

AGRIC.SCIE TERM ONE

Grade9

WEEK	TOPIC	SUB-TOPIC	EXPECTED OUTCOME	METHOD	SUGGESTED EXPERIMENTS	REF
1	-Agriculture in Zambia	-Agriculture practice and industry	-Identify the importance of functional practical work -Investigate interdependence between agriculture and industry	-Field trip -Question & answer -Field trip -Discussion		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
2		-Effects of human population on Agriculture	-Describe the effects of rapid population growth on arable and ranching land. -Explain the effects of rapid population growth on the marketing of agricultural produce/products.	-Discussion -Field trip -Discussion -Question & answer		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Farming areas in Zambia	-Describe the general conditions that favorable farming and ranching.	-Discussion -Field trip		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers

3	-Soil Science	-Characteristics of soils.	-List the characteristics of clay, sand and loam. -List the characteristics of humus.	-Experiment -Demo -Discussion -Question and	-to determine soil drainage. -to determine soil capillarity -to determine humus in soil	-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Soil structure	-Identify soil with good structure. -Explain how to maintain good soil structure.	-Demo -Discussion		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
4		-Plant nutrients	-Classify nutrients. -Describe the importance of nutrients.	-Question & answer -Discussion		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers

		- Manures and ashes	-Explain how dead animals and plant materials are broken down to form humus -Investigate the nutrients content of rabbit, chicken, sheep, duck, cow and pig manures.	-Experiment -Demo	-Making of compost manure	-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
5			-Compare the nutrient content of ashes to that of manure. -Explain soil infertility.	-Demo -Question & answer		
		- Soil reaction	-Explain the causes of soil acidity and alkalinity. -Demonstrate the correction of very high acidity and alkalinity.	-Discussion -Demo	-Test for acidity & alkalinity,	-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
6		-Soil erosion	-Explain causes of soil erosion -Describe the effects of soil erosion. - Describe the prevention of soil erosion.	-Discussion -Field trip -Question & answer		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers

	-Crop Production	- Importance of the crop	-Investigate the nutritional and economical value of the crop. - List the ways in which the crop is used.	-Demo -Question & answer		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
7		- Ecological requirements of the crop	-List the ecological requirements of the crop	-Question & answer		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Varieties and propagation	-Identify the varieties of the crop. - List the advantages and disadvantages of various methods of propagation.	-Question & answer -Discussion		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Site suitable for the crop	-Identify a site suitable for growing the crop.	-Field trip		-Agric – Science Syllabus -Agr.scie by - G.H.Owen

						-W.A Sakira -J.Parson -A.N King -M K Publishers
		- Crop rotation	-Explain why it is necessary to rotate a crop - Draw a plan to fit the crop in a suitable rotation.	-Question & answer -Demo	-Prepare a 4 & 6 rotation system	-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
8		-Land preparation	-Prepare a piece of land for growing of the crop. -Prepare sowing/planting stations for the crop.	-Demo -Demo		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		- Manure and fertiliser application	-Calculate the quantity of fertiliser and manure recommended per unit area. -Apply fertiliser and manures recommended correctly. -Explain the importance of dressing	-Discussion -Question & answer -Demo -Discussion	-fertilizer application	-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers

			seeds/planting materials with chemicals before sowing/planting.	-Question & answer		
		-Sowing and planting materials	- Select suitable sowing or planting materials. -Demonstrate correct sowing or planting	-Discussion -Demo	-Planting of seeds	-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
9		- Plant population	- Determine the germination percentage of seeds. -Calculate the number of plants per given area.	-Experimental -Group discussion	Experiment on germination percentage	-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Weed Control	-Explain the importance of weed control in a field crop. -Demonstrate the methods of weed control that are applicable to the crop being studied.	-Experimental -Demo	-Experiment on how to control weeds	-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		- Insect pests	- Identify insect pests of the crop.	-Experimental	-Experiment on how to control pests	-Agric – Science Syllabus

			- Suggests ways of controlling the pests.			-Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
10		-Diseases	-Identify the symptoms or signs of diseases on field crop. -Identify the crop attacked by diseases. - Explain methods of preventing and controlling disease attack on the crop.	-Field trip -Discussion		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		- Harvesting	- Interpret the length of time it takes from planting or sowing up to maturity. -Identify the signs of readiness for harvesting the crop -Harvest the crop correctly.	-Question & answer -Field trip	-Crop harvesting	-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Yield	- State the recommended yield of the crop per hectare. -Compare the achieved yields with the recommended yields	-Group work		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson

