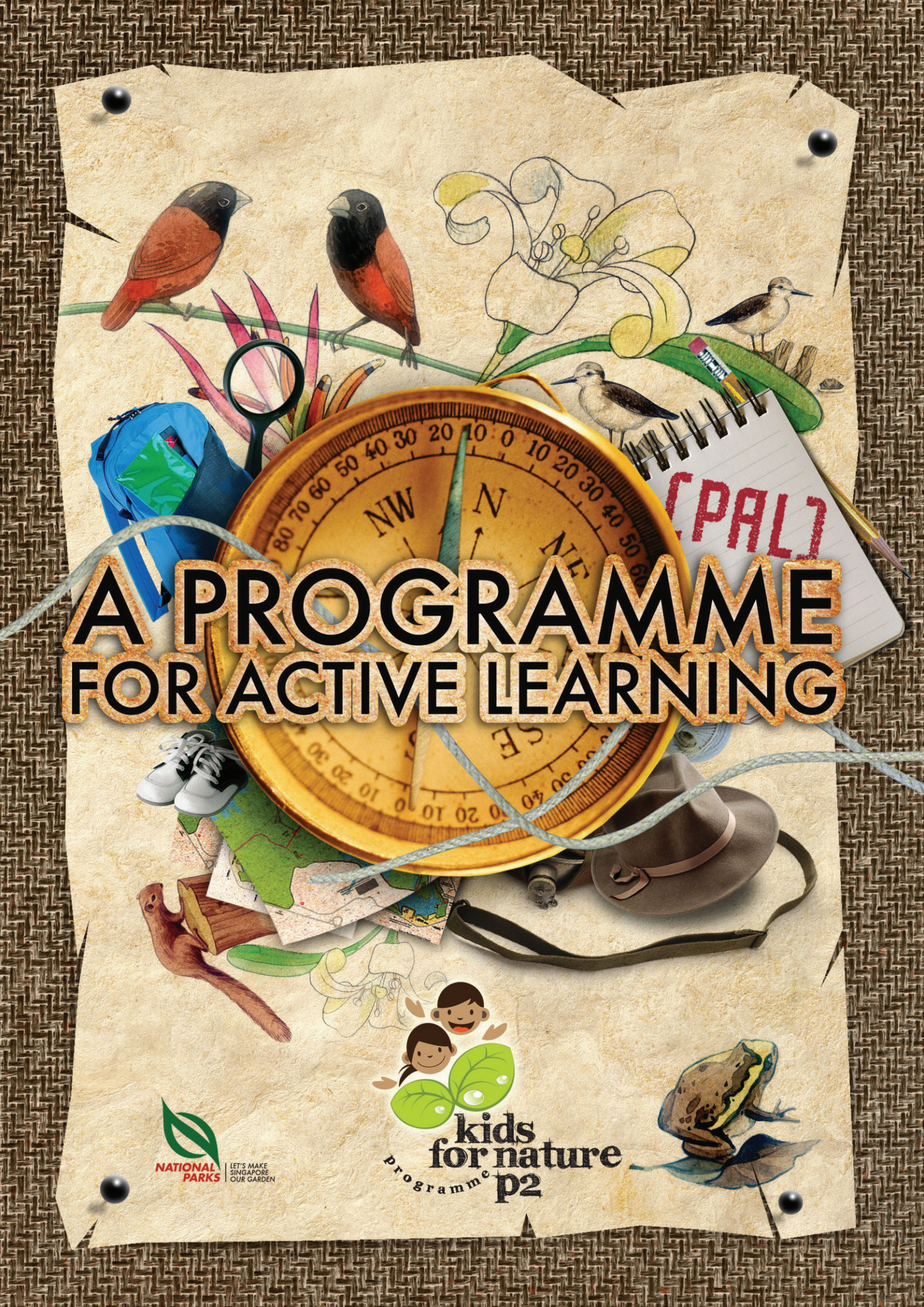




A PROGRAMME FOR ACTIVE LEARNING


NATIONAL PARKS | LET'S MAKE
SINGAPORE
OUR GARDEN

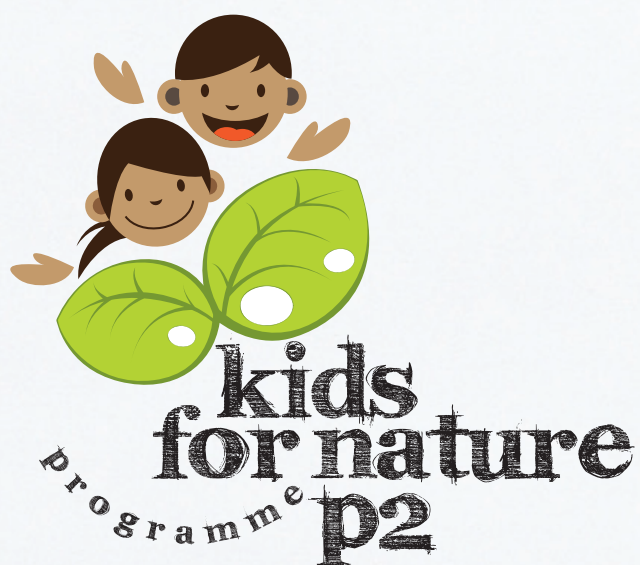

**kids
for nature**
programme **p2**





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[PAL]
A PROGRAMME
FOR ACTIVE LEARNING

A Word from NParks

Kids For Nature Primary One Programme is designed to:

- *Equip children with relevant skills and knowledge to be safe and comfortable in the outdoors*
- *Cultivate a sense of ownership for the environment, encourage and provide opportunities for pupils to take action to sustain the Garden City*
- *Shape a child's character and attitudes through experiential learning in their immediate outdoor setting*

*This Teacher's Guide is developed by National Parks Board
(Text by Tan Wee Lee and Karen Teo in consultation with Conservation Division, Parks
Division and Singapore Botanic Gardens)*

For more information about our programmes, please contact us :

Gina Leong: gina_leong@nparks.gov.sg, 64717847

Tan Wee Lee: tan_wee_lee@nparks.gov.sg, 64717848



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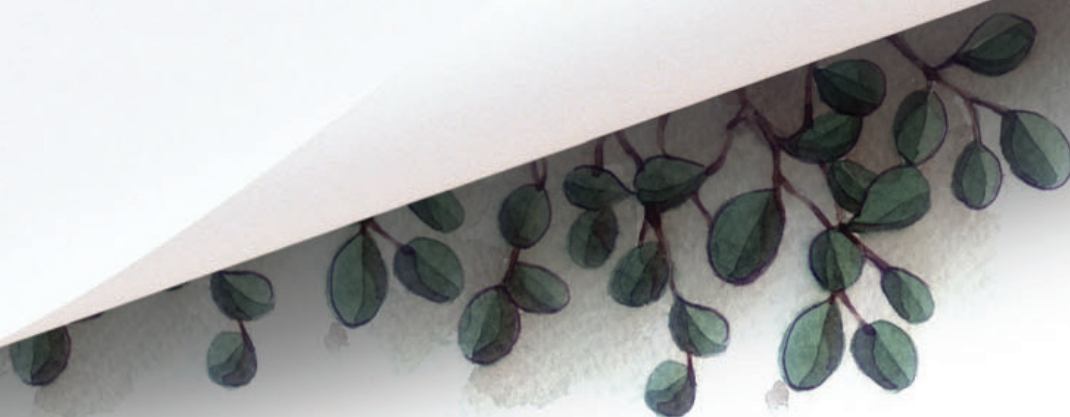
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*Note: The duration of each session is 1 hour.
This is to cater to time-tabling restrictions.*



General Tips Before An Outdoor Lesson

Here are some tips which will help you in conducting and managing your outdoor lesson:

1. Weather

Outdoor activities cannot be carried out effectively if there is heavy rain in the area. It is unsafe to bring students into the outdoors if there is a lightning risk.

