

Pappus

PAPPUS

Plants and Play

Promoting

Universal Skills

A Guide for Trainers of Teachers and Youth Workers

Final Version



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Document Control

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Partners



University of Gloucestershire (coordinator)
(United Kingdom)

<http://www.glos.ac.uk>



Play Learning Life
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<https://www.plloutdoors.org.uk/>



Gesellschaft für Sozialforschung und Bildung
(Austria)

<http://www.gesob.at>



Palacký University
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Rogers Foundation
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<http://www.rogersalapitvany.hu/>



Gedania 1922 Association
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<http://www.tandemno.sk>

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Introduction

The following training curriculum was developed within the PAPPUS - Plants and Play Producing Universal Skills project (2019-1-UK01-KA201-061967), co-funded by the European Union's Erasmus+ Programme. The project explores how plants from both the natural and horticultural worlds can be used playfully to connect young people to their outdoor environments. This connection will not only increase their future expectations and long term understanding of the natural world, but will ultimately develop wider skills and competencies and unlock a greater awareness and understanding of potential linked future career paths.

This curriculum includes 8 modules on plants, learning and play, and was developed to enable teachers and youth workers to incorporate the PAPPUS resources into their work. At the same time, the training curriculum also aims to shape attitudes of participants towards 'being in nature', and the importance of building a personal connection to nature both for children and for adults (e.g. teachers).

Two different pathways have been developed to support learning.

1. A supported training guide for teachers and youth workers. (This document)

This document is designed to be run by a facilitator in a school or other setting. The facilitator could be from within the school/setting or from an outside expert. *The modules could be delivered over a 5 day, intensive course (see table on [page 4](#)), but we recommend that it is broken down and run as an extended course over 4-5 separate days or 8-10 half days running over a term or a school year (see suggested combination of modules on [page 5](#)). This flexibility has many benefits. There are several elements of Action Learning within some of the activities and modules which require work in the learners' setting. It is also beneficial to run the course over an academic year to benefit from seasonal changes, professional development days, and for plant identification.

2. An independent learning guide for teachers and youth workers.

This second version of the training is for self-paced, independent learning. This offers great flexibility for you to work alone or (preferably) alongside colleagues in your own setting or cluster. This file can be downloaded here <https://www.pappusproject.eu/training-course-materials>

Each guide includes module chapters to easily find modules summaries, activities, resources and appendices. Throughout the course each activity has been linked to show its main focus – theory; practical; discussion; active learning. See the key below:



Theory



Practical



Discussion



Active Learning

Learning Outcomes

Each module has been linked to one of the 5 main Learning Outcomes and individual activities carry one or more of the sub outcomes.

By the end of the course learners will:

- 1. demonstrate an understanding of the PAPPUS project**
 - a. name and identify the PAPPUS 15 – our 'top 15' commonly found plants.
 - b. show confidence in identifying a range of plant species.
 - c. know where to find further support to help them and the children identify plants.

- 2. understand how natural objects can be used in pedagogical work**
 - a. describe the benefits and importance of playing and learning outside, with plants.
 - b. show an understanding of the opportunities within the formal curriculum to take learning outside.
 - c. demonstrate the importance of planning, preparation and risk management to facilitate regular and progressive use of the natural world for play and learning.
 - d. show confidence in using the outdoors to deliver purposeful learning activities.
 - e. be familiar with the full range of PAPPUS resources and how to use them to deliver specific learning outcomes.
 - f. use the PAPPUS resources to build up a pedagogical process for their pupils.

- 3. understand the importance of personal connection to nature when working with plants**
 - a. show an understanding of the different perspectives of people and of nature.
 - b. show an understanding of the ethical questions regarding being 'in nature'.
 - c. show an understanding of the connection between understanding, respecting nature and the need to care for it.
 - d. build positive attitude towards plants and nature.
 - e. build positive feelings and attitude towards nature through the creative arts.

- 4. demonstrate an understanding of interdependency and connection**
 - a. demonstrate an understanding of basic ecological principles.
 - b. demonstrate an understanding of co-dependency and system thinking.
 - c. understand how the language we use determines the way we think.
 - d. present and develop examples of positive language use and reconnection with nature.

