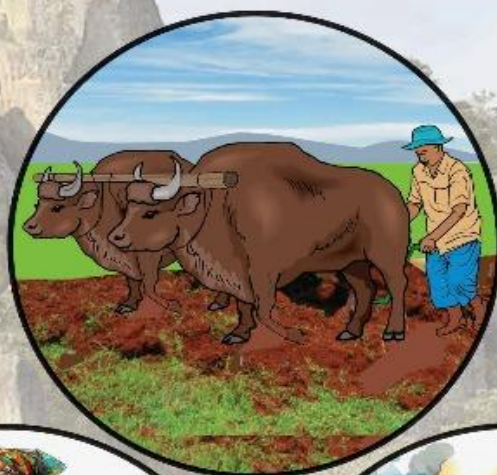




ZIMBABWE

Ministry of Primary and Secondary Education



AGRICULTURE SYLLABUS

2024-2030

FORM 1 - 4

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Table of Contents

1.0	ACKNOWLEDGEMENTS	i
1.0	PREAMBLE	1
1.1	INTRODUCTION	1
1.2	RATIONALE.....	1
1.3	SUMMARY OF CONTENT	1
1.4	METHODOLOGY AND TIME ALLOCATION	1
1.5	ASSUMPTIONS	Error! Bookmark not defined.
1.6	CROSS-CUTTING THEMES	2
2.0	PRESENTATION OF SYLLABUS	2
3.0	AIMS.....	2
4.0	SYLLABUS OBJECTIVES.....	3
5.0	TOPICS.....	5
6.0	SCOPE AND SEQUENCE	1

7.0 COMPETENCY MATRIX.....	7
FORM 1.....	7
FORM 2.....	Error! Bookmark not defined.
FORM 3.....	38
FORM 4.....	62
8.0 SCHEME OF ASSESSMENT	1
8.1 ASSESSMENT OBJECTIVES.....	1

AGRICULTURE FORM 1 - 4 2024 - 2030

1.0 PREAMBLE

1.1 INTRODUCTION

The Heritage-based Agriculture is a science learning area that involves theory and practical activities. This four year learning phase (Form 1 - 4) will provide all learners with opportunities to identify, investigate, solve problems, carry out agricultural activities and assess their viability in a sustainable manner. The learning phase will see all learners being assessed through School Based Continuous Assessment (SBCA) and Summative Assessment (SA).

1.2 RATIONALE

Since Zimbabwe's economy is agro - based, the nation embarked on an agrarian land reform and therefore it is imperative that learners in their diversity acquire necessary agricultural knowledge, skills and positive attitudes. This would enable all learners to be proactive, productive and add value to the national economy. Heritage-based Agriculture enables Learners to value the dignity of labour and harness available resources for enterprise development.

1.3 SUMMARY OF CONTENT

The Form 1 – 4 Heritage-based Agriculture Syllabus will cover theory and practical activities. This four year learning phase seeks to develop skills in sustainable soil and water management, farm tools and machinery use as well as production of agricultural commodities. The syllabus will help all learners to acquire marketing and value addition skills.

1.4 ASSUMPTIONS

It is assumed that all learners have practical skills and knowledge of:

- growing plants and rearing of animals

- the use of farm tools, implements and machinery
- marketing of agricultural produce
- the use of resources in a sustainable manner

1.5 CROSS-CUTTING THEMES

The following are some of the cross-cutting themes in Agriculture:

- Gender equity
- Disaster risk management
- Health and wellbeing
- Environmental management
- ICT
- Business enterprise skills
- Children's rights and responsibilities
- Climate change

2.0 PRESENTATION OF SYLLABUS

The Heritage-based Agriculture Syllabus is a single document covering Forms 1 - 4. It consists of preamble, aims, objectives, scope and sequence, competence matrix and assessment.

3.0 AIMS

The syllabus aims to help learners to:

- 3.1 appreciate the socio-economic importance of agriculture to the country
- 3.2 develop a positive attitude towards Agriculture and its study as a science
- 3.3 develop positive attitude towards the country's natural resources so as to conserve and use them sustainably
- 3.4 apply psychomotor and communication skills in agriculture
- 3.5 develop leadership and Agri-business skills

- 3.6 develop the ability to solve agricultural problems through the application of indigenous knowledge, scientific skills and new technology
- 3.7 develop innovativeness in agricultural practices including value addition
- 3.8 lay a foundation for advanced studies and a career in the field of Agriculture
- 3.9 contribute to the improvement of nutritional needs and food security for the country

4.0 SYLLABUS OBJECTIVES

Learners should be able to:

- 4.1 describe the importance of agriculture to the national economic development of the country
- 4.2 select suitable techniques, equipment and materials for safe and correct use
- 4.3 relate the environment and climatic conditions to agricultural activities
- 4.4 manage an Agriculture enterprise
- 4.5 design experimental or investigative activities using appropriate techniques
- 4.6 present and interpret information in the form of graphs, diagrams and tables
- 4.7 solve Agricultural problems theoretically and practically
- 4.8 carry out relevant estimations and calculations
- 4.9 design agricultural equipment and structures using local materials
- 4.10 select appropriate techniques to add value to Agricultural produce
- 4.11 demonstrate the ability to conserve natural resources sustainably
- 4.12 apply scientific principles and indigenous knowledge to improve nutritional value and food security
- 4.13 practice conservation techniques to protect the environment
- 4.14 select an Agricultural career using the information acquired

5.0 METHODOLOGY AND TIME ALLOCATION

5.1 Methodology

Learner centred and hands on approaches should be used in the development of concepts and skills. These approaches should be inclusive and stimulate curiosity in practical learning. All learners should apply their experiences, knowledge, skills and attitudes independently. Linkage between theory and practice should be prioritised in the teaching and learning of Agriculture.

The following are suggested methods of teaching and learning of Agriculture:

- Project based learning
- Research
- Educational tours
- E-learning
- Experimentation
- Problem solving
- Discovery method
- Demonstrations
- Debate
- Discussions
- Design based learning
- Dramatisation/role play
- Case studies
- Gallery walk
- Resource person(s)
- Simulations
- Song and Dance
- Survey

5.2 Time Allocation

Eight periods of 40 minutes per week should be allocated for adequate coverage of the syllabus. Two double periods for theory and a block of four periods for practicals should be allocated.

NB: Learners should be engaged in at least one Educational Tour and one Seminar per year.

6.0 TOPICS

- 6.1 General Agriculture
- 6.2 Soil and water
- 6.3 Crop husbandry
- 6.4 Animal husbandry
- 6.5 Farm structures and machinery
- 6.6 Agri-business

AGRICULTURE FORM 1 - 4 2024 - 2030

6.0 SCOPE AND SEQUENCE

6.1 TOPIC 1: GENERAL AGRICULTURE

TOPIC	FORM 1	FORM 2	FORM 3	FORM 4
LAND USE	<ul style="list-style-type: none"> • Forms of land use • Land tenure • Historical background to land tenure 	<ul style="list-style-type: none"> • Population growth and land use • Farming systems 	<ul style="list-style-type: none"> • Physical farm planning • Crop rotation 	
ENVIRONMENTAL FACTORS	<ul style="list-style-type: none"> • Environmental factors 	<ul style="list-style-type: none"> • Modification of adverse environmental factors 	<ul style="list-style-type: none"> • Distribution effectiveness, reliability and intensity of rainfall 	<ul style="list-style-type: none"> • Natural disasters • Disaster risk management strategies
NATURAL FARMING REGIONS	<ul style="list-style-type: none"> • Natural farming of regions of Zimbabwe 	-----	-----	-----
FORESTRY	<ul style="list-style-type: none"> • Forests 	<ul style="list-style-type: none"> • Soft and hard wood • Tree planting and management 	<ul style="list-style-type: none"> • Harvesting, treating and marketing of timber and timber products • Deforestation 	<ul style="list-style-type: none"> • Agro-forestry
WILDLIFE	<ul style="list-style-type: none"> • Value of wildlife • Wildlife resources • Fauna and Flora • Classification of wildlife 	<ul style="list-style-type: none"> • Sustainable use of wildlife resource • Specially protected plants and animals 	<ul style="list-style-type: none"> • Indigenous knowledge systems in management of natural resources 	<ul style="list-style-type: none"> • Human and wildlife conflicts

		<ul style="list-style-type: none"> • Dangerous animals and problem animals 		
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6.2 TOPIC 2: SOIL AND WATER

TOPIC	FORM 1	FORM 2	FORM 3	FORM 4
SOIL FORMATION	<ul style="list-style-type: none"> • Weathering 	<p>-----</p>	<ul style="list-style-type: none"> • Weathering 	<p>-----</p>
SOIL TEXTURE, STRUCTURE AND PROFILE	<ul style="list-style-type: none"> • Texture and structure 	<ul style="list-style-type: none"> • Soil profile 	<ul style="list-style-type: none"> • Improvement and maintenance of soil structure • Destruction of soil structure 	<p>-----</p>
SOIL TYPES	<p>-----</p>	<ul style="list-style-type: none"> • Composition and properties of each soil type 	<ul style="list-style-type: none"> • Improvement of physical characteristics of soils 	<p>-----</p>
SOIL CONSTITUENTS	<p>-----</p>	<p>-----</p>	<ul style="list-style-type: none"> • Importance of soil components • Movement of water • Field capacity • Soil macro and micro organisms • Importance of living organisms 	<p>-----</p>
SOIL TEMPERATURE	<p>-----</p>	<p>-----</p>	<ul style="list-style-type: none"> • Influence of soil temperature on plant growth and soil organisms 	<p>-----</p>

			<ul style="list-style-type: none"> • Modification of soil temperature 	
SOIL FERTILITY	<ul style="list-style-type: none"> • Plant nutrients 	<ul style="list-style-type: none"> • Organic and inorganic fertilisers 	<ul style="list-style-type: none"> • Fertiliser application • Soil pH and liming • Soil sampling 	<ul style="list-style-type: none"> • Nitrogen cycle
SOIL EROSION AND CONSERVATION	<ul style="list-style-type: none"> • Soil erosion 	-----	<ul style="list-style-type: none"> • Conservation methods and structures 	-----
WATER LOSS AND SOIL DRAINAGE	<ul style="list-style-type: none"> • Causes of water loss 	-----	<ul style="list-style-type: none"> • Drainage and water logging • Leaching 	-----
WATER CONSERVATION	<ul style="list-style-type: none"> • Water conservation • Methods of water conservation 	-----	<ul style="list-style-type: none"> • Rain water harvesting and storage 	<ul style="list-style-type: none"> • Water pollution • Water legislation
IRRIGATION	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Importance of irrigation • Sources of water for irrigation 	<ul style="list-style-type: none"> • Methods and types of irrigation • Choice of an irrigation system 	<ul style="list-style-type: none"> • Irrigation equipment

6.3 TOPIC 3: CROP HUSBANDRY

TOPIC	FORM 1	FORM 2	FORM 3	FORM 4
CLASSIFICATION OF PLANTS	<ul style="list-style-type: none"> • Classification of plants 	<ul style="list-style-type: none"> • Botanical classification 	-----	-----
STRUCTURE OF FLOWERING PLANTS	<ul style="list-style-type: none"> • External structure of a plant 	<ul style="list-style-type: none"> • Structure of a flower 	<ul style="list-style-type: none"> • Plant anatomy and physiology 	-----
PLANT PROCESSES	-----	<ul style="list-style-type: none"> • Reproduction • Germination 	<ul style="list-style-type: none"> • Water and nutrient uptake 	<ul style="list-style-type: none"> • Respiration • Plant tropisms