Check the weather before any outdoor activity or field trip. You could

- Visit the NEA website, <http://www.weather.gov.sg>
- Call the Lightning Advisory number at 62826821

2. Conduct A Briefing

Brief students before the activity (preferably in the classroom or a day before, where there are fewer distractions and where it is easier for students to hear you)

- What the class is going to do – activities and tasks for the lesson
- What to bring
- Ground rules
 - Stay together as a class/team. If you need to go to the toilet, inform your teacher.
 - Respect the plants and animals. Do not damage or hurt them, or take them home. Some students might be allergic to plant sap, therefore, it is important to remind the students not to pluck any leaf flower or branch.
 - Leave stones where they should be. Do not throw stones, twigs or sticks at one another.
 - Do not push or pull one another.
 - Do keep your volume low so that you do not disturb the animals and the other visitors.
 - Keep the school, park or nature reserve clean – throw your rubbish properly in a bin or bring them back to school to throw.
 - Keep your food in your bags at all time until the teacher tells you to do otherwise.
 - Do not stray off the trails or boardwalks.
- Safety
 - Students should check grassy areas around trees and on tree trunks for red ants before carrying out an activity near the tree.
 - If the students should see any potentially dangerous animal (red ants, bees, wasps, centipedes, snakes etc), they should move away immediately and inform you.
 - If the students are injured, stung, bitten, cut or feeling unwell, they should inform you.
 - They should not misbehave around ponds, wells, streams etc.
 - Have a first aid kit on hand and take note of students with medical conditions.

3. Capture the Moments!

Always bring along a camera to take photographs of students carrying out the activities, happy faces of the students, interesting plants and animals that your class may encounter.

Go through the photographs with your students a week or two after the lesson and recap the fun (and learning)

Tips for Planning PAL Field Trips

The recommended venue for the field trips in this programme will be a nearby park. The duration of the field trip is 2 hours, inclusive of travelling time. During the field trip, the students will

- Go on a 1-hour guided walk by experienced guides from NParks. Please contact Communications and Community Engagement Division at 64717847/8 to make the necessary arrangements, at least a month in advance.
- Do nature activities within the park
- Enjoy a picnic within the park.

Pre-field Trip Preparation:

1. Schedule the field trip dates.
2. Conduct a site reconnaissance (preferably with teachers/parents who are going for the trip)
 - Plan the route/locations for your activities
 - Location of toilets
 - Location of buildings/shelters for pupils should it rain
 - Nearest route to the main road (In the case of an emergency)
 - Any potential safety problems (eg. Nearby pond, slope, busy road, insect's nest etc..)
 - The plants/animals you are likely to see
3. Complete the Risk Assessment Management (RAMS) form.
4. Book transport.
5. Schedule teachers and ask for help from parent volunteers.
6. Photocopy and distribute letters and other information to parents and guardians.
7. On the field trip day, conduct a briefing.
8. Check if there are any students who are feeling unwell. Do not allow students who are ill to go for the field trip.
9. Bring along substantial numbers of first aid kits.

Suggested What-to-Bring List Students

1. A fieldtrip bag (small bags for the items below)
2. Umbrella/Poncho (in case of rain)
3. Water bottle
4. Snacks
5. Insect repellent
6. If needed: personal medication (eg. inhaler)



Summary of PAL Lessons

	Title of Lesson	Highlights of Activities	Learning Outcomes	SEL
1.	Let's Gear Up	This lesson teaches students the importance of being prepared before each outdoor trip, to ensure that it will be a safe and enjoyable one. Students will participate in activities that highlight different weather conditions. They will also learn to consider the purpose and venue of the outdoor trip when packing, as well as how to handle emergencies such as injuries and falls.	• Know the difference between needs and wants • Know what to wear and how to pack for an outdoor trip • Know what to expect on an outdoor trip • Know how to handle emergencies such as injuries and falls	• Self Awareness: Identifying and recognising emotions and needs, self efficacy • Self Management: Self motivation • Social Awareness: Respect for others • Relationship Management: Working cooperatively, communication • Responsible Decision-Making: Personal responsibility
2.	Let's Explore	In this lesson, students will learn basic orienteering skills. They will also learn how to read maps and translate a 3 dimensional location to a 2 dimensional view on the map. Students will go through an orienteering course and be simultaneously introduced to the 10 most common trees found in Singapore.	• Orientate around the school compound using a map/directions • Read a simple map	• Self Awareness: Identifying and recognising emotions and needs • Social Awareness: Perspective taking, respect for others • Relationship Management: Working cooperatively, communication and relationship building • Responsible Decision-Making: Personal responsibility
3.	Giants Among Us	In this lesson, students will learn to look upwards, to notice tall things, and relate them to their own growth that they themselves are growing taller too. They will also learn more about trees and their useful properties.	• Understand the importance of trees and how they support other life forms • Recognise that they can also be useful (like the trees) • Appreciate nature and Singapore's rich biodiversity through the study of trees	• Self Awareness: Identifying and recognising emotions and needs, self efficacy • Self Management: Self motivation and discipline • Social Awareness: Perspective taking, respect for others • Relationship Management: Working cooperatively, communication and relationship building • Responsible Decision-Making: Personal responsibility
4.	Of Shapes And Sizes	In this lesson, students will learn that plants come in all shapes and sizes. They will also use leaves of different shapes and sizes to create art pieces and drawings.	• Learn that plants come in all shapes and sizes • Use leaves of different shapes and sizes to create art pieces and drawings	• Self Awareness: Identifying and recognising emotions and needs, self efficacy • Self Management: Self discipline • Social Awareness: Perspective taking, respect for others • Relationship Management: Working cooperatively, communication, social engagement and relationship building • Responsible Decision-Making: Personal responsibility

5.	Colours Colours	In this lesson, students will be exposed to the colourful world of plants. They will orientate around the school compound, while simultaneously learning how to draw a colour map.	• Understand that plants come in different colours • Record their findings on a map	• Self Awareness: Identifying and recognising emotions and needs, self efficacy • Social Awareness: Perspective taking, respect for others • Relationship Management: Working cooperatively, communication and relationship building • Responsible Decision-Making: Personal responsibility
6.	Little Farmers	In this lesson, students will learn about suitable types of food to bring on an outdoor trip. They will also get a chance to be little farmers and grow food for their excursion.	• Practice good personal hygiene • Be aware of suitable types of food to bring on an excursion, and how to pack them • Know how to grow food from seeds	• Self Awareness: Identifying and recognising emotions and needs • Self Management: Discipline • Social awareness: Perspective taking, respect for others • Relationship Management: Working cooperatively, communication, social engagement and relationship building • Responsible Decision-Making: Personal responsibility
7.	Fruits of Our labour	Students will harvest the fruit of their labour and make sandwiches in preparation for their trip the following week.	• Know simple cooking skills • Be aware of the importance of good personal hygiene • Enjoy the process of growing food and harvesting it	• Self Awareness: Identifying and recognising emotions and needs, self efficacy • Self Management: Self motivation and discipline • Social Awareness: Perspective taking, respect for others • Relationship Management: Working cooperatively, communication, social engagement and relationship building • Responsible Decision-Making: Personal responsibility