			-Suggest ways of improving yield.			-A.N King -M K Publishers
11		- Storage	-identify types of storage facilities - State the various methods of storing the crop. -Store the crop correctly.	-Discussion -Question & answer		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		- Handling and Marketing	-Handle and market the crop effectively. -Project how much money can be realised from the sale of the crop.	Discussion -Question & answer		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
	- Forestry	- Soil and water conservation	-Explain the role trees play in soil and water conservation.	-Question & answer		-Agric – Science Syllabus -Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
12		-Importance of trees in soil management	-Identify leguminous plants that are used to	-Field trip		-Agric – Science Syllabus

			<p>improve soil fertility.</p> <p>-Explain how leguminous trees improve soil fertility.</p>			<p>-Agr.scie by - G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers</p>
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AGRIC.SCIENCE TERM2

	TOPIC	SUB-TOPIC	EXPECTED OUTCOME	METHOD	SUGGESTED EXPERIMENTS	REFERENCES
1	-Conservation farming	- Tillage	-Describe Conservation tillage.	-Discussion		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Land clearing	-Find out the importance of leaving the residues on the surface at the end of the dry season	-Question & answer		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers

		- Seedbed preparation	-Explain the preparation of a seedbed using a suitable plough for conservation farming. -Explain the problems caused by ploughing when preparing seedbeds.	-Question & answer -Demo -Discussion	-Seed bed preparation	-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
2		- Sowing and planting	- Plant or Sow correctly under conservation farming.	-Demo	-Planting	-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Manure and chemical fertilisers	-Apply manure/chemical fertiliser correctly under conservation farming. -Explain the effects of monocropping and the use of acidified fertilisers on soil and crop yields.	-Demo -Question & answer	-Apply fertilizer	-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Weeding	-State the importance of early and repeated weeding.	-Discussion		-Agric – Science Syllabus -Agr.scie by -G.H.Owen

						-W.A Sakira -J.Parson -A.N King -M K Publishers
3		- Pest Control	-Explain the importance of using organic materials/org anisms to Control pests. -Demonstrate the preparation or organic pesticides from local materials. -Control pests using organic material /organisms.	-Question & answer -Demo -Question & answer	-Practical on pest control	-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Crop Rotation in conservation farming	-Plan a four year crop rotation. -Explain the importance of crop rotation in pest control. -Explain the importance of crop rotation on soil fertility.	-Demo -Question & answer -Discussion	-Practical on crop rotation	-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
4		- Manure	-State the importance of manure in conservation farming. -Identify sources of organic	-Discussion -Field trip	-Practical on application of manure	-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K

			manure -State the nutrient status of some manure. -Apply manure correctly.	-Question & answer		Publishers
5	- Livestock production	-Importance of livestock	-State the nutritive value of livestock studied. -Analyse the economic importance of livestock studied.	-Discussion -Question & answer		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		- Digestive system in live stock	-Identify and label a diagram of the digestive system of a ruminant -Explain the difference between Ruminant and non-ruminant.	-Question & answer -Discussion		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Rations	- Distinguish between maintenance and production rations. -Make a reasonably well balanced economic diet for at least one type of livestock from local	-Discussion -Demo		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers

			<p>food sources.</p> <p>-Compare the growth rates of animals fed on alternative diets and relate these to ration quality.</p>	-Demo		
6		-Conversion ratio	-Calculate food conversion ratio from the records of farm animals.	-Discussion		<p>-Agric – Science Syllabus</p> <p>-Agr.scie by</p> <p>-G.H.Owen</p> <p>-W.A Sakira</p> <p>-J.Parson</p> <p>-A.N King</p> <p>-M K Publishers</p>
		-Reproductive systems	-Describe the reproductive systems of male and female animals studied.	-Discussion		<p>-Agric – Science Syllabus</p> <p>-Agr.scie by</p> <p>-G.H.Owen</p> <p>-W.A Sakira</p> <p>-J.Parson</p> <p>-A.N King</p> <p>-M K Publishers</p>
		- Fertility and Characteristics of common breeds	<p>- List the factors that affect the fertility of male and female animals studied.</p> <p>-Identify an animal on heat period.</p> <p>-Identify the best time for breeding animals.</p>	<p>-Question & answer</p> <p>-Field trip</p> <p>-Discussion</p>		<p>-Agric – Science Syllabus</p> <p>-Agr.scie by</p> <p>-G.H.Owen</p> <p>-W.A Sakira</p> <p>-J.Parson</p> <p>-A.N King</p> <p>-M K Publishers</p>

			<p>- Recall the gestation period of animals studied.</p> <p>- Given the date of mating, predict the date of parturition.</p> <p>-Describe the characteristics of common breeds of animals studied.</p>	<p>"</p> <p>"</p> <p>"</p>		
7		- Livestock improvement	-Describe steps involved in a programme of livestock improvement.	-Question & answer		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Management practices on young animals	-Carryout management practices required on young animals.	-Field trip		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers

