

MULTI-SENSORY



asparagus



tomato



spinach



corn



radishes



peas



strawberry



cauliflower



raspberry



lettuce



onion



cherries

The Garden Project

Learning about sustainability and seeding healthy eating habits



potatoes



leeks



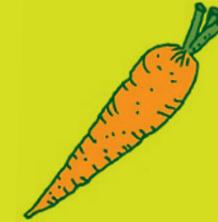
basil



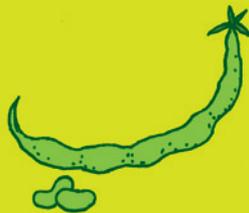
pumpkin



broccoli



carrot



green beans



watermelon



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A
M

“The kids really loved the Garden Project. They got their hands dirty with mud, grass and vegetables, took a deeper look at how nature works and developed their early learning skills by recording everything in their journals! ”

Sara
Director of Infants
(Milan)



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> Introduction

The Garden Project is a standard-based curriculum that employs a Project Based Learning approach for teaching children from three upwards within a *STEAM* framework. The Garden Project values empowering children to build on their knowledge through enquiry of the natural world. Children gain knowledge and skills by working for an extended period of time to investigate, explore and discover how fruit and vegetables are grown, using Science, Technology, Engineering, Arts and Maths as well as sustainable growing practices.

In the context of early childhood education, pedagogy is defined as the practice, art, science, or the craft of teaching. Pedagogy provides a shared frame of reference (a mutual learning encounter) between the educator, the young child and his/her family. It is a dynamic, interactive and collaborative process, underpinned by care, trust, love, reflection, mutual respect, and understanding.

The pedagogy guiding *The Garden Project* draws from several philosophies to create a dynamic approach to teaching and learning. These philosophies include:

Project Based Learning teaching method. The Buck Institute defines **Project-Based Learning** as “a dynamic classroom approach in which children gain knowledge and skills by working for an extended period of time to investigate and respond to a complex, question, problem or challenge”. This allows the teacher to facilitate the exchange of ideas with the end goal for the children to understand, answer the guiding questions used throughout the lesson and exchange ideas on the lesson’s concept.

Your role as an educator isn’t to start the enquiry through a succession of questions from adult to child but rather a discussion, being prepared to speak, listen, respond, put forward more than one point of view, with the intention of developing your children’s knowledge.

Creating a discussion requires *you*, the educator, to take on various roles of expert, facilitator, participant, and creator of meaningful contexts for discussion and enquiry. Cognitively challenging and open-ended questions are most conducive to creative thinking and more elaborate investigations.

Below are the Essential Project Design elements that make up *The Garden Project* (Buck Institute for Education 2015):

- **Key Knowledge, Understanding, and Success Skills** - *The Garden Project* focusses on developing students' technical and metacognitive skills, which include critical thinking, collaboration, and self-management. In addition, *The Garden Project* promotes the development of intrinsic values such as empathy, respect, and patience.
- **Challenging Problems and Questions** – *The Garden Project* frames each lesson around **Our Green Question**, in which the lesson's objectives are focussed on. Children are encouraged to respond to guiding questions in order to answer this and are thereby scaffolding their learning step by step.
- **Sustained Inquiry** – Children's innate love towards nurturing plants gives *The Garden Project* a framework for sustained inquiry as every stage of growing things gives children a sense of purpose and satisfaction. The duration of the projects varies depending on the age group of the children.
- **Authenticity** – *The Garden Project* uses natural materials and features living plants in a real-world context.
- **Student Voice & Choice** – Our child-centred approach gives children a voice and choice on the project, including how they work on and what they create. Learning occurs naturally and authentically, as concepts are connected via the enquiry that is led by them.
- **Reflection** – Students and teachers reflect on learning, the effectiveness of their enquiry and project activities. In addition, children rediscover handiness and the joy of coordinating the mind, body and soul into action as they plant, grow and care for their *Garden in the box*.

STEAM Framework

The Garden Project applies a STEAM framework by developing child-led enquiry, as children are guided into discovering where their food comes from and how to grow vegetables *sustainably*. Age-appropriate skills – from categorisation, observation to problem-solving - are identified and woven together using Science, Technology, Engineering, Arts and Maths, as children's learning is highlighted through meaningful writing and journaling. Every activity highlights the adopted STEAM disciplines and how it interconnects with another discipline.



The Reggio Emilia Approach

The Garden Project is infused with the *Reggio Emilia Approach* as we too believe that the *environment* is a child's 'third educator' and recognise the many ways in which children interpret the world and represent their ideas and theories. We trust our children to ask the right questions and our role as educators is to intervene as little as possible, and observe, listen, interpret and facilitate the children's research by providing interesting and stimulating experiences and resources.



