2.4.2 Resources

Human resources

Agricultural Studies requires a trained subject specialist. It is preferred that the teacher offering Agricultural Studies has a background to farming related activities. Farming and good management skills are essential and a tertiary qualification in teaching is preferred.

Agricultural Studies teachers are required to:

- The teacher learner ratio should ideally be 1:15 as prescribed by OHS act for safety purposes
- Manage resourcing, budgeting and safety in a farming context
 - Conduct stock taking and inventory
 - Maintain and service the tools and farming equipment
 - Ensure learner safety
- Manage the teaching environment
 - Teach the subject content with confidence through proper preparation and flair
 - Interact with learners in a relaxed but firm manner
 - Plan for practical work (Conduct weekly practical sessions)
 - Plan for theory lessons
 - Produce working PAT projects in cooperation with learners
 - Carry out School Based Assessment (SBA)
 - Implement innovative methods to keep the subject interesting
 - Be self-motivated to keep her/him abreast of the latest technological developments
 - Regularly attend skills workshops
 - Regular excursion to agricultural related activities/institutions

Learner Resources:

- Textbook
- Personal protective clothing
- Resource books (agricultural magazines)

2.4.3 Infrastructure, tools, equipment and finances

Procurement of resources should focus on the necessary infra-structure and best possible quality of equipment and financial resources for quality teaching and learning.

Infrastructure

- Agricultural Studies need to be implemented in a school with suitable resources (eg. access to water, livestock and land) and a suitable teaching venue. If such facilities are not available, the responsible department need to ensure that these facilities are available before implementing the subject.
- Tools and equipment should have enough storage and a well-developed storage management system with an up to date inventory. Shelves should be clearly marked, and storage areas defined.
- Good housekeeping principles require that all work areas be cleaned regularly. A suitable waste removal system should be in place to accommodate refuse, off-cut materials as well as chemical waste.
- Tools, machinery and equipment always need to comply with the requirements of the Occupational Health and Safety (OHS) Act 85 of 1993.
 - Safety rules and signs must be displayed on posters on the farm and in the workshop.

Equipment and resources

Procurement of the best quality equipment or similar than needs to be purchased to ensure longevity and duration. The following is the minimum requirement for Agricultural Studies.

Safety equipment

- Signage – Warning signs as required by Occupation Health and Safety act
- Face masks – box of 50
- Safety goggles and earmuffs – 20
- Helmets/welding – 15 (Afrox/.....)
- Safety pants / overall – 1 per learner
- Gloves – 20 pairs
- Gumboots – 1 pair / learner

Basic hand tools – Garden and workshop

- Spades – minimum 15 (equivalent to lasher)
- Rakes – minimum 15 (equivalent to lasher)
- Forks – minimum 15 (equivalent to lasher)
- Hoes - minimum 15 (equivalent to lasher)
- Watering cans – minimum 15
- Planting line – can be constructed (grade 8 PAT) made with available material
- Wheelbarrow – minimum 5
- Dragline Hose pipe (25mm) – 3 x 30m
- Hosepipe fittings (25mm)
- Knap sack sprayer or Spray pump – minimum 4
- Wirepliers – minimum 10 large and 10 medium
- Sledge hammers – minimum 1
- Ball pen or claw hammer x 10
- Pruning scissors – minimum 15
- Wire puller / Wire tensioner – 2
- Spanner set – 1 complete combined spanner set (Same or similar to Gedore)
- Screw driver set – (Phillips and Flat)
- Welding tables x 5
- Bench vices x 10
- Hacksaw x 10
- Square x 10
- Spirit Level (750mm) x 1
- Centre punch x 3

Power tools

- Lawnmower – minimum 2 x petrol lawnmowers (similar to Wolf or professional series with bearing wheels)
- Bush cutter (weed eater) – 2 x similar to, Husqvarna, Stihl FS160 or bigger
- Angle grinder (720w), -115mm x 5 Angle grinder(1.2kw) - 230mm x 2 (Same or similar to Bosch, Makita)
- Inverter Arc welding machine and x 5 (similar to Afrox or Miller)

- Welding accessories (Leather apron/Leather gloves/Auto darkening helmets (Afrox or Matweld), chipping hammers) x 10
- Bench grinder x 1
- Electric hand Drill - 2 x or similar to Makita or Bosh drill
- Electrical pedestal drilling machine x 1
- Oxy-acetylene welding set x 1
- Compressor 100l x 1(Same or similar to Ingersol rand)

Consumables

- Seed (various as according to the school's location)
- Seedlings - Vegetable crops (According to practical activity and need)
- Fertiliser – according to need (2:3:2, 7:3:1) 50 kg each
- Potting medium and alternative planting mediums Vermiculite, coir, peat etc.
- Small micro irrigation system for beds
- Petrol – lawn mowers and weed eaters (1 per school)
- Welding rods x 10 kg 2.5mm (Afrox)
- Steel Various profiles (According to practical activity and need)
- Angle grinder blades (Cutting, grinding and stone) 115 mm x 20 and 230mm x 6
- Pesticides – according to need (weedicides and insecticides)
- Paper and Carton (Carton(corrugated), 2mm thickness solid carton, A3 drawing paper and carton)
- Glue – Woodglue, gluegun, pritt
- Hacksaw blades x 40 (24teeth/cm)
- Drill bit set steel - 1mm -13 mm (Bosch)

Greenhouse

- Size: 16 X 8 metres, Irrigation system included
- Fertiliser application unit
- Planting Bags x 500 each (1l, 3l and 10l)
- Seedling trays 200 holes (polystyrene) x 5

PAT – resources

Grade 8 (Hydroponic system) Schools should use consumables they can afford to administer the PAT

Grade 9 – Fertilisers and popcorn seed are available at seed distributors and co-operations.

Processing – Gas stove with relevant canister

- Pot 20 l heavy bottom, oil, food colouring, icing sugar, plastic bags for packaging (2l bags).

Finances:

Funding: MST and annual monetary allocation

Budget and inventory

A budget must be allocated for the subject from the MST fund. The amount will be determined by the number of learners taking the subject across all the years and the nature of the practical work required as stipulated in the curriculum. The budget needs to be revised annually and must consider all resources needed per year. The funding must allow for provisioning, maintenance and replacement of tool, equipment and machines.

Annual monetary allocation must be allocated to schools for purchasing consumable materials to be used in the subject.

Resourcing could be sub divided into the following categories:

- Safety Equipment
- Tools and Equipment
- Consumable Materials
- Practical Assessment Task Resources
- Teaching and Learning Support Material
- Maintenance

A stock inventory must be maintained by the teacher and verified annually by a Senior Management Team member.

