

ANIMAL HUSBANDARY SYLLABUS

AIMS AND OBJECTIVE

180 – ANIMAL HUSBANDARY

The students should be able to highlight the importance of Animal Keeping, breeding, health, production, feeding, diseases and pest, various types of species and their management.

EXAMINATION STRUCTURE

The trade consists of the following related courses: - Pig Keeping (CAH 11, 18 & 21)

- Poultry Raising (CAH 12, 16 & 23)

- Cattle Production (CAH 13, 17 & 24)

- Goat and Sheep Production (CAH 15, 19, & 25) - Rabbit Keeping (CAH 14, 20 & 22)

EXAMINATION SCHEME

This subject/trade consists of one paper. This will consist of two sections, viz:

SECTION A: It will comprise of forty (40) multiple choice objective questions to be answered in 40 minutes. This section carries forty marks.

SECTION B: It will comprise of seven (7) Essay questions and students are to answer five questions in 2 hours. This carries a total of 60 marks.

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S/NO TOPICS/OBJECTIVES

1. Pig Raising

Locate the areas in Nigeria where pigs are raised.

2. Pig Management Explain why and where

free range, semi intensive and intensive pigs/breeding are practiced

3. Pig Housing Explain conventional

housing for pigs e.g. backyard round huts etc.

4. Feeding in Pigs

1. The importance

of feeding pigs.

2. The sources of

various nutrients.

5. Pig Feeding

Requirement

Explain the various ways of maintaining a hygienic environment in the Piggery

6. Pig Rearing

The terminologies in pig

rearing/keeping.

7. Pigs Breeds

The different breeds of

pigs in the tropics.

8. Breeding System in Pigs

1. Different types of mating.
2. Merit and Demerit of each breeding

system.

9. Pigs nutrition and Feeding

Explain the digestive

system of pigs.

10. Diseases and Pests in

Pig

Explain the nutritional diseases in pigs.

CONTENTS

1. Importance of pig raising.
2. General characteristics of pigs.
3. Advantages and disadvantages of raising

pigs.

1. Pig keeping practice:

- a. free range affectionately n b. semi intensive
- c. intensive

2. The merits and demerits of each practice. 3. Why and where each practice in (1) above

may be preferred.

1. Importance of housing pigs.
2. Raw materials used in the construction of

pig houses.

3. Types of pig houses.

4. Basic facilities expected in a pig house. 1. The nutrient requirement of pigs.

2. Sources of various nutrients.
3. Importance of feeding in pigs.

1. Importance of clean environment in pig raising.

2. The need of vaccination in pigs.
3. The uses of dips and disinfectants in pig

raising.

4. Effects of parasites in pigs.
5. Advantages of dipping.
6. Importance of manure disposal in pig

raising.

1. Terminologies in pig rearing e.g. boar,

sow, piglet, pork etc.

1. Breeds of pigs and their specific features.
2. Advantages of breed system in pigs.

1. Definition of breeding
2. Types of mating system
3. Advantages and disadvantages of breeding

system.

4. Meaning of Oestrus, Oestrus cycle and

signs of oestrus in sow, time of oestrus,

length and time of evaluation in pigs.

1. Digestive system in pigs.
2. Classes of feeds.
3. Digestion of food in pigs.
4. Effect of climate on feed intake in pigs
1. Nutritional diseases in pigs
2. Causes of piglet mortality
3. Endoparasites in pigs
4. Direct and indirect effects of climate on

pigs.

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CAH 11, 18 & 21 – PIG KEEPING IN NIGERIA

ACTIVITIES/REMARKS
- Discussion of the reason for raising pigs.
- Explanation of pig management systems.
- Explanation of the advantages of good housing for pigs.
- Explanation of the nutrient requirement of pigs.

<ul style="list-style-type: none"> - Discussion of the need for clean environment in pig raising - Demonstration of dipping in pigs.
- Discussion of the terminologies in pig rearing.
- Explanation of the breeds of pigs and their specific features.
- Explanation of mating system - Explanation of the artificial insemination practice and why it is important in pig production.
- Explanation of the effects of climate on feed intake in pigs
- Explanation of the direct and indirect effects of climate on pigs.

