



ZIMBABWE

MINISTRY OF PRIMARY AND SECONDARY EDUCATION

CURRICULUM DEVELOPMENT AND TECHNICAL SERVICES

AGRICULTURE

JUNIOR SCHOOL LEVEL
GRADE 3- 7
2015-2022

TEACHER'S GUIDE

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ORGANISATION OF THE GUIDE

The Junior School (Grade 3 to 7) Agriculture teachers' guide is a document that has been prepared to assist the teacher in understanding how to deliver the 2015-2022 curriculum with ease. This guide is divided into two parts. Part A of the guide focuses on the critical documents that you as the teacher must have in the course of curriculum delivery. Part B of the guide focuses on the curriculum content, objectives, methodology, instructional materials, class management and assessment.

A thorough study of this guide will assist you, the teacher, to have ideas on how to properly teach curriculum content on the 2015-2022 Junior School (Grade 3 to 7) Agriculture learning area. This guide makes it easy for you to interpret the syllabus and prepare learning experiences for the learners' in your custody at the school where you are teaching.

To enhance your understanding of the Agriculture learning area, it is very important that as a teacher, you read through the given guidelines, and make necessary learning experiences preparation contextualised to suit the local environment.

PART A

Introduction

2015-2022 Primary and Secondary Education Curriculum has been defined by a policy framework which outlines the stance taken by the Ministry of Primary and Secondary Education. The teacher, as the implementer on the ground, ought to familiarise with documents that the Ministry has availed in order to develop an understanding of the new dimension the curriculum has taken. In this chapter we shall discuss the critical documents that a teacher should have in order to develop an in-depth understanding of the curriculum content and underpinning philosophy.

Objectives

By the end of Part A of this guide, you as the teacher, should be able to

- identify critical documents in curriculum implementation
- describe the contents of each critical document
- interpret Junior School 2015-2022 Agriculture Syllabus

INTRODUCTION

This a document intended to help you realise the recommended expected conduct towards fulfilment of the new curriculum demands in your subject area. It guides you to understand and engage in the participation to implement the new curriculum.

PART A

1.0 CRITICAL DOCUMENTS

As a teacher you need to know the critical documents you should have in order to deliver the curriculum effectively. You should have the following:

- Curriculum Framework
- National Syllabus
- School syllabus
- Scheme Cum Plan or Schemes of Work and Lesson Plan
- Learner Profile
- Progress Records
- Register of Attendance

Curriculum Framework for Zimbabwe Primary and Secondary Education 2015-2022

This is a policy document that outlines underpinning national philosophy, principles, learning areas, the description and expectations of MoPSE at policy level. It prescribes what the government expects you to deliver as you go about your duties.

National Syllabus

It is a policy document that outlines and specifies the learning area philosophy, aims and objectives, Learning/teaching concepts and content, suggested methodology and assessment criteria at every grade level. As a teacher, you should always have it to guide you in your day to day teaching and learning activities.

School Syllabus

This must be drawn from the National Syllabus by reorganising content taking into account local factors. (see section ---- on Syllabus Interpretation)

Scheme cum Plans or Schemes of Work

This is a document that you as a teacher should draw from the national and school syllabus. You should outline the objectives activities, content, methodologies(see scheme of work/scheme cum plan template on page ...).You should draw your scheme of work/scheme cum plans two weeks ahead of lesson delivery date.(use of ICT in drawing the documents is encouraged)

Lesson Plans

This is a detailed daily plan of what you intend to deliver during the lesson. This is to be used in the event of you having drawn a scheme of work rather than a scheme cum plan. (See Detailed Lesson Plan Template on page.....)

Learner Profiles

Profile assessment is a quality assessment tool designed for a variety of learners to determine their strengths and identify areas of improvement. As a teacher, you should carry out profiling to track learner behaviour, knowledge, attitudes, aptitudes, skills, values and performances on an on-going basis. This assessment informs teaching and learning process and contributes to learner profile. (See Learner Profile Card on page...)

Progress Record

You should have a progress record to capture learner performances. (see Template on page...)