8.	The Secret Garden	From their outdoor adventures in school, students now progress on a learning journey to the Singapore Botanic Gardens or HortPark, where they will find interesting plants. Students will discuss how to prepare and pack for the trip. During the trip, students will carry out nature activities.	• Appreciate both outdoor and indoor settings • Understand the importance of teamwork through working in groups • Know what to expect and what to bring on an outdoor trip • Be more appreciative and respectful of nature • Be comfortable with elements in the outdoors	• Self Awareness: Identifying and recognising emotions and needs, self efficacy • Social Awareness: Perspective taking, respect for others • Relationship Management: Working cooperatively, communication and relationship building • Responsible Decision-Making: Personal responsibility
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Topic 1: Let's Gear Up (Part 1)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

1. Know the difference between needs and wants
2. Know what to wear and how to pack for an outdoor trip
3. Know what to expect on an outdoor trip
4. Know how to handle emergencies such as injuries and falls

Objectives for Social-Emotional Learning:

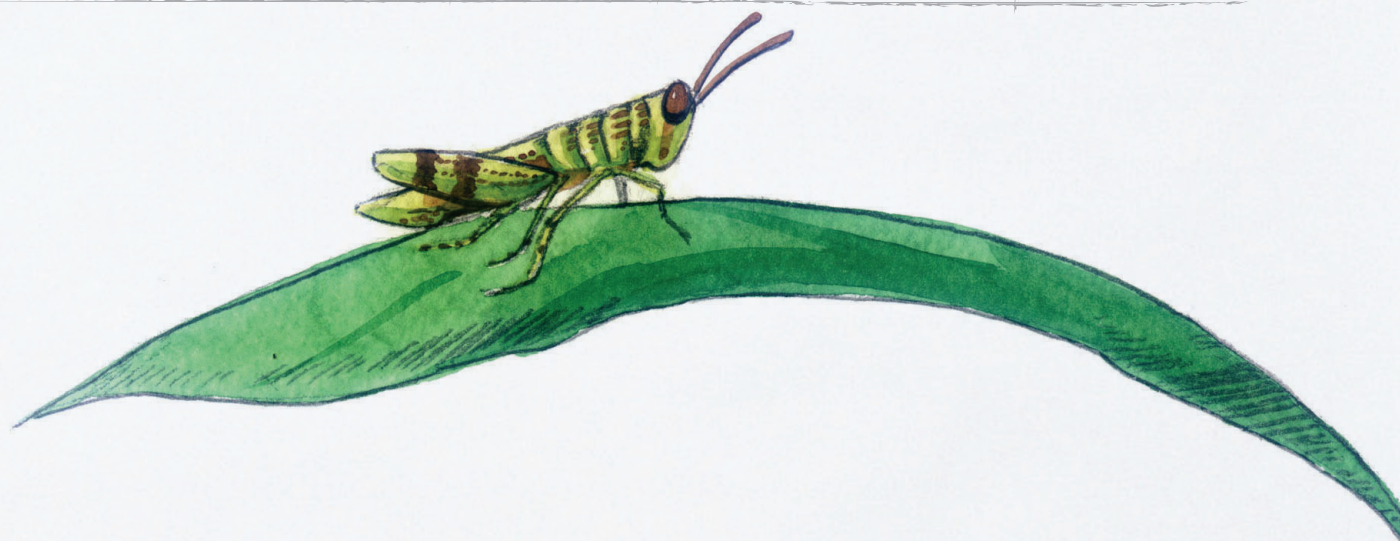
- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self motivation
- Social Awareness: Respect for others
- Relationship Management: Working cooperatively, communication
- Responsible Decision-Making: Personal responsibility and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
Preparation: • Set up six areas as stations for the packing activity. • Each station should contain a backpack, as well as different types of clothing, footwear, and other items necessary for an outdoor trip (these can be photographs or cut-outs). Place other non-related items in the station as distracters. • Each station should have six sets of the photographs/ items on six tables. • Mark out a sizeable area in the school field using four cones of different colours. • Link the cones up with some ropes, to form a rectangle on the ground. • Students should be in their PE attires.		• Items for an outdoor trip, such as windbreaker, t-shirt, hat/cap, singlet, shorts, skirt, pants, socks, slippers, track shoes, hiking boots, gloves, poncho, umbrella, towel, insect repellent, toothpaste, sunglasses, sunblock lotion, notebook, food, water bottle, shorts, mobile phone • Non-related items to act as distracters, eg. Fan, Blanket • First Aid Kit • Backpack • Annex 1 – Checklist For Clothing • Colour cones • Ropes	

• Bring the student out to the field.	5 mins		
• In the field, get the students to gather in the rectangle and inform them that they will play a simple game. • Tell them that you will call out a colour and they are supposed to run and touch the cone. However, anyone who crosses the rope and run out of the rectangle will be asked to sit out.	10 mins	• Colour cones • Ropes	
• After a few rounds, shrink the size of the rectangle and get them to repeat the game. • Do reflection at short intervals to highlight good and rude behaviours. • During the course of the game, remind the students that for the game to be fun, they must always remember to stick to the rules and keep within the designated area. • Shrink the rectangle again to make the game pace faster. • Take this opportunity to point out safety and discipline issues like pushing around and running wild. Let students know that such behaviours are not tolerated during outdoor education lessons and they will have to sit out from the game.	10 mins		
• Distribute Annex 1 – Checklist For Clothing. • Divide the students into groups of five. Students are to assign the following roles within their groups – Leader, Note-taker 1, Note-Taker 2, Packer 1 and Packer 2. • The Leader will decide on the exact route to take and lead the group. • The Note-taker will have to tick the items the group has decided, on the checklist.	5 mins	• Annex 1 – Checklist For Clothing	
• Bring the students on the route and at each station, they will collect items that match the scenario listed at each station.	30 mins		



• <i>Station 1: A Trip to the Forest</i> • Show a picture of a forested area with the title "A Trip To The Forest". • A picture of a forest can be display below.	30 mins	• Windbreaker, t-shirt, hat/cap, singlet, shorts, skirt, pants, socks, slippers, track shoes, hiking boots, gloves, poncho, umbrella, towel, insect repellent, toothpaste, sunglasses, sunblock lotion, notebook, food, water bottle • First Aid Kit • Other distracters	
• <i>Station 2: A Trip on a Sunny Day</i> • Show a picture of a sunny day with the title "A Trip On A Sunny Day". • A s picture of someone sweating profusely can be display below.			
• <i>Station 3: A Trip to the School Garden</i> • Put the school garden as station 3. • Put a piece of paper with the title "A Trip To The School Garden"			
• <i>Station 4: A Trip on a Rainy Day</i> • Show a picture of a rainy day with the title "A Trip On A Rainy Day". • A picture of heavy rain can be display below.			
• <i>Station 5: A Trip on a Windy Day</i> • Show a picture of a windy day with the title "A Trip On A Windy Day". • A picture of someone shivering can be display below.			
• <i>Station 6: A Trip to the Library</i> • Put the school library as station 6. • Put a piece of paper with the title "A Trip To The School Library".			
• At each station, groups will discuss and decide on the items needed for each scenario. Packer 1 and Packer 2 will put the necessary items into the backpack provided.			