			<ul style="list-style-type: none"> • Transpiration • Photosynthesis • Translocation and food storage 	
CROP IMPROVEMENT	-----	-----	<ul style="list-style-type: none"> • Crop breeding 	-----
CROP PRODUCTION	<ul style="list-style-type: none"> • Horticulture • Land preparation • Crop management 	<ul style="list-style-type: none"> • Land preparation • Fruit tree production 	<ul style="list-style-type: none"> • Field crops • Land preparation • Legume and cereal production 	<ul style="list-style-type: none"> • Crop management
CROP PROTECTION	<ul style="list-style-type: none"> • Pests • Diseases • Weeds 	<ul style="list-style-type: none"> • Pests • Diseases • Weeds 	<ul style="list-style-type: none"> • Pests • Disease • Weeds 	<ul style="list-style-type: none"> • Agrochemicals

6.4 TOPIC 4: ANIMAL HUSBANDRY

TOPIC	FORM 1	FORM 2	FORM 3	FORM 4
TYPES OF LIVESTOCK	<ul style="list-style-type: none"> • Types of livestock 	<ul style="list-style-type: none"> • Ruminants and non-ruminants 	-----	-----
ANATOMY AND PHYSIOLOGY	-----	<ul style="list-style-type: none"> • Reproduction in poultry 	<ul style="list-style-type: none"> • Digestive system of a ruminant and non-ruminant 	<ul style="list-style-type: none"> • Reproductive system of a ruminant
NUTRITION	-----	<ul style="list-style-type: none"> • Livestock nutrients 	<ul style="list-style-type: none"> • Types of feeds 	<ul style="list-style-type: none"> • Maintenance and production rations

SMALL LIVESTOCK PRODUCTION	• Broiler production	• Broiler management • Slaughtering, processing and marketing	• Rearing of rabbits/layers/indigenous chickens	• Slaughtering, processing and marketing
NON-RUMINANTS	-----	-----	• Rearing of non-ruminants	-----
RUMINANTS	-----	-----	-----	• Management of cattle or sheep or goats
ANIMAL HEALTH	• Signs of health and ill-health	• Pathogens and Hygiene	• Notifiable diseases • Genetics	• Animal parasites and immunisation
ANIMAL IMPROVEMENT GENETICS	-----	-----	• Genetics	• Breeding

6.5 TOPIC 5: FARM STRUCTURES AND MACHINERY

TOPIC	FORM 1	FORM 2	FORM 3	FORM 4
FARM IMPLEMENTS	• Implements	• Adjustments of animal drawn implements	• Maintenance	-----
FENCING	• Types of fences	• Fencing materials and tools	• Fencing materials	• Anchors and fencing calculations
FARM BUILDINGS	-----	-----	• Farm buildings • Properties of building materials	• Designing livestock buildings
FARM ROADS	-----	• Siting of farm roads	• Features of farm roads	• Road construction and maintenance

APPROPRIATE TECHNOLOGY HARNESSING	-----	-----	• Irrigation pumps	• Shellers
	• Harnesses	• Harnesses	-----	-----

6.6 TOPIC 6: AGRI-BUSINESS

TOPIC	FORM 1	FORM 2	FORM 3	FORM 4
FARM RECORDS AND ACCOUNTS	• Farm records	• Profit and Loss Account	-----	-----
PRINCIPLES OF ECONOMICS	-----	-----	• Opportunity cost and choices • Demand, supply and price	• Diminishing returns • Risk and uncertainty • Decision making
FARM BUDGETING	-----	-----	• Budgets	-----

AGRICULTURAL MARKETING	-----	• Types of markets	• Functions and factors of marketing	• Marketing legislation
AGRICULTURAL COOPERATIVES	• Principles of cooperatives • Types of cooperatives	• Cooperatives	-----	-----

7.0 COMPETENCY MATRIX

FORM 1

7.1 TOPIC 1: GENERAL AGRICULTURE

SUB TOPIC: LAND USE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Forms of land use	<ul style="list-style-type: none"> describe forms of land use identify protected areas in Zimbabwe explain factors limiting land use 	<ul style="list-style-type: none"> Forms of Agriculture: <ul style="list-style-type: none"> Forestry Wildlife management Crop and livestock husbandry Protected areas Factors limiting land use 	<ul style="list-style-type: none"> Carrying out community land use survey to determine the main agricultural activities 	<ul style="list-style-type: none"> Textbooks ICT tools
Land tenure	<ul style="list-style-type: none"> explain land tenure describe each land tenure system 	<ul style="list-style-type: none"> Land tenure: freehold, lease hold, communal and resettlements 	<ul style="list-style-type: none"> Carrying out surveys on land tenure systems in the community 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person
Historical background to land tenure	<ul style="list-style-type: none"> explain the importance of land as a national heritage explain ownership during precolonial period discuss the effects of colonial rule on land ownership justify land reform programme during 3rd Chimurenga/Umvukela outline resettlement models adopted during the agrarian land reform 	<ul style="list-style-type: none"> Pre-colonial, colonial and post-independence land tenure, 3rd Chimurenga/Umvukela land tenure Resettlement models: A1 and A2 	<ul style="list-style-type: none"> Visiting national museums and monuments Inviting resource persons involved in the 2nd and 3rd Chimurenga/Umvukela to explain the rationale of undertaking land reform 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person

SUB TOPIC: ENVIRONMENTAL FACTORS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Environmental factors	<ul style="list-style-type: none"> outline environmental factors influencing agricultural activities discuss the effects of environmental factors on agricultural activities explain effects of temperature on water loss discuss various forms of wilting explain the causes of wilting explain effects of temperature on agricultural activities outline measures that can be taken to minimise effects of adverse temperature 	<ul style="list-style-type: none"> Environmental factors: <ul style="list-style-type: none"> Wind, light, temperature, rainfall and humidity Effects of environmental factors on agricultural activities Loss of water through evaporation Evapo-transpiration and wilting of crops <ul style="list-style-type: none"> Temporary and permanent wilting Frost damage Frost protection 	<ul style="list-style-type: none"> Measuring environmental factors Visiting weather stations for measurements of environmental factors Constructing wind breaks, frost barriers 	<ul style="list-style-type: none"> Textbooks ICT tools Weather station

SUB TOPIC: NATURAL FARMING REGIONS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Natural farming regions of Zimbabwe	<ul style="list-style-type: none"> explain the importance of natural farming regions describe suitable farming systems for each region 	<ul style="list-style-type: none"> Natural farming regions 	<ul style="list-style-type: none"> Carrying out a survey to determine farming activities within their locality Identifying natural farming regions in which they are located 	<ul style="list-style-type: none"> Textbooks ICT tools Map templates Pictures

SUB TOPIC: FORESTRY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Forests	<ul style="list-style-type: none"> explain social, economic, cultural and ecological importance of forests identify major forests in Zimbabwe identify indigenous and exotic timber trees identify exotic timber trees grown in Zimbabwe 	<ul style="list-style-type: none"> Forests Indigenous and exotic trees 	<ul style="list-style-type: none"> Identifying indigenous and exotic trees in their locality Labelling identified indigenous and exotic trees 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person Pictures

SUB TOPIC: WILDLIFE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Wildlife	<ul style="list-style-type: none"> explain socio-economic, cultural and ecological importance of wildlife identify wildlife resources in Zimbabwe identify flora and fauna within their locality classify wildlife according to feeding habits 	<ul style="list-style-type: none"> Value of wildlife Fauna and flora Classification 	<ul style="list-style-type: none"> Discussing socio-economic, cultural and ecological importance of wildlife Surveying on wildlife resources in Zimbabwe Identifying flora and fauna within their locality Classifying animals according to feeding habits Educational touring 	<ul style="list-style-type: none"> Textbooks ICT tools Wildlife Pictures

7.2 TOPIC 2: SOIL AND WATER

SUB TOPIC: SOIL FORMATION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Weathering	<ul style="list-style-type: none">• describe the role of weathering in soil formation• describe the types of rocks from which soil is formed• explain the agents of weathering• discuss factors influencing soil formation	<ul style="list-style-type: none">• Weathering• Types of rocks	<ul style="list-style-type: none">• Identifying rock samples	<ul style="list-style-type: none">• Textbooks• ICT tools• Rock samples• Pictures

SUB TOPIC: SOIL TEXTURE, STRUCTURE AND PROFILE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Texture and structure	<ul style="list-style-type: none"> identify soil particles according to increasing order of size explain the significance of soil texture to crop growth describe soil structure distinguish single grain from crumb structure distinguish between soil structure and soil texture 	<ul style="list-style-type: none"> Soil texture Soil structure 	<ul style="list-style-type: none"> Feeling different soil samples to determine texture Carrying out sedimentation experiments Conducting experiments to determine the effects of texture on emergence of seeds Experimenting on the characteristics of soils 	<ul style="list-style-type: none"> Textbooks ICT tools Soil samples Pictures Sedimentation apparatus

SUB TOPIC: SOIL FERTILITY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Plant nutrients	<ul style="list-style-type: none"> explain the functions of major and minor plant nutrients to crop growth describe effects of nutrients on plant growth 	<ul style="list-style-type: none"> Major and minor nutrients 	<ul style="list-style-type: none"> Listing major and minor nutrients Identifying symptoms of nutrient deficiencies and over supply 	<ul style="list-style-type: none"> Fertilizers Textbooks

SUB TOPIC: SOIL EROSION AND CONSERVATION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Soil erosion	<ul style="list-style-type: none">• identify types of soil erosion• describe the causes and consequences of soil erosion• describe the prevention and control of soil erosion	<ul style="list-style-type: none">• Soil erosion	<ul style="list-style-type: none">• Identifying signs and types of soil erosion• Experimenting the effects of soil erosion on different soil types	<ul style="list-style-type: none">• Textbooks• ICT tools

SUB TOPIC: WATER CONSERVATION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Water conservation	<ul style="list-style-type: none">• explain the importance of water conservation• describe methods of conserving water on arable lands	<ul style="list-style-type: none">• Water conservation	<ul style="list-style-type: none">• Implementing water conservation measures on arable land	<ul style="list-style-type: none">• Textbooks• ICT tools• Resource person

7.3 TOPIC 3: CROP HUSBANDRY

SUB TOPIC: CLASSIFICATION OF PLANTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Classification of plants	<ul style="list-style-type: none"> classify plants according to edible parts classify plants according to life cycle 	<ul style="list-style-type: none"> Parts eaten Life cycle: annual, biennial, perennial 	<ul style="list-style-type: none"> Collecting samples of parts eaten Identifying crops according to their classes Collecting samples, pressing and pasting onto a folder according to their classes 	<ul style="list-style-type: none"> Textbooks ICT tools Plant specimens