Attendance Register

This is a critical document you should have as a teacher to track and record your learner's class or lesson attendance.

PART B

2.0 PREAMBLE

The teacher is required to gain an in-depth understanding of the preamble and be guided in the development of the school based syllabus as it leads learning to the achievement of the national philosophy, competences exhibited through learner exit profiles.

1.1 INTRODUCTION

Junior school Level Agriculture syllabus is designed for Junior Learners (Grade 3 to 7). It is a five year course that seeks to promote learner's development of psychomotor skills, cognitive and practical techniques. This is a science learning area that involves theory and practical activities. Junior Agriculture will provide learners with opportunities to identify, investigate, solve problems, carry out agricultural activities and assess their viability in a sustainable manner. The syllabus also serves as a firm foundation for entry into Secondary School Agriculture studies.

1.2 RATIONALE

Since Zimbabwe's economy is agro-based, it is imperative that learners in their diversity acquire necessary agricultural knowledge, skills and positive attitudes at grass roots level. This would enable learners to be proactive, fit well in the community and national economy, value the dignity of labour and harness available opportunities for enterprise.

1.3 SUMMARY OF CONTENT

The Junior School Agriculture Syllabus will cover theory and practical activities in areas such as water, soil, plant and animal management, farm tools and machinery and Agri-business. This five-year learning phase seeks to develop skills in sustainable soil and water management as well as production and maintenance of agricultural produce. The syllabus will help learners to acquire marketing and value addition.

1.4 ASSUMPTIONS

The syllabus assumes that learners know:

- various plants and animals
- how to conduct practical activities such as weeding, digging and watering
- how to use basic tools such as hoes, slashers and wheel barrows
- that buying and selling of agricultural produce take place
- That resources such as land, tools and equipment are available for use

1.5 CROSS-CUTTING THEMES

The Junior School Level Agriculture Learning area will develop an appreciation of gender equity, Heritage Studies and teamwork. It will equip learners with skills to deal with disaster risk management, food security, safety and health issues. Learners should be able to integrate indigenous knowledge with new technology to deal with emerging environmental challenges.

Objectives:

- After reading this guide you should be able to:
 - interpret the syllabuses correctly
 - use teaching methods appropriate to the learning area
 - prepare engaging and appropriate teaching aids
 - design appropriate strategies for problem solving
 - manage your class effectively
 - be resourceful
 - Manage your class effectively
 - Resourceful
 - Draw up and maintain comprehensive records
 - Guide learners to study effectively on their own
 - Objectively evaluate your own teaching and the learners` progress
 - Acquire teaching techniques

The guide covers the following aspects:

- Syllabus interpretation
- Content
- Methodology
- Teaching-learning materials
- Class management
- Record keeping
- Evaluation

UNIT 1: SYLLABUS INTERPRETATION

- SYLLABUSES ARE KEY DOCUMENTS TO EVERY TEACHER
- TWO TYPES OF SYLLABUSES:

NATIONAL SYLLABUS and SCHOOL SYLLABUS

As a teacher, you should be able to interpret the national and school syllabus with the following components:

- aims
- content
- assessment objectives
- methodology and
- assessment format

Aims: general direction in which you should be guiding your learners (long term)

Objectives: learner behaviour after treatment

Assessment objectives: examination oriented (what is to be tested)

Content: topics or aspects to be covered

Methodology: teaching approaches to achieve desired learning outcomes

Learner-centred approaches allow learners to practice skills learnt

Assessment format: how learners will be assessed

UNIT 2

SCHOOL SYLLABUS (A BREAKDOWN OF THE NATIONAL/OFFICIAL SYLLABUS)

- Drafted at the school
- Influenced by:
 - Level of learner performance
 - Facilities and funds available
 - Time allocation in the official syllabus
 - Local conditions that affect the choice and sequencing of topics
 - Supply of textbooks and other teaching materials
 - Education technology
 - Community influences

● STRUCTURE OF SCHOOL SYLLABUS

(provide a comprehensive syllabus structure)

