

# Our City in a Garden

Theme: Herbs and Spices

Kindergarten 1 (4- 5 years old)

BY: PCF SPARKLETOTS PRESCHOOL @ QUEENSTOWN BLK 46 (CC)

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# INTRODUCTION TO LEARNING KIT

*Level:* Kindergarten 1 (4- 5 years old)

*Theme:* Herbs and Spices

## *Synopsis:*

Benefitting from National Parks' (NPARKS) resource kit, children will be introduced to the flora and fauna that thrives locally. The main focus of our exposure would be narrowed down to "Herbs and Spices".

Children will be engaged in activities that encourages them to ask questions, be inquisitive, gutsy to try and eager to seek answers. There will be a handful of activities and events that will require children to experience authentic learning by giving them first hands explorations.

A learning journey will take place at Hort Park. Children will be assigned to explore the "Balik Kampung" and "Edible Garden" trail. They will use their five senses to learn about the culinary and medicinal uses of the various herbs in this interactive garden.

## *Objectives:*

1. Children will get to enhance their knowledge (names, medicinal and culinary uses) and interest in herbs
2. Children will use their five senses to learn more about herbs
3. Understand parks' regulations and etiquette
4. Develop interest and understanding for local flora and fauna through books

# INTRODUCTION TO LEARNING KIT

*Level:* Kindergarten 1 (4- 5 years old)

*Theme:* Herbs and Spices

## *Information (Herbs):*

Below are a variety of herbs that will be covered in this tool kit. It provides basic information such as medicinal and culinary uses of these herbs. The respective teachers can filter through the list and select the relevant ones to introduce to their children.

*List 1:* Sweet Basil, Coriander, Mint, Curry Leaves, Rosemary, Lemon Grass, Laksa Leaves, Common Purslane, Indian Borage

*List 2:* Thyme, Dill, Oregano, Parsley, Sage, Chives, Bay, Tarragon, Fennel

# FAMILY AND COMMUNITY ENGAGEMENT

Family and the Community plays a huge role in marking children's development and growth of our centre. In some aspects of our project, we planned activities that welcome the parents to volunteer their time with us.

## *Learning Journey (Hort Park):*

- *7<sup>th</sup> June 2016:* Parents were warmly welcomed as we embark on our learning journey to Hort Park. "Balik Kampong" and "Edible Garden" themed gardens were explored. Parents took part in discussions, activities as well as sharing sessions.

## *Events Highlights:*

- *21<sup>st</sup> October 2016:* The garden has a new glamour with the made over. Parents, teachers and children put their best foot forward to lay the new homes for the tender greens. Our backyard is now an oasis flourished with aesthetic plants, vegetable beds, herbs patch, fruits trees and a patch of host plants for butterflies to nest and breed.
- *25<sup>th</sup> October 2016:* Behold, It's "Planting Day"! Parents sat through discussions and lessons with the children and dug their hands into pots, soil and seeds. It is a collaborative effort as the whole school potted a variety of little seeds in recycled cartons.
- *2<sup>nd</sup> December 2016:* Welcome to our official Garden Launch! We were honoured with the presence of Dr Chia (Member of the Parliament), the Head Quarters personal, National Parks In-Charge and of course, our supportive parents.

# LEARNING JOURNEY AT HORT PARK:

## *Itinerary*

9am- 9.30am	Departure/ Arrival at Hort Park
9.30am-10am	Walking over to “Balik Kampong”
10am- 10.30am	Tour “Balik Kampong”
10.30am- 11am	Snacks and Water break
11am- 11.45am	Head over to “Edible Gardens” Trail and tour
11.45am- 12.15pm	Visit “Butterfly Garden” and “Water Garden”
12.15- 12.30pm	Toilet break
12.30pm- 1pm	Departure/ Back to school