2.5 Career opportunities

Career and occupational opportunities for learners with a foundation in Agricultural Studies after completing the FET phase include but is not limited to:

- Landscaping services – general worker
- General worker within agricultural or forestry sector
- Farmer/ Entrepreneur
- Marketer – selling farm produce
- Worker in agricultural sector

SECTION 3:

OVERVIEW OF TOPICS PER TERM AND ANNUAL TEACHING PLANS

3.1 Content overview

TOPIC	Content: Gr 8	Content: Gr 9
<p>General farming and Production factors</p>	<ul style="list-style-type: none"> • Introduction to development of agriculture in South Africa • Understand the factors of production and basic resources required for farming: <ul style="list-style-type: none"> ○ Land (Natural resources) ○ Capital (Financial resources) ○ Labour (Human resources) ○ Entrepreneurship <ul style="list-style-type: none"> ▪ Describe entrepreneurship in the agricultural context: ▪ Characteristics and competencies of an entrepreneur • Explain and understand the importance and conservation of natural resources <ul style="list-style-type: none"> ○ Water ○ Soil ○ Vegetation • Understand and define the following farming systems <ul style="list-style-type: none"> ○ Commercial ○ Subsistence • Explain and understand the essential principles in planning the farm layout <ul style="list-style-type: none"> ○ Farmyard layout and essential farm buildings eg. housing and ablution, stables, milking parlour, shed (vehicles, implement, shearing etc.), workshop, tool storeroom, chemical storeroom, fowl-runs pigsties. 	<ul style="list-style-type: none"> • Understand how the production factors and components of agricultural resources contribute to farming: <ul style="list-style-type: none"> ○ Land (Natural Resources) <ul style="list-style-type: none"> ▪ Land ▪ Water ▪ Vegetation ○ Capital (Financial resources) <ul style="list-style-type: none"> ▪ Capital (Assets) ▪ Credit ○ Labour (Human resources) <ul style="list-style-type: none"> ▪ Management ▪ Labour ○ Entrepreneurship <ul style="list-style-type: none"> ▪ Explain how entrepreneurship is closely linked to using opportunities to create business. • Understand and discuss pollution, degradation and prevention of the following natural resources in Agriculture <ul style="list-style-type: none"> ○ Water ○ Soil ○ Vegetation • Understand and distinguish between the following farming methods <ul style="list-style-type: none"> ○ Intensive ○ Extensive and ○ Mixed farming • Explain and understand the following concepts of a farm <ul style="list-style-type: none"> ○ Camps: Pasture (grazing, wetlands), dry land, irrigated fields, gardens (house and vegetable) and orchard. ○ Fences <ul style="list-style-type: none"> • Electric fences: Movable and permanent • Security • Camps and border fencing
<p>Safety and communication</p>	<ul style="list-style-type: none"> • Understand the importance communication and Safety on the farm <ul style="list-style-type: none"> ○ Occupational Health and Safety (OHS), applicable to the farm and farm workshop. 	<ul style="list-style-type: none"> • Understand and apply Safety on the farm <ul style="list-style-type: none"> ○ Occupational Health and Safety (OHS), general farm safety -and liability

<p>Tools, Equipment and Machines and alternative energy</p>	<ul style="list-style-type: none"> ○ Explain and understand the purpose/function of each of the following basic farm implements <ul style="list-style-type: none"> ○ Primary cultivation <ul style="list-style-type: none"> ▪ Ripper ▪ Plough (disc, shear, chisel etc.) ○ Secondary cultivation <ul style="list-style-type: none"> ▪ Seed drill/planter, cultivator ○ Explain and understand the purpose/function of each of the following workshop equipment <ul style="list-style-type: none"> ○ Identification, maintenance and use of handtools. (see section 2) ○ Select the correct tool for use in a specific task • Name and understand the alternative sources of energy that can be used on the farm: <ul style="list-style-type: none"> ○ Wind ○ Solar ○ Hydro ○ Biogas ○ Biofuel 	<ul style="list-style-type: none"> ○ Explain and understand the purpose/function of each of the following farm implements <ul style="list-style-type: none"> ○ Harvesting: Combine Harvester, silage cutter. ○ General: crop sprayer, slasher, balers, rakes, hammer mill, lawn mowers etc. ○ Machines: Tractors and trailers, trucks, excavators, drones etc. • Identification, use and maintenance of power tools, machines and workshop equipment (As found in section 2) <ul style="list-style-type: none"> ○ Select the correct tool for use in a specific task ○ Demonstrate, care and maintenance of machines and workshop equipment ○ Identify the use and application of: <ul style="list-style-type: none"> ○ Wind ○ Solar ○ Hydro ○ Biogas ○ Biofuel as alternative source of energy on the farm
<p>2. Plant production & Horticulture</p>	<ul style="list-style-type: none"> • Explain the following concepts of soil as a medium for production. <ul style="list-style-type: none"> ○ Composition of soil <ul style="list-style-type: none"> ▪ Organic, mineral, air and water ○ Soil texture <ul style="list-style-type: none"> ▪ Textural classes • Soil cultivation (Hand tools) <ul style="list-style-type: none"> ▪ Methods and purpose ▪ Demonstrate an understanding of soil preparation ▪ Drainage as a necessity 	<ul style="list-style-type: none"> ○ Explain the following concepts of soil as a medium for production <ul style="list-style-type: none"> ○ Soil structure <ul style="list-style-type: none"> ▪ Importance of structure ○ Soil temperature <ul style="list-style-type: none"> ▪ Importance and factors influencing ○ Soil water <ul style="list-style-type: none"> ▪ Forms, movement and conservation ○ Soil reaction <ul style="list-style-type: none"> ▪ Elementary discussion regarding acid, neutral and brackish soils, ○ Soil organic matter <ul style="list-style-type: none"> ▪ Importance and influence ○ Soil Air <ul style="list-style-type: none"> ▪ Importance of air in the soil • Soil cultivation (Machines and implements) <ul style="list-style-type: none"> ○ Demonstrate an understanding of reasons, methods and purpose in soil preparation ○ Irrigation <ul style="list-style-type: none"> ▪ Types of irrigation systems ○ Drainage <ul style="list-style-type: none"> ▪ Types of drainage systems