SUB TOPIC: STRUCTURE OF FLOWERING PLANTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
External structure of a plant	<ul style="list-style-type: none"> identify parts of a flowering plant state functions of each part of a flowering plant 	<ul style="list-style-type: none"> parts of a plant Functions of plant parts 	<ul style="list-style-type: none"> collecting maize and bean plants identifying external plant parts drawing and labelling external parts of a flowering plant tabulating parts and functions of a flowering plant 	<ul style="list-style-type: none"> Textbooks ICT tools Plant specimens

SUB TOPIC: CROP PRODUCTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Horticulture	<ul style="list-style-type: none"> identify branches of horticulture explain the importance of horticulture 	<ul style="list-style-type: none"> Branches of horticulture Importance of horticulture 	<ul style="list-style-type: none"> Identifying horticultural activities in the local community and relate them to their branches Discussing the importance of horticulture 	<ul style="list-style-type: none"> Textbooks ICT tools Plant specimens
Land preparation	<ul style="list-style-type: none"> state reasons for land preparation prepare seed beds 	<ul style="list-style-type: none"> Seed bed preparation reasons for seed bed preparation 	<ul style="list-style-type: none"> preparing a seed bed discussing reasons for land preparation 	<ul style="list-style-type: none"> Textbooks ICT tools Land preparation tools
Crop management	<ul style="list-style-type: none"> establish and manage vegetable crops 	<ul style="list-style-type: none"> Sowing/planting Management practices Marketing 	<ul style="list-style-type: none"> Planting leaf/root/legume/fruit crops according to recommended spacing Managing a vegetable crop up to maturity 	<ul style="list-style-type: none"> Textbooks ICT tools

SUB TOPIC: CROP PROTECTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Pests	<ul style="list-style-type: none"> explain the effects of pests on crops classify pests according to their feeding habits 	<ul style="list-style-type: none"> Effects of pests on crops Classification of pests 	<ul style="list-style-type: none"> Discussing the effects of pests on crops Observing nature of crop damage in the garden Scouting in the garden/field to identify pests Classifying pests according to their feeding habits 	<ul style="list-style-type: none"> Textbooks ICT tools Specimens
Diseases	<ul style="list-style-type: none"> classify plant diseases according to causal organisms 	<ul style="list-style-type: none"> Plant diseases Effects of plant diseases 	<ul style="list-style-type: none"> Identifying crop damages by diseases Discussing causes of plant diseases 	<ul style="list-style-type: none"> Textbooks ICT tools Specimens
Weeds	<ul style="list-style-type: none"> discuss the harmful and beneficial effects of weeds differentiate annual from perennial weeds 	<ul style="list-style-type: none"> Effects of weeds classification of weeds 	<ul style="list-style-type: none"> Collecting weeds in the local area by classes Preserving samples of weeds 	<ul style="list-style-type: none"> Textbooks ICT tools Specimens

7.4 TOPIC 4: ANIMAL HUSBANDRY

SUB TOPIC: TYPES OF LIVESTOCK

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Types of livestock	<ul style="list-style-type: none"> Name types of livestock explain the importance of livestock 	<ul style="list-style-type: none"> Poultry Fish Ruminants Non ruminants Importance of animals 	<ul style="list-style-type: none"> Identifying the types of livestock Discussing the importance of livestock Compiling a list of products and by-products of livestock 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures Animals

SUB TOPIC: SMALL LIVESTOCK PRODUCTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Broiler production	<ul style="list-style-type: none"> state the breeds of broilers explain the importance of rearing broilers describe the housing requirements for broilers rear broilers 	<ul style="list-style-type: none"> Importance of broilers Breeds of broilers Housing of broilers Types of brooders 	<ul style="list-style-type: none"> Debating on the advantages of keeping broiler chickens Comparing the characteristics of different breeds Designing a brooder and deep litter Rearing broilers 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures Broilers

SUB TOPIC: ANIMAL HEALTH

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Signs of health and ill-health	<ul style="list-style-type: none">• define animal health• distinguish between health and unhealthy farm livestock	<ul style="list-style-type: none">• Animal health• Signs of health and ill health	<ul style="list-style-type: none">• Observing signs of ill-health in farm animals• Comparing healthy and unhealthy animals	<ul style="list-style-type: none">• Textbooks• ICT tools• Pictures• Resource persons• Realia

7.5 TOPIC 5: FARM STRUCTURES AND MACHINERY

SUB TOPIC: FARM IMPLEMENTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Implements	<ul style="list-style-type: none">• list 5 tillage implements• draw and label the parts of a mould board plough• explain functions of parts of a mould board plough	<ul style="list-style-type: none">• Mould board plough• Cultivator• Harrow• Planter• Ridger	<ul style="list-style-type: none">• Identifying the tillage implements• Drawing and labelling a mould board plough	<ul style="list-style-type: none">• Textbooks• ICT tools• Pictures• Realia

SUB TOPIC: FENCING

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Types of fences	<ul style="list-style-type: none">• explain the reasons for fencing• identify different types of fences	<ul style="list-style-type: none">• Types of fences• Purpose of fencing	<ul style="list-style-type: none">• Identifying different types of fences within the locality• Discussing the reasons for fencing	<ul style="list-style-type: none">• Textbooks• ICT tools• Pictures

SUB TOPIC: HARNESSING

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Harnesses	<ul style="list-style-type: none">• list the types of harnesses• describe the types of harnesses• state 3 types of yokes	<ul style="list-style-type: none">• Breast bands, collar harnesses, saddle harnesses• Yokes	<ul style="list-style-type: none">• Designing harnesses for cattle and donkeys• Constructing harnessing models	<ul style="list-style-type: none">• Textbooks• ICT tools• Pictures

7.6 TOPIC 6: AGRI-BUSINESS

SUB TOPIC: FARM RECORDS AND ACCOUNTS

TOPIC	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Farm records	<ul style="list-style-type: none"> describe the importance of farm records differentiate physical from financial records 	<ul style="list-style-type: none"> Farm records 	<ul style="list-style-type: none"> Discussing the importance of farm records Compiling records for Agriculture projects at the school Educational touring of local farms 	<ul style="list-style-type: none"> Textbooks ICT tools Farm records

SUB TOPIC: AGRICULTURAL COOPERATIVES

TOPIC	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Principles of cooperatives	<ul style="list-style-type: none"> explain the principles of Agricultural cooperatives 	<ul style="list-style-type: none"> Cooperatives 	<ul style="list-style-type: none"> Discussing how cooperatives are formed Discussing the principles of cooperatives 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person

FORM 2

TOPIC 1: GENERAL AGRICULTURE

SUB TOPIC: LAND USE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Population growth and land use	<ul style="list-style-type: none">explain the effects of population on land use	<ul style="list-style-type: none">Land pressure	<ul style="list-style-type: none">Calculating population density in their local community	<ul style="list-style-type: none">TextbooksICT toolsDemographic maps
Farming systems	<ul style="list-style-type: none">describe each farming system	<ul style="list-style-type: none">Mixed farmingMonocultureIntercropping	<ul style="list-style-type: none">Discussing each farming systemEducational touring of local farms	<ul style="list-style-type: none">TextbooksICT toolsPictures

SUB TOPIC: ENVIRONMENTAL FACTORS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Modification of adverse environmental factors	<ul style="list-style-type: none"> describe ways of reducing effects of environmental factors on Agricultural activities 	<ul style="list-style-type: none"> Modification of adverse environmental factors 	<ul style="list-style-type: none"> Practising shading, mulching, pot holing, manuring, tie ridging, watering and conservation tillage Visiting green houses 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures

SUB TOPIC: FORESTRY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Soft and hard wood	<ul style="list-style-type: none"> distinguish between soft and hard wood 	<ul style="list-style-type: none"> Soft and hard wood 	<ul style="list-style-type: none"> Identifying soft and hard wood timber species 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person Pictures
Nursery site	<ul style="list-style-type: none"> describe factors influencing choice of a nursery site establish and manage tree seedlings in a nursery 	<ul style="list-style-type: none"> Factors influencing choice of a nursery site Tree planting and management 	<ul style="list-style-type: none"> Selecting a nursery site for raising seedlings Raising tree seedlings Demonstrating proper tree planting and management skills Visiting established seedling nurseries 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person Pictures

SUB TOPIC: WILDLIFE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Wildlife resources	<ul style="list-style-type: none"> explain sustainable methods of wildlife utilisation identify special plants and animals in Zimbabwe identify dangerous and problem animals in Zimbabwe describe ways of dealing with dangerous and problem animals in Zimbabwe 	<ul style="list-style-type: none"> Wildlife resources Specially protected animals and plants Dangerous and problem animals 	<ul style="list-style-type: none"> Discussing sustainable methods of wildlife utilisation Listing specially protected plants and animals Surveying on local dangerous and problem animals Demonstrating ways of dealing with dangerous and problem animals in Zimbabwe Watching documentaries 	<ul style="list-style-type: none"> Textbooks ICT tools Protected areas Pictures

TOPIC 2: SOIL AND WATER

SUB TOPIC: SOIL TEXTURE, STRUCTURE AND PROFILE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Soil profile	<ul style="list-style-type: none"> describe soil profile with the aid of a diagram describe the appearance and composition of each horizon discuss the significance of each horizon to crop growth explain the importance of soil profile 	<ul style="list-style-type: none"> Soil profile Soil profiling 	<ul style="list-style-type: none"> Digging a profile pit Identifying the horizons up to the maximum depth of 1.5m 	<ul style="list-style-type: none"> Road side excavations Gullies Open pits

SUB TOPIC: SOIL TYPES

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Composition and properties	<ul style="list-style-type: none"> identify different soil types explain the composition of each soil type compare the composition of soil types compare the properties of different soil types 	<ul style="list-style-type: none"> Soil types: <ul style="list-style-type: none"> Sand soil Loam soil Clay soil Composition and properties 	<ul style="list-style-type: none"> Collecting different soil samples Identifying the soil types Carrying out experiments to verify different properties of soil type 	<ul style="list-style-type: none"> Soil samples

SUB TOPIC: SOIL FERTILITY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Organic and inorganic fertilisers	<ul style="list-style-type: none"> distinguish between organic and inorganic fertilisers describe types of organic fertilisers describe types of inorganic fertilisers differentiate compound from straight fertilisers 	<ul style="list-style-type: none"> Organic fertilisers Inorganic fertilisers 	<ul style="list-style-type: none"> Examining organic and inorganic fertilizers Identifying organic and inorganic fertilisers Identifying straight and compound fertilisers 	<ul style="list-style-type: none"> Textbooks ICT tools Fertilisers Resource person

SUB TOPIC: IRRIGATION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Importance of irrigation	<ul style="list-style-type: none"> discuss the importance of irrigation 	<ul style="list-style-type: none"> Irrigation 	<ul style="list-style-type: none"> Discussing the importance of irrigation 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures
Sources of water for irrigation	<ul style="list-style-type: none"> list sources of water suitable for irrigation determine the suitability of water for irrigation 	<ul style="list-style-type: none"> Sources of irrigation water Water quality 	<ul style="list-style-type: none"> Discussing the different sources of water for irrigation Testing for impurities in water 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures

TOPIC 3: CROP HUSBANDRY

SUB TOPIC: CLASSIFICATION OF PLANTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Botanical classification of plants	<ul style="list-style-type: none"> differentiate monocotyledonous from dicotyledonous plants state botanical classes of crops 	<ul style="list-style-type: none"> Monocotyledonous and dicotyledonous plants Botanical classes: <ul style="list-style-type: none"> Legumes Brassica Solanaceous Cereals Cucurbits 	<ul style="list-style-type: none"> Carrying out field tours Differentiating classes of crops Categorising crops according to botanical classes 	<ul style="list-style-type: none"> Textbooks ICT tools Plant specimens Pictures

SUB TOPIC: STRUCTURE OF FLOWERING PLANTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Structure of a flower	<ul style="list-style-type: none"> draw the structure of maize and bean flowers label the parts of a flower state functions of each part of a flower 	<ul style="list-style-type: none"> Structure of a flower Functions of parts 	<ul style="list-style-type: none"> Collecting maize and bean flowers Identifying parts of a flower Drawing and labelling parts of a flower Tabulating parts and functions of a flower 	<ul style="list-style-type: none"> Textbooks ICT tools Plant specimens Pictures

SUB TOPIC: PLANT PROCESSES

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Reproduction	<ul style="list-style-type: none"> differentiate between sexual and asexual reproduction state advantages and disadvantages of sexual and asexual reproduction describe pollination of maize and bean flowers describe fertilisation process in plants explain different methods of asexual reproduction 	<ul style="list-style-type: none"> Reproduction Pollination and fertilisation 	<ul style="list-style-type: none"> Observing and differentiating maize and bean flowers Discussing advantages and disadvantages of sexual and asexual reproduction Discussing the fertilisation process in plants Watching video simulations on fertilisation process in plants 	<ul style="list-style-type: none"> Textbooks ICT tools Specimens

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
			<ul style="list-style-type: none"> Demonstrating methods of asexual reproduction such as budding, layering 	
Germination	<ul style="list-style-type: none"> state requirements for seed germination differentiate between emergence and seed germination identify internal and external parts of a maize and bean seed 	<ul style="list-style-type: none"> Germination 	<ul style="list-style-type: none"> Conducting experiments to determine the requirements for conditions necessary for seed germination Drawing diagrams to illustrate germination and emergence Dissecting maize and bean seeds Observing the internal parts and external parts of a bean and maize seeds Identifying the parts of a bean and maize seeds 	<ul style="list-style-type: none"> Textbooks ICT tools Specimens

SUB TOPIC: CROP PRODUCTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Land preparation	<ul style="list-style-type: none"> explain the importance of land preparation state the planting systems describe the preparation of a planting hole 	<ul style="list-style-type: none"> Land preparation <ul style="list-style-type: none"> Ploughing Marking planting systems Digging planting holes Making basins 	<ul style="list-style-type: none"> Discussing the importance of land preparation Demonstrating the orchard layout on the ground Preparing planting holes 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures
Fruit tree production	<ul style="list-style-type: none"> explain how a planting board is used plant a fruit tree calculate amounts of fertilisers required for orchard crops design an irrigation schedule discuss the effects of pruning prepare fire guards identify signs of maturity market orchard crops 	<ul style="list-style-type: none"> Uses of a planting board suitable cultivars propagation methods planting management practices harvesting marketing 	<ul style="list-style-type: none"> Growing and managing one crop from the following groups: <ul style="list-style-type: none"> Group A: Deciduous fruits, apple and peaches Group B: subtropical fruits: bananas, guavas, mangoes Group C: Citrus fruits, oranges, naartjies Preparing fire guards Identifying signs of maturity Marketing orchard crops 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures Realia

SUB TOPIC: CROP PROTECTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Pests	<ul style="list-style-type: none"> describe one pest with a complete metamorphosis describe one pest with an incomplete metamorphosis 	<ul style="list-style-type: none"> Life cycle of pests <ul style="list-style-type: none"> Complete and incomplete metamorphosis 	<ul style="list-style-type: none"> Discussing the life cycle of a pest with a complete and incomplete metamorphosis Drawing well labelled diagram of life cycle of a pest with complete and incomplete metamorphosis Collecting and preserving pests specimens 	<ul style="list-style-type: none"> Textbooks ICT tools Pest samples Pictures
Diseases	<ul style="list-style-type: none"> discuss how plant diseases are spread identify symptoms of named groups of diseases 	<ul style="list-style-type: none"> Transmission General symptoms of: <ul style="list-style-type: none"> Fungal Bacteria Viral diseases 	<ul style="list-style-type: none"> Discussing the spread of plant diseases Observing symptoms of plant diseases Watching video clips and photos of various plant diseases 	<ul style="list-style-type: none"> Textbooks ICT tools Plant specimens Pictures
Weeds	<ul style="list-style-type: none"> classify weeds as narrow and broad leaved weeds identify the mode of spread of common weeds 	<ul style="list-style-type: none"> Weeds Mode of spread 	<ul style="list-style-type: none"> Classifying weeds Identifying the modes of spread of common weeds 	<ul style="list-style-type: none"> Textbooks ICT tools Plant specimens Pictures

TOPIC 4: ANIMAL HUSBANDRY

SUB TOPIC: TYPES OF LIVESTOCK

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Ruminants and non-ruminants	<ul style="list-style-type: none"> identify ruminant and non-ruminant animals distinguish characteristics between ruminants and non-ruminants 	<ul style="list-style-type: none"> Ruminants: <ul style="list-style-type: none"> Cattle, sheep and goats Non-ruminants: <ul style="list-style-type: none"> Horses, donkeys, pigs, rabbits, poultry 	<ul style="list-style-type: none"> Examining digestive systems of ruminants and non-ruminants 	<ul style="list-style-type: none"> Textbooks ICT tools Realia Pictures

SUB TOPIC: ANATOMY AND PHYSIOLOGY

TOPIC	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Reproduction in poultry	<ul style="list-style-type: none"> draw and label reproductive system of a hen and cock describe the process of egg formation state functions of each part of an egg 	<ul style="list-style-type: none"> Reproductive parts Egg 	<ul style="list-style-type: none"> Observing the male and female organs from slaughtered hen or cock Drawing and labelling reproductive parts of a hen and cock drawing and labelling an egg Tabulating the reproductive parts and their functions 	<ul style="list-style-type: none"> Textbooks ICT tools Relia Pictures

SUB TOPIC: NUTRITION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
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Livestock nutrients	<ul style="list-style-type: none"> name the main nutrients required by farm livestock explain functions of each nutrient describe deficiency symptoms of each nutrient identify sources of main nutrients 	<ul style="list-style-type: none"> Livestock nutrients 	<ul style="list-style-type: none"> Carrying out simple tests for nutrients in available feedstuffs Collecting and identifying samples of foodstuffs rich in carbohydrates and proteins Observing and identifying symptoms of malnutrition in livestock 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures Feedstuffs Realia
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SUB TOPIC: SMALL LIVESTOCK PRODUCTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Broiler management	<ul style="list-style-type: none"> select type of feeds from day old to slaughter rear broilers assess growth rates of broiler chickens design physical and financial records 	<ul style="list-style-type: none"> Management practices 	<ul style="list-style-type: none"> Preparing rations for broiler chickens of different ages Brooding and rearing broilers Weighing broilers regularly and illustrate graphically growth rate Compiling physical and financial records 	<ul style="list-style-type: none"> Textbooks ICT tools Scale Feeds Broilers

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Slaughtering, processing and marketing	<ul style="list-style-type: none"> demonstrate the slaughtering and dressing of broilers calculate dressing out percentage identify market for broilers 	<ul style="list-style-type: none"> Slaughtering Dressing Marketing 	<ul style="list-style-type: none"> Slaughtering and dressing broilers using different methods Calculating dressing out percentage Carrying out market research for broilers Calculating profit and loss 	<ul style="list-style-type: none"> Textbooks ICT tools Broilers

SUB TOPIC: ANIMAL HEALTH

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Pathogens and hygiene	<ul style="list-style-type: none"> explain causes of diseases justify the importance of hygiene in the prevention and control of diseases 	<ul style="list-style-type: none"> Pathogens Sanitation 	<ul style="list-style-type: none"> Surveying on causes of diseases in animals Investigating and discussing remedies to prevent and control diseases Disinfecting poultry houses 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person Pictures

TOPIC 5: FARM STRUCTURES AND MACHINERY

SUB TOPIC: FARM IMPLEMENTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Adjustments of animal drawn implements	<ul style="list-style-type: none"> carry out adjustments on animal drawn implements 	<ul style="list-style-type: none"> Adjustments: <ul style="list-style-type: none"> Depth Width 	<ul style="list-style-type: none"> Adjusting the depths and width of the mould board plough, cultivator and harrow 	<ul style="list-style-type: none"> Textbooks ICT tools Mould board plough Cultivator Harrow Pictures

SUB TOPIC: FENCING

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Fencing materials and tools	<ul style="list-style-type: none"> identify fencing materials and tools discuss advantages and disadvantages of different fencing materials 	<ul style="list-style-type: none"> Fencing materials and tools 	<ul style="list-style-type: none"> Selecting suitable fencing materials Using tools safely and correctly 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures Actual tools

SUB TOPIC: FARM ROADS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Siting of farm roads	<ul style="list-style-type: none"> discuss factors to be considered when siting a farm road 	<ul style="list-style-type: none"> Siting a farm road Siting equipment 	<ul style="list-style-type: none"> Maintaining roads Grading and clearing drains 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person

	<ul style="list-style-type: none"> list equipment needed when siting farm roads describe characteristics of well sited farm roads 		<ul style="list-style-type: none"> Siting a farm road Describing equipment needed for siting a farm road 	<ul style="list-style-type: none"> Pictures
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SUB TOPIC: HARNESSING

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Harnesses	<ul style="list-style-type: none"> describe materials used for harnesses harness specific animals 	<ul style="list-style-type: none"> Materials for making harnesses 	<ul style="list-style-type: none"> Making harnesses using locally available materials Harnessing specific animals 	<ul style="list-style-type: none"> Textbooks ICT tools Realia Pictures

TOPIC 6: AGRI-BUSINESS

SUB TOPIC: FARM RECORDS AND ACCOUNTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
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Profit and loss Account	<ul style="list-style-type: none"> explain the functions of profit and loss account design a profit and loss account identify the income and expenses of a farm enterprise calculate the income from an agriculture enterprise 	<ul style="list-style-type: none"> Profit and loss accounts Income and expenditure accounts 	<ul style="list-style-type: none"> Discussing role of a profit and loss account in Agriculture Preparing a profit and loss account at a school agricultural enterprise Calculating farm income and expenditure 	<ul style="list-style-type: none"> Textbooks ICT tools Farm records Pictures
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SUB TOPIC: MARKETING

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Types of markets	<ul style="list-style-type: none"> distinguish between controlled and uncontrolled markets describe formal and informal markets for major crops and livestock in Zimbabwe 	<ul style="list-style-type: none"> Controlled and uncontrolled markets Formal and informal markets 	<ul style="list-style-type: none"> Surveying on marketing of Agricultural products Discussing types of markets for local agricultural products 	<ul style="list-style-type: none"> Textbooks ICT tools Local agricultural markets

SUB TOPIC: AGRICULTURAL COOPERATIVES

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
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Cooperatives	<ul style="list-style-type: none"> • explain benefits of agricultural cooperatives • identify problems associated with agricultural cooperatives 	<ul style="list-style-type: none"> • Agricultural cooperatives 	<ul style="list-style-type: none"> • Discussing the benefits of agricultural cooperatives • Researching on the problems linked to local agricultural cooperatives • Dramatizing problems of cooperatives 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Resource person
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FORM 3