# *Lesson Layouts*

Lesson	Objectives/ Outline of Lesson	Duration	Resources	Remarks
<b>Lesson 1: Introduction to Singapore's wildlife- City in a Garden</b>				
Lesson 1:  Objectives	Children will be able to: 1. Know and identify some flora and fauna in Singapore 2. Listen to the story 'An Adventure in a City in a garden' with interest			
Introduction	<ul style="list-style-type: none"> <li>Sharing session (tapping on children's prior knowledge):               <ul style="list-style-type: none"> <li><i>What are some animals that you can see in Singapore?</i></li> <li><i>Do you know any names of the plants/animals we see outside?</i></li> </ul> </li> <li>Introduction of book "An Adventure in a City in a Garden" - title, author and illustrator</li> <li>Picture talk about the book cover               <ul style="list-style-type: none"> <li>✓ <i>Where do you think the two boys are going?</i></li> <li>✓ <i>What are some animals that you can see on the cover?</i></li> <li>✓ <i>How do you think they are going to have an adventure?</i></li> <li>✓ <i>Where do you think is this "City in a Garden"?</i></li> </ul> </li> </ul>	10 mins	"An Adventure in a City in a Garden" big book	*Pause briefly at each page and allow children to raise questions too
Main Activity	<ul style="list-style-type: none"> <li>Read the story with fluency and pause for questions               <ul style="list-style-type: none"> <li>✓ <i>What do you think the boys will discover? (pg.4/5)</i></li> <li>✓ <i>What do you think the Purple Heron eats for dinner if it's standing by the water edge? (pg.6)</i></li> <li>✓ <i>What kind of animals do you think they will discover next? (pg.7)</i></li> <li>✓ <i>What's the difference between a toad and a frog? (pg.8)</i></li> <li>✓ <i>Can anyone remember how does a caterpillar becomes a butterfly? (pg.12/13)</i></li> <li>✓ <i>What do you think is flying in the sky? (pg.20)</i></li> <li>✓ <i>Look at the two boys. How do you think they feel after the adventure? Do you think they would go for another adventure like this? (pg.22)</i></li> </ul> </li> <li>Encourage children to raise questions to ask after reading the story</li> </ul>	30 mins		



Lesson	Objectives/ Outline of Lesson	Duration	Resources	Remarks
<b>Lesson 1: Introduction to Singapore's wildlife- City in a Garden</b>				
Closure	<ul style="list-style-type: none"> <li>• Pass around some selected picture cards (animals and plants that are stated in the book) from the Nparks' Picture Cards Kit.</li> <li>• Allow children to look at the illustration of the picture cards and share what they had observed</li> <li>• Share some fun facts about the animals/plants that are stated at the back of the cards</li> <li>• Picture hunt to recap on some names of the animals/ plants they had learnt from the story – Place some of the picture cards in class and provide the name of an animal/ a plant and ask children to retrieve the correct picture.</li> <li>• Grow like a tree- Using their body, express the growth of a tree from a seed to seedling to the adult tree</li> </ul>	20 mins	Picture cards	*Teacher to select from the picture cards set accordingly