	<ul style="list-style-type: none"> • Explain and understand the requirements of optimal plant growth <ul style="list-style-type: none"> ○ Growth medium and organic matter ○ Water ○ Light (Photosynthesis) ○ Air ○ Nutrition ○ Temperature ○ Manipulation to increase production <ul style="list-style-type: none"> ▪ Plant population/density • Name and understand the use of alternative planting mediums <ul style="list-style-type: none"> ○ Vermiculite ○ Peat ○ Coir ○ Wood shafting/ ○ Peanut shells ○ Stone, sand ○ Potting soil • Understand and apply the requirements for plant growth <ul style="list-style-type: none"> ○ Growing from seed to plant. ○ Identify agricultural crops in South Africa: <ul style="list-style-type: none"> ○ Field crops (Maize, wheat, sunflower etc.) ○ Fruits (Stone, Deciduous, citrus, tropical, nuts etc.) ○ Vegetables (Root, Leave, legume) ○ Tree crops (Forestry) ○ Ornamental (Trees and flowers) ○ Pastoral (grasses, legumes) • Explain and understand the importance of Integrated pest and disease management. 	<ul style="list-style-type: none"> • Explain and understand the requirements of optimal plant growth: <ul style="list-style-type: none"> ○ Nutrients in the soil and requirements <ul style="list-style-type: none"> ▪ Sources of nutrients <ul style="list-style-type: none"> - Organic fertilisers - Synthetic/artificial fertilisers ▪ Important elements (N, P K) Basic calculation • Describe the reasons for the use of alternative planting mediums: <ul style="list-style-type: none"> ○ Use alternative planting mediums in the production process • Manipulation to increase production <ul style="list-style-type: none"> ○ Trellising ○ Pruning ○ Planting density • Understand and apply the requirements for plant growth. <ul style="list-style-type: none"> ○ From cutting to plant. (vegetative) ○ Explain and understand the economic importance of relevant crop production in your area <ul style="list-style-type: none"> ○ Field crops (Maize, wheat, sunflower etc.) ○ Fruits (Stone, Deciduous, citrus, tropical, nuts etc.) ○ Vegetables (Root, Leave, legume) ○ Tree crops (Forestry) ○ Ornamental (Trees and flowers) ○ Pastoral (grasses, legumes) • Explain and understand weed, pest and disease control. <ul style="list-style-type: none"> ○ Manual control ○ Biological control ○ Chemical control <ul style="list-style-type: none"> ▪ Broad leaf/ grasses ▪ Insects (Pests) ▪ Plant diseases ○ Genetic control (Genetic manipulation) ○ Integrated pest and disease management
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<p>3. Animal Production</p>	<ul style="list-style-type: none"> • Identify of animal breeds used in production and their products in South Africa <ul style="list-style-type: none"> ○ Cattle: Dairy, Beef, Dual purpose ○ Sheep: wool, mutton, pelt, dual purpose ○ Pig: Pork and pet ○ Goat: Meat, Milk and hair (Fibre) ○ Poultry: Layers, Broilers, Game ○ Horses: Riding; draught, Pet ○ Rabbit: meat, fibre, etc ○ Beekeeping ○ Game & Ostriches • Identify the basic requirements for optimal animal production. <ul style="list-style-type: none"> ○ Environmental factors <ul style="list-style-type: none"> ▪ Climate ○ Management <ul style="list-style-type: none"> ▪ Housing ▪ Care and health ▪ Nutrition - Feed components and fodder ▪ Breeding and selection 	<ul style="list-style-type: none"> • Explain and understand the economic importance and purpose of each of the following animal's in the area (2 breeds where applicable) <ul style="list-style-type: none"> ○ Cattle: Dairy, Beef, Dual purpose ○ Sheep: wool, mutton, pelt, dual purpose ○ Pig: Pork and pet ○ Goat: Meat, Milk and hair (Fibre) ○ Poultry: Layers, Broilers, Game ○ Horses: Riding; draught, Pet ○ Rabbit: meat, fibre, etc ○ Beekeeping ○ Game & Ostriches • Understand and apply the basic requirements for optimal animal production <ul style="list-style-type: none"> ○ Environmental factors <ul style="list-style-type: none"> ▪ Climate ○ Management <ul style="list-style-type: none"> ▪ Housing ▪ Care and health ▪ Nutrition - Feed components and fodder ▪ Breeding and selection
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<p>Business Planning Practices</p>	<ul style="list-style-type: none"> • Understand and explain the following concepts: <ul style="list-style-type: none"> ○ Good record keeping, ○ Budgeting 	<ul style="list-style-type: none"> • Introduction to the development of a basic SWOT analysis for a farming enterprise. • Apply basic recordkeeping concepts <ul style="list-style-type: none"> ○ Updating inventory through regular stock keeping ○ Draw up a basic budget to reflect expenditure and income
<p>Marketing and price setting</p>	<ul style="list-style-type: none"> • Understand marketing Basic marketing <ul style="list-style-type: none"> ○ Identify basic agricultural needs and want 	<ul style="list-style-type: none"> • Apply basic marketing concepts <ul style="list-style-type: none"> ○ Marketing type <ul style="list-style-type: none"> ▪ Informal ▪ Formal • Understand the basic principles of supply and demand in price determination
<p>Harvesting</p>	<ul style="list-style-type: none"> • Explain the importance of the following concepts: <ul style="list-style-type: none"> • Harvesting • storage 	<ul style="list-style-type: none"> • Define and provide appropriate examples of the following concepts related to produce in their area: <ul style="list-style-type: none"> ○ Harvesting ○ storage
<p>Processing & Value adding</p>	<ul style="list-style-type: none"> ○ Understand and explain <ul style="list-style-type: none"> ○ Processing ○ Value adding ○ Packaging 	<ul style="list-style-type: none"> • Apply Processing & Value adding and package the produced products

3.2 Content outline per term per grade

Annual Teaching Plan

Grade 8: Term 1

WEEK	TOPIC	Content: Gr 8 The learner should be able to:	Examples of techniques, activities, resources and process notes
1	General farming, production factors and agricultural resources	<ul style="list-style-type: none"> • Introduction to the development of agriculture in South Africa • Understand the basic resources for farming: <ul style="list-style-type: none"> ○ Natural resources ○ Financial resources ○ Human resources 	<ul style="list-style-type: none"> ○ Learners to identify resources in their immediate environment and connect it to the farming environment. ○ Keep a logbook for the recording of climatical records e.g rainfall data, max & min temps, wind, cloud covering etc.
2		<ul style="list-style-type: none"> ○ Explain and understand the importance and conservation of natural resources. <ul style="list-style-type: none"> ○ Water ○ Soil ○ Vegetation 	<p>Resources: Agricultural magazines, environmental magazines.</p> <ul style="list-style-type: none"> ○ Learners to bring pictures <p>Activity: Collect pictures and create an A3 poster in how the following resource extraction methods contribute the destruction of our resources. You only need to do one resource extraction method. (eg. Grazing and its contribution to destruction)</p>
3		<ul style="list-style-type: none"> ○ Understand and Define the following farming systems: <ul style="list-style-type: none"> ○ Commercial farming ○ Subsistence farming 	<p>Sources: Use internet & Magazines</p> <p>SBA - Activity: Collate a collage of the two farming systems used in South Africa.</p> <p>PAT activity – Do research on the need for an increase in production for your area. You identify that a hydroponic system should be build. Research some hydroponic systems of low-cost materials and build it to be used in the second term to grow your crop. The produce of your crop needs to be sold in the 3rd term.</p>