Topic 1: Let's Gear Up (Part 2)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

1. Know the difference between needs and wants
2. Know what to wear and how to pack for an outdoor trip
3. Know what to expect on an outdoor trip

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self motivation
- Social Awareness: Respect for others
- Relationship Management: Working cooperatively, communication
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
Gather the students back into the classroom.	5 mins		
- Run through the six scenarios with the students. - Get each group to come up to the front of the classroom, and display the items they have collected in part 1 of the lesson. - Let each group explain their reason/s for choosing each item. - Ask questions like "Why do you need (a particular item) in scenario 1, but not in scenario 2?"	15 mins		
- Ask students why they think a first aid kit is important. - Ask students what they should do in case of an injury like a cut or a fall. - Highlight the correct answers, eg: use water to wash the wound, call for adults to help. - Let students act out the scenario of someone who had a fall. They should think of how to respond in such a situation. - If students try to move the injured person, point out that the person is hurt, and may have sustained other injuries that we cannot see. As such, they should avoid moving the injured person.	10 mins		

Reflection: - Tell the students that they will be going for a field trip to one of the parks on Lesson 8. [Note for teachers: For this field trip, students will visit one of the parks. The whole trip will take approximately three hours, including travelling time. At the site, they will be going for an hour-long guided walk, where the guide will show them interesting plants and animals, and tell them nature-related stories. After the guided walk, the students will participate in some mapping activities. - Ask how they are going to prepare for the field trip. - Prompt the students to ask questions like: - Where is it? (You can show them some photographs of the park) - How long will the whole journey take? (Continue the question by asking whether the time of their field trip will affect what they would like to bring. For example, if they are visiting in the afternoon, they may need to bring a cap or sunglasses) - What will we be doing there? - What should we pack? The aim is to get the students to realise that: - It is important to know where we are going and how long we will be there, before we begin packing. - It is important to learn about the place and your own needs. (Self-Awareness) - It is important to pack according to the conditions of the place. (Responsible Decision-Making) - It is important to dress appropriately for a field trip. (Responsible Decision-Making)	10 mins	Teachers can choose to go to any parks under NParks. Pictures are downloadable from National Park Board's website at www.nparks.gov.sg Photograph of the excursion site (Downloadable from National Park Board's website at www.nparks.gov.sg)	
- Using the materials for the activity in Part I, students will do mock packing for the scenario of an excursion. - Point out any good decisions made, and familiarise students with the process of decision-making.	20 mins		



Topic 2: Here We Go (Part 1)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

1. Orientate around the school compound using a map/directions
2. Read a simple map

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication, and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
Preparation: - Line the school compound with strings of six different colours, so that there will be six coloured routes around the school compound. You can also stick dots on the ground to mark out the routes. - There will be a total of 10 checkpoints. (Note: The class will be divided into groups of five. Each group will be represented by a colour. The six coloured routes will consist of 10 checkpoints. Each checkpoint is represented by a species from 10 of Singapore's most common trees, and will contain a poster with a photograph and brief information on that species.)		- Strings of six colours - Checkpoint posters of the 10 most common trees in Singapore - School Layout Plan	
Get the students into groups of five. Students are to assign the following roles within their groups – Leader, Note-taker, Map-reader, Pointer 1 and Pointer 2.	5 mins	Labels for students with their role names: Leader, Pointer 1, Pointer 2, Map-reader and Note-taker	
- Give each group a map of the school. There should be a coloured line marked on it, representing the orienteering course that they have to follow. - Each group will get a different coloured route. They are to use this map with the coloured line to look for the 10 checkpoints. Once they find the 10 checkpoints, they should mark them on the map by writing down the name of the tree representing each checkpoint.	40 mins	- Maps of the school with a different coloured route marked out on each map - Checkpoint posters of the 10 most common trees in Singapore	Footprints and directional arrows can be used in place of the string.
When the groups return from their orienteering, give them a map with the checkpoints already accurately marked out. This will help them verify if they have correctly marked out all the checkpoints on their own map.	15 mins	Maps with checkpoints accurately marked out	

Topic 2: Here We Go (Part 2)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

- Orientate around the school compound using a map/directions
- Read a simple map

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
Preparation: • Line the school compound with strings of six different colours, so that there will be six coloured routes around the school compound. You can also stick dots on the ground to mark out the routes. (Note: The class will be divided into six groups. Each group will be represented by a colour. The six coloured routes will consist of 10 checkpoints. Each checkpoint is represented by a species from 10 of Singapore's most common trees, and will contain a poster with a photograph and brief information on that species.)		• Strings of six colours • Checkpoint posters of the 10 most common trees in Singapore • School Layout Plan	
• The groups will now get a different colour route from the earlier one. Each group will get a different coloured route.	5 mins	• Labels for students with their role names: Leader, Pointer 1, Pointer 2, Map-reader and Note-taker	
• Give each group a map of the school. There should be a coloured line marked on it, representing the orienteering course that they have to follow. They are to use this map with the coloured line to look for the 10 checkpoints. Once they find the 10 checkpoints, they should mark them on the map by writing down the name of the tree representing each checkpoint.	20 mins	• Maps of the school with a different coloured route marked out on each map • Checkpoint posters of the 10 most common trees in Singapore	
• When the groups return from their orienteering, give them a map with the checkpoints already accurately marked out. This will help them verify if they have correctly marked out all the checkpoints on their own map.	15 mins	• Maps with checkpoints accurately marked out	
• In their groups, get students to write postcard to a friend using Annex 2 – Postcard template, highlighting simple directions of the coloured route they took.	20 mins	• Annex 2 – Postcard template	

Topic 3: Giants Among Us (Part 1)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

- Understand the importance of trees and how they support other life forms
- Recognise that they can also be useful (like the trees)
- Appreciate nature and Singapore's rich biodiversity through the study of trees

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self motivation and discipline
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
• Introduce the word "giants" with these suggested questions: 1. What are giants? (Things which are tall/high) 2. How tall are giants? (Are they taller than 2 adults?) • Bring students to the school grounds/ nearby park and brief them on the first activity. Students are divided into 6 groups. Groups are to search for "giants" — any tall objects as teacher leads them on a route around the school.	25 mins		
• Ask students to list some giants that they have spotted, such as trees, flagpoles, lampposts, pavilions, buildings, and fences. • Draw their attention to the fact that trees are among the giants in schools and parks. • Distribute the School layout plan to each group.	5 mins	• School layout plan	
• Get students to mark out the giants on the school layout plan.	20 mins		
• Gather students in a shaded area to discuss their observations.	5 mins		
Debrief: Suggested questions: • How tall do you think you will grow? • How can you grow tall and healthy? (Eating well, avoiding excessive junk food, being active by exercising and participating in sports activities, getting sufficient sleep, etc.)	5 mins		



Topic 3: Giants Among Us (Part 2)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

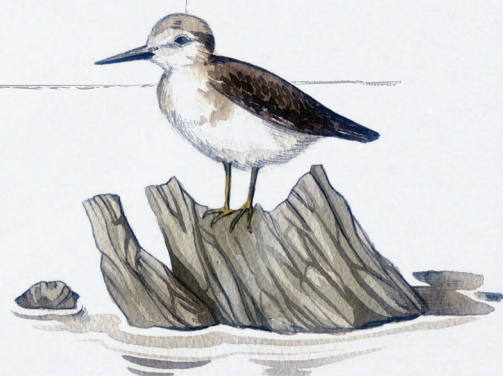
At the end of the lesson, students should be able to:

- Understand the importance of trees and how they support other life forms
- Recognise that they can also be useful (like the trees)
- Appreciate nature and Singapore's rich biodiversity through the study of trees

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self motivation and discipline
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
• Explain that they will now study a "Tree Giant". • Ask students what are the safety measures to take when they are standing near a tree. • Point out to students that there are ants around, and ask what they will do when they encounter ants during their excursions. • Explain to students that ants are a part of nature's living communities and that the nature is their home. • Advise students to stay clear of ants. If ants crawl on their bodies or belongings, they should brush off the ants, then move away from that area. • If there are red ants around, point them out to students and advise them to avoid such species, as their bites can be very painful. • Remind students about safety: Ants can be found on tree trunks and grassy areas and roots around the trees. Brush off the ants quickly and move away from them.	10 mins	• A measuring tape • Large sheets of paper • Wax crayons • Journal (Optional)	
• Assign each group to a tree within an area. Ensure that all the groups stay within the same area, so that the teacher can watch over everyone. • Let students observe all the living thing around/on the tree, and note them down in their journals. Optional: Take pictures of the tree and the animals found around/on it. • Give each group a set of "equipment", consisting of a measuring tape, paper, wax crayons, and plastic bags.			