Lesson	Objectives/ Outline of Lesson	Duration	Resources	Remarks
<b>Lesson 2: Introduction to Herbs and Spices</b>				
Lesson 2:  Objectives	Children will be able to: 1. Touch, smell and look at some herbs 2. Recognize some herbs by smell and sight 3. Understand the uses of herbs (medical and culinary)			
Introduction	<ul style="list-style-type: none"> <li>Sweet basil, mint, curry leaves and coriander will be introduced to the children in class</li> <li>Children will be encouraged to use their senses (sight, touch and smell)</li> </ul>	20 mins	Sweet Basil plant Coriander plant Mint plant Curry Leaves plant	*If teachers would like their children to try the herbs, ensure it is cleaned thoroughly beforehand.
Main Activity	<ul style="list-style-type: none"> <li>Children will compare the herbs (eg. leaves structure, smell, texture etc.)</li> <li>Children will look at the parts of the plant with the chart that is prepared. Talk through the functions of the different parts of the plants</li> <li>Briefly explain about the usage of herbs (culinary, medicinal and fragrance)</li> <li>Discuss about some common dishes that use herbs to flavor</li> </ul>	25mins	Informative Charts (Annex A)  Information from internet (Annex B)	*Tap on children's real life experiences such as - <i>"Have you eaten pizza before? Do you know what makes it so delicious?"</i>
Closure	<ul style="list-style-type: none"> <li>Allow children to share their feelings, ideas and thoughts towards the herbs.</li> <li>Introduce some items and get children to smell to identify the herbs possibly used in making these               <ul style="list-style-type: none"> <li>Mint: Mint Candy, Tooth paste</li> <li>Basil: Dried Basil flakes</li> <li>Oregano: Pizza-flavoured biscuits</li> </ul> </li> <li>Let the children taste the mint candy/ biscuits and get them to explain and describe the taste, their feelings and opinions.</li> </ul>	15mins	Mint Candy Toothpaste Dried Basil Flakes Pizza-flavoured biscuits	*Teacher to guide children by giving positive comments about herbs - <i>"Well, I still think my spaghetti and pizza taste better with some herbs."</i> - <i>"I still think my mint toothpaste smells amazing."</i>

Lesson	Objectives/ Outline of Lesson	Duration	Resources	Remarks
<b>Lesson 3: Pre- Learning Journey to Hort Park</b>				
Lesson 3:  Objectives	Children will be able to: 1. Touch, smell and look at some herbs 2. Recognize some herbs by smell and sight 3. Understand the uses of herbs (medical and culinary) 4. Understand parks regulations, safety and etiquette			
Introduction	<ul style="list-style-type: none"> <li>Lay out the herbs shown the day before and ask children to recall based on sight and smell</li> <li>Allow children to share ideas where they might find herbs (eg. growing or on shelves)</li> </ul>		Sweet Basil plant Coriander plant Mint plant Curry Leaves plant	
Main Activity	<ul style="list-style-type: none"> <li>Briefly recap about the growth of a plant using the song chart</li> <li>Allow children to create actions as they sing. Using Annex A, recall in detail the structure and growth of a plant</li> </ul> <p><b><u>Briefing of Learning Journey to Hort Park</u></b></p> <ul style="list-style-type: none"> <li>Brief children about visit to Hort Park</li> <li>Brief children about parks regulation, safety and etiquette</li> <li>Set rules and instructions and things to abide when we are exploring Hort Park</li> </ul>	30 mins	Informative Charts (Annex A)  Park Regulations (Annex C)  Song Chart (Annex D)	<p>*Before the briefing: Emphasize and get children to suggest the things that they should/ should not be doing at the garden. Get children to suggest ways to show respect to nature and the plants around them. Note down the points on the board.</p>
Closure	<ul style="list-style-type: none"> <li>Children to play a game of “Guess the Herb!” using their sense of smell and touch</li> <li>Recap about the uses of herbs and herbs in the food that they tasted and smelt yesterday (mint/ oregano/ basil)</li> </ul>	10 mins	Information from internet (Annex B)	<p>*If the children are up for it, treat them to another round of herb flavoured snacks!</p>

