CONTINOUS ASSESMENT ITEM

SENIOR THREE BIOLOGY 2024

TERM: 3

TEACHER: BWAMBALE YUSUF AND AGABA CHARLES

TOPIC: GROWTH IN PLANTS AND ANIMALS

LEARNING OUTCOMES: Conducts experiments on conditions necessary for germination

GENERIC SKILL (GS): Co-operation and self directed learning

LEARNING DOMAIN: Psychomotor

ABILITY LEVELS	IMITATION	MANIPULATION	PRECISION	ARTICULATION	NATURALISATION
SCENARIO	Water is widely recognized as an essential factor in the germination process, as it activates metabolic processes within seeds. However, the specific effects of water availability, including the optimal quantity and timing for different seed types, remain inadequately understood. This lack of knowledge can lead to inefficient agricultural practices and reduced crop yields.	Seed germination is a vital process for plant development, influenced by various environmental factors, including oxygen availability. Oxygen plays a critical role in cellular respiration, providing the energy required for metabolic activities during germination. However, limited understanding exists regarding the effects of oxygen	Seed germination is a vital process for plant development, influenced by various environmental factors, including oxygen availability. Oxygen plays a critical role in cellular respiration, providing the energy required for metabolic activities during germination. However, limited understanding exists	Light is a crucial environmental factor influencing germination, as it regulates photoreceptor-mediated processes in certain seed types, particularly those with specific light requirements for activation. In Uganda, where diverse crops such as coffee, millet, and vegetables are cultivated under varying light conditions, farmers often lack knowledge on the optimal	In Uganda, agriculture is the backbone of the economy, with crop production highly dependent on seed germination success. Temperature is a critical factor influencing germination, as it affects enzymatic activity, water uptake, and metabolic processes in seeds. However, the country's tropical climate is characterized by temperature fluctuations and increasingly unpredictable weather patterns due to climate change. These variations may

	Investigating the effect of water on seed germination is crucial to understanding how varying water conditions impact germination rates, seedling vigor, and overall plant development. Your teacher is carrying an investigation on the effect water on germination of bean seeds to fill the gap	concentration on germination rates and seedling growth across different plant species. This gap in knowledge hinders efforts to optimize germination conditions, particularly in environments with poor aeration, such as waterlogged soils.	regarding the effects of oxygen concentration on germination rates and seedling growth across different plant species. This gap in knowledge hinders efforts to optimize germination conditions, particularly in environments with poor aeration, such as waterlogged soils.	light environments for different seed types. Additionally, the rise in deforestation and changing land-use patterns has altered light availability in some agricultural areas. Despite these challenges, there is limited research on how light affects seed germination for crops grown in Uganda	significantly impact germination rates and crop yields, particularly for staple crops such as maize, beans, and millet. Despite this, limited research has been conducted to understand the specific effects of temperature on seed germination under Uganda's climatic conditions.
TASK	Do just as you see your teacher doing	Carry out an investigation to find out the effect of air on germination. State the aim, variables, hypothesis, procedure, diagram, observations, analysis of results, and make conclusion.	Carry out an investigation to find out the effect of air on germination of a named seed	Carry out an investigation to find out the effect of the underlying factor of germination	Carry out an investigation that you will base on to address the gap.