4		<ul style="list-style-type: none"> • Explain and understand the essential principles in planning the farm layout <ul style="list-style-type: none"> ○ Farmyard layout and essential farm buildings e.g. housing and ablution, stables, milking parlour, shed (vehicles, implement, shearing etc.), workshop, tool storeroom, chemical storeroom, fowl-runs pigsties. 	<p>Activity: Compare farm lay-outs in the learner's book</p> <p>Visit a nearby farm to investigate the farm layout and comment.</p>
5	Safety and communication	<ul style="list-style-type: none"> • Understand the importance of Safety on the farm <ul style="list-style-type: none"> ○ Occupational Health and Safety (OHS), applicable to the farm workshop. 	<ul style="list-style-type: none"> ○ Demonstrate the use of tools and equipment and the dangers involved with its use ○ Identify safety signs
6	Tools, equipment and Machines and alternative energy	<ul style="list-style-type: none"> ○ Explain and understand the purpose/function of each of the following basic farm implements/workshop tools <ul style="list-style-type: none"> ○ Primary cultivation <ul style="list-style-type: none"> ▪ Ripper ▪ Plough (disc, shear, chisel etc.) ○ Secondary cultivation <ul style="list-style-type: none"> ○ Seed drill/planter, cultivator 	<p>Sources: Use internet & Magazines</p> <p>Activity: Measure the cultivated depth of implements. (Determine whether it is a primary or secondary implement used.)</p> <ul style="list-style-type: none"> ○ Learners excursion to an Agricultural Show eg Nampo / Royal Show ○ Collect pictures related to relevant equipment for each grade
7		<ul style="list-style-type: none"> ○ Explain and understand the purpose/function of each of the following basic farm workshop tools ○ Identification, use and maintenance of hand tools (as listed in section 2) ○ Select the appropriate tool for use in a specific task 	<p>Sources: Use internet & Magazines</p> <p>Activity: Educator can set a practical test on the identification of tools and equipment as listed above.</p> <ul style="list-style-type: none"> ○ The equipment and tools should be used appropriately for the task at hand in building the hydroponic system in the Practical assessment task.
8		<ul style="list-style-type: none"> • Name and understand the alternative sources of energy that can be used on the farm: <ul style="list-style-type: none"> ○ Wind ○ Solar ○ Hydro ○ Biogas 	<p>Show videos on the use of alternative sources of energy(renewable sources)</p>

		o Biofuel
9-10	Formal assessment	The weeks allocated for formal assessment are integrated across the weeks planned for teaching and learning. The assessment will consist of Practical Task/s with a 60% weighting and a Theory test with a 40% weighting.
<p>Activity 1: Choose any activity in the learners' book. – 30%</p> <p>Activity 2 (PAT): Research on hydroponic systems and building it for production of your crop. Use the available equipment & tools during practical session etc. building of structures - Hydroponic system.</p> <p>Activity 3: Theory - Test on topics covered in the term. Learners respond to instructions (Written) 40% Assess using a memorandum</p>		

Grade 8 Term 2

WEEK	TOPIC	Content: Gr 8 The learner should be able to:	Examples of techniques, activities, resources and process notes
1	Plant production & Horticulture	<ul style="list-style-type: none"> • Explain the following concepts of soil as a medium for production. <ul style="list-style-type: none"> o Composition of soil <ul style="list-style-type: none"> ▪ Organic, mineral, air and water o Soil texture <ul style="list-style-type: none"> ▪ Textural classes 	Activity: Composition of soil. Jar tests/ Water infiltration (See resource pack)
2		<ul style="list-style-type: none"> • Soil cultivation (Hand tools) <ul style="list-style-type: none"> o Methods and purpose o Demonstrate an understanding of soil preparation o Drainage <ul style="list-style-type: none"> ▪ As a necessity 	o Use handheld tools/implements for the effective preparation of soil- Gr 8
3/4		<ul style="list-style-type: none"> • Explain and understand the requirements of optimal plant growth <ul style="list-style-type: none"> o Growth medium and organic matter o Water o Light (Photosynthesis) o Air o Nutrition 	<ul style="list-style-type: none"> o Apply the principals of optimal plant growth to make seedlings/ and or cuttings for your hydroponic system or open field o Use these seedlings /cuttings to produce a crop. (Must be able to process into an edible crop) o Use equipment correctly in order to space plant according to the requirements of specific plants o Collect suitable material to make compost in the school.

		<ul style="list-style-type: none"> ○ Temperature ○ Manipulation to increase production ● Plant population/plant density 	
5		<ul style="list-style-type: none"> ● Name and understand the use of alternative planting mediums <ul style="list-style-type: none"> ○ Vermiculite ○ Peat ○ Coir ○ Wood shuffling/ ○ Peanut shells ○ Stone, sand ○ Potting soil 	<ul style="list-style-type: none"> ○ Collect and identify the different planting mediums. ○ Test water holding capacity and drainage of the collected alternative mediums
		<ul style="list-style-type: none"> ● Understand and apply the requirements for plant growth <ul style="list-style-type: none"> ○ Growing from seed to plant. 	<ul style="list-style-type: none"> ○ Planting seeds in seed tray, transplanting and manage until grown for harvest
6		<ul style="list-style-type: none"> ○ Identify crops produced in South Africa: <ul style="list-style-type: none"> ○ Field crops (Maize, wheat, sunflower etc.) ○ Fruits (Stone, Deciduous, citrus, tropical, nuts etc.) ○ Vegetables (Root, Leave, Pod ○ Tree crops (Forestry) ○ Ornamental (Trees and flowers) ○ Pastoral (grasses, legumes) 	<ul style="list-style-type: none"> ○ Create a poster for each of the crop types.
7		<ul style="list-style-type: none"> ○ Explain and understand the importance of Integrated pest and disease management (IPM) 	<ul style="list-style-type: none"> ○ Build a insect trap, Identify the different pests which are found within the trap ○ Discuss the best way to rid garden of said pests –depending on the severity of the occurrence.
8 – 10	<p>Formal Assessment The weeks allocated for formal assessment are integrated across the weeks planned for teaching and learning. The assessment will consist of Practical Task/s with a 60% weighting and a Theory test with a 40% weighting.</p>		
<p>Activity 1: Choose any activity in the learners' book. – 30%</p> <p>Activity 2 (PAT): Apply the principles of optimal plant growth to grow seedlings/cuttings for your hydroponic system or open field.</p> <p>Activity 3: Theory – Test (50 marks) on all topics covered in the term. Learners respond to instructions 40% Assess using a memorandum.</p>			