Aims: broad indication of what the learners should learn

Objectives: learner behaviour at the end of the teaching-learning experience
(competencies)

- TOPICS/ACTIVITIES (CONTENT)
- METHODOLOGY (learner – centred)
- INSTRUCTIONAL OR TEACHING MATERIALS
- ASSESSMENT

UNIT 3: SCHEME - CUM – PLAN (WEEKLY BREAKDOWN)

By the end of this unit, you should be able to:

- describe the essential components of a scheme-cum plan
- develop a scheme-cum plan
- explain the advantages of writing down your plan
- realise the merits of planning your lessons well in advance

Grade 3 (Format applies from grade 3 to 7)

Agriculture Scheme

Aims

- appreciate the importance of agriculture to the individual, family and country
- develop a positive attitude towards Agriculture and its study as a science
- develop environmental awareness and actively participate in conservation projects within the school and in their community
- develop agricultural business skills in running agriculture as an enterprise
- contribute to the improvement of community nutritional needs, food security and socio-economic development of the country

COMPONENTS OF A SCHEME CUM PLAN

- The layout is usually horizontal and comprise the following columns

DATE	TOPIC AND CONTENT	OBJECTIVES	COMPETENCIES/ SKILLS	SOM/MEDIA/ EQUIPMENT	METHODS AND ACTIVITIES	EVALUATION
1 20/01/17	<p>INTRODUCTION TO AGRICULTURE</p> <p>Lesson 1 FARM TOOLS</p> <ul style="list-style-type: none"> ● garden tools ● uses of garden tools 	<p>By the end of the lesson, learners should be able to:</p> <ul style="list-style-type: none"> -identify garden tools -state the uses of garden tools 	<ul style="list-style-type: none"> ● Weeding ● Digging ● Raking ● Levelling beds 	<ul style="list-style-type: none"> ● Agriculture Junior (grade 3-7) National Syllabus page 13 ● Best Approach to Agriculture Grade 3 Page 107 ● Hoes ● Rakes ● Garden forks ● Watering cans 	<p>Guided Discovery</p> <ul style="list-style-type: none"> ● Naming, drawing and labelling of garden tools ● Modelling ● Modelling of garden tools ● Demonstration ● Demonstrating the use of garden tools ● Miming usage of garden tools ● Designing and keeping a tool inventory 	

DETAILED LESSON PLAN

By the end of this unit, you should be able to:

- Draw up a lesson plan
- Identify relevant teaching-learning materials/aids
- Identify appropriate teaching methods
- Evaluate the lesson delivery

The lesson plan involves:

- Preparation (objectives, teaching aids)
- Execution
- Lesson development
- Summary/conclusion
- Assignment
- Lesson evaluation

Below is an example of a detailed lesson plan

CLASS:	GRADE 3 Green
LEARNING AREA:	Agriculture
DATE:	22 September 2016
TIME:	1030hrs – 1130hrs
TOPIC:	Farm Tools
Key concept:	Identifying garden tools
S.O.M.: -	Agriculture Junior (grade 3-7) National Syllabus page 13 Best Approach to Agriculture Grade 3 Page 107
Equipment:	hoes, garden forks, rakes, watering cans
Number of students:	25
Assumed Knowledge :	Learners to identify some of the basic garden tools

Lesson Objectives

By the end of the lesson, learners should be able to:

- Identify garden tools provided
- State the uses of each garden tool
- Classify tools according to their uses
- Explain the safe use of farm tools and implements

ACTIVITIES

INTRODUCTION: Learners identify garden tools

- Naming, drawing and labelling of garden tools
- Modelling of garden tools
- Demonstrating the use of garden tools
- Miming usage of garden tools
- Designing and keeping a tool inventory

Conclusion: Learners and the teacher to state ways of safe handling garden tools to avoid common hazards.

LESSON EVALUATION:

Strength:

.....

.....

Weaknesses:

.....

.....

Way forward:

.....

.....

LESSON EVALUATION:

Strength:

.....

.....

Weaknesses:

.....

.....

Way forward:

.....