> The Garden Project Philosophy

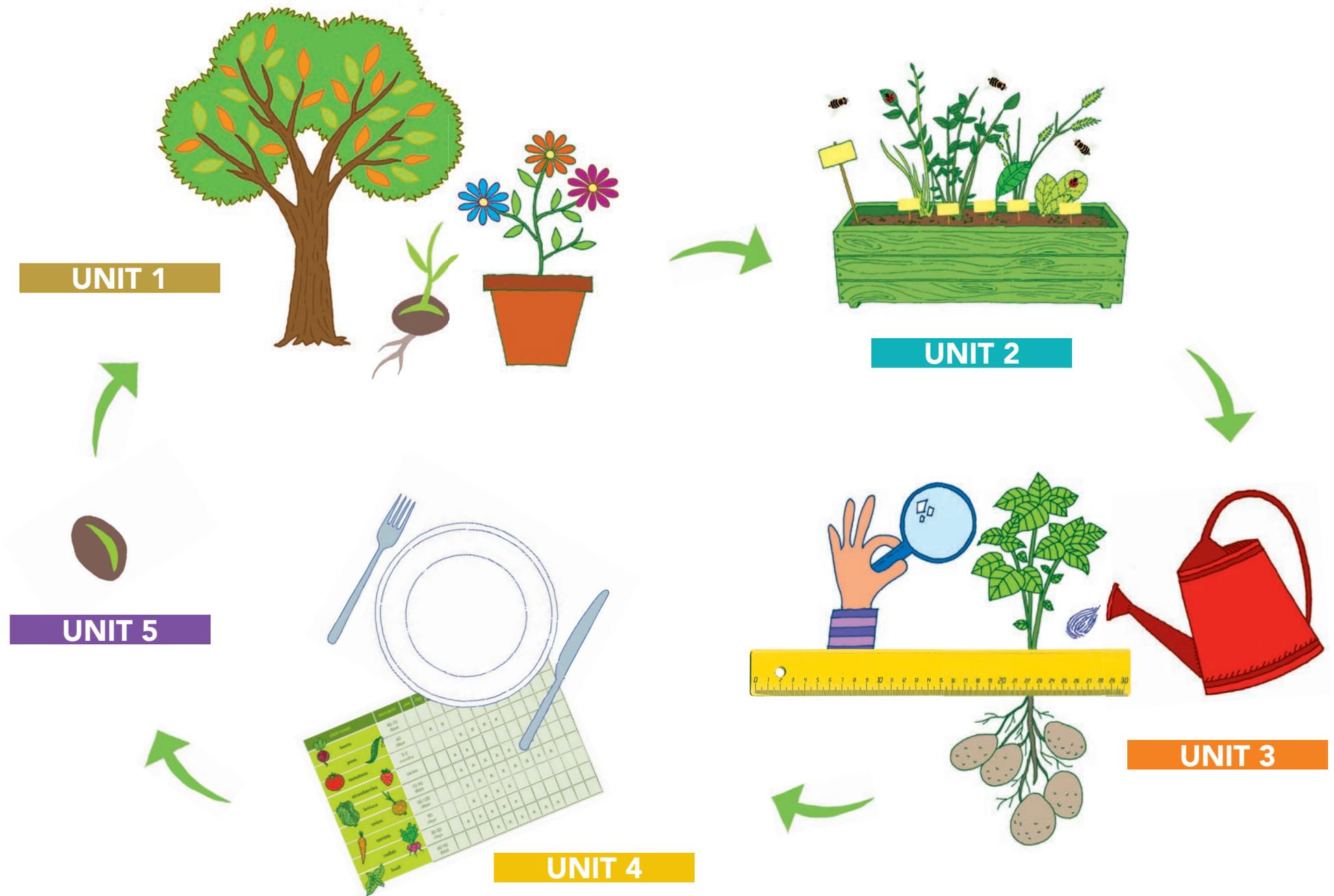
As our planet's future ambassadors, *The Garden Project* sets itself the crucial goal of reconnecting children to nature with a 21st century framework of learning. Every activity draws its inspiration from nature to remind children and teachers that everything begins and ends with nature. Nothing is more inspiring than nature!

Educators are guided into using nature as an ever-changing set of resources that can easily be adapted for the local environment to employ instructional design combining all 5 STEAM disciplines in engaging lessons and mini projects in addition to developing critical thinking and problem solving through Project Based Learning.

Whilst gardening is a central theme of the project, it only comprises 20-30% of this science-based (biology and botany) project. Children are taught how to develop the scientific method, *the ability to hypothesise and set up their experiment*, as well as link each step of the growing process through documentation of their findings in their age-appropriate guided journals.

Maths and Technology are used to deepen the learning experience as children learn to count leaves, make simple seed graphs as well as further their enquiries with the use of technology. The exploration and communication of findings is done through a highly aesthetic exploration of nature using, whenever possible, natural materials.

Finally, the social emotional component of *The Garden Project* is key. In an era where social emotional skills are at risk, it's important to develop life skills that encourage collaboration and harmonious living within our environment. In addition, children and teachers, will have to trust the process as things will not always go as planned but failures always carry important learning opportunities that are just as important as our successes.



> Teaching Strategies, Learning Tools and Student Learning Goals

Specific to our curriculum are the teaching strategies and learning tools we have selected to help educators facilitate meaningful learning experiences for children.

Our teaching goal for *The Garden Project* is to instil in children a love of learning, to prepare them to view the world with eyes of wonder, and to grasp opportunities to learn at any moment of the day! We aim to achieve this, in part, by helping children discover and cultivate their understanding of their ability to think, also referred to as **metacognitive strategies** and *critical thinking* skills. Metacognitive strategies facilitate children's ability to: (a) reflect on their learning behaviours, (b) identify their learning needs, (c) listen and communicate more effectively, and (d) adjust their learning habits accordingly. We facilitate this by providing an integrated curriculum that addresses the learning needs of today's multi-skilled, multi-tasking new generation.

Teaching Strategies and Learning Tools

Scaffolding. *Scaffolding*, a term coined by Wood, Bruner and Ross and influenced by Vygotsky's theory of "zone of proximal development" (ZPD). Scaffolding refers to the process by which adults or capable peers support and guide children's learning to a higher level of competence than they could normally achieve on their own. Scaffolding techniques are found throughout *The Garden Project* the teacher's guide and learning progressions in the Pupil's Journal. Your role as an educator is to stimulate interest in the task by simplifying it, yet also providing the time and the intellectual support needed to keep the children's interest in achieving their goals.