TOPIC 1: GENERAL AGRICULTURE

SUB TOPIC: LAND USE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Physical farm planning	<ul style="list-style-type: none"> • discuss the importance of 	<ul style="list-style-type: none"> • Physical farm planning 	<ul style="list-style-type: none"> • Sketching farm layouts with 	<ul style="list-style-type: none"> • Textbooks • ICT tools

	physical farm planning		suggested farming activities	<ul style="list-style-type: none"> Map templates
Crop rotation	<ul style="list-style-type: none"> outline principles of crop rotation design a four crop rotation cycle discuss the advantages of crop rotation 	<ul style="list-style-type: none"> Principles of crop rotation 	<ul style="list-style-type: none"> Practising crop rotation in the school garden 	<ul style="list-style-type: none"> Textbooks ICT tools Specimens Pictures

SUB TOPIC: ENVIRONMENTAL FACTORS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Distribution effectiveness, reliability and intensity of rainfall	<ul style="list-style-type: none"> describe distribution, effectiveness, reliability and intensity of rainfall in Zimbabwe explain the effects of distribution and intensity of rainfall on agricultural activities 	<ul style="list-style-type: none"> Distribution Effectiveness Reliability Intensity of rainfall Agriculture activities in relation to distribution and intensity of rainfall 	<ul style="list-style-type: none"> Discussing how agricultural activities in Zimbabwe are influenced by rainfall 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures

SUB TOPIC: FORESTRY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Harvesting, treating and marketing of timber and timber products	<ul style="list-style-type: none"> describe methods of harvesting trees discuss methods of treating timber identify possible markets 	<ul style="list-style-type: none"> Harvesting Treating Marketing 	<ul style="list-style-type: none"> Harvesting trees Treating timber Marketing timber Compiling production records 	<ul style="list-style-type: none"> Creosote Carbolinium
Deforestation	<ul style="list-style-type: none"> describe causes of deforestation explain effects of deforestation suggest possible solutions to deforestation explain importance of afforestation and reforestation 	<ul style="list-style-type: none"> Deforestation Afforestation Reforestation 	<ul style="list-style-type: none"> Surveying on the extent of deforestation within their locality Discussing effects of deforestation Identifying possible solutions to deforestation in their locality Planting trees 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures

SUB TOPIC: WILDLIFE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Indigenous knowledge systems in management of natural resources	<ul style="list-style-type: none"> explain how cultural values and beliefs affect the management of natural resources 	<ul style="list-style-type: none"> Conservation and preservation Poaching Biodiversity 	<ul style="list-style-type: none"> Conducting class/school census based on totems that relate to animals 	<ul style="list-style-type: none"> Protected areas Resource person Textbooks ICT tools

	<ul style="list-style-type: none"> • explain how principles of conservation and preservation of wildlife affect trading • describe effects of poaching • discuss biodiversity in relation to genetics, species and ecosystem diversity • describe habitats of wild animals 	<ul style="list-style-type: none"> • Genetic, species and ecosystem diversity • Ecology 	<p>found in the community</p> <ul style="list-style-type: none"> • Visiting protected areas • Debating on wildlife trade at local and international levels • Establishing a nature reserve to encourage biodiversity • Field studying of a habitat to determine animal and plant species composition 	
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TOPIC 2: SOIL AND WATER

SUB TOPIC: SOIL FORMATION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Weathering	<ul style="list-style-type: none"> • discuss various forms of weathering 	<ul style="list-style-type: none"> • Forms of weathering 	<ul style="list-style-type: none"> • Observing weathering • Demonstrating weathering 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Pictures

SUB TOPIC: SOIL TEXTURE, STRUCTURE AND PROFILE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Soil structure	<ul style="list-style-type: none"> identify methods of improving and maintaining good structure explain factors affecting soil structure explain the importance of soil structure 	<ul style="list-style-type: none"> Soil structure 	<ul style="list-style-type: none"> Carrying out field observations of different soil structures Sampling of soil and determining humus content 	<ul style="list-style-type: none"> Textbooks ICT tools Soil samples

SUB TOPIC: SOIL TYPES

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Improvement of physical characteristics of soils	<ul style="list-style-type: none"> describe methods of improving different soil types 	<ul style="list-style-type: none"> Soil improvement: <ul style="list-style-type: none"> Sand and clay soils 	<ul style="list-style-type: none"> Manuring soils Adding anthill soil to sand soil Liming 	<ul style="list-style-type: none"> Lime Organic matter

SUB TOPIC: SOIL CONSTITUENTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Importance of soil components	<ul style="list-style-type: none"> describe the composition of an agriculturally viable soil explain the importance of each soil component describe the types of soil water explain movement of water in the soil explain field capacity explain the role of living organisms in the soil 	<ul style="list-style-type: none"> Soil components Types of soil water Movement of water Field capacity Soil macro and micro organisms 	<ul style="list-style-type: none"> Experimenting on the percentage composition of air, water, organic and inorganic matter in the soil Collecting soil organisms and identifying them 	<ul style="list-style-type: none"> Soil samples Textbooks ICT tools

SUB TOPIC: SOIL TEMPERATURE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Influence of soil temperature on plant growth and soil organisms	<ul style="list-style-type: none"> explain the effects of soil temperature on plant growth and soil organisms 	<ul style="list-style-type: none"> Soil temperature 	<ul style="list-style-type: none"> Conducting field experiments on mulching, shedding and watering 	<ul style="list-style-type: none"> Textbooks ICT tools Soil samples

	<ul style="list-style-type: none"> • outline optimum soil temperature range for growth of most crops • explain effects of extreme temperatures on various stages of crop growth • outline measures that can be taken to reduce the effects of extreme soil temperatures 		<ul style="list-style-type: none"> • Experimenting on the effects of temperature on seed germination 	
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SUB TOPIC: SOIL FERTILITY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Fertiliser application	<ul style="list-style-type: none"> • describe different methods of fertiliser application • calculate fertiliser application quantities per given area • differentiate basal from top dressing 	<ul style="list-style-type: none"> • Application methods • Calculations • Time of application 	<ul style="list-style-type: none"> • Applying organic and inorganic fertilisers 	<ul style="list-style-type: none"> • Organic and inorganic fertilisers • Resource person
Soil sampling	<ul style="list-style-type: none"> • explain the importance of soil sampling • sample soil using at least one method 	<ul style="list-style-type: none"> • Methods of soil sampling 	<ul style="list-style-type: none"> • Sampling soils 	<ul style="list-style-type: none"> • Soil sampling equipment

Soil pH and liming	<ul style="list-style-type: none"> describe how soils are tested for pH discuss the influence of soil pH describe methods of correcting soil pH identify types of lime explain the importance of liming materials explain the difference between lime and fertiliser interpret the significance of pH values 	<ul style="list-style-type: none"> Soil pH Liming 	<ul style="list-style-type: none"> Determining soil pH values using pH meter and universal indicator Demonstrating the different methods of lime application 	<ul style="list-style-type: none"> pH meter Universal indicator Soil samples
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SUB TOPIC: SOIL EROSION AND CONSERVATION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Conservation methods and structures	<ul style="list-style-type: none"> describe methods of soil conservation on arable and grazing lands construct basic conservation structures to standard dimensions 	<ul style="list-style-type: none"> Conservation methods Conservation structures 	<ul style="list-style-type: none"> Constructing and maintaining structures Measuring dimensions of mechanical conservation structures Reclaiming eroded areas in and around the school 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures

			<ul style="list-style-type: none"> • Practising biological conservation 	
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SUB TOPIC: WATER LOSS AND SOIL DRAINAGE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Drainage and water logging	<ul style="list-style-type: none"> • describe drainage and water logging • explain the effects of water logged soils on crop growth • describe methods of improving drainage 	<ul style="list-style-type: none"> • Causes of water loss • Drainage and water logging 	<ul style="list-style-type: none"> • Field touring to identify signs of run off • Identifying drainage structures on the land • Constructing and maintaining drainage structures 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Pictures
Leaching	<ul style="list-style-type: none"> • explain the causes of leaching in arable lands • explain the effects of drainage on loss of plant nutrients • describe methods of controlling leaching in arable lands 	<ul style="list-style-type: none"> • Leaching 	<ul style="list-style-type: none"> • Experimenting on leaching levels of different soils 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Pictures

SUB TOPIC: WATER CONSERVATION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
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Rain harvesting and storage	<ul style="list-style-type: none"> describe methods of harvesting and storing water describe different ground water sources 	<ul style="list-style-type: none"> Rain harvesting and storage Ground water sources 	<ul style="list-style-type: none"> Harvesting rain water using various methods Maintaining water harvesting structures Identifying ground water sources 	<ul style="list-style-type: none"> Textbooks ICT tools
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SUB TOPIC: IRRIGATION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Methods and types of irrigation	<ul style="list-style-type: none"> describe methods of irrigation explain different types of irrigation explain the advantages and disadvantages of each method of irrigation 	<ul style="list-style-type: none"> Methods of irrigation Types of irrigation 	<ul style="list-style-type: none"> Describing methods and types of irrigation Applying water to crops using at least one method of irrigation Visiting irrigation schemes in their locality 	<ul style="list-style-type: none"> Textbooks ICT tools Models Irrigation schemes
Choice of an irrigation system	<ul style="list-style-type: none"> discuss the factors affecting choice of an irrigation system 	<ul style="list-style-type: none"> Factors affecting choice of an irrigation system 	<ul style="list-style-type: none"> Demonstrating different methods of irrigation Designing an irrigation system 	<ul style="list-style-type: none"> Textbooks ICT tools

TOPIC 3: CROP HUSBANDRY

SUB TOPIC: STRUCTURE OF FLOWERING PLANTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Plant anatomy and physiology	<ul style="list-style-type: none">• identify parts of the internal structure of a root, stem and leaf• explain functions of tissues in a root, stem and leaf	<ul style="list-style-type: none">• Tissue distribution in a:<ul style="list-style-type: none">- root- stem- leaf	<ul style="list-style-type: none">• Identifying the internal structure of a root, stem and leaf on a microscope• Drawing cross sectional diagrams of stem, root and leaf• Discussing the functions of root, stem and leaf	<ul style="list-style-type: none">• Textbooks• ICT tools• Microscopes• Pictures• Realia

SUB TOPIC: PLANT PROCESSES

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Water and nutrient uptake	<ul style="list-style-type: none">• describe the absorption of water by	<ul style="list-style-type: none">• Osmosis• Diffusion• Active uptake	<ul style="list-style-type: none">• Experimenting osmosis	<ul style="list-style-type: none">• Textbooks• ICT tools