• Ask students to look around, if they noted any differences between each tree. • Point out words like size. Ask students how they can determine the size of a tree. • Ask students what the "waist" of a tree is like. Is it larger than most of the students' waists? Explain that the "waist" of the tree is referred to as its girth. • Ask students to measure the girth of the trees. • Get students to exchange trees and measure a different tree. • Point out that different tree will have different girths, and that sometimes, there may be different measurements for the same tree. Ask the students why they think this is so. • Explain to students that when measurements are taken at different parts of the tree, the girth will be different. • Point out different trees and compare the leaves in terms of shapes, colours and sizes for the students to see the difference. • Point out different trees and compare the flowers in terms of shapes, colours and sizes for the students to see the difference	20 mins		
• Ask students to list some other ways that trees are different from each other. • Tell students that like human skin, tree barks are also different from each other. • Get students to touch the barks of some trees. • Remind students to exercise caution when touching the tree bark. • Remind them not to move their hands across the bark quickly as it might cut their hands. • Get each group of students to touch a tree and describe the bark. Try to assign different kinds of trees to each group. • Show students a sample of a bark tracing. • Assign each group to a tree, and encourage students in each group to do their bark tracing at different heights. • Get students to share their bark tracings with each other.	25 mins		
Debrief Suggested questions: • How do you tell the difference between trees? (They have different types of bark, leaves, flowers, fruits, etc.) • How is a tree like a person? (Each one of us is different too, with our own characteristics. How we look and behave differs from person to person.) • How are trees helpful? (Provide shade, cool the surroundings, clean our air, give us wood and fibre to make paper)	5 mins		

Topic 4: Of Shapes and Sizes (Part 1)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

- Learn that plants come in all shapes and sizes
- Use leaves of different shapes and sizes to create art pieces and drawings

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self discipline
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication, social engagement and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
• Show students a picture of two leaves with different shapes. • Ask students what is the difference between the two pictures. • Explain to students that plants and fruits come in all kinds of sizes and shapes.	15 mins		
• Divide students into groups of five. • Bring students outdoors and give them time to look for plants, trees or fruits that match the following shapes: circle, triangle, rectangle, oval, square. • Students can take photos using a camera or draw the plants/trees/fruits in their journals. • Get students to collect leaves of different shapes and sizes too. Emphasise that they should only pick leaves that have already fallen on the ground, instead of plucking them off plants or trees.	25 mins	• Journal or camera	
• Let each group present the items collected, and explain why they chose a certain item to represent a particular shape.	20 mins		



Topic 4: Of Shapes and Sizes (Part 2)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

- Learn that plants come in all shapes and sizes
- Use leaves of different shapes and sizes to create art pieces and drawings

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self discipline
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication, social engagement and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
• Let students see Annex 3 - sample of "Let's Leaf Together". • Explain to students that this art piece was created using leaves of different shapes and sizes to form different animals and plants. Point out that things of different shapes and sizes can have different uses. Give examples using water bottles and pencil cases. Big water bottles can contain more water, however they will be heavier. Pencil cases come in different shapes to match the need of the user.	10 mins	• Annex 3 - Sample of "Let's Leaf Together."	
• Divide students into groups of five. • Using leaves of different shapes and sizes that they have collected earlier, students will do a simple art piece, which can be a picture of nature or anything that they feel is important to them.	30 mins	• Lots of leaves • Glue • A4 paper • Colour pencil	
• Get students to share their art pieces in their respective groups.	10 mins		
Debrief: Suggested question: How are we able to tell the difference between items of the same kind, such as leaves? (By their different shapes and sizes) Highlight that like plants, each of us looks different too! But we all play a part in forming a bigger community, just like the leaves in the picture.	10 mins		

Topic 5: Colours Colours (Part 1)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

- Understand that plants come in different colours
- Record their findings on a map

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
Preparation: • Prepare six checkpoints, each with some plants or animals that are colourful. Plants with different shades of same colour can also be included.		• One camera for each group • Stickers to be used as checkpoint markers • School Layout Plan	
• Divide the students into groups of five. Students are to assign the following roles within their groups – Leader, Note-taker, Map-reader, Pointer 1 and Pointer 2.	5 mins	• Labels for students with their role names: Leader, Pointer 1, Pointer 2, Map-reader and Note-taker	
• Give each group a map of the school. • Each group will start at a different checkpoint. They are to use this map to bring them to the different checkpoints. • At each checkpoint, students will take photos of nature things that they think are colourful and interesting.	35 mins	• One camera for each group • Stickers to be used as checkpoint markers • School Layout Plan	
• When the groups return from their activity, let them share the photos they have taken. • Get students to talk about the reason why they choose certain plants to showcase, and encourage them to talk about what they find interesting about the colours.	20 mins		



Topic 5: Colours Colours (Part 2)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

- Understand that plants come in different colours
- Record their findings on a map

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
• Divide the students into groups of five. • Bring students to the school garden, or an area in the school where there is a variety of colourful nature objects. Along the way, make a few stops and let students point out colourful and interesting nature-related things.	10 mins		
• At the garden, tell students that they will be drawing a colour map to record the colours that they see. • Every time a student sees something natural that is colourful, he/she takes out his/her journal. • When all students have spotted a colourful nature object, they will start to learn how to draw a colour map. • Students should write their names in the middle of a new double page, and draw light lines dividing the two pages into quarters. • Tell the students that instead of drawing a regular map, they will be drawing a colour map. • Show students a Annex 4 - sample of the colour map • In the bottom right-hand corner they should draw the map's key. Each new colour observed will be represented with a symbol and recorded in the key. • If students see a blue butterfly, they can use a blue colour pencil to draw a butterfly on their colour map. • Ask students to also draw an X and write their names in the centre of the map. The X represents the students' current location. • As students spot colourful objects, the symbol is recorded on the map at the where it was observed relative to the X on the map. • Each group can be assigned to a different area. • Students can stop once they have recorded five colourful objects.	30 mins	• Journal • Colour pencils • Annex 4 - Sample of colour map	
• Gather the students in their groups and let them share what they have seen with their group members. • The student who is sharing should show his/her map to other group members without any explanation. Group members will then try to recognise the object and its colour based on what is marked out on the map. • Each member should have a chance to share his/her map with the group.	15 mins		
Debrief • Use some of the better maps as example of how a colour map should be drawn.	5 mins		

Topic 6: Little Farmer (Part 1)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

- Practice good personal hygiene
- Be aware of suitable types of food to bring on an excursion, and how to pack them
- Know how to grow food from seeds