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S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
11.	<p>The Breeding System in Pigs</p> <ol style="list-style-type: none"> 1. Explain out-breeding, cross breeding and in-breeding. 2. Problems of infertility in pigs. 	<ol style="list-style-type: none"> 1. Breeding in pigs. 2. Cross and in-breeding. 3. Merit and demerits of breeding system. 4. Problems of infertility in pigs 5. Male and female sex hormones in pigs. 6. Male and female reproductive tracts. 	<ul style="list-style-type: none"> - Description of the male and female reproductive tracts. - Mention the differences between the male and female reproductive tracts.
12.	Nutritional Requirement in Pigs	<ol style="list-style-type: none"> 1. Nutritional requirement in pig from day one to finishing. 2. Feed requirement of piglets, grower, fattener, breeder and finisher. 	
13.	Care and Management of Pigs	1. Care and Management of sow, boars, gilt, baby pigs, growers and finishing pigs.	
14.	Routine Management Practices in Pigs. Discuss management practices in pig rearing.	<ol style="list-style-type: none"> 1. Major routine management practices in pig rearing. 2. Description of the following activities in pig breeding. 	Demonstrate the routine management practices like identification, teeth chipping castration etc.

		a. identification b. infant teeth chipping c. castration d. ear notching	
15.	Record Keeping in Pig Management Explain the importance of record keeping in pig production.	1. Importance of record keeping in pig management. 2. Different types of record in pig keeping e.g. breeding record, sow litter record etc.	
16.	Processing of Pigs Explain the different slaughtering equipment.	1. Importance of slaughtering and processing of pigs. 2. Different slaughtering equipment. 3. processes/Procedure for slaughtering. 4. Slaughtering processes. 5. Uses of slaughter by-products. 6. Offarts and carcass.	<ul style="list-style-type: none"> - List the uses of slaughter by products. - Outline the processes/procedures for slaughtering. - Identification of the different parts of the carcass e.g. the loin, hump, neck, head, intestines etc.

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CAH 12, 16 & 23 – POULTRY RAISING

S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
1.	Poultry Keeping Poultry List the importance of keeping poultry to the farmers.	1. Importance of keeping poultry to the farmers and society.	
2.	Poultry Species 1. Identify and show the features of domestic fowl duck etc. 2. List and explain the general characteristics of poultry.	1. Features of domestic birds. a. fowl b. turkey c. duck d. guinea fowl etc. 2. General characteristics of poultry.	- Description of the proccession of beaks, scaly, lags, feathers, e.g. laying etc.
3.	Poultry Management	1. The keeping and raising systems of poultry.	

	Explain the following poultry raising systems.	2. Advantages and disadvantages of free range, semi intensive and intensive system.	
4.	<p>Poultry Housing</p> <ol style="list-style-type: none"> 1. Name common facilities in a poultry houses 2. Explain conventional and unconventional housing. 	<ol style="list-style-type: none"> 1. Types of housing for poultry in the tropics. 2. Importance of housing in poultry houses. 3. Raw materials used in building poultry houses. 4. Common facilities requirement in a poultry farm and their uses e.g. shovel, wheel barrow, drinker, feeder, crates and head-pan etc. 	- Identification of raw materials use in building poultry houses.
5.	<p>Poultry Feeding</p> <p>Explain the nutrient required by the various classes of poultry.</p>	<ol style="list-style-type: none"> 1. Importance of nutrients to the overall performance of poultry. 2. Sources of nutrients in poultry feeding. 	- Explanation of the sources of the various nutrients e.g. carbohydrate, sorghum, millet etc.
6.	<p>Hygiene in Poultry Keeping</p> <p>Explain types and importance of vaccinations.</p>	<ol style="list-style-type: none"> 1. Importance of clean environment in poultry rearing. 2. Types and importance of vaccinations. 	- Discussion of importance clean environment as factor for proper development of birds.
7.	<p>Terminologies in Poultry</p> <p>Explain and outline the various terminologies in poultry raising.</p>	1. The various terminologies used in poultry raising e.g. Tom, Ducklings, Chicks, Growers, Broiler, Starters, Layer Mash etc.	- Description of the various terminologies with students
8.	<p>Classes of Poultry</p> <p>State the characteristics of exotic birds e.g. fast growing, big-in-size etc.</p>	<ol style="list-style-type: none"> 1. Different classes of poultry production e.g. Pullets for egg production; Broiler for table meat; Cockerel for table meat. 2. Characteristics of local birds production. 3. The features of exotic birds e.g. brown or black plumage, big in size, fast growing. 	- With the use of question and answer method, describe the local chicken, duck, Turkey, Ostriches, Pigeon etc.
9.	<p>Ingredients in Poultry Feeding</p> <p>Explain the digestive system of a known</p>	1. The digestive system of a poultry breed. 2. The various sources of nutrients for poultry raising.	- Identification of the various additives available for poultry feeds in the market e.g. vitamin, premix for ducks etc.