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
	plants through osmosis • explain nutrient absorption by roots through active uptake • describe absorption of water by seeds	• Imbibition	• Demonstrating imbibition by means of experiments • Discussing processes of osmosis, diffusion active uptake and imbibition	• Experimental apparatus • Pictures • Seed • potato samples
Transpiration	• discuss the role of transpiration stream • describe the role of stomata • explain how wilting occurs • outline factors affecting rate of transpiration	• Transpiration • Transpiration streams • Role of stomata in transpiration • Importance of transpiration • Wilting	• Carrying out field experiments to demonstrate transpiration • Identifying plants that are under water stress • Discussing factors affecting rate of transpiration	• Textbooks • ICT tools • Pictures • Experiment apparatus
Photosynthesis	• describe how plants photosynthesise • state the chemical and word equation for photosynthesis	• Gaseous exchange • Roles of chlorophyll, carbon dioxide and light • Word and chemical equation for photosynthesis	• Discussing the process of photosynthesis • Conducting experiments to demonstrate the need for carbon dioxide, light and chlorophyll	• Textbooks • ICT tools • Experiment apparatus • Pictures
Translocation and food storage	• explain the process of translocation	• Translocation • Food storage organs	• Demonstrating the process of	• Textbooks • ICT tools

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
	<ul style="list-style-type: none"> identify plant food storage organs state the nature of food stored by plants 		<p>translocation through the ring barking experiment</p> <ul style="list-style-type: none"> Selecting plants available in the locality and identify where they store plant food listing specific plants and state where they store food 	<ul style="list-style-type: none"> Plant specimens Pictures

SUB TOPIC: CROP IMPROVEMENT

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Crop breeding (Maize)	<ul style="list-style-type: none"> state the importance of crop breeding explain heterosis differentiate between open pollination and controlled pollination state the three types of crop hybrids describe the production of single, 	<ul style="list-style-type: none"> Crop breeding Hybrids Heterosis in plant breeding Open and controlled breeding Single, double and three way hybrids 	<ul style="list-style-type: none"> Discussing the importance of crop breeding Identifying crop hybrids grown in the locality Visiting a plant breeding station and observe how hybrids are produced 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person Pictures

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
	double and three way hybrids		<ul style="list-style-type: none"> Demonstrating maize breeding 	

SUB TOPIC: CROP PRODUCTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Land preparation	<ul style="list-style-type: none"> state reasons for land preparation describe steps taken during land preparation describe primary and secondary tillage methods describe conservation or minimum tillage techniques identify implements and tools used 	<ul style="list-style-type: none"> Reasons for land preparation Land preparation procedures Tillage machinery, implements and tools 	<ul style="list-style-type: none"> Discussing reasons for land preparation Carrying out tillage operations Describing the tillage practices Identifying implements and tools used Touring farming areas 	<ul style="list-style-type: none"> Textbooks ICT tools Tillage machinery Implements and tools
Legume and cereal production	<ul style="list-style-type: none"> grow one cereal and one legume crop carry out management practices on selected crops describe harvesting of the crop 	<ul style="list-style-type: none"> Suitable cultivars from: <ul style="list-style-type: none"> Cereals:- maize, sorghum, wheat Legumes:- groundnuts, 	<ul style="list-style-type: none"> Selecting crop cultivars Carrying out crop management practices on selected crops Identifying signs of crop maturity 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
	<ul style="list-style-type: none"> store harvested crops market crops 	<ul style="list-style-type: none"> field beans, soya beans Seed rates Management practices Storage structures Marketing 	<ul style="list-style-type: none"> Storing harvested crops Marketing crops 	

SUB TOPIC: CROP PROTECTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Pests	<ul style="list-style-type: none"> explain methods of pests control describe the advantages and disadvantages of each method describe mode of action of the main groups of pesticides 	<ul style="list-style-type: none"> Pest control methods Pesticides 	<ul style="list-style-type: none"> Discussing methods of pest control Describing advantages and disadvantages of pest control methods Describing the mode of action of the main groups of pesticides 	<ul style="list-style-type: none"> Textbooks ICT tools Empty pesticides containers Pictures
Diseases	<ul style="list-style-type: none"> describe methods of disease control identify the correct chemicals used to control crop diseases 	<ul style="list-style-type: none"> Disease control methods 	<ul style="list-style-type: none"> Describing methods of disease control Scouting for crop diseases 	<ul style="list-style-type: none"> Textbooks ICT tools Samples of diseased crops

			<ul style="list-style-type: none"> Collecting samples of crops damaged by crop diseases 	
Weeds	<ul style="list-style-type: none"> describe methods of weed control differentiate herbicides as selective and non-selective differentiate herbicides on the basis of timing of application compare effectiveness of different weed control methods 	<ul style="list-style-type: none"> Weed control Herbicides 	<ul style="list-style-type: none"> Describing methods of weed control Discussing the basis of herbicides selectivity Identifying samples of types of herbicides Experimenting on the effectiveness of different methods of weed control 	<ul style="list-style-type: none"> Textbooks ICT tools Empty herbicide containers

TOPIC 4: ANIMAL HUSBANDRY

SUB TOPIC: ANATOMY AND PHYSIOLOGY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Digestive system of a ruminant and non-ruminant	<ul style="list-style-type: none"> identify parts of the digestive system of a ruminant and non-ruminant explain functions of parts of the digestive systems distinguish the difference between digestive systems of a ruminant and non-ruminant 	<ul style="list-style-type: none"> Anatomy and physiology of the digestive systems 	<ul style="list-style-type: none"> Drawing and labelling digestive system of a named ruminant and non-ruminant Discussing digestive systems Examining the digestive systems 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures Realia

SUB TOPIC: NUTRITION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Types of feeds	<ul style="list-style-type: none"> classify feed stuffs identify feed stuffs for each class of livestock 	<ul style="list-style-type: none"> Roughages Concentrates 	<ul style="list-style-type: none"> Preparing balanced ration Classifying feedstuffs 	<ul style="list-style-type: none"> Textbooks ICT tools Samples of feeds Pictures

SUB TOPIC: SMALL LIVESTOCK PRODUCTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Rearing of either rabbits or layers or indigenous chickens	<ul style="list-style-type: none"> • identify breeds of a named animal • choose a suitable housing site for a named animal • design and construct housing for a named animal • describe nutritional requirements of a named animal • manage the young one of a named animal 	<ul style="list-style-type: none"> • Breeds • Housing • Nutritional requirements • Management practices 	<ul style="list-style-type: none"> • Comparing characteristics of different breeds • Choosing an appropriate breed • Designing a plan of an animal house • Designing a feeding programme for a named animal • Brooding and rearing animals • Carrying out necessary management practices 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Realia • Feeds samples • Housing plans

SUB TOPIC: NON-RUMINANTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Rearing of Non-ruminants: Pigs or donkeys	<ul style="list-style-type: none"> identify the breeds of a named animal describe housing systems manage the named animal to maturity 	<ul style="list-style-type: none"> Animal breeds Housing systems Management practices 	<ul style="list-style-type: none"> Rearing a named animal Discussing management practices of a named animal Researching on breeds of pigs or donkeys 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person Realia

SUB TOPIC: ANIMAL HEALTH

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Notifiable livestock diseases	<ul style="list-style-type: none"> recognise signs and symptoms of notifiable diseases 	<ul style="list-style-type: none"> Notifiable diseases 	<ul style="list-style-type: none"> Discussing one disease from the following groups: <ol style="list-style-type: none"> Bacterial diseases:- anthrax Viral diseases:- foot and mouth or new castle Protozoan diseases:- trypanosomiasis, 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person

SUB TOPIC: ANIMAL IMPROVEMENT GENETICS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Genetics	<ul style="list-style-type: none">• Explain genetics terms• explain the stages in mitosis and meiosis• outline the effects of the environment on genes	<ul style="list-style-type: none">• Genetic terms• Mitosis and meiosis	<ul style="list-style-type: none">• Discussing genetic terms• Describing mitosis and meiosis• Discussing the effects of the environment on genes• Observing slides on stages of mitosis and meiosis	<ul style="list-style-type: none">• Textbooks• ICT tools• Microscope

TOPIC 5: FARM STRUCTURES AND MACHINERY

SUB TOPIC: FARM IMPLEMENTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Maintenance	<ul style="list-style-type: none">• describe routine maintenance of irrigation pumps and shellers	<ul style="list-style-type: none">• Routine maintenance	<ul style="list-style-type: none">• Using and maintaining irrigation pumps and shellers	<ul style="list-style-type: none">• Textbooks• ICT tools

SUB TOPIC: FENCING

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Fencing materials	<ul style="list-style-type: none">discuss advantages and disadvantages of fencing materials	<ul style="list-style-type: none">Fencing materials	<ul style="list-style-type: none">Discussing advantages and disadvantages of fencing materials	<ul style="list-style-type: none">TextbooksResource person

SUB TOPIC: FARM BUILDINGS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Farm buildings	<ul style="list-style-type: none">identify materials used for the construction of farm buildingsdescribe the properties of building materials	<ul style="list-style-type: none">Farm building materialsProperties of building materials such as:<ul style="list-style-type: none">QualityDurabilityFire resistance	<ul style="list-style-type: none">Discussing building materialsTouring farm buildings	<ul style="list-style-type: none">TextbooksICT toolsPictures

SUB TOPIC: FARM ROADS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Features of farm roads	<ul style="list-style-type: none">describe features of a farm roadstate the dimensions of different features on a farm road	<ul style="list-style-type: none">Farm road features and dimensions	<ul style="list-style-type: none">Discussing features of a farm roadRepairing farm roadsTouring farm roads	<ul style="list-style-type: none">TextbooksICT toolsPictures

SUB TOPIC: APPROPRIATE TECHNOLOGY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Irrigation pumps	<ul style="list-style-type: none">identify parts of a hand or power operated irrigation pumpdescribe the routine maintenance of a pump	<ul style="list-style-type: none">Parts of hand or power operated pumpsMaintenance	<ul style="list-style-type: none">Identifying pump partsMaintaining pumps	<ul style="list-style-type: none">TextbooksICT toolsRealia

TOPIC 6: AGRI-BUSINESS

SUB TOPIC: PRINCIPLES OF ECONOMICS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Opportunity cost and choices	<ul style="list-style-type: none"> explain the opportunities available for the farmer in agriculture industry describe the factors influencing farmers' choices in agricultural enterprises explain the concept of opportunity cost 	<ul style="list-style-type: none"> Opportunities available to the farmer Farmers choices Opportunity cost 	<ul style="list-style-type: none"> Identifying agriculture opportunities available for enterprising at the school Choosing appropriate agricultural enterprises for the school Simulating the concept of opportunity cost Identifying opportunity costs in real life situations 	<ul style="list-style-type: none"> Textbooks ICT tools Realia
Demand, supply and price	<ul style="list-style-type: none"> describe the laws of demand and supply interpret demand and supply curves/schedules describe determinants of market price for agricultural commodities 	<ul style="list-style-type: none"> Demand and supply Market price 	<ul style="list-style-type: none"> Demonstrating effects of price change on demand and supply Surveying on demand and supply levels of farm produce at a local market Illustrating the interaction of demand and supply curves 	<ul style="list-style-type: none"> Textbooks ICT tools Money Local markets

SUB TOPIC: FARM BUDGETING

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Budgets	<ul style="list-style-type: none"> explain the importance of budgeting in farming identify sources of information for budgeting calculate the gross margin for an agricultural enterprise prepare partial and complete budgets 	<ul style="list-style-type: none"> Budgeting 	<ul style="list-style-type: none"> Discussing the role of budgets in farming Surveying on farm budgets Drawing up gross margin, partial and whole farm budgets from sourced information 	<ul style="list-style-type: none"> Textbooks ICT tools Money Source documents