Grade 8 Term 3

WEEK	TOPIC	CONTENT The learner should be able to:	Examples of techniques, activities, resources and process notes
1	Animal Production	<ul style="list-style-type: none"> • Identify animal breeds used in production and their products in South Africa 	<ul style="list-style-type: none"> ○ Visit agricultural shows. ○ Collect pictures of different breeds of animals. ○ Make posters of animals and their specific products
2		<ul style="list-style-type: none"> ○ Cattle: Dairy, Beef, Dual purpose ○ Sheep: wool, mutton, pelt, dual purpose 	
3		<ul style="list-style-type: none"> ○ Pig: Pork and pet ○ Goat: Meat, Milk and hair (Fibre) 	
4		<ul style="list-style-type: none"> ○ Poultry: Layers, Broilers, Game ○ Horses: Riding; draught, Pet 	
5		<ul style="list-style-type: none"> ○ Rabbit: meat, fibre, etc ○ Beekeeping ○ Game & Ostriches 	<ul style="list-style-type: none"> ○ Visit beekeeper or watch video regarding production systems ○ Pupils must draw up list of advantages of beekeeping as well as products derived from beekeeping.
6, 7, 8		<ul style="list-style-type: none"> • Identify the basic requirements for optimal animal production. <ul style="list-style-type: none"> ○ Environmental factors <ul style="list-style-type: none"> ▪ Climate ○ Management <ul style="list-style-type: none"> ▪ Housing ▪ Care and health ▪ Nutrition - Feed components and fodder ▪ Breeding and selection 	<ul style="list-style-type: none"> ○ Visit to a farm where feeding procedures as well as feeding needs, and requirements of the specific animals are explained and demonstrated. The same feeding procedures, feed levels and record keeping must be implemented if the same animals are kept. ○ A visit by an animal feed consultant/agent is also advised. Collect pictures of different housing systems. Categorise them into intensive and extensive systems. ○ Invite a veterinarian or animal health technician to discuss animal health.
9 – 10	Formal Assessment The weeks allocated for formal assessment are integrated across the weeks planned for teaching and learning. The assessment will consist of Practical Task/s with a 60% weighting and a Theory test with a 40% weighting.		
Activity 1: Choose any activity in the learners' book. – 30% Activity 2 (PAT): See PAT activity as in the learners books - 30% Activity 3: Theory – Test (50 marks) on topics covered in term. Learners respond to instructions 40% Assess using a memorandum			

Grade 8 Term 4

WEEK	TOPIC	CONTENT The learner should be able to	Techniques, activities, resources and process notes
1	Business planning and practices	<ul style="list-style-type: none"> • Understand and explain the following concepts: <ul style="list-style-type: none"> ○ Good record keeping, ○ Budgeting 	<ul style="list-style-type: none"> • Use of prepared list to involve learners in record keeping-e.g. fruit/veggies supplied to the kitchen • Divide class into groups-one group can make list of all expenditure in producing the product. • Other group can make list of what price product can be sold at to make profit
2	Marketing and price setting	<ul style="list-style-type: none"> • Understand basic marketing • Identify basic agricultural needs and wants 	<ul style="list-style-type: none"> • Compile a checklist with some treats and let learners indicate their needs and wants.
3	Harvesting and storage	<ul style="list-style-type: none"> • Explain the importance of the following concepts: <ul style="list-style-type: none"> ○ Harvesting ○ storage 	<ul style="list-style-type: none"> • Collect pictures and watch videos of different harvesting equipment for the various products and how is been stored
4	Processing and value adding	<ul style="list-style-type: none"> ○ Understand and explain <ul style="list-style-type: none"> ○ Processing ○ Value adding ○ packaging 	<ul style="list-style-type: none"> • After harvesting of produce, learners must process it into a edible product (planting of eg. Popcorn at the end of gr 8 for harvesting in Gr. 9 for processing in the 3rd term eg. processing into caramel popcorn)
5-10	Formal Assessment	The weeks allocated for formal assessment are integrated across the weeks planned for teaching and learning. The assessment will consist of Practical Task/s with a 60% weighting and a Theory test with a 40 % weighting.	
Activity 1 (PAT): Harvesting, add value, processing and selling the product. – 30%			
Activity 2: Theory- Test (100 marks) on topics covered in term 1-4. Learners respond to instructions 100% Assess using a memorandum.			

Grade 9 Term 1

WEEK	TOPIC	Content: Gr 9 The learner should be able to:	Examples of techniques, activities, resources and process notes
1	General farming, production factors and agricultural resources	<ul style="list-style-type: none"> • Understand the components of the basic resources for farming: <ul style="list-style-type: none"> ○ Natural Resources <ul style="list-style-type: none"> ▪ Land ▪ Water ▪ Vegetation ○ Financial resources <ul style="list-style-type: none"> ▪ Capital (Assets) ▪ Credit • Human resources <ul style="list-style-type: none"> ▪ Management (Owner/manager) ▪ Labour 	PAT - Scenario: learners need to borrow money (monopoly) money to purchase the commodities needed to plant their crop in the first term. Use these commodities and equipment to plant your crop. <ul style="list-style-type: none"> ○ Keep a logbook for the recording and interpretation of climate records e.g rainfall data, max & min temps, wind, cloud covering etc.
2		<ul style="list-style-type: none"> • Understand and discuss pollution, degradation (erosion and chemical) and prevention of the following natural resource in agriculture. <ul style="list-style-type: none"> ○ Water ○ Soil ○ vegetation 	Activity: Create a poster on the sources of Agricultural pollution, its consequences and prevention Sources: Agricultural magazines, environmental magazines Learners to bring pictures
3		<ul style="list-style-type: none"> • Understand and distinguish between the following farming methods. <ul style="list-style-type: none"> ○ Intensive farming e.g. Precision farming ○ Extensive farming ○ Mixed farming ○ Other non-traditional methods 	Learners to collect pictures of different farming methods, categorise them on a poster/task Sources: Use internet & Magazines
4		<ul style="list-style-type: none"> • Explain the following concepts of a farm <ul style="list-style-type: none"> ○ Camps: Pasture (grazing, wetlands), dry land, irrigated fields, gardens (house and vegetable) and orchard. ○ Fences <ul style="list-style-type: none"> ○ Importance of fencing ○ Permanent fencing 	Activity: Use the farm map below and indicate where and which type of fence you will erect on the property below. Use all types of fences as discussed.