S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
	poultry breed.		
10.	Poultry Pests and Diseases Identify types of endoparasites and their control measures.	<ol style="list-style-type: none"> 1. Various diseases and pests that affect poultry. 2. Types of ectoparasites and endoparasites that affect poultry raising. 3. Preventive and curative measures for poultry diseases. 	- Study the various diseases and pests that affect poultry.
11.	Climate Condition in Poultry Explain the effects of climate on poultry	1. Prevailing weathers conditions and it's effects on growth and egg production.	- Outline the prevailing weather condition, its effects on growth and egg production.
12.	Origin of the Poultry Species State the differences between local and exotic breeds of poultry.	<ol style="list-style-type: none"> 1. The origin of poultry. 2. Class of poultry and reasons for the choice. 	- Choose a class of poultry and state the reason for the choice e.g. pullets for eggs broiler for meal.
13.	The Importance and Factors for Choice of a Site Explain the importance of housing in poultry with their various designs suitable for the tropics.	<ol style="list-style-type: none"> 1. The importance of housing in poultry. 2. the factors influencing the choice of housing. 3. Diagram of typical poultry house in your locality. 	- Sketch a typical poultry house suitable for climatic condition in your locality.
14.	Poultry Equipment Describe some poultry equipment and explain their usage	1. Poultry equipment and their uses e.g. drinker, feeders, perches, nesting box, egg crates, transportation crate, rain boots, head pans, shovels and wheelbarrows etc.	- Identification of the various equipment and designs meant for each stage of growth.
15.	Nutrient Required for Poultry <ol style="list-style-type: none"> 1. State nutrient intake level of poultry. 2. Explain some common feed compositions. 	<ol style="list-style-type: none"> 1. The intake level of the following for poultry: <ol style="list-style-type: none"> a. energy b. protein c. vitamin d. mineral 2. Feed composition. 	- Identification of some commercial feeds in the market.
16.	Routine Management Practices State the various routine management practice in poultry raising debarking, despairing of cocks, clipping, dubbing, daily supply of water etc.	<ol style="list-style-type: none"> 1. Various routine management practices in: a. poultry raising debarking, b. clipping, c. dubbing, d. daily supply of water 	-
17.	Hygienic and Health <ol style="list-style-type: none"> 1. Name common poultry diseases in the tropics. 2. Explain possible causes of diseases. 	<ol style="list-style-type: none"> 1. General hygienic measures for poultry. 2. Common poultry diseases in the tropics 3. Possible causes of diseases in poultry 4. Common pest and their control 	<ul style="list-style-type: none"> - Discussion of general hygienic measures for poultry. - Description of the effects of diseases and

			pests on general performance of poultry
18.	Practice of Hatchling Brooding and Sourcing for Chicks 1. Explain the different types of: a. hatching, b. natural c. artificial.	1. Types of hatching natural artificial 2. Definition of brooding 4. Types of brooding a. Hen b. artificial 3. Ways of rearing the chicks from 0-8 weeks.	- Observation of ways of raising the chicks from 0-8 weeks (brooding)

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S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
	2. Define brooding 3. Explain types of brooding a. hen b. artificial.		
19.	Poultry Products and Processing Explain the sources of chicks.	1. The sources of chicks: a. pullet chicks b. broiler chicks c. cockerels etc.	- Mention the good source of day old chicks.
20.	Record Keeping 1. Describe the importance of good record keeping of various poultry products and bi- products. 2. Explain the essence of proper recording of poultry performance.	1. The importance of good record keeping for the various poultry products and bi-products e.g. a. eggs, processing of products. b. Poultry meat c. slaughter waste or offals, d. by-products (manure) 2. The essence of proper recording of poultry performance e.g. a. laying percentage, b. weight and size of eggs, c. number of eggs, d. feed consumption, e. record of medications/ vaccination. f. Record of cost of items g. Record of sale e.g. eggs and birds	<ul style="list-style-type: none"> - Explanation of the importance of these products to the farmer. - Demonstrate the process of how to record sales.

