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| SCHEME OF WORK FORM ONE AGRICULTURE TERM ONE 2023 |
|  WK**NO** | L/**NO** | TOPIC/**SUBTOPIC** | **LESSON / SPECIFIC**OBJECTIVES | **TEACHING / LEARNING****ACTIVITIES** | **MATERIALS****/****RESOURCES** | REF. | REM. |
| 1  |  |  *INTAKE OF STUDENTS* |  |  |  |  |
|  2 | 12 | **INTRODUCTION**  **TO****AGRICULTURE**Introduction.Branches of Agriculture. | By the end of the lesson, the learner should be able:To define Agriculture as an art and a science.To describe the branches of Agriculture. | Brainstorming: Teacher elicits the definition of Agriculture.Discussion- Branches of Agriculture: crop farming, livestock farming, Agricultural Economics, Agriculture Engineering, e.t.c. | Chart- Branches of Agriculture.Livestock / Crop products. |  *KLB**Pages 1-3**LONGHORN**Pages 1-2**CERT.AGRIC**Pages 1-3* |  |
| 3 | Importance of Agriculture. | To explain the importance of Agriculture. | Brain storming, guided questions and detailed discussion. | Livestock / Crop raw produce, industrial goods, flow charts. | *CERT.AGRIC**Pages 3-4.* |  |
| 3 | 1 | Problems facing Agriculture. | To state and explain problems facing Agriculture and suggest possible solutions. | Brain storming, guided questions and detailed discussion. |  | *CERT.AGRIC**Page 4.* |  |
| 2 | Farming Systems. | To define a farming system.To identify factors that affect choice of a farming system. | Teacher exposes the meaning of a farming system.Discussion on factors that affect choice of a farming system. |  | *KLB**Pages 5-6**LONGHORN**Pages 6-7**CERT.AGRIC**Page 5* |  |
| 31 | Farming systems in Kenya.Intensive farming systems. | To describe various farming systems practised intensively.To state advantages and disadvantages of each type of intensive farming. | Q/A & Discussion:* Arable farming.
* Small-scale farming.
* Subsistence farming

Q/A & Discussion:-commercial farming.-Intercropping. |  | *LONGHORN**Pages 7-9**CERT.AGRIC**Page 6.* |  |
| 4 |
| 2,3 | Extensive farming systems.Advantages and disadvantages of extensive farming system. | To describe various farming systems practised extensively.To state advantages and disadvantages of each type of extensive farming. | Discussion:* Dairy farming
* Large-scale farming
* Ranching
* Plantation farming.

Q/A and explanations.  | Relevant photographs: plantations, ranches, dairy farms. | *KLB**Pages 5-6.**LONGHORN**Page 7.* |  |
| 5 | 1 | Methods of farming.Mixed farming. | To define mixed farming.To state advantages and disadvantages of mixed farming. | Probing questions.Discussion- factors favouring / militating against mixed farming. |  | *KLB**Pages 6,7,& 8**LONGHORN**Pages 9-13* |  |
| 2 | Nomadic Pastoralism. | To define nomadic pastoralism.To state advantages and disadvantages of nomadic pastoralism. | Probing questions.Discussion- factors favouring / militating against pastoralism. |  | *CERT. AGRIC**Pages 7-9* |  |
| 3 | Shifting cultivation. | To define shifting cultivation.To state advantages and disadvantages of shifting cultivation. | Exposition;Discussion. |  | *CERT. AGRIC**Pages 7-9* |  |
| 67 | 1 | MID TERM BREAK |  |  |  |  |
| 2 | Organic farming. Agroforestry. | To define organic farming.To state advantages and disadvantages of organic farming. To define agroforestry. | Probing questions.Discussion: factors favoring / militating against organic farming / organic farming. | Specimens of organic manures.Specimens of agroforestry trees,Charts & photographs. | *CERT. AGRIC**Pages 8-9* |  |
|  | 3 | FACTORS INFLUENCING AGRICULTURE*Human factors.* | To explain the human factors influencing Agriculture. | Detailed discussion and probing questions on: Health (*emphasis on HIV/AIDS*), education level, communication, economic development, marketing, government policies, e.t.c. | Data on HIV/AIDS. | *K.L.B.* *Pgs 11- 15* |  |
| 8 | 1 | *Climatic factors.*- Rainfall. | To discuss at length influence of rainfall on Agriculture.To identify farming practices that:* Reduce effects of water shortage.
