SCIENCE – BASIC 9

THIRD TERM SCHEME OF LEARNING

WEEKS	STRAND	SUB STRAND	INDICATORS	RESOURCES
1	Systems	**Farming Systems** ● B9.3.4.1 Demonstrate knowledge and skills in the preparation of different types of manure from animal and plant waste	B9.3.4.1.1 List and explain the different plant and animal waste used in preparing different types of manure	Charts & Pictures
2	Systems	**Farming Systems** ● B9.3.4.1 Demonstrate knowledge and skills in the preparation of different types of manure from animal and plant waste	B9.3.4.1.2-3 Demonstrate the preparation of different types of manure Prepare different types of manure.	Charts & Pictures
3	Forces & Energy	**Force & Motion** ● B9.4.4.1 Demonstrate understanding of the concept of pressure and explain how pressure acts in everyday life	B9.4.4.1.1-2 Explain the concept of pressure and show how pressure relates to force; perform activities that work on the principle of pressure in the daily lives of humans. Explain the importance of Newton's Third Law of Motion in life.	Charts & Pictures
4	Forces & Energy	**Force & Motion** ● B9.4.4.2 Demonstrate an understanding of Newton's Third Law of Motion and its application in everyday life	B9.4.4.2.1 Demonstrate the application of Newton's Third Law of motion in life Explain Newton's Laws of Motion and their applications to daily life.	Charts & Pictures

5	Forces & Energy	**Agriculture Tools** ● B9.4.5.1 Demonstrate knowledge and skills in making simple agricultural tools for on-farm activities	B9.4.5.1.1-2 Identify materials used in making simple agricultural tools. Discuss and write activities involved in making simple agricultural tools.	Charts & Pictures
6	Forces & Energy	**Agriculture Tools** ● B9.4.5.1 Demonstrate knowledge and skills in making simple agricultural tools for on-farm activities	B9.4.5.1.3 Manufacture simple agricultural tools	Charts & Pictures
7	Humans & the Environment	**Science and Industry** ● B9.5.3.1 Analyze the scientific concepts, principles and processes applied in industries in and outside their community	B9.5.3.1.1 Investigate the scientific concepts, principles and processes involved in industries in their environment. B9.5.3.2.1 Explain the concept of industry and distinguish between modern and indigenous industries	Charts & Pictures
8	Humans & the Environment	**Science and Industry** ● B9.5.3.2 Demonstrate an understanding of the concept of industry, the science underpinning the processes of production in industries the technologies in indigenous industries and western industries	B9.5.3.2.2 Examine indigenous industries in their communities and show the scientific processes in the stages of production.	Charts & Pictures
9	Humans & the Environment	**Climate Change & Green Economy** ● B9.5.4.1 Demonstrate an understanding of the natural and human factors that	B9.5.4.1.1	Charts & Pictures

		influence climate change and a green economy	Examine various natural and human factors that influence climate change and green economy in their localities. B9.5.4.2.1 Assess data on climate change and green economy actions/ activities globally including Ghana and other countries.	
10	Humans & the Environment	**Understanding the Environment** ● B9.5.5.1 Demonstrate knowledge and skills in the use of plant roots, stems, leaves, flowers, and fruits for agricultural and non-agricultural purposes	B9.5.5.1.1 Show and list the uses of different plant parts for agricultural and non-agricultural purposes. .	Charts & Pictures
11	Humans & the Environment	**Understanding the Environment** B9.5.5.1 Demonstrate knowledge and skills in the use of plant roots, stems, leaves, flowers, and fruits for agricultural and non-agricultural purposes	B9.5.5.1.2 Demonstrate the use of different plant parts for agricultural and non-agricultural purposes	
12	REVISION			
13	EXAMINATION AND VACATION			