21.	Ways of Improving Local Chickens Explain cock exchange programme.	1. Cock exchange programme 2. Advantages of local chicken and hybrid chicken	- List the advantages of local chicken and hybrid chicken
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CAH 14, 20 & 22– RABBIT KEEPING

S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
1.	Rabbits Keeping	1. Importance of raising rabbits 2. Types of Rabbit breeds 3. Types of Rabbits	- Discussion of reasons for raising or keeping rabbits.
2.	Rabbit Housing	1. Meaning of rabbit housing. 2. Conditions necessary for setting a rabbit housing. 3. Importance of housing a rabbit. 4. Materials needed for construction of rabbit housing.	- Explanation of different types of rabbit houses e.g. pews &* notches.
3.	Rabbits Production	1. Reproductive features of rabbit. 2. The main features of the male and female rabbits. 3. The differences between male and female rabbits.	- Explanation on difference between male and female reproductive tract.
4.	Rabbit Feeding	1. Common feeds of rabbit 2. Nutritional constitution of rabbit food 3. Classification of rabbit common food into the various nutrients.	- Identify and list the common food of rabbits into various classes of nutrients e.g. maize, sorghum, yam for carbohydrates.
5.	Rabbit Health	1. Definition of diseases and pests. 2. Common rabbit diseases and pests. 3. Symptoms and signs of diseases in rabbit. 4. Importance of a good sanitary condition in rabbit house. 5. Ways of improving and preventing diseases and pest in rabbits.	- Explain signs of common rabbit disease, and identify ecto and indo parasites of rabbits.

6.	Rabbit Production Terminologies	1. Meaning of terminology. 2. Common terminologies applicable in rabbit keeping.	-
7.	The Characteristics, Types and Problems of Rabbit Production.	1. The general characteristics of different breed of rabbits. 2. The mean bred and fancy type of rabbits. 3. Some common difficulties in keeping rabbits.	<ul style="list-style-type: none"> - Identify coat, colour, weight, length of various breeds in your area. - List the characteristics of meat.
8.	The materials used for rabbits housing	1. Important features of rabbits housing. 2. The materials used for constructing rabbit housing.	<ul style="list-style-type: none"> - Description of the height, length, width of rabbit housing. - Drainage and disposal.
9.	Breeding Techniques in Rabbits	1. Sexual maturity in rabbit 2. Types and importance of breeding rabbits 3. Mat using pattern in back and does. 4. Signs of pregnancy in rabbits. 5. Sign of parturition or kindling on rabbit. 6. The maturity ratio in rabbits.	- How to identify the age, sexual mating in buck and does signs of pregnancy etc.
10.	Feed and Nutrient Requirement for Rabbits	1. The feeds required by rabbit 2. Classes of rabbits.	- Differentiating feeds for rabbits e.g. protein, roughages, carbohydrates, fats, vitamins and minerals.
11.	Common Disease and Pest of Rabbits	1. Common disable effects. 2. Litter mortality in rabbit. 3. The control measures for prevention of young rabbit mortality. 4. Symptoms of diseases in rabbit. 5. The importance of hygiene and good	- Show the importance of good housing, sanitation, vaccination, medication and food feeding. Symptoms of ill health in rabbits.

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S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
		building materials.	
12.	Husbandry and Handling practices	1. Routine Management practices in rabbit keeping 2. handling of rabbit.	- Carry out identification of rabbit ear notching, following, tagging etc.