Language Development Strategies. In addition to providing a platform for learning, *The Garden Project* also gives educators strategies to extend vocabulary and introduce English as a second or foreign language in a natural context. Simple linguistic phrases are given to teachers to introduce new vocabulary following the natural approach, i.e. focus on "acquisition" as opposed to language "processing", the way children learn their first language or mother tongue.



Music. Music and Early Childhood Education go hand in hand, which is why *The Garden Project* has integrated **The Vegetable Plot** songs and music to spice up your learning journey. Children will be choreographing their own groovy dance moves to the music, in addition to learning new songs and rhymes that focus on planting, healthy eating and expressing yourself creatively.

In addition to developing vocabulary, children are developing **phonological awareness** with the songs from the vegetable plot by focussing on the sound structure of spoken words while singing and rhyming their favourite tunes.



The Vegetable Plot Characters. In addition to taking children on a musical journey, we have adopted Aspara Gus or "Gus", the lead character of *The Vegetable Plot*, as *The Garden Project* mascot as he introduces key concepts and ties the learning together by giving suggestions and tips on healthy eating. Gus, an animated asparagus, is a fearless leader whose goal is to convey the message that vegetables love to be eaten so they can nourish our bodies. We hope that the emotional bond that the children develop with the character will also positively influence their healthy food choices.

Specialised Science & Nature Skills Assessment. At the end of every journal, the teacher is provided with an age-appropriate Specialised Science and Nature Skills Assessment sheet, to highlight the progress made throughout the project in those skills associated with Science and Nature. Teachers can either tick the skills that have been visibly mastered or mark the boxes with an "A" for *Achieved* or "IP" if still *In Progress*. It is possible to personalise the progress made for every individual child in the Comments.



Social Emotional. The social emotional component is one of the most important aspects of *The Garden Project* as, in addition to developing the social emotional skills between children, it also focuses on patience, caring for living organisms, collaboration and empathy which are key life-skills we want to develop in all children. Pupils also deepen their understanding of the natural world as well as the environmental impact of their actions. Activities that have a strong social emotional component are marked with a heart icon.



Bookworm Corner. Most lessons are accompanied by a book or story suggestion to further the investigation and/or to add a literacy component which encourages healthy reading habits in small children. Books and stories are suggested at the end of most lessons.

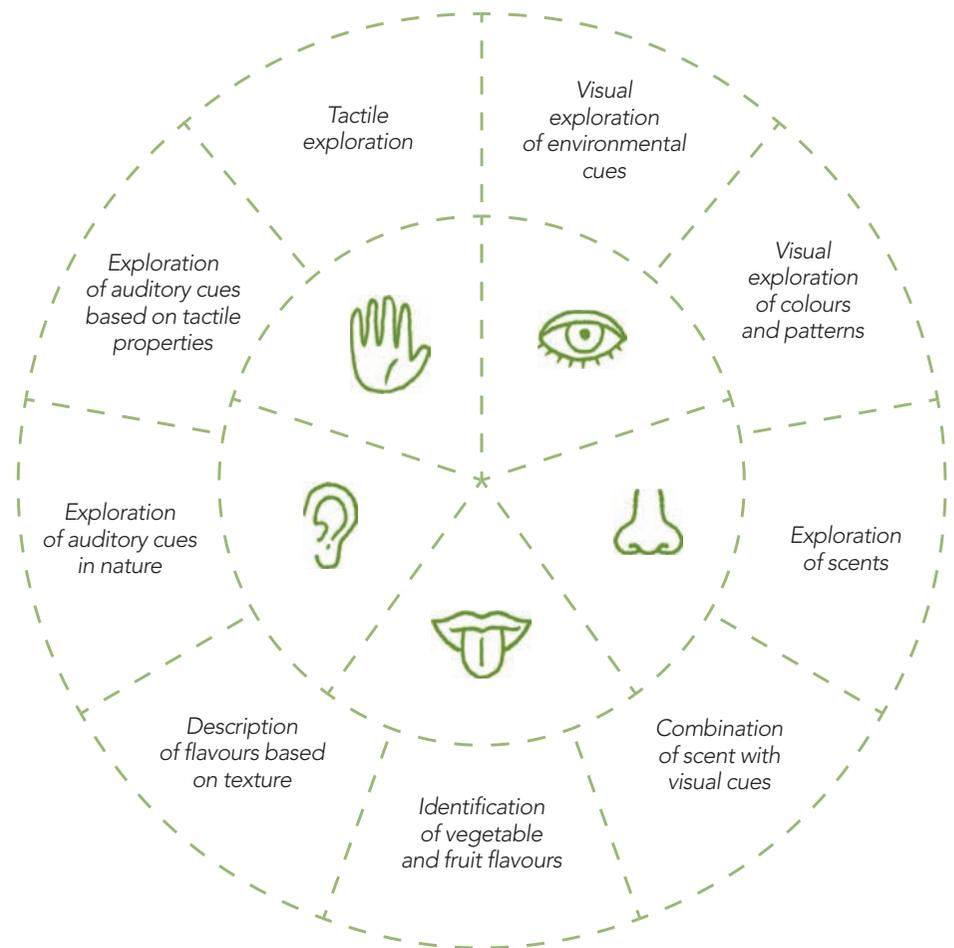


Learning Centres

Learning Centres, often referred to as Learning Spaces or Stations encourage child centred learning and autonomy to further explore and develop a concept introduced within the activity. This refers to a pre-established period of time (often the first activity of the morning) in which children can choose independently which area and activity to work on. A typical pre-primary classroom might offer Arts, Maths, Science, Social and Emotional and Literacy centres, but this is predominantly down to each teacher to decide. When and where appropriate in the teacher's manual, we have included suggestions for you to incorporate a Garden Project centre within your classroom. Similarly you could simply incorporate the different activities within your pre-established learning centres, depending on the focus of each activity (according to the STEAM puzzle piece). Activities of this type require prior preparation and planning although once established, children should be able to complete them autonomously or with other children. This approach to learning encourages creativity, autonomy, motivation and encourages children to take responsibility for their learning.