* Overcome effects of excess water.
 | Q/A and explanations about: rainfall i.e. lack of rainfall, excess rainfall, rainfall intensity, distribution and reliability.Exposition and explanations. | Weather station instruments:*rain gauge.* | *KLB**Page 18**CERT.AGRIC**Page13**LONGHORN**Pgs 24-32.* |  |
| 2 | - Temperature. | To define cardinal temperature range, maximum and minimum temperature, optimum temperature.To identify factors that cause temperature variations.To explain ways in which plants/ animals overcome extreme temperatures. | Exposition and explanation.Discussion and Q/A on; altitude, latitude, seasons, winds, clouds, slope, e.t.c.Students highlight ways in which plants / animals overcome extreme temperatures, then the teacher delves into the details. | Thermometers. | *KLB**Page 19.**CERT. AGRIC**Page 16.**LONGHORN**Pages 24-32.* |  |
| 3 | - Light. | To state functions of light.To describe characteristics of light. | Q/A: Functions of light.Exposition & Discussion: Light intensity, duration and wavelength. |  | *KLB**Page 21.**CERT. AGRIC**Page 18.**LONGHORN**Pgs 24-32.* |  |
| 9 | 1 | - Wind and Relative Humidity. | To identify effects of wind on agricultural production.To explain relation between relative humidity and rate of evapotranspiration. | Q/A: Uses and nuisances of wind.Exposition: Meaning of relative humidity.Discussion: Relative humidity v/s rate of evapotranspiration. |  | *KLB**Page20.**CERT. AGRIC**Page 20.* |  |
| 2 | Biotic factors. | To explain effects of biotic factors on Agriculture. | Q/A and explanations on effects of: pests, diseases, pathogens, predators, pollinators, bacteria, e.t.c. on Agriculture. | Wall charts / Sample pests and pollinators. | *KLB**Pages 16-17.**CERT. AGRIC**Pages 20-21.**LONGHORN**Pages 16-21.* |  |
| 3 | Edaphic factors. | To define soil.To state uses of soil.To identify forms of weathering. | Q/A and explanation: definition of soil, its uses.Exposition: Teacher exposes meaning of weathering and forms of weathering. | Soil / rock samples. | *KLB**Page 22.**CERT. AGRIC**Page 21.**LONGHORN**Pages 33-60* |  |
| 10 | 1 | Soil profile. | To define soil profile.To represent soil profile diagrammatically.To explain effects of soil profile on crop production. | Exposition – Definition.Drawing and labelling soil horizons.Explanation and questioning: soil horizons v/s crop production. | Chart – Soil profile. | *KLB**Page30.**CERT. AGRIC**Pages 27-28.**LONGHORN**Pages 33-60.* |  |
| 2 | Soil constituents & sedimentation. | To identify constituents of soil. | Group experiments-To show soil sedimentation. *(Left overnight).* | Measuring cylinder,Water, Sample of garden soil,Sodium carbonate. | *KLB**Pages 32-34.**CERT. AGRIC**Page 30.* |  |
| 3 | Soil constituents & sedimentation. | To explain the importance of the soil constituents. | Discussion: Constituents of soil and importance of each constituent. |  | *LONGHORN**Pages 33-60.* |  |

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| 11 | 1,2 | Soil texture. | To define soil texture.To identify textural classes of soil.To identify types of soils. | Group experiment- Mechanical analysis of soil.Discuss the results.Expose meaning of soil texture. | Sieve meshes of different diameters,Beakers,Garden soil,Weighing balance. | KLBPages 46-49.CERT.AGRICPage 38.LONGHORNPages 33-60. |  |
| 3 | Water retention of soils. | To describe an experiment to show:* Water retention of soils.