13.	Features of a Good Rabbit Housing	<ol style="list-style-type: none"> 1. Importance of hygiene and good building materials. 2. Equipment needed in Rabbit farm and their maintenance. 3. Difference between a maternity hatch and a nest box. 	<ul style="list-style-type: none"> - Identify equipment/materials used in the sanitation and building of a rabbit house.
14.	Handling and Care of Rabbit	<ol style="list-style-type: none"> 1. Handling and appearance of a young rabbit care. 2. Care of Doe to Kitten. 3. Period of weaning. 4. Precaution involved in handling kitten 5. Predators of rabbits. 6. Time of rebreeding rabbit. 7. Abortion in rabbit. 8. Infertility in rabbit. 	<ul style="list-style-type: none"> - Explain the period of weaning of a rabbit. - Describe the effects of handling kitten by hand. - Causes of abortion in rabbit.
15.	Importance of Feeding Rabbits	<ol style="list-style-type: none"> 1. Nutrition deficiencies in rabbits. 2. Feed conversion efficiency of rabbit and poultry. 3. Compounding rabbit ration. 4. Coprophagy in rabbit. 	<ul style="list-style-type: none"> - List symptoms of nutritional imbalance and explain how to compound ratio diets using Pearson square etc.
16.	Digestion of Feed in Rabbit	<ol style="list-style-type: none"> 1. Digestion, Assimilation and absorption in rabbit 2. Digestive system in rabbit 	<ul style="list-style-type: none"> - Outline the differences/similarities in digestive system of rabbit and minerals.
17.	Record Keeping in Rabbit	<ol style="list-style-type: none"> 1. Importance of record keeping 2. Explain the different types of record keeping. 	
18.	Process of Rabbits	<ol style="list-style-type: none"> 1. Equipment used for processing rabbit. 2. Different processing method in rabbits 3. Importance of slaughtering and processing 4. Uses of rabbit products and by-products e.g. blood, fur, faeces. 	<ul style="list-style-type: none"> - Identify and list equipment used for processing rabbits. - Processing of rabbits e.g. flaying (skinning).

CATTLE PRODUCTIONS

S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
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1.	Cattle Keeping	1. Importance of cattle to the farmer and beef consumers	-
2.	Cattle breeds in Nigeria	1. Various breeds of cattle in Nigeria	-
3.	Terminologies in cattle production	<ol style="list-style-type: none"> 1. Various terminologies in cattle keeping e.g. bull, culling in-cow, calf, heifer, calling, yearly etc. 2. Importance and uses of the various equipment in cattle farming e.g. shovel, head pan, wheel barrow, fork, drum, rope, sprayer, troughs etc. 	- Identify and explain the importance of various items of equipment used in cattle farming.
4.	Cattle Housing	1. Importance of housing in cattle keeping. 2. Materials required for the construction of cattle housing.	-
5.	Cattle Feeding	1. Various forages consumed by cattle. 2. Nutritional requirement of cattle.	- Identify the various forages e.g. grasses, legumes, brow plants and crop residus.
6.	Cattle Disease, Pests and Simple Control Conditions	1. The causes of diseases and pest in cattle. 2. Treatment and care of affected animal	- Demonstrate the treatment and care for affected animal.
7.	Cattle Identification	<ol style="list-style-type: none"> 1. Various ways of identifying cattle in the farm. 2. Methods of identifying cattle in the farm e.g. ear tag, branding etc. 	- Students should be shown ways by identifying cattles in a farm e.g. ear, tag, branding etc
8.	Cattle Breeds	1. Various breed of cattle and their features.	- Discuss adaption, reisting to trypanosomioses tsetse fly etc.
9.	Hybrids Breeds	1. Types of hybrids breeds.	-
10.	Cattle Production Management	<ol style="list-style-type: none"> 1. The various management systems of cattle production. 2. Advantages and disadvantages of cattle production. 	-
11.	Feeds and Feeding of Cattle	<ol style="list-style-type: none"> 1. Common foods for cattle. 2. Feeding pattern of cattle. 3. Importance of feed to cattle production. 	- Describe the quality and quantity of the feeds needed for meat and milk production.
12.	Hygiene and Health Care	<ol style="list-style-type: none"> 1. Importance of hygiene and health for cattle production. 2. Ways of manure disposal for a hygienic environment. 3. Causes of infection in cattle. 4. Diseases and pest control in cattle production. 	- Describe the rectors that cause ill health in cattle.

13.	Reproduction in Cattle	1. Definition of reproduction. 2. Features of male and female reproductive organs.	-
14.	Products and By- Product of Cattle	1. The importance of milk from cattle. 2. The uses of hides from cattle.	-
15.	Record Keeping	1. The usefulness of record keeping in cattle production.	-
16.	Best Breed for production Purpose	1. The breed best suited for your locality. 2. The feeds and feeding requirements: water, protein, energy, vitamins, minerals.	- Describe the characteristics of the breeds and reasons for their preference.