Multi-Sensory Exploration

One of the strengths of *The Garden Project* is its highly sensory component. Children learn best when engaging their senses and can tangibly apply an acquired concept across a variety of settings. Every concept introduced in *The Garden Project* has a multisensory exploration across a number of disciplines and they are highlighted in every lesson with the sensory icons indicated below.



Pupil Learning Goals

Pupils experience integrated learning as they participate in lessons that are based on nature and also address development across key domains. Below are examples of the skills that are covered throughout the project:



Science & Nature

- Adopting the **scientific method** by developing **observation** of nature and **asking simple questions** to gain a better understanding of their world. For example: "what does a plant need to grow?" or "how do vegetables grow differently?"
- Being able to form a **hypothesis** that drives from **investigation** and **experimentation** are key to enquiry-led learning. Children are encouraged to carry out tests on the world to see if it will behave the way they think. "Does a plant need water to grow?" or "Which vegetable grows faster – a radish or a carrot?"
- **Documentation** of findings and **collection** of results is an essential skill for budding scientists. Documenting changes based on colour, shape, size, height and texture are some of the processes covered in *The Garden Project*.
- Throughout *The Garden Project*, there will be multiple opportunities for children to be **measuring** results, including time, temperature and height.
- **Narrative skills** are a central part of the programme as children learn to recall new vocabulary and describe the life cycle of plants, fruit and vegetables in *The Garden Project*. **Vocabulary** is enriched through the elaboration of plant names, fruit and vegetables.
- **Fine motor skills** are developed through gardening (sowing, planting, watering) and/or use of tools such as magnifying glasses.



Technology

- Children learn how to use technology **wisely** as part of **engaging** in **shared** learning experiences.
- The use of technology is encouraged as a means to document findings through **photography**.
- Observation and documentation are **deepened** through the use of *time-lapse* technology and voice *recording* devices to record findings.



Engineering

- Fostering children's natural curiosity as to **why** and **how** things work in nature, especially when related to growing vegetables and fruit.
- **Improve**, **design** and **devise** solutions to measure and facilitate growth of vegetable plants, using **sustainable** materials.
- Learning to answer simple questions that arise in the process of growing vegetables. For example: "**How** do plants move their seeds from one place to another? "**What** can we do to solve this problem?"
- Following a **simple process** to find solutions which involves: defining the problem through words or images, doing the **research** to develop a possible solution, **designing** a solution, building a **prototype**, **testing** it and **evaluating** the solutions.



Arts

- Using the arts as means of **expressing** an idea, feeling and/or concept.
- Developing **aesthetic value** through **composition** of colours, shapes, patterns and sounds is a key goal throughout the project.
- Children learn how to use a variety of **natural materials** (seeds, stones, sand, earth, water) and mediums (hands, feet, cotton buds, ink), to express themselves, such as with mud painting inspired by the *Land Art Movement*.
- **Trusting** the *creative process* and expressing it through exploration, experimentation and intuition using specialised techniques (vegetables print-making, shadow stenciling, peel tattoos).



Maths

- **One to one correspondence** in **counting** natural materials (beans, leaves, seeds) and developing early numeracy skills or division (splitting a vegetable in 2), addition (adding seeds together) and subtraction.
- Children elaborate **shape recognition** through careful observation of shapes of fruit and vegetables.
- **Pattern Recognition** in nature, for example noticing that ladybirds have mirrored dots on either sides of their shell, finding spiral patterns in nature (explained by the Fibonacci series).
- As plants and vegetables grow, children learn to **sort** and classify/ categorise vegetables in **multiple ways** as well as how to present findings with the use of **simple graphs**.



Understanding the Teacher's Manual

As indicated above, The Garden Project adopts a multi-disciplinary STEAM framework, placing a particular emphasis on Science & Nature and the way scientific knowledge is based on empirical evidence of the natural world. As budding scientists, pupils are encouraged to look for patterns and order when making observations about the world and their natural environment. The Garden Project Journals, an integral part of the project, encourage the documentation of the world around them, building on prior experiences by collecting, recording and sharing observations.

The Garden Project combines *The Scientific Method* and *Project Based Learning* within a pre-primary setting, by designating the following lesson components:



Teacher Set-up

Some activities require additional set-up and planning time prior to the lesson. These are marked with a set-up icon.



Classroom Demonstration and Documentation

Activities that involve teacher-led demonstration followed by group documentation on a chart or poster. These are marked with the classroom documentation icon.



Our Green Question

Defining the *driving question* – why the lesson is being run – is key to a successful PBL. For this reason, each lesson starts with *Our Green Question* the thread of the lesson to drive children's curiosity to understand their natural environment. Children are not expected to answer *Our Green Question* at the start of the lesson but rather, as they get older, are encouraged to repeat and remember it throughout the lesson. By the end of the lesson children should have gained their own understanding of *Our Green Question*. Encourage them to share their ideas. These questions are marked with a green lightbulb.