THIRD TERM
WEEKLY LESSON NOTES
WEEK 1

Week Ending:		**DAY:**		**Subject:** Science	
Duration: 100mins				**Strand:** Systems	
Class: B9		**Class Size:**		**Sub Strand:** Farming Systems	
Content Standard: B9.3.4.1 Demonstrate knowledge and skills in the preparation of different types of manure from animal and plant waste			**Indicator:** B9.3.4.1.1 List and explain the different plant and animal waste used in preparing different types of manure		**Lesson:** 1 of 2
Performance Indicator: Learners can identify and write down the materials used in preparing manure and their sources				**Core Competencies:** Critical Thinking and Problem Solving (CP), Communication and Collaboration (CC) Digital Literacy (DL), Creativity and Innovation	
References: Science Curriculum Pg. 105					
Key words: Animal Manure, Green Manure, Compost, Organic Matter, Nitrogen, Carbon					

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Begin the lesson by asking learners if they know what manure is and why it is important for farming. Introduce the concept of manure as organic matter used to fertilize soil and improve crop growth.	
PHASE 2: **NEW LEARNING**	Discuss various types of manure used by farmers, such as: • Animal manure: Includes cow dung, chicken droppings, and horse manure. • Green manure: Composed of plant residues like crop residues or leguminous plants. • Compost: Decomposed organic matter from kitchen waste or garden debris. Explain the materials used in preparing manure, including: • Organic matter: Kitchen waste, crop residues, grass clippings. • Nitrogen sources: Animal droppings, leguminous plants. • Carbon sources: Straw, sawdust, dried leaves.	

	Discuss the sources of these materials, such as farms, households, and garden waste.	
	Assessment	
	1. List three types of manure used by farmers and describe their benefits for soil fertility.	
	2. Identify two materials used in preparing manure and explain where these materials can be sourced from.	
	3. Discuss the importance of using organic matter in agriculture and how it contributes to sustainable farming practices.	
	4. State one potential challenge or limitation of using manure as a fertilizer and suggest a solution	
PHASE 3: **REFLECTION**	Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.	
	Take feedback from learners and summarize the lesson.	

Week Ending:		DAY:		Subject: Science	
Duration: 100mins				Strand: Systems	
Class: B9		Class Size:		Sub Strand: Farming Systems	
Content Standard: B9.3.4.1 Demonstrate knowledge and skills in the preparation of different types of manure from animal and plant waste			Indicator: B9.3.4.1.1 List and explain the different plant and animal waste used in preparing different types of manure		Lesson: 1 of 2
Performance Indicator: Learners can list and explain the different plant and animal waste used in preparing different types of manure				Core Competencies: Critical Thinking and Problem Solving (CP), Communication and Collaboration (CC) Digital Literacy (DL), Creativity and Innovation	
References: Science Curriculum Pg. 105					
Key words: Justification, Soil and Climate, Plant Wastes, Animal Wastes					

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Ask learners if they know what manure is and why it is important for farming. Introduce the concept of manure as organic matter used to fertilize soil and improve crop growth.	
PHASE 2: **NEW LEARNING**	Explain the two main categories of manure: plant wastes and animal wastes. Discuss examples of manure from plant wastes (e.g., compost, green manure) and animal wastes (e.g., poultry droppings, cow dung). In small groups, have learners compile a list of plant parts/wastes and animal parts/wastes used to prepare manure. Examples of plant parts/wastes: Leaves, waste fruits, plant shavings, crop residues. Examples of animal parts/wastes: Poultry droppings, cow dung, pig dung, animal carcasses. Discuss the factors that influence the choice of manure, such as soil type, climate, and crop requirements.	

| | Provide examples and scenarios (e.g., sandy soil, dry climate, fruit orchard) and ask learners to justify the use of specific manures for each scenario.

Assessment
1. Categorize the following types of manure into plant wastes or animal wastes: compost, poultry droppings, cow dung, green manure.
2. Compile a list of materials used to prepare manure, including plant parts/wastes and animal parts/wastes.
3. Justify the use of cow dung in a region with clayey soil and frequent rainfall.
4. Explain why compost may be preferred over poultry droppings in a vegetable garden. | |
| PHASE 3:
REFLECTION | Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.

Take feedback from learners and summarize the lesson. | |