.....

UNIT 5: METHODOLOGY

- As a teacher it is important for you to use problem-solving and learner-centred approaches:
- You are the facilitator
- The learner is the doer

OBJECTIVES

By the end of this unit, you should be able to:

- select appropriate teaching methods for your lessons
- use a variety of learner-centred approaches
- plan and organise study tours
- help pupils carry-out projects or experiments
- Q/A
- Lecture
- Demonstration
- Observation
- Simulation
- Role play
- Experimentation
- Project
- Field trips

Choice of method is influenced by:

- your personality
- learner`s level of development (cognitive, affective and psychomotor)
- Content to be covered
- Competencies to be developed

UNIT 6: INSTRUCTIONAL (TEACHING-LEARNING) AIDS

- help learners to learn better and faster
- capture learners` interest
- create virtual reality

OBJECTIVES

By the end of this unit, you should be able to:

- select appropriate instructional aids
- make good quality aids from available resources
- use instructional aids effectively
- Design meaningful and effective instructional aids

TYPES: charts, chalkboard, whiteboard, computers, slides, films, videos, flannel graph, textbooks

UNIT 7: CLASS MANAGEMENT

Process of planning, organising, leading and controlling class activities to facilitate learning

OBJECTIVES

By the end of this unit, you should be able to:

- create an effective learning environment
- motivate the learners
- maintain discipline
- supervise class activities

ORGANISATIONAL SKILLS FOR EFFECTIVE LEARNING

Classroom organisation which covers:

- physical environment
- emotional environment
- grouping the learners
- class control and discipline
- supervision

PHYSICAL ENVIRONMENT

- Classroom to be clean, tidy and airy
- Safety considerations when arranging furniture
- Teaching aids to be visible to learners

EMOTIONAL ENVIRONMENT

- Be firm, warm and pleasant
- Set the right tone
- Tell learners what behaviour you expect

GROUPING

- Learners may be grouped according to needs, abilities, problems but not gender
- Promote sharing of ideas among learners

CLASS CONTROL AND DISCIPLINE

- Know the schools policy on discipline
- Be firm and fair
- Punishment should be corrective
- Acknowledge good behaviour
- Make use of prefects and class monitors
- Create an atmosphere of trust and honesty
- Aim for intrinsic discipline

MOTIVATION

- Make learners feel important
- Recognise and reward excellence
- Be a role model in terms of your demeanour

SUPERVISION

- Check learners` work in order to guide and correct them
- Areas that require supervision include practical work, written work, discussions, group work and field trips

UNIT 8: RECORD – KEEPING

Records are critical documents about the teaching – learning process which you must keep as a teacher

They include:

- Syllabuses (National and School)
- Staff and pupil details
- Examination documents
- Mark lists
- Stock control registers

OBJECTIVES

By the end of this unit, you should be able to:

- identify the various records you are expected to keep
- prepare accurate records
- Interpret information from records to promote learning
- Maintain and keep records safely
- Appreciate the need to update records regularly

TYPES OF RECORDS

- Official syllabuses
- School syllabuses
- Records of staff details
- Records of learner details
- Supervision records
- Files, circulars, handouts, past exam papers
- Minutes of meetings
- Inventory of resource materials
- Stock control registers

UNIT 9: Evaluation

- Measuring the success of teaching in terms of teacher and learner performance
- Provides feedback on the acquisition of knowledge, skills and attitudes by learners

OBJECTIVES

By the end of this unit, you should be able to:

- evaluate both your work and that of the learners
- identify the essential evaluation methods that you can use
- prepare marking schemes for the various activities or projects

METHODS OF EVALUATION

- Tests and exercises
- Projects
- Examinations
- Assignments

UNIT 10

SYLLABUS TOPICS

- 10.1 Introduction to agriculture
- 10.2 Climate and land use
- 10.3 Soil
- 10.4 Water
- 10.5 Plants
- 10.6 Animals
- 10.7 Farm implements and machinery
- 10.8 Agri-business

Hints and guidance topic by topic using grade 3 level

10.1 Introduction to agriculture

Objectives(learner – behaviour)