PBL Guiding Questions

A series of *guiding questions* have been elaborated to support children's understanding of *Our Green Question* and scaffold learning. These are the prelude to every activity, giving children clues to the answers pertaining to *Our Green Question* and the activity that will be conducted, interpreted within the given STEAM discipline. The list of *PBL Guiding Questions* can also be found under *Before and During the Lesson* and *End of Lesson Reflections*.



Explore through STEAM Learning Centres

Children are encouraged to further *explore* a concept through the *Learning Centres*. These are child-led activities, run in autonomy with 1 to 4 children. Learning Centre activities are marked with a magnifying icon and vary in colour depending on the STEAM discipline they are under.



Student Documentation through the Pupil's Journals

Most activities conclude with the documentation of the children's learning journey in their journals, marked with the documentation icon in 3 different colours: green refers to the *Journal of Wonder*, orange to the *Journal of Observation* and yellow to the *Journal of Investigation*.

The teacher is encouraged to involve children in the learning process by applying key questions throughout the lesson, starting with simple questions aimed at supporting pupils in recalling and recognising information and principles that are developed into higher level questions which demonstrate that the pupil is able to apply a abstract information in a new context.

Journals

The Garden Project is accompanied by age appropriate journals. The journals is linked with the documentation phase indicated in most lessons recording every pupil's learning journey. The journals are aligned with the U.K.'s Early Years Foundation Stage (EYFS) and are subdivided into 3 age-appropriate levels:



Journal of Wonder – pupils focus on Nature's wonders whilst acquiring, recalling and recognising information related to nature's elements, parts of a plant and how vegetables grow. This journal is an introduction to nature and encourages children to observe and question nature, and to get their hands dirty.



Journal of Observation – pupils are guided into observing nature's clues to have a better understanding of the world around them, as well as learn to care for living organisms, and that Mother Nature cannot be rushed. By this stage pupils should start to recognise nature's cues and have a better understanding of their natural surroundings.



Journal of Investigation – pupils learn to use their observations to describe patterns in the natural world and record them to notice patterns over time. The last of a series of three journals, children are now scientists of the natural world! By this stage children will have acquired a desire to understand and investigate nature and their surroundings and the importance of looking after the environment.



LESSON	TITLE	ACTIVITIES	FOCUS BY AGE GROUP AND LEVEL	JOURNAL
Unit 4 Harvesting				
Lesson 1	Family of Vegetables	<ul style="list-style-type: none"> • Development of early numeracy by counting vegetables • Classification of vegetables (family groups) • Exploration of high and low sounds through vegetable instruments 	<p>WONDER (3-5yr olds)</p> <ul style="list-style-type: none"> • Identifying differences and similarities in vegetables <p>OBSERVATION (4-6yr olds)</p> <ul style="list-style-type: none"> • Categorising vegetables by type and colour <p>INVESTIGATION (5-7yr olds)</p> <ul style="list-style-type: none"> • Categorising vegetables by family types and connecting this concept with the child's family trees. Applying their sense of creativity to use vegetables to create simple instruments 	 Investigation <ul style="list-style-type: none"> • Family of Vegetables p. 22-23 • My Family Tree p. 24
Lesson 2	How did your vegetables grow?	<ul style="list-style-type: none"> • Use of basic mathematical language to describe concepts of position and size (comparison) • Identification of vegetable maturity, i.e. when they are ready to be picked 	<p>WONDER (3-5yr olds)</p> <ul style="list-style-type: none"> • Learning to identify which vegetables grow above and below the ground <p>OBSERVATION (4-6yr olds)</p> <ul style="list-style-type: none"> • Describing how vegetables grow and noticing when they are ready to be picked or harvested <p>INVESTIGATION (5-7yr olds)</p> <ul style="list-style-type: none"> • Investigating the shapes of ripe fruits and vegetables in nature through mandalas and thaumatropes 	 Wonder <ul style="list-style-type: none"> • Carrots and Radishes p. 24 • Squeeze Your Vegetable p. 25  Observation <ul style="list-style-type: none"> • Developing My Sense of Taste p. 23  Investigation <ul style="list-style-type: none"> • Above and Under the Ground p.25
Lesson 3	Eating by Season	<ul style="list-style-type: none"> • Identification of fruit and vegetables seasonality • Documentation of seasonality through a harvest chart 	<p>WONDER (3-5yr olds)</p> <ul style="list-style-type: none"> • Understanding the seasonality of fruits and vegetables <p>OBSERVATION (4-6yr olds)</p> <ul style="list-style-type: none"> • Connecting the seasonality of fruits and vegetables with the colour wheel <p>INVESTIGATION (5-7yr olds)</p> <ul style="list-style-type: none"> • Documenting and charting the seasonality of the vegetables that have been grown throughout The Garden Project 	 Wonder <ul style="list-style-type: none"> • At the Market p. 26  Observation <ul style="list-style-type: none"> • Fruit and Vegetables Colour Wheel p. 24  Investigation <ul style="list-style-type: none"> • My Harvest Chart p. 26-27
Lesson 4	Eating the Rainbow	<ul style="list-style-type: none"> • Revision of colours • Introduction to nutrition and healthy eating by colour • Categorisation of vegetables by colour groups 	<p>WONDER (3-5yr olds)</p> <ul style="list-style-type: none"> • Identifying that vegetables have bright colours <p>OBSERVATION (4-6yr olds)</p> <ul style="list-style-type: none"> • Identifying vegetables by colour groups <p>INVESTIGATION (5-7yr olds)</p> <ul style="list-style-type: none"> • Categorising vegetables by colour groups and making simple healthy choices for snack 	 Wonder <ul style="list-style-type: none"> • Colourful vegetables p. 27  Observation <ul style="list-style-type: none"> • Eating the Rainbow! p 25 • My Favourite Recipe p. 26 • What's for Dinner? p. 27  Investigation <ul style="list-style-type: none"> • Creative Juices p. 28 • Fruit Mandalas p. 29 • Fruit Thaumatrope p. 30

Reduce, Reuse, Recycle: making your own Gardening Tools & Equipment



Use your creativity to reduce, reuse and recycle in your classroom and your garden!