SUB TOPIC: AGRICULTURAL MARKETING

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Functions and factors of marketing	<ul style="list-style-type: none"> explain the functions of marketing in agriculture state factors affecting marketing of agricultural produce 	<ul style="list-style-type: none"> Marketing functions Factors affecting agricultural marketing 	<ul style="list-style-type: none"> Preparing agriculture produce for marketing Selling agricultural produce to the market Discussing functions of marketing in agriculture Identifying factors affecting agricultural marketing 	<ul style="list-style-type: none"> Textbooks ICT tools Agriculture produce Local markets

FORM 4

TOPIC 1: GENERAL AGRICULTURE

SUB TOPIC: ENVIRONMENTAL FACTORS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Natural disasters	<ul style="list-style-type: none">explain the effects of natural disasters on Agriculture	<ul style="list-style-type: none">HailstormFloodsCyclonesWhirl wind	<ul style="list-style-type: none">Discussing effects of natural disasters on agriculture	<ul style="list-style-type: none">TextbooksICT toolsPicturesWeather station

		<ul style="list-style-type: none"> • Veld fire 	<ul style="list-style-type: none"> • Watching videos of natural disasters • Visiting Met Stations 	
Disaster management strategies	<ul style="list-style-type: none"> • outline precautionary measures to guard against natural disasters 	<ul style="list-style-type: none"> • Weather forecast • Disaster preparedness • Conservation structures 	<ul style="list-style-type: none"> • Constructing conservation structures around their community • Listening to weather reports 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Pictures • Resource person

SUB TOPIC: FORESTRY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Agro-forestry	<ul style="list-style-type: none"> • identify agro-forestry components • discuss the importance of agro-forestry practices • establish agro-forestry plots 	<ul style="list-style-type: none"> • Agro-forestry practices 	<ul style="list-style-type: none"> • Designing and implementing an agro-forestry project at their school 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Pictures • Resource person

SUB TOPIC: WILDLIFE

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
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Human and wildlife conflicts	<ul style="list-style-type: none"> • discuss possible conflicts between humans and wildlife • explain the existing legislation in managing wildlife resources in Zimbabwe • discuss the role of Government and voluntary organisations in wildlife management • discuss the role of international conventions in wildlife management 	<ul style="list-style-type: none"> • Human and wildlife conflicts • Protection of resources • Legislation and Government and voluntary organisations • International conventions 	<ul style="list-style-type: none"> • Role playing depicting conflicts between humans and wildlife • Collecting relevant information on Government Policy as regards to wildlife management • Debating the role of Government and voluntary organisations in wildlife management 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Pictures • Resource person
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TOPIC 2: SOIL AND WATER

SUB TOPIC: SOIL TEXTURE, STRUCTURE AND PROFILE

KEY CONCEPT	OBJECTIVES	CONTENT	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
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	Learners should be able to:	(knowledge, skills, values and attitudes)		
Soil textural classes	<ul style="list-style-type: none"> list the eight textural classes determine textural class of a soil using textural triangle 	<ul style="list-style-type: none"> Eight textural classes in Zimbabwe 	<ul style="list-style-type: none"> Carrying an experiment on soil texture using the Sieve method to determine soil classes 	<ul style="list-style-type: none"> Sieves of varying sizes ICT tools

SUB TOPIC: SOIL FERTILITY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Nitrogen cycle	<ul style="list-style-type: none"> describe the nitrogen cycle with the aid of a diagram 	<ul style="list-style-type: none"> Nitrogen cycle 	<ul style="list-style-type: none"> Describing the nitrogen cycle Illustrating the nitrogen cycle 	<ul style="list-style-type: none"> Textbooks ICT tools

SUB TOPIC: WATER CONSERVATION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Water pollution	<ul style="list-style-type: none"> explain causes of water pollution 	<ul style="list-style-type: none"> Water pollution 	<ul style="list-style-type: none"> Collecting water samples to determine levels of pollution 	<ul style="list-style-type: none"> Textbooks ICT tools

	<ul style="list-style-type: none"> describe the effects of water pollution on agricultural production discuss ways of reducing water pollution 		<ul style="list-style-type: none"> Identifying sources of water pollution Discussing ways of reducing water pollution 	
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Water legislation	<ul style="list-style-type: none"> discuss water use legislation discuss water management in Zimbabwe 	<ul style="list-style-type: none"> Management of national water (ZINWA) 	<ul style="list-style-type: none"> Identification of water bodies 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures
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SUB TOPIC: IRRIGATION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Irrigation equipment	<ul style="list-style-type: none"> identify irrigation equipment describe the structures and functions of irrigation equipment 	<ul style="list-style-type: none"> Irrigation equipment: <ul style="list-style-type: none"> Structures and functions 	<ul style="list-style-type: none"> Assembling of irrigation equipment Discussing structures and functions of irrigation equipment 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures

TOPIC 3: CROP HUSBANDRY

SUB TOPIC: PLANT PROCESSES

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Respiration	<ul style="list-style-type: none"> state the word and chemical equation for aerobic respiration distinguish between aerobic and anaerobic respiration identify sites of respiration describe the importance of respiration explain the differences between 	<ul style="list-style-type: none"> Respiration 	<ul style="list-style-type: none"> Experimenting on respiration Comparing aerobic and anaerobic respiration Identifying sites of respiration Describing importance of respiration Comparing respiration and photosynthesis 	<ul style="list-style-type: none"> Textbooks ICT tools Experimental apparatus

	photosynthesis and respiration			
Plant tropisms	<ul style="list-style-type: none"> describe each of the tropisms demonstrate the responses of plant parts to tropisms evaluate the importance of plant tropisms 	<ul style="list-style-type: none"> Plant tropisms Responses to light, gravity and water 	<ul style="list-style-type: none"> Describing the plant tropisms Demonstrating each tropism through experiments Discussing the importance of plant responses 	<ul style="list-style-type: none"> Textbooks ICT tools Experimental apparatus

SUB TOPIC: CROP PROTECTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Agrochemicals	<ul style="list-style-type: none"> explain the precautionary measures taken when using and storing chemicals describe the toxicity levels of agro-chemicals calibrate the knapsack sprayer 	<ul style="list-style-type: none"> Agro-chemicals Toxicity levels Calibration 	<ul style="list-style-type: none"> Reading instructions on chemical labels Identifying the formulation of pesticide Determining the strengths of formulation Identifying application rate and methods Calibrating the knapsack sprayer 	<ul style="list-style-type: none"> Textbooks ICT tools Agro-chemicals samples Knapsack sprayers Pictures

TOPIC 4: ANIMAL HUSBANDRY

SUB TOPIC: ANATOMY AND PHYSIOLOGY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Reproductive system of a ruminant	<ul style="list-style-type: none"> identify the parts of the reproductive systems of the ruminant male and female explain functions of parts of the reproductive systems 	<ul style="list-style-type: none"> Reproductive systems of ruminants 	<ul style="list-style-type: none"> Drawing and labelling reproductive systems of a named male or female ruminant Discussing functions of parts of the reproductive systems 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures

SUB TOPIC: NUTRITION

KEY CONCEPT	OBJECTIVES	CONTENT	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
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	Learners should be able to:	(knowledge, skills, values and attitudes)		
Maintenance and production rations	<ul style="list-style-type: none"> • calculate maintenance and production rations • prepare rations for both ruminants and non-ruminants 	<ul style="list-style-type: none"> • Maintenance and production rations 	<ul style="list-style-type: none"> • Calculating production ration using Pearson Square method • Mixing rations to produce a balanced diet 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Resource person • Pictures • Animal feeds

SUB TOPIC: SMALL LIVESTOCK PRODUCTION

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Slaughtering, processing and marketing	<ul style="list-style-type: none"> • slaughter and dress rabbits or off-layers or indigenous chickens • prepare pelts or eggs for market • compile financial and production records 	<ul style="list-style-type: none"> • Slaughtering and marketing of rabbits/layers/indigenous chickens 	<ul style="list-style-type: none"> • Slaughtering and dressing rabbits or off-layers • Packaging and refrigerating rabbits or off-layers or indigenous chickens • Identifying suitable market 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Slaughtering materials • Pictures

SUB TOPIC: RUMINANTS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
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Management of cattle or sheep or goats	<ul style="list-style-type: none"> • list exotic and indigenous breeds in Zimbabwe • describe characteristics of exotic and indigenous breeds • describe management practices 	<ul style="list-style-type: none"> • Exotic and indigenous breeds • Management practices 	<ul style="list-style-type: none"> • Discussing characteristics of exotic and indigenous breeds • Discussing management practices • Researching on animal breeds • Conducting a tour of animal rearing farms 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Pictures • Resource person • Realia
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SUB TOPIC: ANIMAL HEALTH

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Animal parasites and immunisation	<ul style="list-style-type: none"> • identify parasites of farm livestock • describe the life cycles of one internal and one external parasite • prevent and control parasites • describe other methods of preventing and controlling diseases 	<ul style="list-style-type: none"> • Parasites: <ul style="list-style-type: none"> - Life cycle - Symptoms - Prevention - Treatment - Control • The Animal Health Act • Immunisation 	<ul style="list-style-type: none"> • Explaining the Animal Health Act • Discussing the life cycle of one host tick and a roundworm • Discussing the prevention and control of internal and external parasites 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Pictures • Resource person • Specimens

SUB TOPIC: ANIMAL IMPROVEMENT GENETICS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Breeding	<ul style="list-style-type: none"> explain the importance of breeding explain the effects of the environment on breeding distinguish cross-breeding from in-breeding select animals for breeding 	<ul style="list-style-type: none"> Livestock breeding Effects of the environment on breeding Importance of artificial selection 	<ul style="list-style-type: none"> Discussing the importance of breeding Discussing the effects of the environment on breeding Drawing genetic diagrams in test cross problems 	<ul style="list-style-type: none"> Textbooks ICT tools Resource person Pictures

TOPIC 5: FARM STRUCTURES AND MACHINERY

SUB TOPIC: FENCING

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES

Anchors and fencing calculations	<ul style="list-style-type: none"> • explain the role of anchors • outline the advantages and disadvantages of different anchors • determine the quantities of materials required per given perimeter 	<ul style="list-style-type: none"> • Anchors • Fencing calculations 	<ul style="list-style-type: none"> • Constructing anchors • Calculating quantities of materials required per given perimeter • Discussing the advantages and disadvantages of different anchors 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Pictures
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SUB TOPIC: FARM BUILDINGS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Designing livestock buildings	<ul style="list-style-type: none"> • draw plans of buildings suitable for livestock • calculate costs of construction • determine the cost effectiveness of each material 	<ul style="list-style-type: none"> • Livestock building designs • Costing 	<ul style="list-style-type: none"> • Designing livestock houses • Calculating costs 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Building plans

SUB TOPIC: FARM ROADS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
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Road construction and maintenance	<ul style="list-style-type: none"> • identify materials required for the construction of a farm road • describe the construction of a farm road • maintain local farm roads 	<ul style="list-style-type: none"> • Road construction • Farm road maintenance 	<ul style="list-style-type: none"> • Mobilising materials required for construction of a farm road • Discussing the construction of a farm road • Maintaining farm roads 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Resource person • Pictures
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SUB TOPIC: APPROPRIATE TECHNOLOGY