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self motivation and discipline
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication, social engagement and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
Preparation: • Prepare various food items as distracters. Pictures of Ice cream can be used.		• Food items: - Packet of chicken rice - Packet of biscuits - Sandwich - Bowl of salad - Other foods to act as distracters • Backpack • Ziploc bag • Organic garden peas • Whiteboard	
• Remind the students that they will be going on an excursion to one of the parks in Lesson 8. • Show them a picture of the park and recap the lesson on packing, using the following "head-to-toe" method. • Start by pointing to the head when listing the essential items to pack for the excursion, then move down slowly to the face, neck, hand, stomach, legs, feet. Eg. At the head, students will shout "cap", at face, they might shout "sunblock lotion" or "insect repellent" • Write down what is mentioned on the board. • Highlight more essential items like water, cap, umbrella and food.	20 mins		
• Ask students what types of food they will be bringing on the excursion. • Show them a few different kinds of food items: - Packet of chicken rice - Sandwich - Bowl of salad - Other foods to act as distracters • Discuss with students the most suitable types of food to bring on an excursion. • Ask questions which will lead students to conclude that food which is easy to carry is important when choosing what to bring on an outdoor trip. Eg. - Packet of chicken rice: a) "How are you going to eat?" b) "With one hand?" c) "Will it drop?" d) "Do you need rice for a quick snack?" e) "Do you have time to finish it?" - Sandwich: a) What kind of sandwich? - Bowl of salad a) "How are you going to keep it in your bag?"	10 mins	• Food items: - Packet of chicken rice - Packet of biscuits - Sandwich - Bowl of salad - Other foods to act as distracters	

• Open a packet of biscuits and after taking a bite (this can be simulated), tell the students that you are too full now and would like to eat the biscuit later. • Put the packet of biscuits (the packaging should still be open) into the backpack slowly. • Hint to students that biscuit crumbs might fall out and dirty the backpack. • Take out a Ziploc bag and put the biscuit in. Demonstrate to students that they can simply open the bag and close it after use, should they need the food.	10 mins	• Backpack • Ziploc bag	
• "Tell students that sandwiches are an ideal food for excursions, as they are easy to eat. Ask students what fillings they would like to include in their sandwiches for this field trip." • For those who have gone through the Kids For Nature Programme in Primary 1, prompt them to recall Topic 7 from their Primary 1 module. Ask students what are the things nature can give to us. • Ask students if there is anything that they can use from nature as an ingredient in their sandwiches. • Tell them that we should have some vegetables in our sandwiches, as they are healthy, and taste good with ham or tuna. • Ask students where they will get the vegetables. • Tell them that the most natural way to get vegetables is to grow them.	10 mins		
• Take out some of the organic garden peas and show them to the students. • Tell the students that they will get to grow the peas. The peas will grow into sprouts that they can put into their sandwiches.	10 mins	• Organic Green Peas	



Topic 6: Little Farmer (Part 2)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

- Practice good personal hygiene
- Be aware of suitable types of food to bring on an excursion, and how to pack them
- Know how to grow food from seeds

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self motivation and discipline
- Social awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication, social engagement and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
Preparation: • Soak the peas in water for about eight hours. Change the water every two - three hours, to prevent the peas from spoiling. • Arrange the materials on a table at the back of the classroom.		• Potting mix • Small garden spade (One for each group) • Organic garden peas (10 for each student) • Spray bottle (One for each group) • A suitable planting tray, such as an egg tray (One for each student) • Annex 5 - Little Farmer Checklist	
• Get the students to gather at the back of the classroom. • Divide the class into groups of five. • Explain the use of each item to the students: - Potting mix (Seeds need nutrients just like us. The potting mix provides the seeds with the required nutrients) - Small garden spade (To transfer the potting mix) - Organic garden peas (Seeds for growing) - Spray bottle (To water the plant) - A suitable planting tray (To hold the plant and potting mix) • Tell students that there is one thing that they will need to do, and ask them what it is. Hint that their hands will be dirty after touching the potting mix. • Remind students that they should always wash their hands after doing any form of gardening.	20 mins		
• Spread a layer of potting mix (3 cm deep) at the base of the planting tray, and spread the soaked garden peas evenly on the soil surface. • Cover the peas with a thin layer of potting mix (1 cm deep). Place the planting tray in the shade until shoots appear in about three days.	20 mins	• Potting mix • Small garden spade (One for each group) • Organic garden peas (10 for each student) • Spray bottle (One for each group) • A suitable planting tray, such as an egg tray (One for each student)	

• Transfer the planting tray to a sunny location. If this is not possible within the classroom, arrange for a plot in the school compound. • Gather the students together.	10 mins		
• Distribute Annex 5 - Little Farmer Checklist. • Tell the students to put a tick on the checklist after watering the plants every day. They should also use the checklist to monitor the growth of the plants. • Explain to students that they need water daily. However, if they were forced to drink a lot of water (such as 20 jars!), they would feel very uncomfortable. The same rule applies for plants, which need two to three sprays (and not more than that) every day. • The group leader will gather the group each day to water the plant and update the checklist. • Students can harvest the peas when they are about 7 cm tall, just as the tendrils are beginning to emerge. • The next Kids For Nature lesson would be an ideal time for harvesting. • Remind students that the plants are living things and like us, they need food and water to grow well. • Remind students that they will be able to see the peas next week, and they will get to harvest them. • Remind students to return the gardening tools to their original locations. • Take some time to explain that if these items are left lying around, they can go missing, and even cause accidents.	10 mins	• Annex 5 - Little Farmer Checklist	



Topic 7: Fruits of Our Labour (Part 1)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

1. Know simple cooking skills
2. Be aware of the importance of good personal hygiene
3. Enjoy the process of growing food and harvesting it

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self motivation and discipline
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication, social engagement and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
Preparation:		• A new pair of scissors • Cup/bowl	
• Ask students if they have been taking care of their plants. • Tell them that those who have made an effort will enjoy a good harvest. • Get the leader of each group to do a check on the Little Farmer Checklist and share the group's progress with the class. • Remind the students that by doing this, the leader is helping the teacher, and that those who did not do their part should bear should not blame the leader.	10 mins		
• Tell students that they will now harvest the pea sprouts. This means that they will gather the edible parts from each plant. They should take care not to hurt the plant, as it can once again grow more food to be harvested. • Gather the students into their groups, along with their planting trays. • Use a new pair of scissors for the demonstration on harvesting. • To harvest, cut at the base of the plant, above the lowest node on the stem. This will allow new shoots to emerge for the next harvest. Each batch of peas can be harvested up to three times. • Get one student from each group to do a demonstration at the front of the classroom. Supervise closely and take the opportunity to remind students about safety. • Students who have done the demonstration can then return to their groups and help others. • The sprouts collected should be placed in a cup/bowl. • Groups that have completed the harvesting will return the planting tray to its original position for the next round of harvesting.	30 mins	• Cup/bowl • New pair of scissors	If it is not possible to use a new pair of scissors, the teacher should get students to wash their scissors thoroughly with dishwashing detergent before using it for harvesting.
• Ask the students to look at the harvested sprouts. Ask them if the sprouts are clean. • Get the students to go in groups to wash the sprouts thoroughly.	10 mins		
Debrief: Suggested questions: - What did you learn about plants in the first activity? (Plants can grow. We need to take care of them, and provide water and nutrients for them to grow.) - From all the activities, we can see that it is important to be responsible. Are you responsible too? Give some examples of how you have been responsible. - Did you have fun growing plants as a group? What did you like about the cooking activity? How well do you think your group performed?	10 mins		



