

DAWOOD PUBLIC SCHOOL

GARDENING

Course Outline – 2018-19

Grade V

AUGUST-OCTOBER

Late Summer (monsoon) to Autumn

Area of Study	Learning Objectives and Skill Development
<p>Understanding Soil</p> <ul style="list-style-type: none">• Composition of Fertile Soil<ul style="list-style-type: none">➤ Organic Content➤ Well Aerated➤ Well Drained➤ Soil Texture• Preparation of patch on land• Preparation of soil for container sowing<ul style="list-style-type: none">➤ sack sowing• Focus on loamy soil<ul style="list-style-type: none">➤ Humus (organic matter)➤ Sand➤ Silt➤ Clay <p>Basic Concepts of Sowing</p> <ul style="list-style-type: none">• Focus on seed sowing• Broadcasting method <p>Lettuce as Leafy Vegetables</p> <ul style="list-style-type: none">• Used in salads• Grown in bunches• Sprouts in red and green colours <p>Potato as Winter Vegetable</p> <ul style="list-style-type: none">• Tuber growing underground• Eyes of potato form the buds which are used as 'seeds'• 'propagation' instead of 'seed sowing'• Some other tubers:<ul style="list-style-type: none">➤ Ginger➤ Yam➤ Sweet potato <p>Basic Concepts of Propagation</p> <ul style="list-style-type: none">• Budding Method <p>Garden Plants</p> <p>Recognise common garden plants</p> <ul style="list-style-type: none">➤ Tree – Peepal➤ Plant – Adenium (desert rose)	<ul style="list-style-type: none">• Name the features for fertile soil• Differentiate between 'texture' of soil and 'moisture content' of soil• Identify 'well aerated' and 'well drained' soil• Develop an awareness of composition for loamy soil• Develop an awareness that sowing can be done in different types of containers• Experience the use of tools for sowing:<ul style="list-style-type: none">➤ Hoe➤ Spade• Experience the broadcasting method for sowing lettuce• Identify lettuce seeds on the basis of:<ul style="list-style-type: none">➤ Color➤ Size➤ Shape• Name some uses of lettuce• Identify potato is a 'tuber'• Name some other tubers• Differentiate between 'growing from seeds' and 'propagation'• Differentiate between healthy 'potato eyes' and damaged 'potato eyes'• Experience 'budding' as a methods of propagation• Develop an awareness that propagation can also be done by:<ul style="list-style-type: none">➤ Cutting➤ Air layering➤ Grafting• Identify common garden plants

Practical:

- Land preparation
- Sowing Lettuce
- Propagation of Potato

Gardening terms:

Fertile – Soil that is able to support the growth strong healthy plants

Organic – taken from nature or derived from natural matter

Humus – the organic component of soil, formed by the decomposition of leaves and other plant material by soil microorganisms

Decomposition – the process of rotting or decay

Microorganism – a very small living organism observed only under a microscope

Aerated – a condition created when the space between soil particles allows circulation of air

Drained – slightly moist

Texture – what things are made of and how they feel

Tuber – swollen and thick underground part of plant

Bud – a small part that grows on a plant and develops into a flower, leaf or a new plant

Budding – sowing a bud to grow a new plant

Propagation – growing a plant without using seeds

Translated Terms:

Lettuce – ‘Salad Pata’

Adenium – ‘Sehra-e-champa’

IT Links for Reference:

Land preparation

<https://www.wikihow.com/Prepare-the-Soil-for-a-Vegetable-Garden>

<http://www.dummies.com/home-garden/gardening/how-to-prepare-garden-soil-for-planting/>

<https://www.almanac.com/content/preparing-soil-planting>

Sowing Lettuce

<https://www.wikihow.com/Plant-Lettuce>

https://www.youtube.com/watch?v=w11--OF_IME

<https://www.youtube.com/watch?v=V9cfsdxdFIQ>

Propagation of potato

<https://www.youtube.com/watch?v=pqRE6k7Mpx8>

<https://www.youtube.com/watch?v=UQnscSrlsMw>

<https://theeducatorsspinonit.com/learning-garden-how-to-grow-potatoes/>

NOVEMBER- JANUARY

Late Autumn to Winter

Area of Study	Learning Objectives and Skill Development
<p>Basic Concepts of Transplantation</p> <ul style="list-style-type: none"> • Need for transplantation <ul style="list-style-type: none"> ➤ For preserving the stronger sapling ➤ For growth of healthy plant ➤ For equal spacing to allow development of mature plant • Focus on lettuce saplings • Procedure for Transplantation <p>Focus on Harvesting</p> <ul style="list-style-type: none"> • Time for harvest <ul style="list-style-type: none"> ➤ Approximately 30-45 days after transplantation ➤ 6-7 inches in height ➤ Leaves should appear crisp and crunchy ➤ Harvest before sprouting of flower • Harvesting leafy vegetables - Lettuce • Storage of Lettuce • Comparing storage technique for leafy vegetables <ul style="list-style-type: none"> ➤ Lettuce ➤ Fenugreek ➤ Spinach ➤ Rocket <p>Winter Flowers</p> <ul style="list-style-type: none"> • Observation of Plantation • Recognition of winter flowers: <ul style="list-style-type: none"> ➤ Rose ➤ Marigold ➤ Petunia ➤ Pansy ➤ Dahlia ➤ Zinnia <p>Garden Plants</p> <p>Recognise common garden plants</p> <ul style="list-style-type: none"> ➤ Tree – Plumieria (Champa) ➤ Plant – Ficus 	<ul style="list-style-type: none"> • Develop an awareness and importance of transplantation • Differentiate between ‘sowing from seeds’ and ‘transplantation’ • Identifying the saplings which are ready for transplantation on the basis of: <ul style="list-style-type: none"> ➤ Plant health ➤ Height (2-3 Inches) ➤ Number of leaves (5-6 leaves) • Experience the usage of tools for transplantation: <ul style="list-style-type: none"> ➤ Hoe ➤ Spade • Develop an awareness of when lettuce plant is ready for harvest • Differentiate between ‘limp and soggy’ lettuce leaves and ‘crisp and crunchy’ lettuce leaves • Recognize the tools for harvesting: <ul style="list-style-type: none"> ➤ Safety scissors ➤ Pruner • Experience the harvesting of lettuce • Experience and observe post harvest management for lettuce • Name some winter flowers • Differentiate between ‘pansy’ and ‘petunia’ • Identify common garden plants <ul style="list-style-type: none"> ➤ Flame Tree ➤ Aralia ➤ Peepal ➤ Adenium ➤ Bottle brush ➤ Monastera • Differentiate between ‘Adenium’ and ‘Plumieria’ on the basis of: <ul style="list-style-type: none"> ➤ Leaves ➤ Flowers ➤ Branches

