

Penang Sangam High School
P.O. Box 44, Rakiraki
Year 12 Agriculture Lesson Notes Week 7

Strand	AS 12.3 Agronomy
Sub-Strand	AS 12.3.2.3: Ornamental Horticulture
Content Learning Outcome	Deliberate on Ornamental Horticulture by investigating, selecting and practicing appropriate husbandry methods on selected ornamental plants.

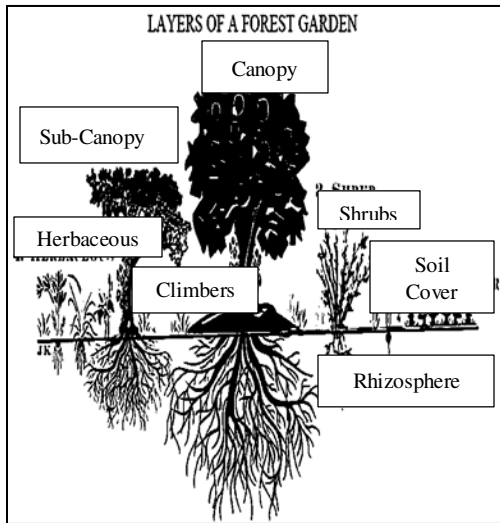
2020 – Explain one importance of ornamental plants. (2 marks)

Lesson 1: Introduction

Lesson Outcome: Discuss the Origins of Ornamental Horticulture

Ornamental Horticulture developed from forest gardening around 10000 BC when families identified, protected and improved useful plant species while eliminating undesirable species
 Ornamental plants are used for their flowers, their texture, form and shape, and other aesthetic characteristics.

<u>Ornamental Horticulture</u> – growing, arranging and marketing plants for decorative purposes. eg. floral arrangements and landscaping.	<u>Forest Gardening</u> – Food production system in which trees and plants are replaced by fruit and nut trees and vegetables.
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Lesson 2: Classification of Horticultural Plants

Lesson Outcome: Discuss some ways in which horticultural plants are classified.

Xerophyte – plant stores water in leaves & stems & adapted to live in arid environments i.e. require less water to survive eg. pine and cactus

Hydrophyte – plant which only grows in or on water eg. water hyacinth

Mesophyte – plant needing only a moderate amount of water eg. grass, herbs

2020 - MC No. 13

2017 – MC No. 12

Classification of Plants

Classification		Description	Example
Growth habit	Herbaceous or herbs	succulent seed plants possessing self-supporting stems	Celery
	Climbing plants	a climbing or trailing plant. It may be soft stemmed [vine] or hard stemmed [liana].	Bougainvillea
	Trees	Plants having a single central axis	Coral tree (Dracaena)
	Shrubs	plant having several upright stems	Hibiscus

Leaf drop	Deciduous plants	plants which seasonally lose leaves	Kapok tree
	Evergreen	plants which retain functional leaves throughout the year e.g. Sandalwood	Sandalwood trees
Life span	Annual	a plant that completes its life cycle, from germination to the production of seed, within one year, and then dies.	Lettuce, watermelon, marigold and common sunflower
	Biennial	a flowering plant that takes two years to complete its biological lifecycle	Anthurium
	Perennial	a plant that lives for more than two years	Frangipani
Temperature tolerance	Tender plant	damaged or killed by large temperature variations	Sunset bells
	Hardy plant	a plant that withstands changes in temperature.	Eastern woodfern
Temperature requirements	Cool season plant	prefers cool temperatures	Peas, lettuce and cole crops
	Warm season plant	prefers warm temperatures	Pepper, eggplant
Sunlight intensity requirements	Photophilous plant	is receptive to, seeks and thrives in direct sunlight.	Barrel cactus, Aloe vera
	Sciophilous plant	is receptive to, seeks and thrives in less direct sunlight or shade	Paphiopedilum orchid, lalabe (edible fern)
Habitat or site preference	Xerophyte	survive in an environment with little water, such as a desert or an ice- or snow-covered region	Caccti
	Hydrophytes	plants that grow partly or wholly in water whether rooted in the mud, as a lotus, or floating without anchorage.	Water hyacinth
	Mesophytes	terrestrial plants adapted to moderate water conditions	Palms
pH preference	Acid tolerant	certain plants tolerate a range of soil pH values.	Hydrangea flowers
	Salt tolerant plants	Halophytes: Plant that grows in high salinity waters	Red mangrove
2019 – MC No.		Glycophytes: Grows in low sodium content soil	White mangrove

Four different categories of hydrophytes

1. Floating plants - roots hang in water from floating green portions. e.g. water hyacinth
2. Marginal plants - grow in shallow water or in moist soil. e.g. water sedge
3. Deep water plants - roots are anchored on river or pond bed. e.g. Gloriosa [water lily]
4. Oxygenating plants - submerged aquatic plants that release oxygen in water. e.g. Ancharis

1. Differentiate between a photophilous plant and sciophilous plant in relation to site selection for propagation.
2. Differentiate between a halophyte plant and a glycophyte plant in relation to saline growing conditions.