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S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
		3. Requirements for dry season feeding e.g. browse, plants and crops residues, hay, silage production (forage conservation).	-
17.	Health Care and Quarantine Purpose	<ol style="list-style-type: none"> Importance of isolation of new or sick animal. Basic principle of health control: <ol style="list-style-type: none"> Regular observation routine check Disposal of dead animal Importance of health record. Definition of the term vaccination. Method of worm prevention. Methods of tick control Some skin and hoof problems. Ways of control and prevention of the problems. 	- Describe vectors and causative agents of diseases. Also describe the control/preventive measures and how to safe-guard herds.
18.	Various Management Systems Needed at Various Ages	1. Basic management systems of the following classes of cattle: Colt, Heifers, In-cow, Bull and Dairy Cow.	- Describe the management of each class as it affects their growth stages, reproduction and general performance.
19.	Reproductive Activities in Cattle Production	<ol style="list-style-type: none"> Definition of maturity in cattle. The symptoms to show when the cattle are on heat. Explanation of the term abortion. The likely causes of abortion in cattle. 	<ul style="list-style-type: none"> - With diagrams, describe the reproductive organs of a bull and a cow. - Explain the term abortion and the causes.

		5. Measures to preventing abortion in cattle.	
20.	Record Keeping	1. Importance of good records keeping. 2. Keeping proper record of farm activities. 3. Cost benefit analysis of record keeping. 4. Record book for evaluation auditing.	
21.	Milking Procedures in Cattle Production	1. Milking procedures in cow. 2. Use of the following products from cattle beef: blood, bones hides, horn etc.	<ul style="list-style-type: none"> - Describe various methods of milking (Hand/Machine). - Discuss milk handling and storage.
22.	Selection of Replacement Stock	<ol style="list-style-type: none"> Features to look out for in selecting a good heifer or bulls. Importance and use of heifer or bull. 	- Describe the Anatomical features in terms of selection etc.

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CAH 15, 19 & 25 - GOAT AND SHEEP PRODUCTION I

S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
1.	Goats and Sheep Production/raising Explain the importance of goats and sheep raising.	1. The importance of goats and sheep raising to the farmer.	
2.	Goats and Sheet Breeds <ol style="list-style-type: none"> Identify the breeds of Goats and Sheep. List the breeds of Goat and Sheep. 	<ol style="list-style-type: none"> The meaning of sheep and goats breed. The different breeds in goats and sheep. The general characteristics of goats and sheep. 	<ul style="list-style-type: none"> - Draw some goats and sheep breeds available within your area. - Identification of the differences between the breeds.
3.	Goats and Sheep Management <ol style="list-style-type: none"> Explain different types of goat sheep farms management. State the advantages and disadvantages of the system of management. 	<ol style="list-style-type: none"> Types of goats/sheep farms management system e.g. a. Free range systems b. Semi-intensive system c. Intensive system. Advantages and disadvantages of the 	- Identification of the common management systems in your area.

		system of management above.	
4.	<p>Goats and Sheep Housing</p> <ol style="list-style-type: none"> 1. Explain types of goats and sheep farm housing. 2. Describe the types of housing for goats and sheep e.g. conventional and non-conventional housing. 3. Identify the local raw materials used for the construction of goats/sheep house. 	<ol style="list-style-type: none"> 1. Types of goats/sheep farms housing 2. Importance of housing in goats/sheep farming. 3. Materials required for the construction of goats/sheep housing. 4. Facilities needed in goats and sheep house e.g. feeder, head pan and drinkers etc. 5. Types of bedding materials used for goats and sheep. 	<ul style="list-style-type: none"> - Discussion of the features of a good housing for sheep and goats e.g. huts, bamboo and pen/padlock. - Construct a pen/paddock for goats and sheep using local materials e.g. wood, bamboo. - Sketch the facilities in goats and sheep house.
5.	<p>Goats and Sheep Nutrition and Feeding</p> <p>Explain the nutrient requirements of sheep and goats e.g. carbohydrates, protein, fat and oil etc.</p>	<ol style="list-style-type: none"> 1. Food and feeding pattern of goats and sheep. 2. Sources of nutrients in goats and sheep feeding. 3. Importance of nutrients to sheep and goats. 	<p>- Identification of the source of nutrients in carbohydrate, protein etc.</p>
6.	<p>Health and Hygiene in Sheep</p>	<ol style="list-style-type: none"> 1. The importance of clean environment of the growth of goats and sheep. 2. The types and uses of vaccination in goats and sheep. 	<p>- Vaccination programmes for goats and sheep in tabular form.</p>
7.	<p>Terminologies and Attractive Properties of Sheep and Goats</p>	<ol style="list-style-type: none"> 1. Terminologies in goats and sheep farming e.g. bull, culling in-cow, calf, heifer, calling, yearly etc. 2. Types of goats and sheep e.g. billy, nanny, kid kidding, whether, flock, chevron, 	<p>- Identify and explain the importance of various items of equipment used in cattle farming.</p>