Topic 7: Fruits of Our Labour (Part 2)

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

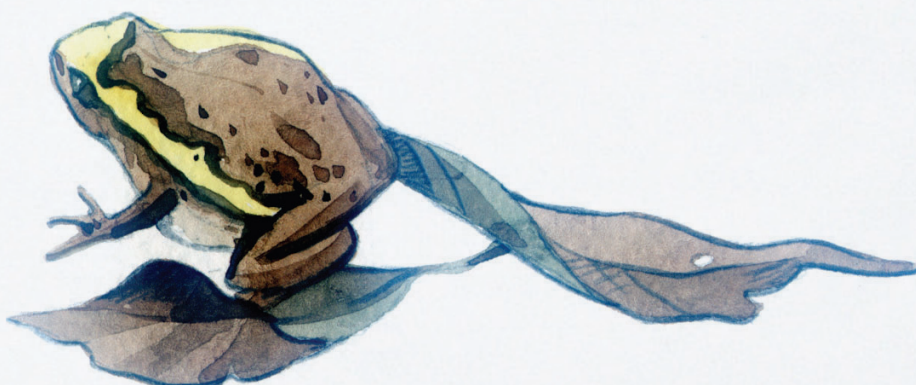
1. Know simple cooking skills
2. Be aware of the importance of good personal hygiene
3. Enjoy the process of growing food and harvesting it

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self motivation and discipline
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication, social engagement and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
Preparation: • Prior to the lesson, ask students to bring some cucumbers, tomatoes and bread to class. • Cut the vegetables into slices. Place each ingredient on a separate plate. Leave these plates on one or two tables before the class begins. • Get students to bring their own spoons and forks on the day of the lesson.		• Ingredients for sandwich - Bread - Tuna spread - Ham - Tomatoes - Cucumber - Eggs • Non-disposable plastic bowls/plates • Spoon/Forks • Butter knives • String	
• Divide students into groups of five. Explain that each student will make a special sandwich using the ingredients provided, as well as the sprouts that they have harvested. • Before the students move off in their groups, stand near the table with ingredients and observe which groups move in the direction of the sink, and which groups move towards the table with the ingredients. • Stop any groups that are moving towards the table with ingredients, and ask if there is anything that they forgot to do. • For groups that moved towards the sink to wash their hands, ask them why they did so, and how this would affect them. • Through discussions, highlight that students should wash their hands as part of personal hygiene, before touching any food.	5 mins		This activity should take place in a location that has a sink, such as the school canteen

- Name the ingredients on the table, eg: tuna spread, ham, tomatoes, cucumbers and bread. - Show the students how to cut the eggs using only string. - Ask students if they can simply use any string which they find lying around. - Remind them that the food that they consume should be clean. Therefore, the string used to cut the eggs should be new and not dirty.	10 mins	- Bowls/plates - Eggs - String	
- Students can start to make their sandwich. - If students include an unusual mix of ingredients in the sandwich, do not stop them.	20 mins		
Distribute plates to each student, and allow them to sample the sandwich made by other groups.	10 mins	Non-disposable plastic plates	
Demonstrate how to wash a plate and utensils, then get the students to wash their own plates and cutlery in groups.	10 mins		
Debrief: Suggested questions: - What did you learn about plants in the first activity? (Plants can grow. We need to take care of them, and provide water and nutrients for them to grow.) - From all the activities, we can see that it is important to be responsible. Are you responsible too? Give some examples of how you have been responsible. - Did you have fun growing plants as a group? What did you like about the cooking activity? How well do you think your group performed?	5 mins		



Topic 8: The Secret Garden

Specific Instructional Objectives for Environmental Education and Outdoor Education:

At the end of the lesson, students should be able to:

1. Appreciate both outdoor and indoor settings
2. Understand the importance of teamwork through working in groups
3. Know what to expect and what to bring on an outdoor trip
4. Be more appreciative and respectful of nature
5. Be comfortable with elements in the outdoors

Objectives for Social-Emotional Learning:

- Self Awareness: Identifying and recognising emotions and needs, self efficacy
- Self Management: Self motivation and discipline
- Social Awareness: Perspective taking, respect for others
- Relationship Management: Working cooperatively, communication, social engagement and relationship building
- Responsible Decision-Making: Personal responsibility

Activity	Time (mins)	Materials / Resources	Remarks
Preparation • Inform students one week in advance that they will be visiting HortPark or Singapore Botanic Gardens. • Encourage students to make salads and sandwiches at home to bring on the trip. • Encourage students to recall what they have learnt in previous lessons. Tell them to ensure that they bring what is necessary. • Before going to the park, do not do a check on the items that students are bringing.		• Groundsheet • Extra water • Journal • Wet tissues • Poncho	
• There are two possible venues for the field trip in this programme – Jacob Ballas Children's Garden and HortPark. The duration of the field trip is three hours, consisting of one hour each of travelling time, a guided walk and an orienteering activity. • Experienced guides from NParks will lead the guided walk. • Please contact NParks' Communications and Community Engagement Division at 64717847/8 to make a booking at least one month in advance.	1 hour		
• Let students play the Nature Scavenger Hunt. • Divide the students into groups, and get them to nominate a leader. Each group has to find and cross off as many of the objects on Annex 6 - Nature Scavenger Hunt checklist as possible. • Hand out the checklist to each group leader. • Every student in the group must observe and feel the object before they can move on to the next object. • Unlike a normal scavenger hunt where items are collected. Students will see, touch, and feel the objects, but not collect them (unless they are lying loose, like leaves). • Tell students that the Nature Scavenger Hunt is not a race! During the hunt they are to be calm, relaxed, and observant. • Ask them not to run, and to stay with their own groups. • Each group will then present their findings to the whole class. • Students are encouraged to question why the other groups think that certain objects match the description on the checklist.	20 mins	• Journal • Poncho • Annex 6 - Nature Scavenger Hunt checklist	• If possible, request a parent volunteer to watch over the students' belongings • If this option is not feasible, students should bring their bags along with them
• Start the picnic, but before the students begin eating, ask them what they need to do (wash their hands). • Let students wash their hands at a toilet or water point (if any), or use water from their water bottles to do so. If water is not readily available, students should use wet tissues to clean their hands.	30 mins	• Groundsheet	
Debrief: • The following topics can be discussed: - Why do we need to protect nature?	10 mins		