In this lesson, children will discover the equipment needed to facilitate gardening and manipulation of natural materials. The most obvious is a watering can to water plants, but also shovels, trowels, and rakes.



This lesson focuses on reusing and repurposing materials so that they can be reused in a different context (upcycling). Children will recycle plastic bottles and paper cups to reuse them as watering equipment and use yoghurt pots as plant pots. In this way, children learn the importance, not only of caring for each other, but also of caring for nature and the environment that surrounds them.



Engineering



Vocabulary

water, cup, bottle, seeds, dirt, fill, sprinkle, hole, pour

> Lesson Overview

ACTIVITY	SKILLS	MATERIALS	JOURNALS
 <p>Engineering All Ages</p> <ul style="list-style-type: none"> • Conversion of old plastic water bottles and paper cups to make watering devices <p>Project Ideas All Ages</p> <p>Conversion of yoghurt pots into plant pots</p>	<ul style="list-style-type: none"> • <i>Finding different uses for everyday materials</i> • <i>Manipulating water with various materials</i> • <i>Investigating water regulation by perforating holes into materials</i> • <i>Promoting sustainable practices</i> • <i>Applying “upcycling” practices by finding a new purpose for an old item</i> 	<ul style="list-style-type: none"> • Sample watering can, (shovel, trowel, rake are optional) to show children • Old plastic bottles with a hole in the caps or caps with a nozzle (one per child or small group) • Teacher’s use scissors • Old paper cups, with and without holes in the base (one of each, per child or small group) • Washing up bowls for water • Water • Unwanted household/classroom items to upcycle such as yoghurt pots 	
 <p>Learning Centres All Ages</p> <ul style="list-style-type: none"> • Categorisation of old items into recycling boxes 	<ul style="list-style-type: none"> • <i>Categorisation of recycling materials</i> 	<ul style="list-style-type: none"> • A pair of scissors to perforate a hole in the plastic lid • 3 containers (labelled green, yellow, blue) • Items to sort into recycling containers 	

PBL Guiding Questions



Our Green Question

Why is it important to use old materials in a new way?

Before and During the Lesson

- Plants need water. How do plants get water in nature? What does rain sound like? What if there's no rain or our plants are indoors? How can we give them water?
- Look at the bottle. What's it for? Is the hole of the bottle big or small?
- Look at the cup. What's it for? Is the top of the cup big or small? Does water come out faster from the bottle or the cup?
- Look at a watering can. Does the water come out fast or slow? What can we observe from where the water comes out? Is there one big hole? Are the holes big or small?
- Can plants have too much water? Why is it important they get the right amount of water?
- How can we make our cup/bottle similar to the watering can?

End of Lesson Reflection

- How did we reuse our old bottle/cup?
- How is our 'upcycled' bottle/cup similar to a watering can?
- How did we change the bottle/cup?
- Can plants have too much water?
- Look around the classroom, can you see any other objects we can reuse or 'upcycle'? Do we need to change it?



Engineering



How can we reuse (upcycle) old paper cups and plastic bottles to water our plants?

- Find out how many of the children have already planted or gardened before. Discuss gardening equipment, show children a watering can. You can show them other equipment such as a trowel, and a shovel if you have them. We need these to help plant our garden and take care of it.
- Ask children how nature waters plants. *What does rain sound like?* Ask children to mimic loud heavy rain and quiet soft rain with their fingertips. Explain that plants need not too much, not too little, but just the right amount of water. *What if there's no rain or the plants are indoors? How can we give them water?*
- Using the watering can as an example, ask the children if there are **other items** in the **room** they could use to transport water in. Remind the children that you don't have to throw rubbish away. Whenever possible you should find new ways to reuse old items to reduce waste.
- Next show them an old, empty **water bottle**. *Look at the bottle. What's it for? Is the hole of the bottle big or small?* Let the children give you their suggestions and then hand an empty bottle of water to each child or small group. Pour some water from the bottle.
- Now show them a **paper cup** (without holes in it). *Look at the cup. What's it for? Is the hole of the cup big or small?* Ask a child to pour water from the cup.
- **Organise** children into **smaller groups** working around a **washing up bowl**. Let the children **play** with the **water**. Remind them that they must keep the water in the washing-up bowl and not on the floor. Encourage children to fill bottles and cups up and empty them out into the washing up bowl. *Does the water come out faster from the bottle or the cup?*

- Does more water come out of the bottle or the cup?
- Now look at the watering can. Demonstrate. Does the water come out fast or slow? What can we observe from where the water comes out? Is there one big hole? Are the holes big or small? Explain that a watering can sprinkles water and this helps us give plants the right amount.
- How can we make our bottles and cups more like a watering can? Accept different ideas. Distribute **plastic lids with holes** in them and ask children to screw on the plastic bottles. After, give out cups with holes in them. Now ask them to use their bottles to **squirt water** out and experiment **regulating** different amounts of water. Children should be experimenting by **pouring water** from water bottles into the cups with holes in them so that eventually they've devised a way to **sprinkle** plants with water.

