



## WEEKLY HOME STUDY PACKAGE - WEEK 1 (05/07/21 – 09/07/21)

<b>Subject</b>	<b>AGRICULTURAL SCIENCE</b>	<b>Year/Level</b>	<b>12</b>
<b>Strand</b>	AS 12.3 Agronomy		
<b>Sub-strand</b>	AS 12.3.2 Horticulture		
<b>Content Learning Outcome</b>	Deliberate on Ornamental Horticulture by investigating, selecting and practicing appropriate husbandry methods on selected ornamental plants.		

### LESSON 2: CLASSIFICATION OF HORTICULTURAL PLANTS

**LESSON OUTCOME:** At the end of this lesson, the student will discuss some ways in which horticultural plants are classified

Terms:

1. **Xerophyte** - stores water in its leaves and stems so is adapted to live in arid environments.
2. **Hydrophyte** - a plant that grows only in or on water.
3. **Mesophyte** - a plant needing only a moderate amount of water

Classification of horticultural plants:

**1. by growth habit**

- a. **Herbaceous or herbs** - succulent seed plants possessing self-supporting stems
- b. **Climbing plant** - It may be soft stemmed [vine] or hard stemmed [liana].
- c. **Trees** - plants having a single central axis
- d. **Shrubs** - plant having several upright stems

**2. by leaf drop:**

- a. **Deciduous** - plants which seasonally lose leaves e.g. Kapok tree
- b. **Evergreen** - plants which retain functional leaves throughout the year e.g. Sandalwood

**3. by life span:**

- a. **Annual** - a plant that completes its life cycle within one year, and then dies.
- b. **Biennial** - a flowering plant that takes two years to complete its biological lifecycle
- c. **Perennial** – a plant that lives for more than two years

**4. by temperature tolerance:**

- a) **Tender plant** - damaged or killed by large temperature variations.
- b) **Hardy plant** – a plant that withstands changes in temperature.

**5. by temperature requirements:**

- a) **Cool-season plant** - prefers cool temperatures (peas, lettuce, cole crops)
- b) **Warm-season plant** - prefers warm temperatures (pepper, eggplants (aubergine))

**6. by sunlight intensity requirements**

- a) **Photophilous Plant**- is receptive to, seeks and thrives in direct sunlight.
- b) **Sciophilous Plant**- is receptive to, seeks and thrives in less direct sunlight or shade

**7. by habitat or site preference:**

- a) **Xerophytes** –survive in an environment with little water, e.g. Desert and are succulents.
- b) **Hydrophytes** - grow partly or wholly in water whether rooted in the mud, as a lotus, or floating without anchorage.
- c) **Mesophytes** - terrestrial plants which are adapted to moderate water conditions, e.g. trees, palm, grasses.

8. **pH preference**:- The majority of plants grow best in neutral soil.
- a. **Acid tolerant** – certain plants tolerate a range of soil pH values.
  - b. **Salt tolerant plants** (i) **Halophytes** - plants that grow in waters of high salinity, coming into contact with saline water through roots or by salt spray, such as in saline semi-deserts, mangrove swamps, marshes, sloughs and seashores. (ii) **Glycophytes** – plants that will only grow healthily in soils with low content of sodium salts

**Activity**

1. State **two** examples of xerophytes

\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

2. Why it is important to do a pH test before cultivation of major crops?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

3. Identify **two** types of climbing plants

\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

4. Apart from the examples given, name **two** cool season plants in Fiji

\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

5. Describe a plants complete life cycle

\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

6. State the adaptive features of a cacti

\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

7. Differentiate between deciduous and evergreen plants

\_\_\_\_\_  
\_\_\_\_\_ (2 marks)

8. State the method of reproduction of xerophytes

\_\_\_\_\_  
\_\_\_\_\_ (2 marks)