		<ul style="list-style-type: none"> ○ Electrical fencing ○ Security fencing 	
5	Safety and communication	<ul style="list-style-type: none"> • Understand Safety on the farm and workshop <ul style="list-style-type: none"> ○ Occupational Health and Safety (OHS), general farm safety -and liability 	<ul style="list-style-type: none"> ○ Demonstrate the use of tools and equipment and the dangers involved with its use ○ Wear protective clothing during practicals. ○ Apply farm safety rules
6	Tools, equipment and Machines and alternative energy.	<ul style="list-style-type: none"> ○ Identify, explain and understand the purpose/function of each of the following basic farm implements <ul style="list-style-type: none"> ○ Harvesting: Combine Harvester, silage cutter. ○ General: crop sprayer, slasher, balers, rakes, hammer mill, lawn mowers etc. ○ Machines: Tractors and trailers, trucks, excavators, drones etc 	<ul style="list-style-type: none"> ○ Learners excursion to Agricultural Show etc. Nampo ○ Collect pictures related to relevant equipment for each grade <p>Sources: Use internet & Magazines</p>
7		<ul style="list-style-type: none"> • Identification, use and maintenance for power tools, machines and workshop equipment (as listed in section 2) <ul style="list-style-type: none"> ○ Select the appropriate tool for use in a specific task • Demonstrate how to use, care for and maintain machines and workshop equipment 	<ul style="list-style-type: none"> ○ Learners excursion to Agricultural Show etc. Nampo ○ Collect pictures related to relevant equipment for each grade ○ Use the available equipment & tools during practical session etc. gardening, building of structures (metal, brick and wood) <p>Sources: Use internet & Magazines</p>
8		<ul style="list-style-type: none"> • Identify the use and application of: <ul style="list-style-type: none"> ○ Wind ○ Solar ○ Hydro ○ Biogas ○ Biofuel <p>as alternative source of energy on the farm</p>	Show videos on the use of alternative sources of energy
9-10	Formal assessment	The weeks allocated for formal assessment are integrated across the weeks planned for teaching and learning. The assessment will consist of Practical Task/s with a 60% weighting and a Theory test with a 40% weighting.	
<p>Activity 1: Choose any activity in the learners' book. – 30%</p> <p>Activity 2 (PAT): Use your surroundings, prepare a seedbed/field for the planting of your crop. (30%)</p> <p>Activity 3: Theory - Test on topics covered in the term. Learners respond to instructions (Written) 40% Assess using a memorandum</p>			

Grade 9 Term 2

WEEK	TOPIC	Content: Gr 9 The learner should be able to:	Examples of techniques, activities, resources and process notes
1/2	Plant production & Horticulture	<ul style="list-style-type: none"> • Explain the following concepts of soil as a medium for production <ul style="list-style-type: none"> ○ Soil structure <ul style="list-style-type: none"> ▪ Importance of structure ○ Soil temperature <ul style="list-style-type: none"> ▪ Importance and factors influencing ○ Soil water <ul style="list-style-type: none"> ▪ Forms, movement and conservation ○ Soil reaction <ul style="list-style-type: none"> ▪ Elementary discussion regarding acid, neutral and brackish soils organic matter • Soil organic matter <ul style="list-style-type: none"> ○ Importance and influence • Soil Air <ul style="list-style-type: none"> ○ Importance of air in the soil 	<ul style="list-style-type: none"> ○ Using practical to determine soil cultivation depth of implements for the effective preparation of soil-
3		<ul style="list-style-type: none"> • Soil cultivation (Machines and implements) <ul style="list-style-type: none"> ○ Demonstrate an understanding of reasons, methods and purpose in soil preparation ○ Irrigation <ul style="list-style-type: none"> ▪ Types of irrigation systems - ○ Drainage <ul style="list-style-type: none"> ○ Types of drainage systems 	<ul style="list-style-type: none"> ○ Using practical to determine soil cultivation depth of implements for the effective preparation of soil- Gr 9 ○ Videos of machines used for cultivation practices ○ Compile a poster on micro (drip, micro-jets, mini popups) and macro (flood, centre pivot, side-roller, dragline, rain gun sprinkler, overhead etc.) irrigation systems and methods
4		<ul style="list-style-type: none"> • Explain and understand the requirements of optimal plant growth: <ul style="list-style-type: none"> ○ Nutrients in the soil and requirements <ul style="list-style-type: none"> ▪ Sources of nutrients: <ul style="list-style-type: none"> - Organic fertilisers - Synthetic/artificial fertilisers ▪ Important elements (N, P K) Basic calculation 	PAT-Apply the principals of optimal plant growth to make seedlings/ and or cuttings for your hydroponic system or open field. Use these seedlings /cuttings to produce a crop. (Must be able to process into an edible crop) Use equipment correctly in order to space plant according to the requirements of specific plants Apply compost or fertilizer to the soil manufactured by Gr 8.
		<ul style="list-style-type: none"> • Describe the reasons for the use of alternative planting mediums: 	<ul style="list-style-type: none"> ○ Summarize the Functions and Deficiency symptoms of the THREE macro- nutrients on a poster ○ Collect and identify the different planting mediums. ○ Test water holding capacity and drainage of the collected alternative mediums

5		<ul style="list-style-type: none"> ○ Manipulation to increase production <ul style="list-style-type: none"> ▪ Trellising ▪ Pruning ▪ Planting density • Understand and apply the requirements for plant growth <ul style="list-style-type: none"> ○ From cutting to plant(vegetative) 	<ul style="list-style-type: none"> ○ Show videos on manipulation for increased production ○ Learners should demonstrate how to prune a shrub/ tree e.g. Roses
6		<ul style="list-style-type: none"> ○ Explain and understand the economic importance of relevant crop production in your area <ul style="list-style-type: none"> ○ Field crops (Maize, wheat, sunflower etc.) ○ Fruits (Stone, Deciduous, citrus, tropical, nuts etc.) ○ Vegetables (Root, Leave, Pod ○ Tree crops (Forestry) ○ Ornamental (Trees and flowers) ○ Pastoral (grasses, legumes) 	<ul style="list-style-type: none"> ○ Choose one crop to show the economic importance of it in your community
7		<ul style="list-style-type: none"> • Explain and understand weed, pest and disease control. <ul style="list-style-type: none"> ○ Manual control ○ Biological control ○ Chemical control <ul style="list-style-type: none"> ▪ Broad leaf/ grasses ▪ Insects (Pests) ▪ Plant diseases ○ Genetic control (Genetic manipulation) ○ integrated pest and disease management 	<ul style="list-style-type: none"> ○ Identify the different pests which are found within the garden. Discuss the best way to rid garden of said pests –depending on the severity of the occurrence. ○ Identify weeds and different ways to eradicate it. ○ Demonstrate different forms of weeding as well as safety precautions when chemical weeding is selected-wearing of masks and goggles.
8 – 10	Formal Assessment		

The weeks allocated for formal assessment are integrated across the weeks planned for teaching and learning. The assessment will consist of Practical Task/s with a 60% weighting and a Theory test with a 40% weighting.