- explain the importance of Agriculture to the community and the nation
- use farm tools safely

Content

- Importance of Agriculture to the community and the nation
- Classification of farm tools according to their use:
 - Digging tools
 - Cutting tools
 - Watering tools
 - Spraying tools
- Safe use of farm tools and implements

Methodology (learner - centredness)

- Project based learning
- Educational tours
- E-learning
- Collections
- Demonstrations
- Resource person(s)

Teaching - learning aids

- ICT Tools
- Print Media
- Farm Implements and Tools
- Audio and Visual Materials

Activities (learner – centredness)

- Educational touring to observe commercial agricultural activities
- Listing agricultural activities done in their community and nation
- Discussing the benefits of agricultural activities done in their community and the nation
- Matching the tools to their uses
- Collecting and grouping tools according to their uses
- Sketching farm tools

- Designing and keeping an inventory of farm tools
- Discussing the safe use of farm tools and implements
- Demonstrating the safe use of farm tools and implements

Competencies

Knowledge	Skills	Attitudes
<ul style="list-style-type: none"> ● Identifying agricultural opportunities in family community and nation 	<ul style="list-style-type: none"> ● Handling tools and equipment properly 	<ul style="list-style-type: none"> ● Resolving differences of opinion
<ul style="list-style-type: none"> ● Assessing the competitive advantage of tools and machinery 	<ul style="list-style-type: none"> ● Drawing ● Hoeing ● Digging 	<ul style="list-style-type: none"> ● Collaborating and contributing to team results
<ul style="list-style-type: none"> ● Record keeping 		

Assessment

Learners will be assessed on:

- Definition of terms used in agriculture
- The ability to relate the importance of agriculture to the family, community and economy of Zimbabwe
- Application of health and safety measures as they relate to agriculture
- The classification of farming implements and tools according to use
- Correct use and maintenance of any given agricultural tools, equipment and machinery

10.2 Climate and land use

Objectives (learner – behaviour)

- Identify the seasons of Zimbabwe
- Identify signs from their local environment that indicate seasons

Content

- Seasons of Zimbabwe
- Rain season
- Post rain season
- Cool dry season
- Hot dry season

Methodology (learner – centredness)

- Project based learning
- Educational tours
- E-learning
- Collections
- Demonstrations
- Resource person(s)

Teaching-learning aids

- Printing media
- ICT Tools
- Recommended textbooks
- Seasonal fruits / crops

Activities (learner centredness)

- Naming of the seasons
- Classifying months that fall within each season
- Discussing local activities and events done in each season
- Listing environmental signs (including indigenous knowledge systems) that indicate seasonal changes
- Educational tours
- Singing songs, reciting rhymes and poems related to seasons

Assessment

The learners will be assessed basing on:

- Correct classifying of months that fall within each season
- Correct identification of fruits / crops that fall in each season
- Listing environmental signs (including indigenous knowledge systems) that indicate seasonal changes.

10.3 Soil

Objectives (learner –behaviour)

- Define soil and identify local soils
- Identifying materials used for making a compost
- Define soil erosion and identify signs of soil erosion in the local environment

Content

- Importance of soil
- Local soils
- Compost making
- Soil erosion and signs of soil erosion

Methodology (learner - centredness)

- Project based learning
- Educational tours
- E-learning
- Collections
- Demonstrations
- Resource person(s)

Teaching – learning aids

- Print media
- ICT Tools
- Local environment
- Soil samples
- Vegetation and animal matter

Activities (learner centredness)

- Discussing soil and its importance
- Collecting samples of local soils
- Collecting materials used for making compost, pegging the compost site, making the compost heap and maintaining the compost heap.
- Educational tour to identify signs of soil erosion in the local environment

Assessment

Learners will be assessed on:

- Correct collection of soil samples
- Making a compost heap and maintaining it
- Identification of signs of soil erosion in the local environment

10.4 Water

Objectives (learner – behaviour)

- state uses of water

Content

- uses of water in agriculture

Methodology (learner – centredness)

- listing uses of water in agriculture

Teaching –learning aids

- print media
- garden tools
- safe water
- recommended textbooks

Activities- (learner centredness)

- demonstrating uses of water in agriculture such as irrigating, cleaning garden tools and watering animals.