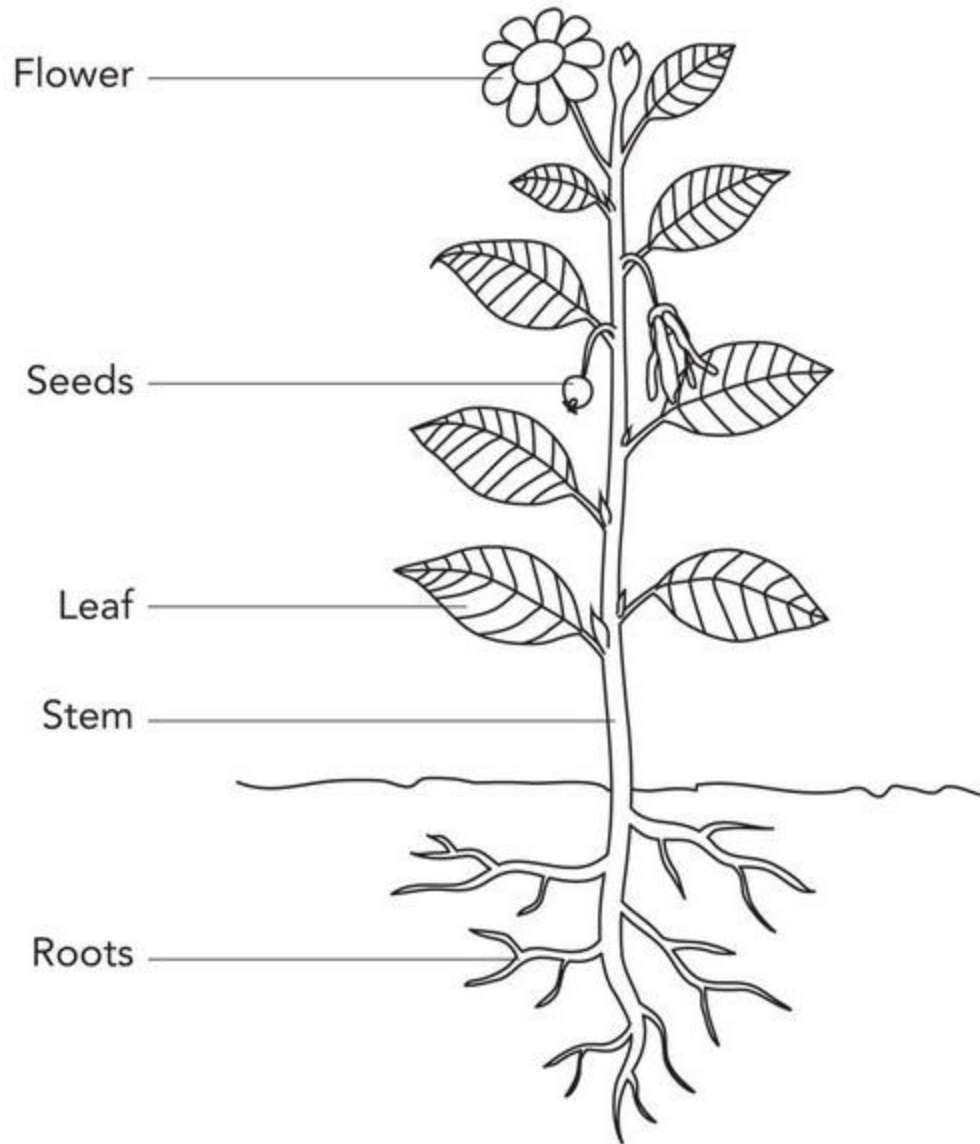


Lesson	Objectives/ Outline of Lesson	Duration	Resources	Remarks
Lesson 4: Learning Journey to Hort Park				
Learning Journey	<ul style="list-style-type: none"> <li>• Allow children some time to explore and ask questions.</li> <li>• Discussion and ask children               <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>What are some ways that the gardeners can help to keep the plants and gardens healthy?</i></li> <li><input type="checkbox"/> <i>How do you think plants can be planted besides using seeds?</i> (eg. seeds, seedling transfer, hydroponics etc.)</li> <li><input type="checkbox"/> <i>What are some things that we should/ should not do in a garden?</i></li> <li><input type="checkbox"/> <i>Can anyone remember what are some herbs we had seen and what are their uses?</i></li> </ul> </li> <li>• Visit “Butterfly Garden” and challenge children to spy some ‘Painted Jezebel’ which they had read about in “An adventure in a City in a Garden” book.</li> <li>• Visit the “Water Garden” near the entrance of Hort Park</li> <li>• Toileting before boarding the bus</li> </ul>	45 mins		