S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
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		servicing, suckling meat of sheep ram, ewe, lamb, suckling and flock. 3. Breeding methods of goats and sheep. 4. Care for breeding sheep and goats. 5. The age range of puberty in sheep and goats. 6. Care for the breeding billy-goat, ram and nanny. 7. Definition of puberty, oestrus, ovulation, fertilization, servicing, gestation and parturition.	
8.	Breeding Selection, Care and Management of Goats and Sheep	1. The taints selection of goats and sheep. 2. Qualities of goats and sheep suitable for reproduction. 3. The method of production of milk and meat for cross breeding. 4. Parturition process in goat and sheep. 5. The care of new born kids and lambs. 6. Signs of difficult birth.	- Major breeds of sheep and goats found in west Africa.
9.	Nutrition and Feeding of Sheep and Goat	1. The feeding practice of goats and sheep. 2. The essential feed supplements.	- Identifying various feed supplements e.g.
10.	Common Diseases of Goats and Sheep	1. Common diseases of goats and sheep. 2. The condition of sick goat and sheep. 3. Internal and external parasites. 4. Importance of vaccinations of goats and sheep.	- Summary of the common diseases.
11.	Processing and slaughter of goats and sheep	1. The use of sheep and goat products and by products e.g. meat, blood, bones, hides and skin, dung.	- Identify the uses of dung, horns, hoofs, hides & skin, bones, blood etc.
12.	The Reproductive Organs of Sheep and Goats	1. The male and female reproductive system of sheep and goats. 2. Signs of oestrus.	- Identify and draw the male and female reproductive system signs of estrus in goat and sheep.
13.	Care and Management of Kids and Lambs	1. Process of weaning kids and lambs. 2. Care for breeding and lactation	- Carry out the lane of young goat and sheep in the farm e.g. provision of feed, water, vaccination etc.

14.	Pasture Management and Utilization by Sheep and Goats	<p>1. Importance of pasture to sheep and goat. 2. Types of pasture materials e.g. legumes</p> <p>(centrosema) grass, and ropogon</p> <p>gayemens.</p> <p>3. Types of grazing management applicable</p> <p>in Nigeria.</p> <p>4. Definition of hay and silage.</p> <p>5. The differences between hay and silage. 6. Silage to sheep and goat.</p>	<ul style="list-style-type: none"> - Identify the types of pastures available in your area. - Pasture materials in terms of legumes and grass in your area.
15.	Selection of Housing Site and Effects of Climate to Sheep and Goat	<p>1. Common sheep and goat housing.</p> <p>2. Typical goat and sheep house.</p> <p>3. Dimension of the pen/padlock for sheep</p> <p>and goat.</p> <p>4. The effect of climate on type of housing. 5. Effect of climate on nutrition of sheep</p> <p>and goat.</p>	<ul style="list-style-type: none"> - Draw a common sheep and goat housing in your area. - Describe direct and indirect effect of climate in nutrition of sheep and goats.
16.	Disease and Pest of Sheep and Goats	<p>1. Disease and pest of sheep and goat. 2. Nutritional disorder.</p>	
17.	Breeding Systems	<p>1. Breeding system in sheep and goat.</p>	- Identify the sheep and goats

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S/NO	TOPICS/OBJECTIVES	CONTENTS	ACTIVITIES/REMARKS
		<p>2. Problems of infertility in sheep and goats. 3. The productive hormones.</p>	crosses and pure breeds in your locality.
18.	Slaughtering and processing of sheep and goats	<p>1. The processes of slaughter and preservation of sheep and goat.</p>	
19.	Sanitation of Abattoir and slaughter slabs	<p>1. The level of sanitation required in the meat slaughtering house.</p> <p>2. The effects of dirty slaughter slab.</p>	- State the importance of sanitation in slaughter slab/abattoir micro organism and pest associated with slaughter.

		3. The importance of meat inspectors.	
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