		- Pastures	<p>-Compare the characteristics of natural pastures and improved pastures.</p> <p>-Explain the maintenance of a productive pasture.</p> <p>-Maintain a small productive pasture.</p>	-Field trip		<p>-Agric – Science Syllabus</p> <p>-Agr.scie by</p> <p>-G.H.Owen</p> <p>-W.A Sakira</p> <p>-J.Parson</p> <p>-A.N King</p> <p>-M K Publishers</p>
		- Parasites and diseases	<p>-Identify various parasites of farm Animals.</p> <p>Suggest various methods of prevention or controlling parasites on farm animals.</p>	-Field trip		<p>-Agric – Science Syllabus</p> <p>-Agr.scie by</p> <p>-G.H.Owen</p> <p>-W.A Sakira</p> <p>-J.Parson</p> <p>-A.N King</p> <p>-M K Publishers</p>
8			<p>-Describe the common diseases of farm animals.</p> <p>Suggest various methods of prevention and or controlling diseases.</p>	-Discussion		

		- Marketing	-Prepare animals for marketing. -Prepare animals products for marketing. -Market animals and animal products.	-Discussion " -Question & answer		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
9	- Farm structures	-Storage for grains	-Prepare grains for storage. -Describe an appropriate storage facility for grains. - Identify an appropriate storage facility for grains.	-Discussion -Question & answer		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
		-Storage for fruits	-Prepare fruits for storage. -Describe an appropriate facility for storing fruits. -Identify an appropriate Store for fruits.	-Discussion " "		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
10		- Rabbit houses	- List types of houses for rabbits. -Plan an appropriate house for a given group of rabbits.	-Group Work -Demo	-Practical on planning of a rabbit house	-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K

						Publishers
11		-Pigsties	<p>- List the various types of shelter for pigs.</p> <p>-Describe an appropriate shelter for a given group of pigs.</p> <p>- Plan an appropriate shelter for a given group of pigs.</p>	<p>-Question & answer</p> <p>-Discussion</p> <p>-Demo</p>		<p>-Agric – Science Syllabus</p> <p>-Agr.scie by -G.H.Owen</p> <p>-W.A Sakira</p> <p>-J.Parson</p> <p>-A.N King</p> <p>-M K Publishers</p>
		-Goat houses	<p>-List types of goat shelters.</p> <p>- Prepare an appropriate shelter for a given class of goats.</p>	<p>-Question & answer</p> <p>-Group work</p>	-Practical on preparation of shelter for goats	<p>-Agric – Science Syllabus</p> <p>-Agr.scie by -G.H.Owen</p> <p>-W.A Sakira</p> <p>-J.Parson</p> <p>-A.N King</p> <p>-M K Publishers</p>
		-Cattle houses	<p>- List appropriate types of Shelters for cattle.</p> <p>-Prepare an appropriate shelter for a given class of cattle</p>	<p>-Discussion</p> <p>-Demo</p>	-Practical on preparation of shelter for cattle	<p>-Agric – Science Syllabus</p> <p>-Agr.scie by -G.H.Owen</p> <p>-W.A Sakira</p> <p>-J.Parson</p> <p>-A.N King</p> <p>-M K Publishers</p>
		-Drainage pen	-State the dimensions of the collecting pen and the drainage pen.	-Discussion		<p>-Agric – Science Syllabus</p> <p>-Agr.scie by -G.H.Owen</p>

			-Describe a dip tank	-Question & answer		-W.A Sakira -J.Parson -A.N King -M K Publishers
		- Concrete mixtures	-State the proportions of concrete mixtures suitable for various building purposes. -Demonstrate mixing concrete for various building purposes. -Name the various types of bricks and blocks. - Make bricks and blocks.	-Discussion -Demo -Demo	-Practical on mixing concrete	-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers

AGRIC.SCIENCE TERM3

	TOPIC	SUB-TOPIC	EXPECTED OUTCOME	METHOD	SUGGESTED EXPERIMENTS	REFERENCES
1	-Farm Machinery	-Power drawn implements for soil preparations	-Identify tractor drawn implements for preparing soil	-Field Trip-		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers

2		-Power drawn implements for sowing/planting	-Identify tractor drawn implements for planting	-Field trip		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
3			-Describe the proper care of tractor drawn implements	-Discussion		
4		- Storage for farm machinery	-Prepare power drawn implements for storage. - Describe an appropriate facility for storing power implements.	-Discussion		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
5	-Farm Management	- The farm	-Identify the resources the farm requires for production. -Explain the idea of the farm as a business.	-Question and answer -Discussion		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira -J.Parson -A.N King -M K Publishers
6		-Entrepreneurship	-Describe an enterprise. -Describe entrepreneurs hip.	-Discussion		-Agric – Science Syllabus -Agr.scie by -G.H.Owen -W.A Sakira

			- Explain how to find a Market for the farm products			-J.Parson -A.N King -M K Publishers
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