SUVA SANGAM COLLEGE

YEAR 11 AGRICULTURAL SCIENCE

WEEK 1 (05/07 – 09/07)

STRAND: AS 11.3.2 – HORTICULTURE

SUB STRAND 11.3.2.1 – ASEXUAL PLANT PROPAGATION

LESSON 1 – OVERVIEW OF CROP PERRODUCTION

Lesson Outcome: Students should be able to explain the importance and types of crop reproduction

Vocabulary – Reproduction – a biological process in which organism gives rise to offspring similar to itself.

There are two basic forms of reproduction in plants:

i) sexual – reproduction which involves the use of seeds

ii) asexual – reproduction using the plant parts other than seeds

Reproduction is important because it enables the continuity of the species generation after generation.

Activity (refer to text book page 112)

1. State at least two advantages and two disadvantages of asexual propagation

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2. Explain the two types of asexual propagation

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SUVA SANGAM COLLEGE

YEAR 11 AGRICULTURAL SCIENCE

WEEK 2 (12/07 – 16/07)

STRAND: AS 11.3.2 – HORTICULTURE

SUB STRAND 11.3.2.1 – ASEXUAL PLANT PROPAGATION

LESSON 2 – NATURAL VEGETATIVE PROPAGATION METHODS

Lesson Outcome: Students will distinguish among and explain natural vegetative propagation methods

Vocabulary – subaerial stems – situated or formed or occurring on the surface of the earth.

Some plants reproduce by stems or by roots

a) Propagation by roots – the swollen tap root of radish ,turnip have buds at the base of old stems which serve as organ of vegetative propagation

b) Propagation by stem – These includes:

   i) subaerial stems eg runners , stolons suckers

   ii) underground stems eg rhizomes, tubers, bulbs, corm

c) Propagation by leaf – fleshy succulent leaves bear adventitious buds in their notches located in the margins.

Activity (refer to text book pages 112-113)

1. Name examples of plants that are propagated using the following methods:

   a) runners _____

   b) stolon _____

   c) suckers _____

   d) Rhizome _____

   e) tubers _____

   f) bulb _____

   g) corm _____

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YEAR 11 AGRICULTURAL SCIENCE

WEEK 3 (19/07 – 23/07)

STRAND: AS 11.3.2 – HORTICULTURE

SUB STRAND 11.3.2.1 – ASEXUAL PLANT PROPAGATION

LESSON 3 – ARTIFICIAL VEGETATIVE PROPAGATION METHODS

Lesson Outcome: Students will distinguish and explain artificial vegetative propagation methods

Vocabulary – medial cutting – a cutting taken towards the middle of the stem.

Vegetative propagation by artificial means is often the result of assisting natural vegetative propagation methods and may include the following methods:

a) Layering – The development of adventitious roots is induced on the stem before it is separated from the parent plant

b) Cutting – A vegetative part of a plant ie stem , leaf or root is cut off the parent material and encouraged to form roots so form a new plant

c) Separation – Form of propagation where plants that produce bulbs or corms multiply by separating it from the parent plant and planted out.

d**)** Micro propagation – The production of a large number of individual plants from a piece of plant tissue cultured in a nutrient medium. Also known as **tissue culture.**

Activity (refer to text book pages 114-118)

1. Differentiate between simple layering and compound layering

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2. State at least two advantages and two disadvantages of tissue culture.

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_____
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SUVA SANGAM COLLEGE

YEAR 11 AGRICULTURAL SCIENCE

WEEK 4 (26/07 – 30/07)

STRAND: AS 11.3.2 – HORTICULTURE

SUB STRAND 11.3.2.2 – LANDSCAPING

LESSON 1 – OVERVIEW OF LANDSCAPING

Lesson Outcome: Students will explain, identify the four main elements of and distinguish among the main types of landscaping

Vocabulary – **Landscape architecture** – the design of outdoor public areas, landmarks and structures to achieve environmental, social- behavioural or aesthetic outcomes.

Landscaping – any activities that modifies the visible features of an area of land.

A**esthetic** – concerned with beauty or the appreciation of beauty

Ornamental – a plant grown for its aesthetic appearance

Landscaping refers to any activity that modifies the visible features of an area of land including living elements such as flora and fauna, natural elements such as landforms, human elements such as structures and abstract elements such as the weather and lighting condition.

Landscaping is divided into two components

i) Hard landscaping – where inanimate elements like path, water features etc give the landscape form and structure,

ii) Soft land landscaping – where the flowers, trees , shrubs and animals softening the landscape

Activity (refer to text book page120)

1, Explain the three types of landscaping

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_____

2. Differentiate between soft and hard landscaping

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SUVA SANGAM COLLEGE

YEAR 11 AGRICULTURAL SCIENCE

WEEK 5 (02/08 – 06/08)

STRAND: AS 11.3.2 – HORTICULTURE

SUB STRAND 11.3.2.2 – LANDSCAPING

LESSON 2 – BENEFITS OF LANDSCAPING

Lesson Outcome: Students will discuss the benefits of landscaping

Vocabulary

Conservation – the act of preserving, guarding, protecting or wise use

Landscaping impacts economic, life style and environmental value of an area.

A. Economic benefits

i) increase tourist revenue

ii) increase property value

iii) provides employment

B. Life style benefits

i) physical exercise

ii) healthy food

iii) creates outdoor room

C. Environmental benefits

i) protects water quality

ii) improves air quality

iii) reduces noise , wind and glare

Activity (refer to text book page)

1. Explain why natural landscaping is regarded as heaven for wild life

_____
_____
_____

2. How does landscaping protects water quality

_____
_____