Lesson	Objectives/ Outline of Lesson	Duration	Resources	Remarks
<b>Lesson 5: Post-Learning Journey</b>				
Lesson 1:  Objectives	Children will be able to: 1. Share experiences from the Learning Journey 2. Understand the uses of herbs (medical and culinary) 3. Hands on experiences with planting herbs			
Introduction	<ul style="list-style-type: none"> <li>Gather children and allow them to share their experience at the Hort Park yesterday.</li> <li>✓ <i>Is anyone able to share how we can respect the plants and why should we do that?</i></li> <li>✓ <i>Can you remember what are some plants that we saw at Hort Park?</i></li> </ul>	15mins		
Main Activity	<ul style="list-style-type: none"> <li>Introduce the materials: soil compost, small pots, basil/ coriander seeds, water, plastic spoons</li> <li>Get children to share what they think should be placed in the pot first. Note down their ideas on the white board.</li> <li>Teacher to now write down the proper method on the board and group children into small groups.</li> <li>Allocate roles to each member in the group</li> <li>Teacher to walk around and provide guidance to the children</li> </ul>	30mins	Pots Soil Seeds Plastic Spoons Water (bottle or cups) Planting Manual (Annex E)	*Amount of pots depends on class size ( <i>3 children to 1 pot</i> ) *Teacher can purchase or use whichever seeds available *Allocate roles such as: <i>-scooping soil into pot</i> <i>-watering soil</i> <i>-planting seed in the soil</i>
Closure	<ul style="list-style-type: none"> <li>Guide children and allocate time for packing up</li> <li>Place their pots near the window sill</li> <li>Discuss about what they think will happen as the seed is growing.</li> <li>✓ <i>What do you think will grow first?</i></li> <li>✓ <i>When do you think we can see the little seedling?</i></li> <li>✓ <i>What should we do/give to the seed so that it will grow?</i></li> </ul>	15mins	Informative Charts (Annex A)	

# ANNEX

## *Informative Charts*

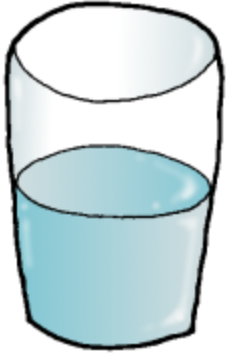


## Plant Structure

- Flower: Produce seeds
- Seeds: Produce a new plant
- Leaf: Absorbs sunlight to make 'food' for the plant
- Stem: Supports plants. Transport water and minerals to other parts of the plant
- Roots: Supports plant. Takes in water and nutrients from the soil



# What do plants need to help them grow?



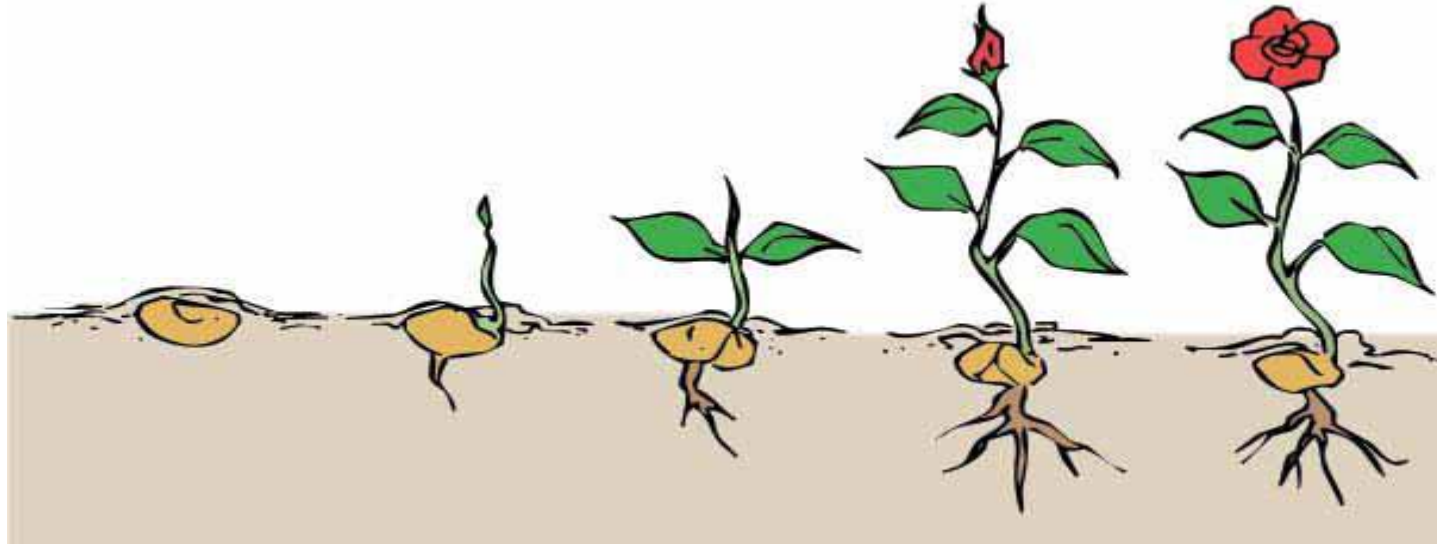
Water. Water is important for a plant as it allows them to stand upright and tall.

