

GREENHILL ACADEMY SECONDARY
S.5 HOLIDAY BIOLOGY WORK TERM 2 2026
TOPIC: NUTRITION IN PLANTS

Learning outcome: (b) assess the influence of environmental factors on the photosynthetic efficiency of plants to optimise photosynthetic rates and crop yields.

Scenario

Unpredictable weather, including prolonged droughts and excessive rainfall, has reduced vegetable production in many Ugandan communities. A local youth farmers' group plans to establish a greenhouse to produce vegetables throughout the year but lacks knowledge of greenhouse design and the biological factors that influence plant growth.

As a passionate young biologist in the community, you have been invited to design and construct a low-cost greenhouse using locally available materials. You will grow one vegetable crop (Sukuma wiki/Lettuce/Spinach/Cucumber), monitor its growth (plant height, number of leaves, length of largest leaf, pests observed, temperature, soil moisture), discuss how optimum conditions for plant growth are maintained, the benefits and challenges of greenhouse farming

Checklist

Each learner should submit report including:

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| • Greenhouse design sketch | • Graphs/data presentation |
| • Components and functions | • Discussion |
| • Photos during construction | • Conclusions |
| • Photos of the completed greenhouse | • Recommendations |
| • Photos showing crop growth | • Reflection on challenges encountered |
| • Data recording sheets | |

Throughout your project, compile your portfolio (evidences of work done) and at the end of 2 weeks, send your report plus portfolio to assekalema@greenhillacademy.ac.ug.

Deadline for submission is 18 days after end of term 2 2026

Happy hands-on holiday