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Shellers	<ul style="list-style-type: none"> • identify parts of a maize and groundnut sheller • explain functions of each part • explain operational principles of shellers 	<ul style="list-style-type: none"> • Parts of shellers • Operation principles 	<ul style="list-style-type: none"> • Using shellers appropriately • Describing functions of each part • Discussing the operational principles of a sheller 	<ul style="list-style-type: none"> • Textbooks • ICT tools • Realia

TOPIC 6: AGRI-BUSINESS

SUB TOPIC: PRINCIPLES OF ECONOMICS

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Diminishing returns	<ul style="list-style-type: none"> explain the law of diminishing returns interpret the law of diminishing returns describe the implications of diminishing returns in agriculture 	<ul style="list-style-type: none"> Law of diminishing returns Agriculture implications of diminishing returns 	<ul style="list-style-type: none"> Discussing the law of diminishing returns Interpreting the law of diminishing returns from graphs Watching video simulations on the effects of increased inputs on outputs while other factors are held constant 	<ul style="list-style-type: none"> Textbooks ICT tools
Risk and uncertainty	<ul style="list-style-type: none"> Outline risks and uncertainties that can be encountered in Agriculture distinguish between risks and uncertainties explain ways of minimising the effects of risks and uncertainties 	<ul style="list-style-type: none"> Differences between risks and uncertainties Avoiding risks and uncertainties 	<ul style="list-style-type: none"> Conducting a survey to assess risks and uncertainties on the school or community farms Discussing ways of minimising the effects of risks and uncertainties identified 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures
Decision making	<ul style="list-style-type: none"> explain the importance of decision making in agriculture outline the economic factors influencing decision making 	<ul style="list-style-type: none"> Importance of decision making Economic factors in decision making 	<ul style="list-style-type: none"> Discussing the importance of decision making in agriculture enterprises 	<ul style="list-style-type: none"> Textbooks ICT tools Pictures

			<ul style="list-style-type: none"> Identifying economic factors influencing decision making 	
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SUB TOPIC: MARKETING

KEY CONCEPT	OBJECTIVES Learners should be able to:	CONTENT (knowledge, skills, values and attitudes)	SUGGESTED NOTES AND ACTIVITIES	SUGGESTED RESOURCES
Marketing legislation	<ul style="list-style-type: none"> explain the marketing legislation for agricultural produce and commodities 	<ul style="list-style-type: none"> Changes in marketing legislation on agricultural products 	<ul style="list-style-type: none"> Identifying crop and animal products that are controlled by marketing legislation in Zimbabwe 	<ul style="list-style-type: none"> Textbooks ICT tools Newspapers Magazines Pictures

8.0 ASSESSMENT

Learners shall be assessed through School Based Continuous Assessment (SBCA) and Summative Assessment (SA). These assessments shall be guided by the principles of inclusivity, practicability, authenticity, transparency, flexibility, validity and reliability. The principles are crucial for creating a supportive and effective learning environment that fosters growth and development in learners. Arrangements, accommodations and modifications shall be visible to enable candidates with special needs to access assessments.

This section covers the assessment objectives, the assessment model, the scheme of assessment, and the specification grid.

8.1 ASSESSMENT OBJECTIVES

Learners will be assessed on their ability to:

- 8.1.1 outline control measures of pests, diseases and parasites of a named agricultural enterprise
- 8.1.2 interpret and evaluate the profitability of a given agricultural enterprise
- 8.1.3 describe the anatomy and physiology of named plants and animals
- 8.1.4 illustrate breeding processes in plants and animals
- 8.1.5 outline the effects of the environment on crop and animal production
- 8.1.6 discuss the production of a named plant and animal up to marketing
- 8.1.7 outline the socio-economic importance of agriculture to the family, community and the nation
- 8.1.8 discuss health and safety measures in agriculture
- 8.1.9 correctly use and maintain any given agricultural equipment
- 8.1.10 describe and maintain named agricultural structures
- 8.1.11 design experiments and correctly interpret the results
- 8.1.12 apply acquired skills, knowledge and information to solve agricultural problems in the community
- 8.1.13 maintain accurate physical and financial records of a named agricultural enterprise
- 8.1.14 explain the socio-economic importance of wildlife and forestry

8.1.15 justify the importance of land tenure on agricultural activities in Zimbabwe

8.2 Assessment Model

Assessment of learners shall be both Continuous and Summative as illustrated in Figure 1. School Based Continuous Assessment shall include recorded activities from the School Based Projects done by the learners. The mark shall be included on learners' end of term and year reports. Summative assessment at school level shall include terminal examinations which are at the end of the term and year.

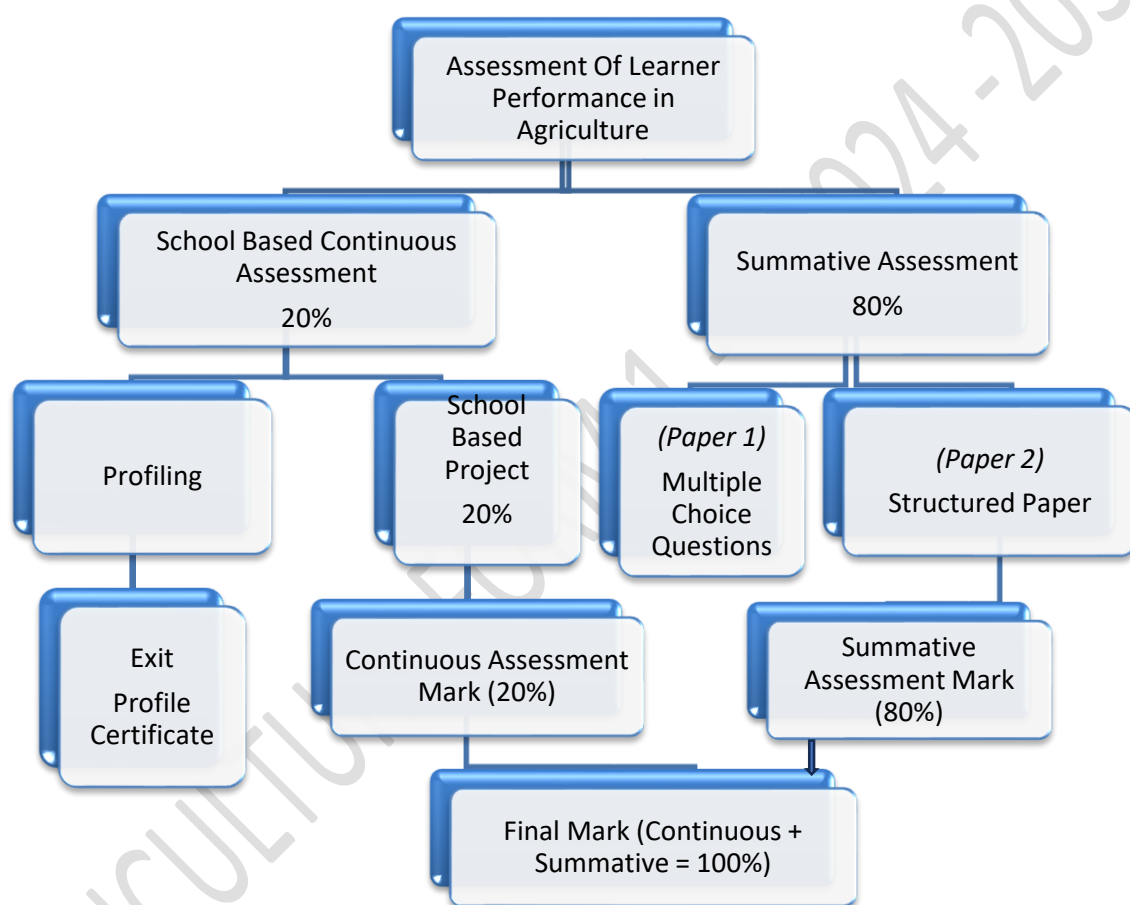


Fig. 1 Assessment Model

In addition, learners shall be profiled and learner profile records established. Learner profile certificates shall be issued for checkpoints assessment in schools as per the dictates of the Teacher's Guide to Learning and Assessment. The aspects to be profiled shall include learner's prior knowledge, values and skills, and subsequently the new competences acquired at any given point.

8.3 Scheme of Assessment

The Assessment Model shows that learners shall be assessed using both School

Based Continuous Assessment and Summative Assessment for both School and ZIMSEC assessments.

The table shows the Scheme of Assessment where 20% is allocated to School Based Continuous Assessment and 80% to School or ZIMSEC Summative Assessment.

FORM OF ASSESSMENT	WEIGHTING
School Based Continuous Assessment	20%
Summative Assessment	80%
Total	100%

8.3.1 Description of School Based Continuous Assessment

Learners shall do one school-based project per form which contributes to 20% of the end of year final mark. The end of year summative assessment shall then contribute 80%. However, for ZIMSEC public examinations, two (2) school-based projects shall be considered as School Based Continuous Assessment at Form 6. The two School Based Projects shall include those done during Form 3 and 4 sessions. Each will contribute 10%.

8.3.1.1: School – Based Project Continuous Assessment Scheme

The Table given below shows the Learning and Assessment Scheme for the School Based Project.

Project Execution Stages	Description	Timelines	Marks
1	Problem Identification	January	5
2	Investigation of related ideas to the problem/innovation	February	10
3	Generation of possible solutions	March	10
4	Selecting the most suitable solution	April-May	5
5	Refinement of selected solution	June	5
6	Presentation of the final solution	July	10

7	Evaluation of the solution and Recommendations	August-September	5
	TOTAL		50

8.3.2 Description of the ZIMSEC Summative Assessment

ZIMSEC Summative Assessment shall be a public examination at Form 4. The examination shall consist of three (3) papers.

Paper 1 (1hr – 40 marks) 20%

There are **40 Objective** type questions and candidates are required to answer all.

Paper 2 (2hrs – 100 marks) 40%

Paper 2 consists of two sections.

Section A: Six compulsory structured questions based on the whole syllabus - 60 Marks.

Section B: Four questions will be set on Crop Production and Animal Husbandry. Candidates must answer Two Questions only.

Each question carries (20) marks. Candidates are expected to show thorough understanding of practical skills involved in the studied areas.

Paper 3 Coursework 20%

This is a practical coursework paper marked by the teacher and moderated by ZIMSEC Details are available from ZIMSEC

A learner is expected to produce a project portfolio at each of the following levels:

- Form 1
- Form 2
- Form 3
- Form 4

ASSESSMENT MODE	WEIGHTING
3 tests per year per level	10%
1 project per year per level	10%
1 psychomotor test per term per level	10%

NOTE: A profile system has to be developed for every learner to capture those attributes that cannot be measured such as the soft skills. A folio comprises test results throughout the secondary school on an annual basis and marks collected

from the four prescribed projects. Observation schedules, checklists, tests and project tasks are to be set at district level and standardised nationally.

8.4 Specification Grid

Skill	Paper 1	Paper 2	Paper 3
Knowledge and comprehension	40%	40%	40%
Application and Analysis	40%	40%	40%
Problem solving	20%	20%	20%
TOTAL	100%	100%	100%