

**DAWOOD PUBLIC SCHOOL**

**GARDENING**

**Course Outline – 2018-19**

**Grade IV**

**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"><li>• Preparation of patch on land</li><li>• Fertile Soil</li><li>• Non fertile soil</li></ul> <p>Basic Concepts of Sowing</p> <ul style="list-style-type: none"><li>• Focus on seed sowing</li></ul> <p>Tomato as Fruit</p> <ul style="list-style-type: none"><li>• Used as a vegetable in cooking and salads</li><li>• Belongs to berry family</li></ul> <p>Basic Concepts of Propagation</p> <ul style="list-style-type: none"><li>• Budding Method</li></ul> <p>Potato as Winter Vegetable</p> <ul style="list-style-type: none"><li>• Tuber growing underground</li><li>• Eyes of potato form the buds which are used as 'seeds'</li></ul> <p>Garden Plants</p> <p>Recognise common garden plants</p> <ul style="list-style-type: none"><li>➤ Tree – Flame tree</li><li>➤ Plant – Aralia</li></ul>	<ul style="list-style-type: none"><li>• Develop an awareness of fertile soil and non-fertile soil</li><li>• Develop an awareness of features for fertile soil:<ul style="list-style-type: none"><li>➤ Organic Matter</li><li>➤ Moisture</li><li>➤ Soil Texture (touch method)</li></ul></li><li>• Understand the importance of preparing land before sowing</li><li>• Recognise tools required for sowing:<ul style="list-style-type: none"><li>➤ hoe</li><li>➤ spade</li></ul></li><li>• Develop awareness that 'tomato' is a 'fruit'</li><li>• Experience of soil preparation for sowing tomato seeds</li><li>• Identify tomato seeds on the basis of:<ul style="list-style-type: none"><li>➤ Color</li><li>➤ Size</li></ul></li><li>• Develop an awareness about potato as a tuber</li><li>• Differentiate between 'growing from seeds' and 'propagation'</li><li>• Identify potato buds used for sowing of potato</li><li>• Understand that 'budding' is one of the many methods of propagation</li></ul>

**Practical:**

- Land preparation
- Sowing Tomato
- Propagation of Potato

**Gardening terms:**

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

Organic – taken from nature or derived from natural matter

Moisture – wetness due to water

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 new plant

Budding – sowing a bud to grow a new plant

Propagation – growing a plant without using seeds

**Translated Terms:**

Tomato – ‘tematar’

Potato – ‘aloo’

Flame tree – ‘gulmohar’

**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 Tomato

<https://www.wikihow.com/Grow-a-Tomato-Plant>

<https://bonnieplants.com/growing/growing-tomatoes/>

<https://www.youtube.com/watch?v=dHS9O49JGj8>

Budding 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"> <li>• Need for transplantation               <ul style="list-style-type: none"> <li>➤ For preserving the stronger sapling</li> <li>➤ For growth of healthy plant</li> </ul> </li> <li>• Focus on tomato saplings</li> <li>• Procedure for Transplantation</li> </ul> <p>Focus on Harvesting</p> <ul style="list-style-type: none"> <li>• Time for harvest</li> <li>• Harvesting fruits - Tomatoes</li> <li>• Storage of Tomatoes</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between ‘growing from seeds’ and ‘transplantation’</li> <li>• Understand the need for transplantation</li> <li>• Identify the saplings which are ready for transplantation on the basis of:               <ul style="list-style-type: none"> <li>➤ Plant health</li> <li>➤ Height (4-5 Inches)</li> <li>➤ Number of leaves (5-6 leaves)</li> </ul> </li> <li>• Recognize the tools for transplantation:               <ul style="list-style-type: none"> <li>➤ Hoe</li> <li>➤ Spade</li> </ul> </li> <li>• Develop an awareness of when tomatoes are ready for harvest</li> <li>• Recognize the tools for harvesting:               <ul style="list-style-type: none"> <li>➤ Safety scissors</li> <li>➤ Pruner</li> </ul> </li> </ul>

<p>Winter Flowers</p> <ul style="list-style-type: none"> <li>• Observation of Plantation</li> <li>• Recognition of winter flowers <ul style="list-style-type: none"> <li>➤ Rose</li> <li>➤ Marigold</li> <li>➤ Petunia</li> <li>➤ Pansy</li> <li>➤ Dahlia</li> </ul> </li> </ul> <p>Garden Plants</p> <ul style="list-style-type: none"> <li>• Recognise common garden plants <ul style="list-style-type: none"> <li>➤ Tree – Bottle Brush</li> <li>➤ Plant – Monstera</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Experience the harvesting of tomato fruit</li> <li>• Observe the post harvest management of tomato fruit</li> <li>• Name and identify some winter flowers</li> </ul>
<p><b>Practical:</b></p> <ul style="list-style-type: none"> <li>➤ Transplanting Tomato Saplings</li> <li>➤ Harvesting Tomato Fruit</li> </ul> <p><b>Gardening Terms:</b></p> <p>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  Transplanting – to remove a plant from the ground or from a pot and re-plant it to another place  Sapling – Young tree</p> <p><b>IT Links for Reference:</b></p> <p>Transplanting Tomato Saplings  <a href="https://www.youtube.com/watch?v=XpwgLqScSAQ">https://www.youtube.com/watch?v=XpwgLqScSAQ</a>  <a href="https://www.youtube.com/watch?v=w9-VT-aRRM4">https://www.youtube.com/watch?v=w9-VT-aRRM4</a>  <a href="https://modernfarmer.com/2015/05/how-to-grow-your-own-tomatoes-part-2-transplanting/">https://modernfarmer.com/2015/05/how-to-grow-your-own-tomatoes-part-2-transplanting/</a></p> <p>Harvesting Tomatoes  <a href="https://www.youtube.com/watch?v=R2mB_14ohUY">https://www.youtube.com/watch?v=R2mB_14ohUY</a>  <a href="https://www.youtube.com/watch?v=dp0-FVIGweY">https://www.youtube.com/watch?v=dp0-FVIGweY</a>  <a href="http://www.sciencekids.co.nz/sciencefacts/food/tomatoes.html">http://www.sciencekids.co.nz/sciencefacts/food/tomatoes.html</a></p>	