Annexes

Annex 1 : Checklist For Clothing

TEACHER: _____ CLASS: _____ DATE: _____

NAMES OF GROUP MEMBERS

Leader _____
 Packer 1 _____
 Packer 2 _____
 Packer 3 _____
 Note-taker _____

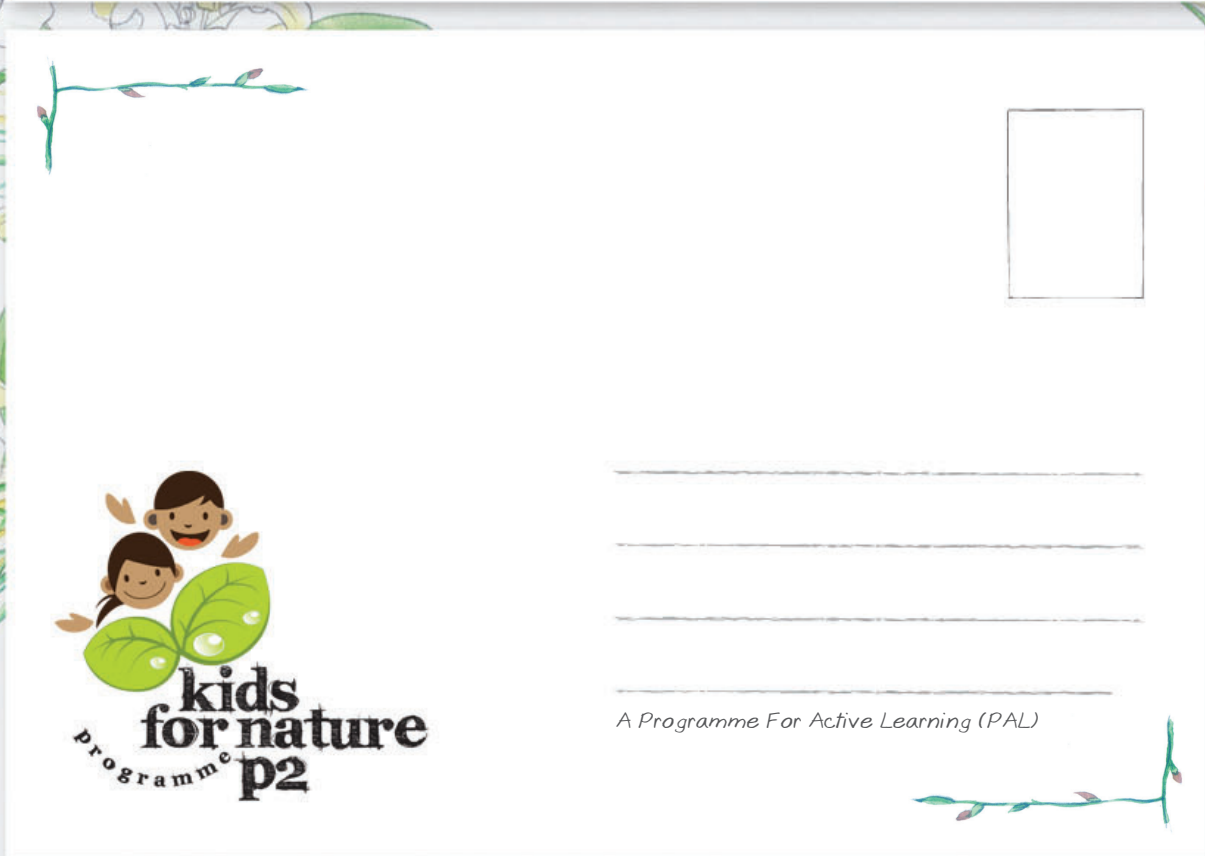
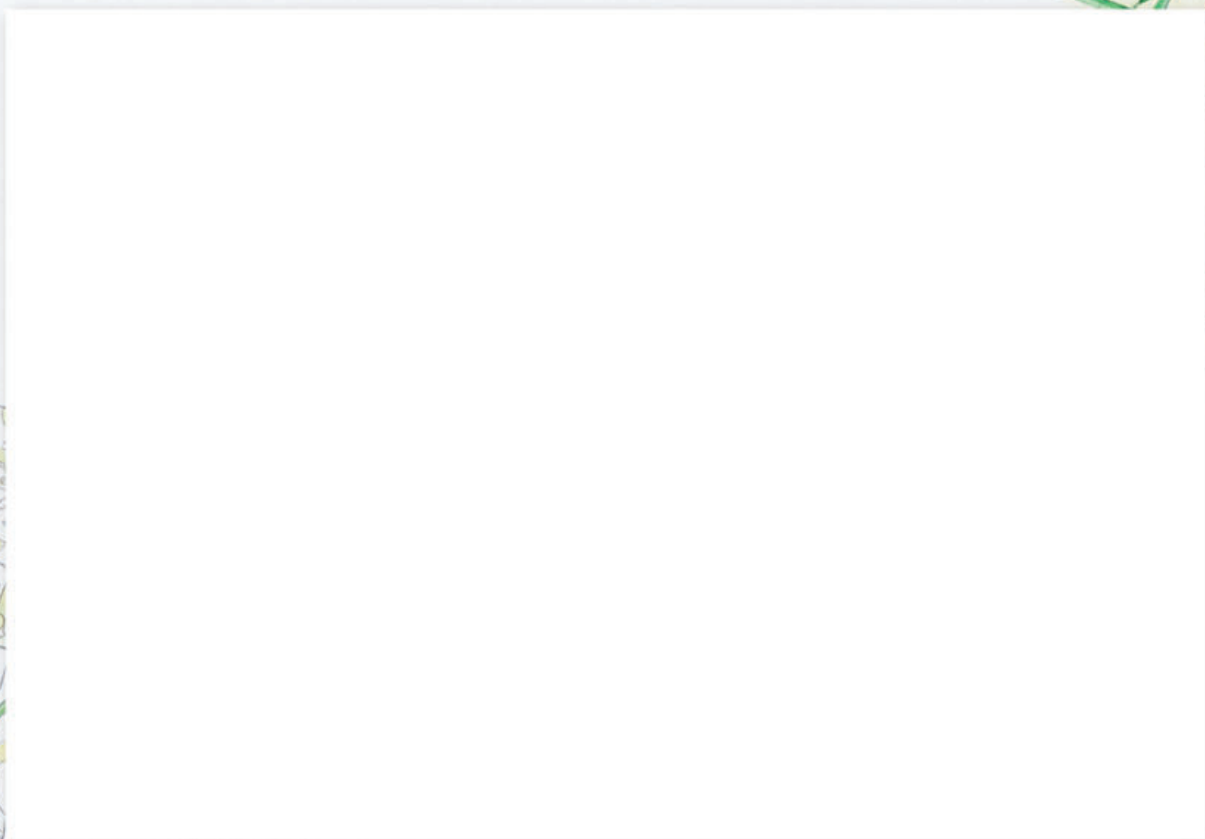
WHAT WOULD YOU WEAR AND BRING?

Discuss as a group that you would wear and bring to a field trip. Then tick the items you would bring for a particular weather.

ITEM	WEATHER			PLACES		
	SUNNY	WINDY	RAINY	FOREST	GARDEN	LIBRARY
Gloves						
Hat / Cap						
Hiking boots						
Leather boots						
Pants						
Poncho						
Singlet						
Skirt						
Slippers						
Socks						
Towel						
Track shoes						
T-shirt						
Umbrella						
Windbreaker						
Winter Jacket						

Annex 2: *Postcard template*

NAME: _____ CLASS: _____ DATE: _____



Annex 3: *Sample of 'Let's Leaf Together'*



Annex 4: Sample of Colour Map



Red Flower



Tree



Student's
Name



Direction
Facing

Annex 5: Little Farmer Checklist

NAME: _____ CLASS: _____ DATE: _____

Tell your students that the items below are works that have to be done to ensure the healthy growth of the plant. Check off the following things that you have done:

CHECKLIST

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Watering Before Recess							
Watering After Recess							
Shade							
Sunlight							
Length	cm	cm	cm	cm	cm	cm	cm



Annex 6: Nature Scavenger Hunt



NAME: _____ CLASS: _____ DATE: _____

Tell your students that the items below are just to touch and to see – but NOT to collect. Check off the following things that you have found:

CHECKLIST

Find...

	a rock
	soil
	something prickly
	something furry
	something smooth and cold
	a red leaf
	a brown leaf
	a yellow leaf
	a green leaf
	something wet
	something sticky
	something made by humans
	something alive
	something dead
	a plant that smells nice
	a leaf that has been chewed by an insect
	something that you think is really interesting
	something that you dislike