Activity 1: Choose any activity in the learners' book. – 30%

Activity 2 (PAT): Apply the principals of optimal plant growth to make seedlings/ and or cuttings for your hydroponic system or open field. (30%)

Activity 3: Theory – Test (50 marks) on topics covered in the term. Learners respond to instructions 40% Assess using a memorandum

Grade 9 Term 3

WEEK	TOPIC	CONTENT The learner should be able to:	Examples of techniques, activities, resources and process notes	
1	Animal Production	<ul style="list-style-type: none"> • Explain and understand the purpose of each of the following animal's in the area (2 breeds where applicable) 	<ul style="list-style-type: none"> ○ Visit agricultural shows. ○ Collect pictures of different breeds of animals. ○ Make posters of animals and their specific products 	
2		<ul style="list-style-type: none"> ○ Cattle breeds: Dairy, Beef, Dual purpose ○ Sheep breeds: wool, mutton, pelt, dual purpose 		
3		<ul style="list-style-type: none"> ○ Pig breeds: Pork and pet ○ Goat breeds: Meat, Milk and hair (Fibre) 		
4		<ul style="list-style-type: none"> ○ Poultry: Layers, Broilers, Game ○ Horses: Riding; draught, Pet 		
5		<ul style="list-style-type: none"> ○ Rabbit: meat, fibre, etc ○ Beekeeping ○ Game & Ostriches 		<ul style="list-style-type: none"> ○ Visit beekeeper or watch video regarding beekeeping. ○ Pupils must draw up list of advantages of beekeeping as well as products derived from beekeeping.
6		<ul style="list-style-type: none"> • Understand and apply the basic requirements for optimal animal production <ul style="list-style-type: none"> ○ Environmental factors <ul style="list-style-type: none"> ▪ Climate ○ Management 		<ul style="list-style-type: none"> ○ Visit to a farm where feeding procedures as well as feeding needs, and requirements of the specific animals are explained and demonstrated. The same feeding procedures, feed levels and record keeping must be implemented if the same animals are kept.

		<ul style="list-style-type: none"> ▪ Housing ▪ Care and health ▪ Nutrition - Feed components and fodder ○ Breeding and selection 	<ul style="list-style-type: none"> ○ A visit by an animal feed consultant/agent is also advised.
7			<ul style="list-style-type: none"> ○ Invite a veterinarian or animal health technician to discuss animal health
8			<ul style="list-style-type: none"> ○ The reason for the development of new breeds – make a poster
9 – 10	<p>Formal Assessment</p> <p>The weeks allocated for formal assessment are integrated across the weeks planned for teaching and learning. The assessment will consist of Practical Task/s with a 60% weighting and a Theory test with a 40% weighting.</p>		
<p>Activity 1: Choose any activity in the learners' book. – 30%</p> <p>Activity 2 (PAT): The reason for the development of new breeds – make a poster on breeds used to make composite and reasons (30%)</p> <p>Activity 3: Theory - Test (50 marks) on topics covered in term. Learners respond to instructions 40% Assess using a memorandum</p>			

Grade 9 Term 4

WEEK	TOPIC	CONTENT The learner should be able to	Examples of techniques, activities, resources and process notes
1	Business planning and practices	<ul style="list-style-type: none"> • Introduction to the development of basic SWOT analyses for a farming enterprise • Apply basic record keeping concepts <ul style="list-style-type: none"> ○ Updating inventory by regular stock keeping ○ Draw up a basic budget to reflect expenditure and income and profit/loss calculation 	<ul style="list-style-type: none"> • Compile a list of inventory for the agricultural section • Use of prepared list to involve learners in record keeping-e.g. fruit/veggies supplied to the kitchen • Divide class into groups-one group can make list of all expenditure in producing the product other on income do profit loss calculation
2	Marketing and price setting	<ul style="list-style-type: none"> • Apply basic marketing concepts <ul style="list-style-type: none"> ○ Market research and Advertising ○ Marketing type <ul style="list-style-type: none"> ▪ Formal ▪ Informal • Understand the basic principles of supply and demand in price determination 	<ul style="list-style-type: none"> • Use market research to determine identify the needs and wants in the community and link it to supply and demand • Advertising the produce to be processed
3	Harvesting, Processing & Value adding	<ul style="list-style-type: none"> • Define and provide appropriate examples of the following concepts related to produce in their area: <ul style="list-style-type: none"> ○ Harvesting ○ storage space • Application of <ul style="list-style-type: none"> ○ processing, ○ value adding and ○ packaging of the produce on the farm 	<ul style="list-style-type: none"> • After harvesting of produce, learners must add value to their produce (planting of eg. Popcorn at the end of gr 8 for harvesting in Gr 9 for processing in the 3rd term eg. processing into caramel popcorn)
4			
5 -10	Formal Assessment	The weeks allocated for formal assessment are integrated across the weeks planned for teaching and learning. The assessment will consist of Practical Task/s with a 60% weighting and a Theory test with a 40 % weighting.	
Activity 1 (PAT): Processing, value-adding and selling crop.			
Activity 2: Theory- Test on topics covered in term 1-4. Learners respond to instructions 100% Assess using a memorandum			

4.1 INTRODUCTION

Assessment is a continuous, planned process of identifying, gathering and interpreting information about the performance of learners, using various forms of assessment. It involves four steps: generating and collecting evidence of achievement; evaluating this evidence; recording the findings and using this information to understand and thereby assist the learner's development in order to improve the process of learning and teaching.

Assessment should be both informal (Assessment for Learning) and formal (Assessment of Learning). In both cases regular feedback should be provided to learners to enhance the learning experience.

Assessment in Agricultural Studies

4.2 INFORMAL OR DAILY ASSESSMENT

Assessment for learning has the purpose of continuously collecting information about learner performance, that can be used to improve their learning.

Informal assessment is a daily monitoring of learners' progress. This is done through observations, discussions, practical demonstrations, learner-teacher conferences, informal classroom interactions, etc. Informal assessment may be as simple as stopping during the lesson to observe learners or to discuss with learners how learning is progressing. Informal assessment should be used to provide feedback to learners and to inform planning for teaching but need not be recorded. It should not be seen as separate from the learning activities taking place in the classroom.

Self-assessment and peer assessment actively allow learners to assess themselves. This is important as it allows learners to learn from and reflect on their own performance. The results of the informal daily assessment tasks are not formally recorded unless the teacher wishes to do so. The results of daily assessment tasks are not taken into account for promotion purposes.

4.3 FORMAL ASSESSMENT

All assessment tasks that make up a formal programme of assessment for the year are regarded as Formal Assessment. Formal assessment tasks are marked and formally recorded by the teacher for progression and certification purposes. All Formal Assessment tasks are subject to moderation for the purpose of quality assurance and to ensure that appropriate standards are maintained.

Formal assessment provides teachers with a systematic way of evaluating how well learners are progressing in a grade and in a particular subject. Examples of formal assessments include tests, examinations, practical tasks, projects, oral presentations, demonstrations, performances, etc. Formal assessment tasks form part of a year-long formal Programme of Assessment in each grade and subject.

Formal assessment tasks form part of a yearlong formal Programme of Assessment in each grade and subject, are school-based and are weighted as follows for the different grades:

Practical Assessment Task

A practical assessment task (PAT) mark is a compulsory component of the final promotion mark for all candidates offering subjects that have a practical component and counts 30% (30 marks) of the end-of-year examination mark. The PAT is implemented across the first three terms of the school year. This is broken down into different phases or a series of smaller activities that make up the PAT. The PAT allows for learners to be assessed on a regular basis during the school year and it also allows for the assessment of skills that cannot be assessed in a written format, e.g. test or examination. It is therefore important that schools ensure that all learners complete the practical assessment tasks within the stipulated period to ensure that learners are resulted at the end of the school year. The planning and execution of the PAT differs from subject to subject. To apply content and develop skills learners will be involved in a PAT in grades 8 and 9.