Practical:

- Transplanting Lettuce Saplings
- Harvesting Lettuce

Gardening Terms:

Pruner – a type of scissors

Harvest – when vegetables or herbs are ready to be taken out from the soil or plant

Post harvest – handling of harvested vegetables and fruits after harvest, includes cleaning, sorting and storing

Leafy vegetables - used and eaten for their green leaves

Transplanting – to remove a plant from the ground or from a pot and re-plant it at another place

Sapling – Young tree

Translated Terms:

Plumieria – ‘champa’

Marigold – ‘gainda’

Fenugreek – ‘methi’

Rocket – ‘kulfa’

IT Links for Reference:

Transplanting lettuce Saplings

<https://www.youtube.com/watch?v=8dN88pOBMSE>

https://www.youtube.com/watch?v=1AJDT_qEekY

Harvesting lettuce

<https://www.youtube.com/watch?v=FWeFH1MVHko>

<https://www.youtube.com/watch?v=ECjwlilahM8>

FEBURARY-APRIL

Late Winter to Spring

Area of Study	Learning Objectives and Skill Development
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Focus on Compost

- Compost added to soil makes fertile soil
- Fruit and Vegetable Peel Compost – Minerals, and Nutrients for soil
 - adds organic material and multi-vitamins to soil
 - obtained by peels of vegetables and fruit
 - addition of seeds should be avoided as once seeds mature, compost quality will weaken
 - rotten or infected peels should be avoided as bacteria may damage the soil
- Recapitulation of the benefits of different types of compost

Focus on Sowing

- Okra (Lady Finger) as a spring vegetable
- Sowing Okra (Lady Finger)
- Introduction to triangular plantation
 - Awareness of seed positioning
 - Awareness of distance between each plant
 - Awareness of depth in seed sowing

Okra as a Spring Vegetable

- Plant grows to 2.5 - 3 ft on average
- Approximately 4 – 5 okra pods grow on each plant per week
- Produces yellow flowers
- At least 6 – 8 harvests are possible per season

Spring Fruits

- From orchard
 - Mango
 - Papaya
 - Mud Apple
- From kitchen garden
 - Watermelon
 - Melon
 - Strawberry

- Discuss the importance and benefits of adding compost to soil
- Differentiate between soil which has compost and soil which does not
- Identify fruit and vegetable peels as natural waste
- Identify fruit and vegetable peels as a source of minerals, vitamins and nutrients for the plants
- Differentiate between ‘healthy’ peels and ‘rotten’ or ‘infected’ peels
- Discuss what may happen if seeds are added to Vegetable and Fruit Peel Compost
- Develop an awareness of spring vegetables and fruits
- Identify seeds of Okra on the basis of:
 - Size
 - Shape
 - Colour
- Experience the triangular form of plantation
- Differentiate between ‘seed position’ and ‘seed distance’
- Discuss why ‘depth of seed sowing’ matters in plantation of okra
- Describe the difference between triangular plantation and broadcasting
- Develop an awareness of the appearance of the mature crop of okra
- Name some spring vegetables and fruits
- Name some leafy vegetables and discuss their post harvest management
- Differentiate various spring/summer fruits on the basis of:
 - Water content
 - Fibre
 - Seed position
 - Skin texture

Practical:

- Preparing Fruit and Vegetable Peel Compost
- Sowing Okra

Gardening Terms:

Nutrient – important substance for life and growth.

Spring vegetable- vegetables grown in spring season

Pod – a long seed vessel of a plant

Triangular Plantation – a method of plantation in which seeds are sown spaced as triangles

Translated Terms:

Okra (lady finger) – ‘bhindi’

Mango – ‘aam’

Melon – ‘kharbooza’

Watermelon – ‘tarbooz’

Papaya – ‘Papita’

Mud Apple – Chikoo

IT Links for Reference:

Preparing Fruits and Vegetables Peel Compost

<https://www.youtube.com/watch?v=RE5hMhWBSRk>

<https://www.youtube.com/watch?v=wOQZuUHYInk>

<https://www.youtube.com/watch?v=csKFyMcMYA>

Sowing Okra

<https://www.youtube.com/watch?v=7EUIOxuyxm8>

<https://www.youtube.com/watch?v=klFedbaEYXM>

<https://www.youtube.com/watch?v=6h04lfwQAA8>