5yrs+

- Children can further **investigate** ways in which they can **regulate** the flow of water from their cups. Under adult supervision/with assistance, children poke holes in the bottom of their cups with a ballpoint pen.

Project Ideas

All Ages

- Explore the concept of **reusing** (upcycling) old materials for **plant** pots. Repurposed plant pots can include: yoghurt pots, large plastic bottles, old Wellington boots, old egg cartons and even egg shells!

5yrs+

- What other gardening tools do you need for your garden? Can you reuse (upcycle) anything else that you no longer have use for?



Learning Centres

- Apart from reusing objects, we can also recycle materials in the classroom. Prepare 3 containers: green for glass, yellow for plastic, blue for paper. Bring in some items available for children to sort through and put into the different containers.



Specialised Science & Nature Skills Assessment

OBSERVATION

Use these statements to assess gardening skills developed during The Garden Project.

✓	EQUIPMENT SKILLS	✓	HARVESTING SKILLS
	I can use a watering can to water plants		I can dig root crops, such as carrots and radishes without damaging them
	I can use a measuring stick to measure plant growth		I can harvest leafy crops such as lettuce and spinach without damaging the plant
✓	PLANTING SKILLS	✓	OTHER SKILLS
	I can sow large seeds such as lima beans		I can conduct hand texturing tests of soil to determine soil type
	I can sow medium seeds such as spinach		I can sow small seeds such as radish seedse
	I can sow fine seeds such as tomatoes, leeks and lettuce		I can distinguish sweet from sour
	I can fill a container ready for sowing		I can observe the changes in plants, fruit and vegetables
	I can fill a cup with soil	✓	PLANNING SKILLS
	I can remove a young plant from its container		I can draw my garden plan
	I can plant a young plant into the soil and firm in		I can choose plants to grow
✓	AFTER-CARE SKILLS	✓	RE-PLANNING SKILLS
	I can water seedlings		I can start my new vegetable garden by replanting a carrot, radish or turnip head.
	I can water established plants		
	I can pinch out plants such as sweet peas, broad beans and tomatoes		
Teacher's comments			

> Vocabulary

Nouns

NATURAL ELEMENTS	PARTS OF A PLANT	OBJECTS	FRUIT & VEGETABLES	MONTHS & SEASONS	PEOPLE & ANIMALS
air soil sand sun water food (nutrients) mud puddle dirt ground sky temperature grass forest juice	bulb flower fruit leaf / leaves plant roots seed(s) seedling(s) stem sprout tree sap plant cycle	Garden in the Box cup watering can bottle thermometer magnifying glass seed bomb window circle square triangle rectangle oval pattern recipe ingredients	apple strawberry orange banana grape(s) broccoli cauliflower carrot onion potato radish tomato celery lettuce bean(s) courgette aubergine	January February March April May June July August September October November December winter spring summer autumn	friend pest family bee ladybird earthworm snail bug insect aphid slug caterpillar spot(s) stripe(s)

Verbs

GARDENING	NATURE/ENVIRONMENT	ACTION	SENSES	CLASSROOM LANGUAGE
plant pour sprinkle water fill grow squeeze compost sew	harvest reduce recycle reuse upcycle	sleep eat listen look touch walk	smell taste feel see hear	stick glue trace draw paint dip print group measure work well get along

2. Out of the Ground

(Sung by Sue, Collie, Ru and Rockit)

Like they've just come out of the ground

[Sue Kini]

You know, some vegetables take chemicals
To help them grow large
They hang around in science labs
With businessmen in charge
They say "Hey hey, take a bite of me baby,
I'm so tasty and round" Skip bop a bee boo
But me I like them natural
Like they've just come out of the ground
Like they've just come out of the ground

[Collie Flower]

Well, some vegetables live on the shelf
In a tin or in a can
They never see the light of day
Till they're put in the pan
They don't say nuthin'
From them you don't hear no sound
Yeah, that's why I like 'em natural
Like they've just come out of the ground
Like they've just come out of the ground

[Ru Barb]

Oh, I like 'em fresh and alert
Their faces all covered in dirt
I like 'em real, because
We're made more beautiful by our flaws
I like 'em the way they are naturally found
Like they've just come out of the ground (Oh oh oh)
Like they've just come out of the ground

Tell 'em friend!

[Guitar solo]

[Rockit Lettuce]

I like 'em crunchy, yeah, yeah!
'Cos it means there's lots of good things in there
I like 'em colourful but not too bright

Their original colour's just right
I like 'em the way that they are naturally found

Like they've just come out of the ground
Like they've just come out of the ground
(x3)

Like they've just come out of the ground

3. I love to go outside

(Sue Kini's song)

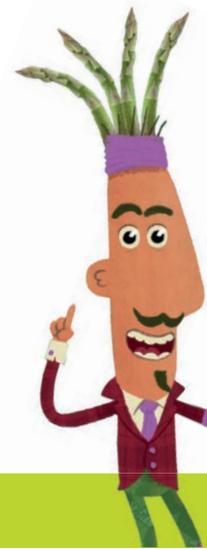
(Sue Kini?)