Assessment

Learners will be assessed on:

- correct uses of water without wastage like irrigating crops, cleaning garden tools.

10.5 Plants

Objectives (learner – behaviour)

- identify plants within the local environment

- state local organic sources of plant nutrients
- identify local vegetables and classify them as indigenous or exotic
- identify local field crops fruit trees
- define and identify ornamental plants
- define forestry and uses of trees

Content

- plants within the local environment
- local organic sources of plant nutrients
- local vegetables ; indigenous and exotic
- local field crops and fruit trees
- ornamental horticulture and plants
- uses of treed

Methodology (learner centredness)

- Project based learning
- Educational tours
- E-learning
- Collections
- Demonstrations
- Resource person(s)

Teaching - learning aids

- ICT Tools
- Print Media
- Recommended textbooks
- Resource person (s) such as Forestry Commission
- Plants in the local environment
- Audio and Visual Materials
- Decayed plant matter

Activities (learner - centredness)

- Naming the plants
- Collecting plant samples
- Educational tour to identify plants
- Project on plants in the local environment
- Stating the locally available organic sources
- Identifying local field crops
- Listing and identifying local fruit trees
- Describing ornamental horticulture and listing and identifying ornamental plants

Assesment

Learners will be assessed based on:

- Correct identification of plants
- Listing and identifying of local fruit trees
- Listing and identifying ornamental plants

10.6 Animals

Objectives (learner – behaviour)

- List uses of domestic animals
- Identify types of animal feeds
- Classify the animal feeds as natural and commercial
- Name the types of small livestock
- Define apiculture
- Distinguish bees from other insects

Content

- Uses of domestic animals
- Animal feeds
- Types of small livestock (poultry or rabbits)
- Apiculture (characteristics of bees)

Methodology (learner – centredness)

- Project based learning
- Educational tours
- E-learning
- Collections
- Demonstrations
- Resource person(s)

Teaching – learning aids

- ICT Tools
- Print Media
- Recommended textbooks
- Resource person (s)
- Domestic animals
- Samples of animal feeds
- Bee specimen

Activities (learner – centredness)

- Naming domestic animals and discussing uses of them
- Drawing domestic animals
- Modelling domestic animals
- Grouping animal feeds as natural and commercial feeds
- Feeding animals kept in the school
- Drawing types of poultry or rabbits
- Educational touring to observe different types of poultry and rabbits
- Describing the differences between bees and other insects
- Drawing the bee

Assessment

Learners will be assessed based on:

- Correct naming and accurate drawing of domestic animals
- Grouping animal feeds as natural and commercial feeds
- Drawing types of poultry or rabbits

- Differentiate between bees and other insects

10.7 Farm Implements and Machinery

Objectives

- Identify farm implements

Content

- Types of farm implements

Methodology (learner – centredness)

- Project based learning
- Educational tours
- E-learning
- Collections
- Demonstrations
- Resource person(s)

Teaching – learning aids

- ICT Tools
- Print Media
- Recommended textbooks
- Farm implements

Activities (learner – centredness)

- Identifying farm implements
- Drawing farm implements
- Educational touring to observe farm implements
- Keeping an inventory of farm implements

Assessment

Learners will be assessed based on:

- Correct identification and drawing of farm implements

10.8 Agribusiness

Objectives (learner – behaviour)

- List local agricultural products

Content

- Local agricultural products

Methodology (learner –centredness)

- Educational tours
- E-learning
- Collections
- Demonstrations
- Resource person(s)

Teaching – learning aids

- Print media
- Recommended textbooks
- Samples of agricultural products

Activities (learner – centredness)

- Naming agricultural products
- Collecting agricultural products
- Drawing agricultural products

Assessment

Learners will be assessed on:

- Collection, naming and drawing of agricultural products