Sunlight. Plants needs sunlight to make food so that they can continue growing strong.



Fertilizer. It boost the growth of the plants so that it can mature quicker.

# Growth of a Plant



## Seed

It begins with a little seed.

## Sprout

Roots began growing after a few days of germination.

## Seedling

A little shoot starts to grow as the tender green leaves push out of the soil

## Young Plant

The little plant takes structure and grows taller with more leaves and maybe, a flower bud.

## Adult Plant

The plant has fully grown with a strong stem and a blooming flower.

# ANNEX

## *Herbs Information*

# HERBS



SWEET BASIL



CORIANDER



MINT



CURRY LEAVES



ROSEMARY



LEMON GRASS



LAKSA LEAVES






COMMON PURSLANE






INDIAN BORAGE

# USES OF HERBS

 <p><i>Sweet Basil</i></p>	<p><u>Medical:</u> Calming the stomach, Cough and cold, Antibiotic properties, Stings and bites, Ear infection, Stress reduction</p> <p><u>Culinary:</u> Italian pasta, Pesto, Salad, Sauces, Stir fry</p>
 <p><i>Coriander</i></p>	<p><u>Medical:</u> Diarrhea, Skin inflammation, Benefits eye care, Anaemia, Mouth Ulcers, Blood pressure</p> <p><u>Culinary:</u> Condiment, Garnish or Decoration on culinary dishes</p>
 <p><i>Mint</i></p>	<p><u>Medical:</u> Treats indigestion, Nausea, Cold, Diarrhea, Headache, Weight Loss</p> <p><u>Culinary:</u> Tea, Drinks, Sauce, Meat Marinade</p>

# USES OF HERBS

 <p><i>Curry Leaves</i></p>	<p><u>Medical:</u> Decrease blood cholesterol, Diarrhea, Indigestion, Diabetes, Cancer fighting properties</p> <p><u>Culinary:</u> Salad, Curry, Meat Stew</p>
 <p><i>Rosemary</i></p>	<p><u>Medical:</u> Rich source of antioxidants, Digestion, Memory and concentration, Cancer fighting properties</p> <p><u>Culinary:</u> Meat Marinade, Pizza, Focaccia, Sauces</p>
 <p><i>Lemon Grass</i></p>	<p><u>Medical:</u> Anti inflammatory, Anti bacteria, Anti depressant, Cancer fighting properties, Cough and flu, Detoxifies</p> <p><u>Culinary:</u> Marinades, Stir fry, Curry paste, Tea, Spice rubs, Broths</p>