It is expected from learners in grade 8 – 9 to do all management activities to produce a crop. (cultivate, plant, take care, harvest, store, process (if needed), market and sell).

See 4.7 – Layout of PAT 8 and 9

Grades	Formal school-based assessments	End-of-year examinations
R -3	100%	
4 - 6	75%	25%
7 – 9 Academic stream	40%	External examination 60%
8 - 9 Occupational stream	30% SBA 30% PAT	40%
10 and 11	25% including a mid-year examination	External examination: 75%
	25% including mid-year and trial examinations	External examination: 75%

The cognitive demands in assessment should be **appropriate for the age and developmental level** of the learners in the grade. Assessment in Agricultural studies must cater for a range of cognitive levels and abilities of learners. The assessment tasks should be carefully designed to cover the

content of the subject as well as the range of skills and the cognitive levels that have been identified in the specific aims. The design of assessments should therefore ensure that a full range of content and skills are assessed within each Grade in the Phase. The specific aims, topics, content and range of skills in the subject should be used to inform the planning and development of assessments.

Formal assessments must cater for a range of cognitive levels and abilities of learners, as shown below:

Cognitive Levels	Examples of useful verbs	Percentage of task
Lower Knowledge	Name, List, Match, Select, State, Define, Quote.	30
Middle Understanding and application	Classify, Compare, Convert, Describe Illustrate, Differentiate, Distinguish.	40
High	Interpret, Justify, Create, Design, Support, Recommend.	30

4.4 PROGRAMME OF ASSESSMENT GRADES 8 – 9

Grade 8 and 9

Grade 8 and 9 will focus on a broad overview of the subject with a basic understanding and mastery of some of the basic skills required in the subjects Agricultural Sciences, Agricultural Management Practices and Agricultural Technology.

Grade 8 and 9	Formal School-Based Assessments			Final End-of-Year Assessments
	Term 1	Term 2	Term 3	Term 4
SBA	30%	30%	30%	Add and convert the 3 term marks to 30%
PAT	30%	30%	30%	Add and convert all term marks to 30%
Theory	40%	40%	40%	Final written exam 100 marks convert to 40%
Term Report	100%	100%	100%	100% End of the year mark

Suggested Program of Assessment for Agricultural Studies

Grade 8

Term	Content/ concept/skill	Activities	Forms of Assessment	%	FATs based on activities in CAPS: OAS
Term 1	General Farming	Activity 1: Choose an activity as in the learner book	SBA	30%	FAT 1
		Activity 2 (PAT): See learners book for the term	PAT	30%	
		Activity 3: Theory-quarterly tests	Written	40%	
Term 2	Crop production	Activity 1: Choose an activity as in the learner book	SBA	30%	FAT 2
		Activity 2 (PAT): See learners book for the term	Practical (PAT)	30%	
		Activity 3: Theory - exams	Written	40%	
Term 3	Animal production	Activity 1: Choose an activity as in the learner book	Practical	30%	FAT 3
		Activity 2 (PAT): See learners book for the term	PAT	30%	
		Activity 3: Theory-quarterly test	Written	40%	
Term 4	Agricultural Business	Activity 2 (PAT): See learners book for the term	PAT	30%	
	All content	Activity 2: Theory-exams (100 marks)	Written	40%	

Suggested Program of Assessment for Agricultural Studies

Grade 9

Term	Content/ concept/skill	Activities	Forms of Assessment	%	FATs based on activities in CAPS: OAS
Term 1	General Farming	Activity 1: Choose an activity as in the learner book	Practical	30%	FAT 1
		Activity 2 (PAT): See learners book for the term	PAT	30%	
		Activity 3: Theory-quarterly tests	Written	40%	
Term 2	Crop production	Activity 1: Choose an activity as in the learner book	Practical	30%	FAT 2
		Activity 2 (PAT): See learners book for the term	PAT	30%	
		Activity 3: Theory - exams	Written	40%	
Term 3	Animal production	Activity 1: Choose an activity as in the learner book	Practical	30%	FAT 3
		Activity 2 (PAT): See learners book for the term	PAT	30%	
		Activity 3: Theory-quarterly test	Written	40%	
Term 4	Agricultural business	Activity 2 (PAT): See learners book for the term	PAT	30%	
	All content	Activity 1: Theory-exams	Written	40%	

4.5 RECORDING AND REPORTING

Recording is a process in which the teacher documents the level of a learner's performance in a specific assessment task. It indicates learner progress towards the achievement of the knowledge

as prescribed in the Curriculum and Assessment Policy Statements. Records of learner performance should provide evidence of the learner’s conceptual progression within a grade and her/his readiness to progress or promote to the next grade. Records of learner performance should also be used to verify the progress made by teachers and learners in the teaching and learning process.

Reporting is a process of communicating learner performance to learners, parents, schools, and other stakeholders. Learner performance can be reported in a number of ways. These include report cards, parents’ meetings, school visitation days, parent-teacher conferences, phone calls, letters, class or school newsletters, etc. Teachers in all grades report in percentages against the subject. Seven levels of competence have been described for each subject listed for Grades R - 12. The various achievement levels and their corresponding percentage bands are as shown in the Table below.

Codes and Percentages for Recording and Reporting

Rating code	Description of competence	Percentage
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

Note: The seven-point scale should have clear descriptors that give detailed information for each level.

Teachers will record actual marks against the task by using a record sheet; and report percentages against the subject on the learners’ report cards.

4.6 MODERATION OF ASSESSMENT

Moderation refers to the process that ensures that the assessment tasks are fair, valid and reliable. Moderation should be implemented at school, district, provincial and national levels. Comprehensive and appropriate moderation practices must be in place for the quality assurance of all subject assessments.

Formal assessment (SBA)

Moderation at the school will be carried out at least once each school term by the Head of Department responsible for the subject. This moderation needs to take place before cluster, district, regional or provincial moderation. Teachers' portfolios and evidence of learner performance must be moderated to ensure that a variety of assessment tasks have been used to address various topics and that assessment covered a range of cognitive levels.

4.7 GENERAL

This document should be read in conjunction with:

- 4.7.1 *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R-12; and*
- 4.7.2 *National Protocol for Assessment Grades R-12;*
- 4.7.3 *White Paper 6 on Special Needs Education: Building an Inclusive Education and Training System (2001);*
- 4.7.4 *Guidelines for Responding to Diversity in the Classroom through the Curriculum and Assessment Policy Statements (2011);*
- 4.7.5 *Guidelines to Ensure Quality Education and Support in Special Schools and Special School Resource Centres (2013);*
- 4.7.6 *Policy on Screening, Identification, Assessment and Support (2014);*
- 4.7.7 *Guidelines for Full-service/Inclusive Schools (2010); and*
- 4.7.8 *Standard Operating Procedures for Assessment of Learners who Experience Barriers to Assessment (2016)*