I love the morning sun
I love the bright blue sky
I love to get up early and have fun
I love to go outside

I love the smell of the sea (Oh Sue!)
It's a feast for my ears and my eyes (Where are you?)
I love to jump in and swim swim swim
I love to go outside

I love to pick up leaves that have fallen from the trees
I love to look for birds and butterflies
I love to look around and listen to the sounds
I love to go outside

When it's raining
I put on my yellow gumboots and I splash
In every muddy puddle I can find
Then it's back home I go
And drink my cocoa
I love to go outside
I love to go outside



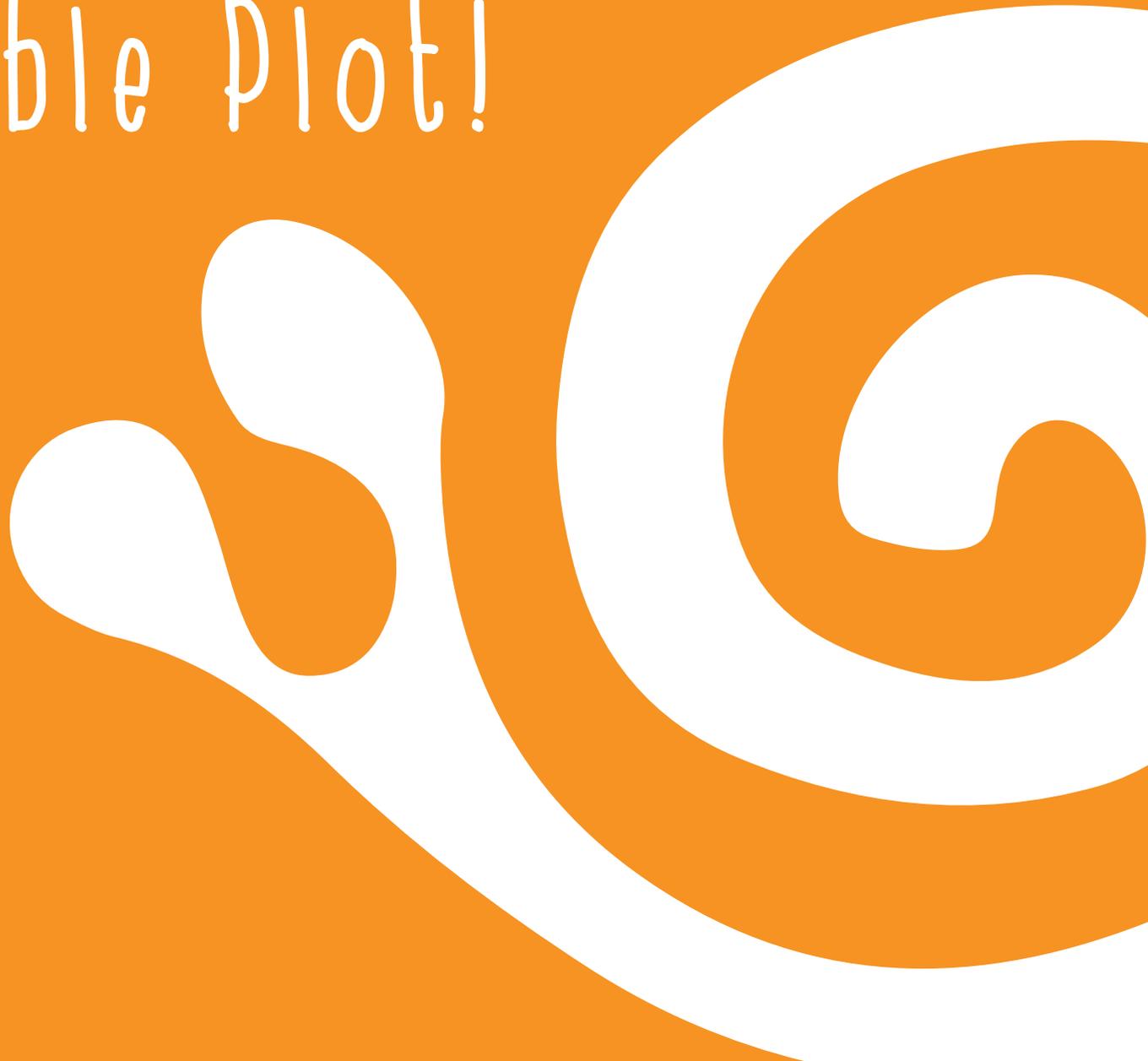
Did you know? "Gumboots" are also called Wellington Boots, or "Wellies," in the UK, and rain boots in the USA.

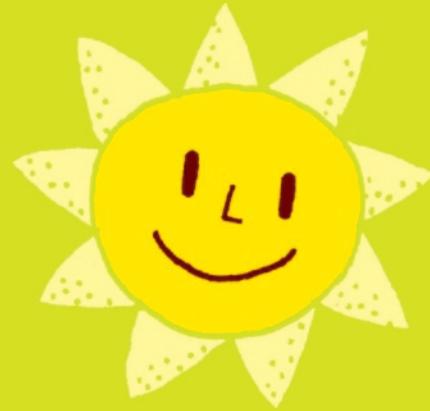


Hoopla
Education

Every child is an **Artist**
Picasso

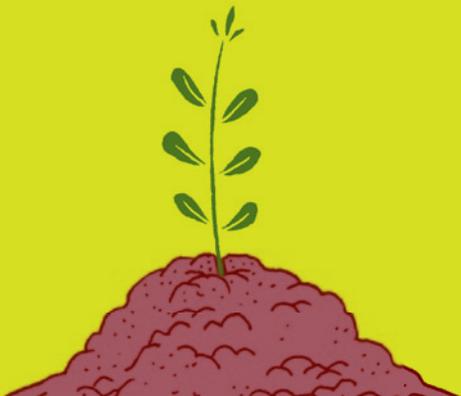
With groovy songs from
The Vegetable Plot!





The Garden PROJECT

Learning about sustainability and seeding healthy eating habits



100% RECYCLED PAPER