## FEBURARY-APRIL

Late Winter to Spring

Area of Study	Learning Objectives and Skill Development
<p>Focus on Compost</p> <ul style="list-style-type: none"> <li>• Compost added to soil makes fertile soil</li> <li>• Wood Compost – Carbon and Nitrogen for soil               <ul style="list-style-type: none"> <li>➤ adds organic material and carbon to soil</li> <li>➤ obtained by dried twigs and branches, or wood shavings and wood chips</li> <li>➤ Nitrogen needed for photosynthesis</li> <li>➤ Carbon is necessary for growth</li> </ul> </li> <li>• Recapitulation of different types of compost               <ul style="list-style-type: none"> <li>➤ Neem compost</li> <li>➤ Banana Compost</li> <li>➤ Eggshell Compost</li> </ul> </li> </ul> <p>Insects in Plants</p> <ul style="list-style-type: none"> <li>• Beneficial Insects               <ul style="list-style-type: none"> <li>➤ Ground Beetles</li> <li>➤ Earthworms</li> <li>➤ Ladybug</li> <li>➤ Honeybees</li> </ul> </li> <li>• Harmful Insects               <ul style="list-style-type: none"> <li>➤ White fly</li> <li>➤ Millibug</li> </ul> </li> </ul> <p>Importance of Insect Traps</p> <ul style="list-style-type: none"> <li>• To keep away harmful insects</li> <li>• Traps eliminate the requirement of insecticides</li> </ul> <p>Focus on Sowing</p> <ul style="list-style-type: none"> <li>• Rocket as a leafy spring vegetable</li> <li>• Sowing Rocket</li> </ul> <p>Spring Vegetables</p> <ul style="list-style-type: none"> <li>• Eggplant</li> <li>• Rocket</li> <li>• Sponge Gourd</li> <li>• Okra (lady finger)</li> <li>• Cucumber</li> </ul> <p>Spring Fruit</p> <ul style="list-style-type: none"> <li>• Mango</li> <li>• Melon               <ul style="list-style-type: none"> <li>➤ Honeydew</li> <li>➤ Watermelon</li> <li>➤ Cantaloupe</li> </ul> </li> <li>• Strawberries</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss the importance and benefit of compost</li> <li>• Name some types of compost</li> <li>• Identify wood as natural waste</li> <li>• Identify wood as a source of carbon and nitrogen for the plants</li> <li>• Describe the benefits of adding carbon and nitrogen rich compost to soil</li> <li>• Differentiate between beneficial insects and harmful insects</li> <li>• Name some beneficial insects</li> <li>• Name some harmful insects</li> <li>• Construct a yellow sticky trap</li> <li>• Discuss the disadvantages of using insecticides</li> <li>• Develop an awareness that rocket is a spring vegetable</li> <li>• Differentiate between Rocket and Spinach</li> <li>• Experience the sowing of Rocket</li> <li>• Identify the seeds of Rocket</li> <li>• Discuss the nutritional benefits of Rocket Develop awareness that 'Rocket' is also known as 'arugula'.</li> <li>• Name some spring vegetables and fruits</li> <li>• Name the varieties of melon</li> </ul>

**Practical:**

- Preparing Wood Compost
- Making an Insect Trap (sticky trap)
- Sowing Rocket

**Gardening Terms:**

Nutrient – important substance for life and growth.

Nitrogen – a colorless and odorless gas, available in air and also forms all living tissues.

Carbon – an essential element in plants which promotes healthier and more productive growth of plants.

Spring vegetable- vegetables grown in spring season

Leafy vegetable- used and eaten for their green leaves

**Translated Terms:**

Rocket – ‘kulfa’

Sponge Gourd – ‘turaee’

Egg plant – ‘baingun’

Cucumber – ‘kheera’

Okra (lady finger) – ‘bhindi’

Mango – ‘aam’

Melon – ‘kharbooza’

Watermelon – ‘tarbooz’

**IT Links for Reference:**

Preparing Wood Compost

<https://www.gardenguides.com/126946-compost-wood-chips.html>

[https://www.youtube.com/watch?v=umRR6HKw\\_KI](https://www.youtube.com/watch?v=umRR6HKw_KI)

<https://gardening.stackexchange.com/questions/7884/effectiveness-of-using-wood-chips-a-la-back-to-edden-as-a-garden-mulch-coveri>

Making Insect Trap (Yellow Sticky trap)

<http://www.instructables.com/id/Make-Your-Own-Sticky-Fly-Traps>

<https://www.youtube.com/watch?v=CxfEnwblW2Q>

<https://www.youtube.com/watch?v=vONXlePZ23U>

Sowing Rocket

<https://www.youtube.com/watch?v=htuCrC6VXDE>

<https://www.gardenersworld.com/how-to/grow-plants/how-to-grow-rocket-leaves-from-seed/>

<https://www.rhs.org.uk/advice/grow-your-own/vegetables/rocket>