* Capillary rates of different soils.
 | Group experiments.Discussion of observations. | Sandy, Loam,Clay soilCotton woolFunnelsStop watchesRulersMeasuring cylinders. | KLBPages 52-53.CERT. AGRICPage 46. |  |
| 12 | 1 | Effect of soil water holding properties on crop production. | To explain the effects of soil water holding properties on crop production. | Q/A and explanation about soil aeration and drainage and their influences on growth of crops. |  | KLBPages 52-53.CERT. AGRICPage 46. |  |
| 2,3 | Soil structure. | To define soil structure.To identify types of soil structure.To identify mans influence on soil structure.To explain effects of soil structure on crops. | Detailed discussion.Drawing of diagram- soil horizons.Q/A: Man’s influence on soil structure.Q/A: Soil structure v/s Crop production. | Chart- soil structure forms. | KLBPage 41.CERT. AGRICPage 40.LONGHORNPages 33-60 |  |
| 13,14 |  | END OF TERM ONE ASSESSMENT TEST |  |  |  |  |  |
| SCHEME OF WORK FORM ONE AGRICULTURE TERM TWO 2023 |
|  WK**NO** | L/**NO** | TOPIC/**SUBTOPIC** | **LESSON / SPECIFIC**OBJECTIVES | **TEACHING / LEARNING****ACTIVITIES** | **MATERIALS****/****RESOURCES** | REF. | REM. |
| 1 | 1-2 | Soil chemical properties. | To describe chemical properties of soil.To explain the influence of chemical properties of soils on crop production. | Teacher exposes new concepts e.g. carbon acid in the soil.Group experiments – Soil pH ranges.Discuss the observations.Explanations and questioning. | Litmus papers,Bromothymol blue,Universal indicator, pH meters.  | KLBPage 55.LONGHORNPages 33-60. |  |
| 3 | **FARM TOOLS AND EQUIPMENT**Crop production tools. | To distinguish farm tools from farm equipment.To identify farm tools and equipment and state their uses. | Drawing garden tools.Identifying real tools, such as pruning fork, leveling boards, knap-sack sprayer, soil auger, e.t.c | Chart – Tools that are not common.. | KLBPages 59-63.CERT. AGRICPages 48-52LONGHORNPages 62-63 |  |
| 2 | 1 | Classification of farm tools and equipment.Maintenance of farm tools and equipment | To classify tools on basis of their uses.To state practices of maintenance of the tools. |  | Common farm tools, school farm | KLBPages 59-63.CERT. AGRICPages 48-52LONGHORNPages 62-63 |  |
| 2,3 | Livestock production tools and equipments. | To identify livestock production tools and equipment.To state purposes of livestock production tools and equipment.To label diagrams of important tools.To state practices of maintenance of the tools. | Drawing/ identifying the elastrator, hoof trimmer, strip cup, teeth clipper, drenching gun, chaff cutter, dehorning wire, bolus gun and others.Discussion: Maintenance practices of identified parts of the tools. | Chart-Uncommon tools: elastrator, hoof trimmer, strip cup, teeth clipper, drenching gun, chaff cutter, dehorning wire, bolus gun and others. | KLBPages 63-75.CERT. AGRICPages 54-59.LONGHORNPgs 63-73. |  |
| 3 | 1,2 | Workshop tools and equipment. | To identify common workshop tools and equipments.To identify practices of maintaining the workshop.To state general safety precautions to be observed in a work shop. | Drawing / identifyingCommon workshop tools/ masonry tools: saws, planes, hammers, pliers, spoke shave, files, rasps, G-clamp, tin snip, e.t.cQ/A: Maintenance practices. | Saws, planes, hammers, pliers, spoke shave, files, rasps, G-clamp, tin snip | KLBPages 94-97. |  |
| 3 | Measuring tools. | To identify common measurement tools and equipments.To identify practices of maintaining the measuring tools. | Drawing / identifying common measurement tools: tape measure, plumb bob, T-square, spirit level, marking gauge.  | Common measurement tools: tape measure, plumb bob, T-square, spirit level, marking gauge.  | KLB Pages 82-85. |  |
| 4 | 1,2 | TEST & MID TERM BREAK |
| 3 | **CROP PRODUCTION 1**Land Clearing. | To explain importance of land clearing.To identify tools for land clearing.. | Brainstorming,Q/A & Discussion. | Tools / photographs of tools used in land clearing. | KLBPage 109.CERT. AGRIC.Page 81. |  |