# USES OF HERBS

 <p><i>Laksa Leaves</i></p>	<p><u>Medical:</u> Anti inflammatory, Diarrhea, Snake bites, Acne, Stimulate digestion</p> <p><u>Culinary:</u> Laksa, Fish dishes</p>
 <p><i>Common Purslane</i></p>	<p><u>Medical:</u> Heart health, Weight Loss, Cancer fighting properties, Prevents Osteoporosis, Stimulate blood circulation</p> <p><u>Culinary:</u> Salad, Meat marinade, Beverages, Soup</p>
 <p><i>Indian Borage</i></p>	<p><u>Medical:</u> Relieve respiratory issues, Treat skin disease, Relief stress and anxiety, Boosts immune system</p> <p><u>Culinary:</u> Tea, Lemonade, Syrup, Salad, Sauces, Soup,</p>



# HERBS



THYME



DILL



OREGANO



PARSLEY



SAGE



CHIVES



BAY




TARRAGON






FENNEL






# USES OF HERBS

 <p><i>Thyme</i></p>	<p><u>Medical:</u> Diarrhea, Stomach ache, Arthritis, Sore throat, Cough, Colic, Bronchitis</p> <p><u>Culinary:</u> Grilled meat/ fish dishes, Marinade, Spaghetti, Couscous</p>
 <p><i>Dill</i></p>	<p><u>Medical:</u> Anti bacterial, Digestion, Relief for insomnia, Hiccups, Diarrhea, Cancer fighting properties</p> <p><u>Culinary:</u> Dips, Salad, Garnish, Creamy sauces, Seafood Dishes</p>
 <p><i>Oregano</i></p>	<p><u>Medical:</u> Anti bacterial, Anti inflammatory, Cancer fighting properties, Headaches, Bloating, Dandruff</p> <p><u>Culinary:</u> Pizza, Condiments, Meat marinade</p>

# USES OF HERBS

 <p><i>Parsley</i></p>	<p><u>Medical:</u> Stimulate the appetite, Improve digestion, Reduce spasms, Diabetes, Cough, Asthma</p> <p><u>Culinary:</u> Garnish, Sauce, Salad</p>
 <p><i>Sage</i></p>	<p><u>Medical:</u> Lower blood glucose and cholesterol, Anti inflammatory, Anti fungal, Treatment for Alzheimer</p> <p><u>Culinary:</u> Veal dishes, Soups, Sausages, Pasta, Pizza</p>
 <p><i>Chives</i></p>	<p><u>Medical:</u> Cold prevention, Lower cholesterol, Clear stuffy nose, Prevent bad breath, Anti-bacterial</p> <p><u>Culinary:</u> Salad, Fish dishes, Dressing, Dips</p>

# USES OF HERBS

 <p><i>Bay</i></p>	<p><u>Medical:</u> Digestive, Flu and Cold, Antibiotic, Cancer fighting properties, Appetite Stimulant</p> <p><u>Culinary:</u> Meat dishes, Curry, Sauces</p>
 <p><i>Tarragon</i></p>	<p><u>Medical:</u> Appetite Stimulant, Cure insomnia, Antiseptic, Loaded with anti-oxidant</p> <p><u>Culinary:</u> Salad, Vinegar, Marinate</p>
 <p><i>Fennel</i></p>	<p><u>Medical:</u> Loaded with vitamins and anti-oxidants, Reduce blood pressure, Low in calories</p> <p><u>Culinary:</u> Flavouring for wide range of dishes, dips, salad</p>

# ANNEX

## *Park Regulations*

# Park Regulations

Dos:	Don'ts:
<ul style="list-style-type: none"><li>• Be gentle when you touching or smelling the pretty flowers and leaves.</li><li>• Only look at the living creatures.</li><li>• Keep your hands to yourself (unless other instructions are given.)</li><li>• Use your indoor voice. (unless other instructions are given.)</li><li>• Be considerate of the other visitors in the park.</li><li>• Use your walking feet (unless other instructions are given.)</li></ul>	<ul style="list-style-type: none"><li>• Pluck the flowers or leaves.</li><li>• Take anything from the garden back home.</li><li>• Attempt to catch any pretty insects.</li><li>• Shout and run wild.</li><li>• Stray too far from your teachers, friends and parents.</li><li>• Eat fallen fruits or other plants.</li></ul>

