THIRD TERM
WEEKLY LESSON NOTES
WEEK 2

Week Ending: 07-07-2023	**DAY:**	**Subject:** Social Studies
Duration: 60MINS		**Strand:** Environment
Class: B8	**Class Size:**	**Sub Strand:** Weather & Climate

Content Standard: B8.1.3.1 Demonstrate understanding of the significance of weather and climate to the environment	**Indicator:** B8.1.3.1.1. Assess the significance of weather and climate to the environment	**Lesson:** 1 OF 2
Performance Indicator: Learners can sketch maps and interpret landscapes from maps	**Core Competencies:** CP 5.1: CC 8.1: CC 8.1: CC 9.1: CP 5.2: CC	
References: Social Studies Curriculum Pg. 49		
Keywords:		

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Engage learners to go on a nature to observe physical features of the school compound. Let them sketch a map of the school compound. They share their maps with the class for further discussion. Share performance indicators with learners.	
PHASE 2: **NEW LEARNING**	Discuss various ways of measuring the elements of weather and climate, including the use of hygrometer, rain gauge and barometer. a. Temperature: *Thermometer: A common instrument used to measure air temperature. Traditional thermometers use mercury or alcohol, while modern ones may employ digital sensors.* b. Precipitation: • *Rain Gauge: Measures the amount of rainfall in a specific area. It consists of a container with graduated markings to indicate the depth of collected precipitation.* • *Snow Gauge: Similar to a rain gauge, but designed specifically for measuring the depth of snowfall.* • *Disdrometer: Used to measure the size and velocity of raindrops or snowflakes, providing detailed information about precipitation characteristics.* c. Humidity: *Hygrometer: Measures the amount of moisture or water vapor in the air. Common types include psychrometers, which use the cooling effect of evaporation, and capacitive hygrometers, which utilize changes in electrical capacitance.*	Pictures and Charts

	d. Wind: • *Anemometer: Measures wind speed. Common types include cup anemometers, which have rotating cups, and ultrasonic anemometers, which use ultrasonic sound waves to detect wind speed and direction.* • *Wind Vane: Determines the direction from which the wind is blowing. It usually consists of a pointer attached to a vertical axis*. e. Air Pressure: *Barometer: Measures atmospheric pressure. Mercury barometers use a column of mercury in a glass tube, while aneroid barometers use a flexible metal chamber that expands or contracts with changes in pressure*. f. Sunlight: • *Pyranometer: Measures solar radiation, including direct and diffuse sunlight. It typically consists of a sensor that absorbs solar energy and generates an electrical signal proportional to the received radiation.* • *Sunshine Recorder: Determines the duration of sunlight exposure at a particular location using a glass sphere that focuses sunlight on a strip of photosensitive paper*. Engage learners in groups to construct instruments to measure elements of climate. <u>Assessment</u> What instrument is commonly used to measure air temperature? Name a device used to measure the amount of rainfall in a specific area. How is humidity typically measured? Which instrument is used to determine wind speed? What is the purpose of a barometer in weather measurements?	
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.	

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PHASE 2: **NEW LEARNING**	Engage learners in their groups to identify and describe the climate zones in Ghana. Ghana, located in West Africa, has a diverse climate with distinct climatic zones. Here are the main climatic zones found in Ghana: 1. Tropical Rainforest Zone: • *Location: The southernmost part of Ghana, including the coastal areas and the high rainfall regions.* • *Climate: Characterized by high temperatures and abundant rainfall throughout the year, with no distinct dry season. Average annual rainfall exceeds 1,500 mm (59 inches).* • *Vegetation: Dense tropical rainforests with a rich variety of plant and animal species.* 2. Coastal Savannah Zone: • *Location: The coastal belt stretching from the rainforest zone to the north.* • *Climate: Features a wet and dry season. The wet season occurs from April to October, with peak rainfall between June and September. The dry season lasts from November to March, with lower rainfall and higher temperatures.* • *Vegetation: Mixed vegetation of grassland, shrubs, and isolated patches of forest.* 3. Forest Transition Zone: • *Location: Located between the rainforest zone and the Guinea Savanna zone, spanning parts of central Ghana.* • *Climate: Experiences a transition between the wetter rainforest climate and the drier savanna climate. Rainfall is slightly lower*	Pictures and Charts

	than in the rainforest zone, and there is a distinct wet and dry season. • *Vegetation: Mosaic of forests, grasslands, and farmland.* 4. Guinea Savanna Zone: • *Location: Covers the northern part of Ghana, including the northern regions.* • *Climate: Exhibits a pronounced wet and dry season. The wet season occurs from April to October, with peak rainfall between June and September. The dry season, known as Harmattan, extends from November to March and is characterized by hot and dry winds from the Sahara Desert.* • *Vegetation: Predominantly open grasslands with scattered trees, especially along watercourses.* 5. Sudan Savanna Zone: • *Location: The northernmost part of Ghana, bordering Burkina Faso.* • *Climate: Features a more pronounced dry season compared to the Guinea Savanna zone. The wet season lasts from May to October, with peak rainfall between June and September. The dry season, marked by the Harmattan winds, extends from November to April.* • *Vegetation: Dominated by grasslands with few trees and shrubs.* Sketch the map of Ghana and indicate the different climatic zones. <u>Assessment</u> 1. Which part of Ghana is characterized by dense tropical rainforests? 2. What are the two main seasons in the Coastal Savannah Zone of Ghana? 3. Which climatic zone experiences a transition between the rainforest and savanna climates? 4. What is the dry season in the Guinea Savanna Zone of Ghana called? 5. Which climatic zone in Ghana is known for its hot and dry Harmattan winds? 6. Which part of Ghana is characterized by open grasslands and scattered trees? 7. In which climatic zone is the Harmattan season more pronounced? 8. What are the typical months of the wet season in the Sudan Savanna Zone of Ghana? 9. How does the climate in the Forest Transition Zone differ from that of the rainforest zone? 10. How do the climatic zones of Ghana influence the types of vegetation found in different regions?	

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