| 5 | 1 | Land preparation. | To explain importance of land preparation.To identify methods of land preparation.To identify tools for land preparation. | Brainstorming,Q/A & Discussion. | Tools / photographs of tools used in land prep. |  |  |
| 2,3 | Primary cultivation.- Hand cultivation. | To state advantages and disadvantages of hand cultivation.To relate hand cultivation to correct tools and equipment. | Q/A: Advantages and disadvantages of the cultivation methods discussed.Discussion: Choice of equipment for primary cultivation.  | Tools / photographs of tools used in hand cultivation. | KLBPage 106.CERT. AGRICPage 77-78.LONGHORNPage 103. |  |
| 6 |  | MID TERM BREAK |  |  |  |  |  |
| 7 | 1,2 | Secondary cultivation. | To state aims of secondary cultivation.To state factors affecting number of secondary cultivation carried out.To identify implements used during secondary cultivation. | Q/A: Definition of secondary cultivation, factors affecting number of secondary cultivations, etc.Discussion: Implements used during secondary cultivation. | School farm,Chart showing harrows. | KLBPage109-110.CERT. AGRICPage 84-85.LONGHORNPage 110. |  |
| 3 | Minimum tillage. | To define minimum tillage.To give reasons for carrying out minimum tillage.To state advantages and disadvantages of minimum tillage. | Teacher exposes the meaning of minimum tillage.Q/A and explanations: Advantages and disadvantages of minimum tillage. |  | KLB Page 112-113.CERT. AGRICPage 85.LONG HORNPage103. |  |
| 8 | 1,2 | Tertiary operations. | To identify tertiary operations carried out in the field.To state importance of some tertiary operations.To relate required soil tilth to the type of tertiary operations carried out. | Discussion: Ridging, rolling and leveling and their importance. | Chart / photographs showing ridgers, rollers, levelers. | KLBPages 110-111.LONG HORNPage 86. |  |
| 3 | WATER SUPPLY, IRRIGATION AND DRAINAGEUses of water in a farm. | To state uses of water in a farm. | Q/A and brief explanations.Written assignment. | Photographs of dams, boreholes, springs and gutters. | KLBPages 117-120.CERT. AGRIC.Pages 89-92.LONGHORNPage 114. |  |
| 9 | 1 | Sources of water in a farm. | To identify sources of water in a farm. | Q/A and brief explanations.Written assignment. | otographs of dams, boreholes, springs and gutters. | KLBPages 117-120.CERT. AGRIC.Pages 89-92.LONGHORNPage 114. |  |
| 2 | Water collection and piping,  | To describe water collection, and piping. | Assignment method / group discussion. |  | KLBPages 120-121.CERT. AGRIC.Page 94.LONGHORNPage 114. |  |
| 3 | Storage and treatment of water. | To describe water storage and treatment. |  |  |  |  |
| 10 | 1 | Irrigation.  | To identify aims of irrigation.To explain choice of irrigation equipment.To state methods of irrigation. | Brief discussion. |  | KLBPages 129-134.CERT. AGRICPages 101-104.LONGHORNPages 114-124. |  |
| 2,3 | Methods of irrigation. | To describe methods of irrigation.To state advantages of overhead irrigation over surface irrigation.To explain economic importance of irrigation. | Probing questions and discussion. | Illustrative charts- Methods of irrigation. |  |  |
| 11 | 1 | Drainage. | To describe methods of water drainage.  | Probing questions and discussion. | Illustrative charts- Methods of drainage. | KLBPage 136.CERT. AGRICPages 108-109.LONGHORNPage 133. |  |
| 2,3 | Water pollution. | To identify agricultural practices that can lead to water pollution.To identify practices that can reduce water pollution. | Q/A: Identifying water pollutants and methods of pollution control. | Samples of water pollutants & polluted water. | KLB Page 139.CERT. AGRICPage 110.LONGHORNPage 137 |  |

