Unit 1 Application of Scientific Method to Horticulture

Content Area: **Science**
Course(s): **Horticulture 1**
Time Period: **September**
Length: **8 blocks**
Status: **Published**

Transfer

At the end of this Unit students will be able to discuss the field of Horticulture and engage in basic greenhouse practices such as general care of greenhouse inhabitants.

Enduring Understandings

The scientific method is used by horticulturists to foster the production of a commercially acceptable crop.

Essential Questions

What is the most important aspect about plants?

Why is the communication between scientists and consumers important?

Content

Vocabulary

Pomology, Olericulture, Floriculture, short treatment, medium treatment, tall treatment, vegetative period, pinching, disbudding, growth retardants

Learning Objectives

Prepare the greenhouse for daily operations.

Research careers related to the horticulture field.

Identify greenhouse equipment and properly operate equipment.

Recognize the scope of the horticulture industry.

Plant mums in the greenhouse.

View the effects of pinching, disbudding, and center bud removal on mums.

Prepare experimental and control groups for on going mum experiment.

Determine the effect of light and temperature on mum growth and bud development.

Collect data on ongoing mum experiments.

Examine the effect of fertilizer on mum growth.

Discuss water requirements of mums.

Identify insects that commonly effect mums.

Standards

HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.

HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain

homeostasis.

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9-12.HS-LS1-3	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.
9-12.HS-LS1-5.2	Developing and Using Models
9-12.HS-LS1-2.2	Developing and Using Models
9-12.HS-LS1-7.2	Developing and Using Models
9-12.HS-LS1-4.2	Developing and Using Models
9-12.HS-LS1-3.3	Planning and carrying out in 9-12 builds on K-8 experiences and progresses to include investigations that provide evidence for and test conceptual, mathematical, physical, and empirical models.
9-12.HS-LS1-6.6	Constructing Explanations and Designing Solutions
9-12.HS-LS1-1.6	Constructing Explanations and Designing Solutions

Assessments

Project - Introduction to Greenhouse Use and Structure

Students assessed on basic structure of their Greenhouse and their daily responsibilites in maintaining it's inhabitants.

Quiz - Practical Use of Greenhouse and Plant Care

Students are assessed on skills on basic greenhouse practices

Quiz - New vocabulary introduced in Unit 1

students are assessed on relavent vocabulary.

Test - Major Assessment based on Unit 1 instruction and greenhouse progress

Individual sumative assessment to gage students achievement and understanding during Unit 1 instruction.

Resources

Text:

Introductory Horticulture 8th ed(Cengage Learning), Hardcover (2011)
by H Edward Reiley, Carroll L Shry

Greenhouse

Planting Materials including soil, water, seeds, Fertilizer.