# ANNEX *Song Chart*

# I'm a Little Seedling

*(Tune: I'm a Little Teapot)*



I'm a little seedling,  
Short and stout

Here are my leaves and here are my  
roots

When you give me water,  
Hear me shout

Watch me grow up day to day



# ANNEX

## *Planting Manual*



# Planting Manual

Planting Needs:
1. Pot
2. Newspapers/ Disposable container
3. Soil
4. Plastic Spoon
5. Seeds
6. Cup of water



Step 1	Scoop soil into your pot till $\frac{3}{4}$ full  <i>(Tip: Use a disposable spoon. Pick up any large piece of charcoal/ stone or break it into smaller pieces if it does not fit into your pot)</i>
Step 2	Water your soil generously  <i>(Tip: Place pot in a small disposable container or newspaper)</i>
Step 3	Make little indents in the soil (approx.1 cm) and place the seeds.  <i>(Tip: Place number of seeds depending on pot size. Small pots: 2/3 seeds. Medium pots: 5/6 seeds. Large pots: 10/15 seeds.)</i>
Step 4	Place it in a shady area and wait for the seedling to sprout (approximately 2 weeks- depends on plant species). Move your pot to a sunny area once the first green breaks through the soil.

# ANNEX

## *Photographs Of Hort Park*

# HortPark



Signboard and entrance to the Horticulture Park.

Map of the whole park located near the informative centre.



33 Hyderabad Road  
(off Alexandra Road), Singapore  
119578

HortPark is a one-stop gardening resource centre that brings together gardening-related, recreational, educational, research and retail activities under one big canopy in a park setting.

It is also a knowledge centre for plants and gardening, providing planting ideas and solutions, and offering a platform for the horticulture industry to share best practices and showcase garden designs, products and services.



# Hort Park



## Balik Kampung

Bringing out the kampung spirit as part of the SG50 project, it houses a variety of simple herbs and vegetables to complete the nostalgic feel with the thoughtful designs.

## Edible Garden

Look, smell, taste, touch and learn about the culinary and medical uses of various vegetables, herbs and spices at this interactive garden.



# *Photographs Of Learning Journey*





Inquisitive minds always notice the littlest things and bombard you with questions to ponder on. A millipede that was taking its stroll after a light shower was the object of their interest.

Here we are at 'Balik Kampung'. We saw some growing chilli plants. Picking up the dried and fall fruits, we used our senses to observe it.



Cheese to a group photo and a wonderful time we have got here!





Well, well, look what we have got here?  
A growing lush patch of basil! With instructions given, we got down to sniffing the delicate plants. We also spotted rosemary and eggplants!

And we are off to explore the 'Edible Garden'!

We took our guesses on what kind of edible vegetables, herbs and plants we might find here.

Although the weather was scorching, the children were still excitable and participated actively in observation tasks. It was a free roaming wonderland for the children as they asked for permission to touch, smell, and look closely at what there is in their sight. Even the smallest things intrigues them endlessly.



# *Photographs Of Parental Involvements*





## Planting Day

"Are we going to plant, Miss Kwan?" the children exclaimed with excitement. With the presence of their parents, their eagerness was barely contained.

The activity started off with a simple book; "Vicky's Vegetables". The story briefly shared about a girl's love for vegetables, things needed for planting, steps to planting and most importantly: Patience! The children learnt that the plants will not grow overnight- and just like them; growing requires time, care and lots of love. The parents took part in the reading activity, simple discussions and sharing about the types of vegetables they expose their kids to at home.

We broke off into small groups after the lesson to kick-start our own pot of 'Kang Kong'. From decoration of the plastic container, creating our own tags, scooping soil and placing the seeds; the parents were there with them throughout the whole process.

There were plenty of interaction, laughter, questions and hands-on experiences between parents and children. It was heart-warming to see the bond, expressions of love, unique ways of communication and parenting styles displayed.