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| 12 | 1,2 | **SOIL FERTILITY**Characteristics of a fertile soil. | To identify characteristics of a fertile soil.To describe ways in which soil fertility is lost.To state ways of improving soil fertility. | Q/A and explanations.Brief discussion. | Samples of fertile soil, eroded soil,  | KLBPage 142.CERT.AGRICPage112.LONGHORNPage 140. |  |
| 3 | Organic manures. | To identify role of organic manure in crop production.To state types of organic manures. | Q/A and explanations. |  | KLBPages146-147.LONGHORNPgs 143-145. |  |
| 13 & 14 |  | END TERM 2 EXAMS |  |  |  |  |  |
| *SCHEME OF WORK FORM ONE AGRICULTURE TERM THREE 2023* |
|  WK**NO** | L/**NO** | TOPIC/**SUBTOPIC** | **LESSON / SPECIFIC**OBJECTIVES | **TEACHING / LEARNING****ACTIVITIES** | MATERIALS/RESOURCES | REF. | REM. |
| 1 | 1,2 | Methods of making organic manure. | To describe methods of making organic manure. | Discussion: Compost manure, green manure, FYM.Procedure of making manure. | Compost manure, green manure, FYM. | KLBPages 149-150.CERT.AGRICPage 114-116.LONGHORNPages 146-148. |  |
| 3 | Quality of FYM. | To state factors influencing quality of FYM. | Detailed discussion.Q/A: Proper storage of FYM. | FYM. | KLBPage 149.CERT.AGRICPage116. |  |
| 2 | 1 | LIVESTOCK PRODUCTION IImportance of livestock. Livestock types and breeds. | To state the importance of livestock.To define the terms livestock breed and livestock type. | Q/AExposition: Definition of livestock breeds and types. | Livestock products and by-products. | KLBPage 155.CERT.AGRICPage 118.LONGHORNPage 152. |  |
| 2 | Dairy cattle. | To identify key parts of a cow.To identify characteristics of dairy cattle.To describe various breeds of dairy cattle. | Drawing and labeling a cow.Q/A: Characteristics of dairy cattle. | Chart- key parts of a cow. | KLBPage 159CERT.AGRICPage120. |  |
| 3,1 | Breeds of dairy cattle. | To describe common breeds of dairy cattle. | Brief discussion: characteristics, origin of - Jersey, Guernsey, Friesian, Ayrshire, Brown Swiss, e.t.c. | Wall chart: breeds of dairy cows. | KLBPages 159-162.CERT.AGRICPages 120-122.LONGHORNPages152. |  |
| 3 |
| 2 | Beef cattle. | To identify major parts of a beef animal.To identify general characteristics of beef cattle. | Drawing and labeling a beef cow. | Charts- a beef animal. | KLBPages 162-163.CERT.AGRICPages123-127. |  |
| 3,1 | Breeds of beef cattle. | To describe various breeds of beef cattle | Brief discussion: Hereford, Aberdeen Angus, Charolais, and Galloway. | Wall chart-Beef cattle | KLBPages 163-164.CERT.AGRICPages 123-127. |  |
| 4 |
|  | 2 | Dual-purpose cattle. | To identify dual-purpose cattle breeds (both exotic and indigenous).To state characteristics of dual-purpose cattle breeds. | Discuss characteristics of Sahiwal, Red Poll and Zebu (East African Zebu). | Photographs of dual-purpose cattle breeds.  | KLBPages164-165.CERT.AGRICPages127-128. |  |
| 3,1 | Sheep. Breeds of wool sheep. | To name the key parts of a sheep.To name breeds of wool sheep.To state characteristics of each bread of wool sheep. | Identifying and stating characteristics of Merino sheep, Rambouillet, Suffolk. | Chart- key parts of a sheep.Wall chart- Breeds of wool sheep. | KLBPage 174CERT.AGRICPage 129-133.LONGHORNPage164. |  |
| 5 |
| 2 | Mutton sheep breeds. | To name breeds of mutton sheep.To state characteristics of each bread of mutton sheep. | Identifying and stating characteristics of the Dorper, Black head Persian sheep, Masai sheep, Somali sheep. | Wall chart- Breeds of mutton sheep. | KLBPages 176-177.CERT.AGRICPage 132. |  |
| 3 | Dual-purpose sheep. | To name breeds of dual-purpose sheep.To state characteristics of each bread of dual-purpose sheep. | Assignment method: Stating characteristics of Romney Marsh, Corriedale, and Hampshire Down. | Wall chart: dual-purpose sheep breeds. | KLBPage 178.CERT.AGRICPages133-134 |  |
| 6 | 1 | Breeds of meat goats. | To name and state characteristics of breeds of meat goats. | Highlight the characteristics of: Galla goat, Boar goat. |  |  |  |
| 2 | Breeds of milk goats. | To name and state characteristics of breeds of milk goats.To state characteristics of Angora goat. | Highlight the characteristics of: Toggenburg goat, Saanen, Jamnapuri goat, e.t.c.Highlight the characteristics of Angora goat. | Wall chart- milk and meat goats. | KLBPage 180.CERT.AGRICPages 135-137.LONGHORNPage 169. |  |
| 3 | Pig breeds. | To name key parts of a pig.To identify breeds of pigs and their characteristics. | Highlight briefly the characteristics of Large White, Ladrace, Hampshire and others. | Chart- Key parts of a pigWall chart- Major pig breeds. | KLBPages 166-171.CERT. AGRICPages139-140.LONGHORNPage 174. |  |
|  | Breeds of rabbits. | To name key parts of a rabbit.To identify breeds of rabbits and their characteristics. | Briefly discuss the typical conformation and characteristics of New Zealand White, the California White, the Chinchilla and Earlops. | Chart- Key parts of a rabbitWall chart- Rabbit breeds. | KLBPages 184-185.CERT. AGRIC.Pages 141-143.LONGHORNPage 183. |  |
| 1 | Chicken breeds. | To name key parts of a chicken. To list characteristics of pure breeds of chicken | Drawing and labelling.Assignment method: Leghorn, Rhode Island Red, Australop, Light Sussex, Plymouth Rock, e.t.c. | Chart – Key parts of a chicken. | KLBPages 172-174.CERT. AGRIC.Pages 143-146.LONGHORNPage 178. |  |
| 7 |
| 2 | Chicken hybrids. | To state advantages of hybrids over pure breeds. | Q/A & brief discussion. |  |  |  |
| 3 | Camel breeds. | To identify the two major camel breeds. | Exposition;Discussion;Excursion. | Photographs of camel breeds. | KLBPages 185-186.CERT. AGRIC.Pages 185-186.LONGHORNPage 182. |  |
| 8 | 1 | **AGRICULTURAL ECONOMICS 1**Introduction.  | To define the terms Economics and Agricultural Economics. | Probing questions and discussion. |  | KLBPage 189.CERT. AGRICPage 149.LONGHORNPage 190. |  |
| 2 | Basic economic principles. | To explain basic concepts of economics. | Discussion at length on the following: scarcity and choice, opportunity cost, preference and choice. |  | KLBPages 189-190.CERT. AGRICPage 150.LONGHORNPage 190. |  |
| 3 | Importance of Farm records. | To describe the importance of keeping accurate up-to-date farm records. | Q/A and explanation of importance of farm records. | Specimen farm records. | KLBPages 190-191.CERT. AGRICPage 150.LONGHORNPages 192-194. |  |
| 9 | 1 | Types of farm records.Inventory and financial records. | To describe inventory records and financial records. | Probing questions and discussion. | Samples of records / charts. | KLBPage 192.CERT. AGRICPage 152.LONGHORNPage 160. |  |
| 2 | Labour records and production records. | To describe labour records and production records, and their components.  | Probing questions and discussion. | Labour records and production records. | KLBPage 198, &192.CERT.AGRIC.Page 152.LONGHORNPage 160. |  |
| 3 | Livestock Production Records.Breeding records. | To identify components of animal breeding records. | Q/A: Components of breeding records.Group work:- Components of breeding records of a cow in tabular form.-Components of breeding records of a sow. | Livestock breeding records. | KLBPage 194.CERT.AGRICPage 154.LONGHORNPage 200. |  |
| 10 | 1 | Feeding records.Health records. | To explain importance of feeding records.To represent feeding details in tabular form.To identify details of animal health records. | Probing questions and discussion. | Chart – Sample of animal health record. | KLBPage 196-197.CERT. AGRIC.Page 158-159. |  |
| 2,3 | Livestock production records. | To state importance of keeping accurate livestock production records.To identify necessary details of livestock production records. | Discussion: Milk production record/ egg production record. Practical activity- Design milk production / egg production records. | Livestock production records. | KLBPage 192.CERT. AGRIC.Page 152.LONGHORNPage 160.  |  |
|  |  |  | SUMMATIVE ASSESSMENT TEST |  |  |  |