- 5. develop personal skills**
 - a. experience increased cooperative attitude.
 - b. experience development of negotiation and communication skills.
 - c. give/receive individual positive feedback.
 - d. describe experiences



Resources for Delivery

This course is designed to be delivered with minimal resources, alongside the PAPPUS Toolkit which is available in 5 languages here <https://www.pappusproject.eu/toolkit>

The below list of useful PAPPUS Resources to aid delivery can all be found on the project website www.pappusproject.eu

- PAPPUS Toolkit
- PAPPUS Website
- Learning Springboard examples
- Playful Springboard examples
- Plant ID Fact Sheet examples
- Happy Families Card examples
- Fantasy PAPPUS Card examples
- Botanical terms - a glossary and further annotated images showing plant structures in greater detail.
- PAPPUS Discussion Forum



Face-to-face Programme of Delivery

Suggested for a full, face-to-face, 5-day delivery

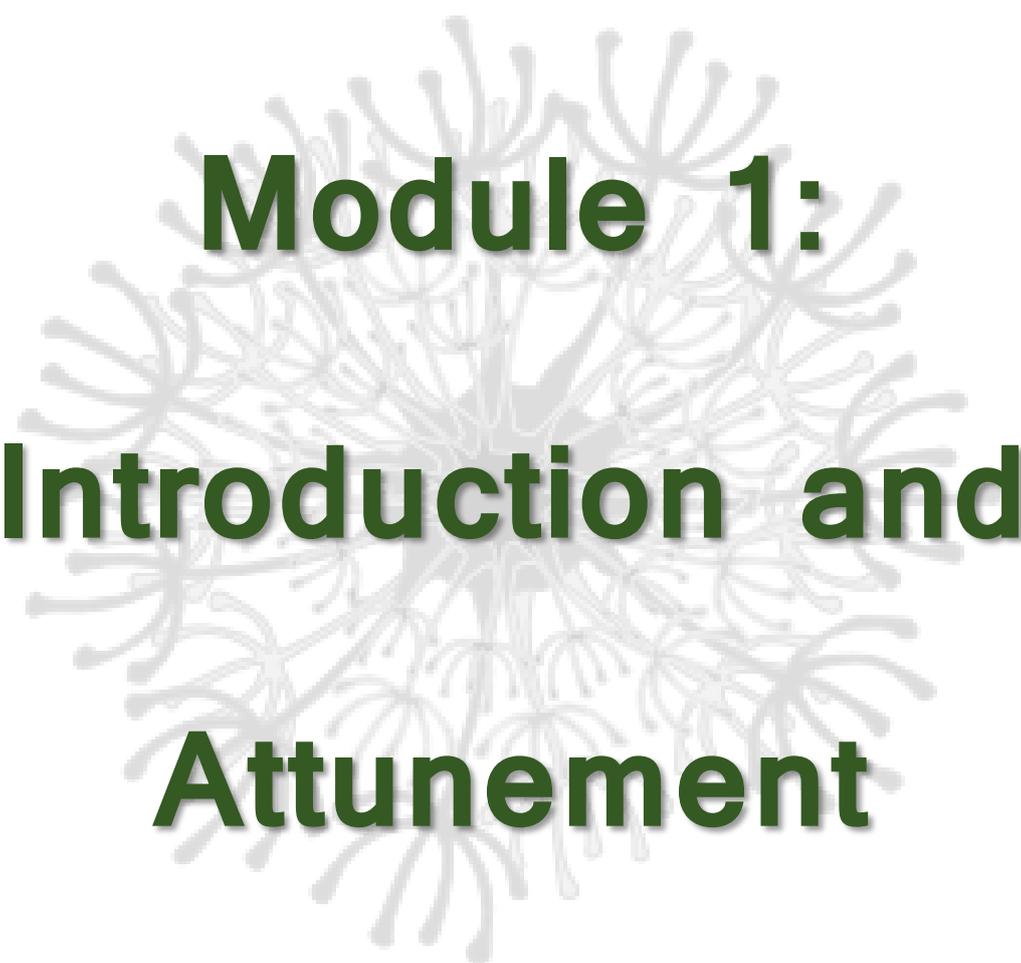
	1 st day	2 nd day	3 rd day	4 th day	5 th day
10:00-11:30		Module 3 <i>(select activities most relevant to the participants)</i> Taking learning and play outside	Module 5 Ecology 1	Module 6 Plants as actors 1	Module 8 Closing
11:30-11:45		Break	Break	Break	Break
11:45-13:15	Module 1 Introductions	Module 3 Taking learning and play outside	Module 5 Ecology 2	Module 6 Plants as actors 2	Module 8 Evaluation of the course
13:15-14:30	Lunch break	Lunch break	Lunch break	Lunch break	Lunch break
14:30-16:00	Module 2 Sharing stories	Module 4 Getting to know the plants 1	Free afternoon / Organised programme / Knowledge Transfer Study visit <i>(if you are running this as a one-week course, include a study visit of your choice)</i>	Module 7 Design a pedagogical process	
16:00-16:15	Break	Break		Break	
16:15-17:45	Module 2 Personal experiences	Module 4 Getting to know the plants 2		Free time	

Extended Course

Suggested combination of modules to run over a term or a school year

Modules	Suggested delivery
Modules 1 and 2	Can be run together in one session.
Module 3	Is best delivered broken down further into the individual activities and corresponding Action Learning tasks. As follows:
	<ul style="list-style-type: none"> • A1 and A2= ½ day with follow-on Action Learning tasks.
	<ul style="list-style-type: none"> • A3 (1hour) could be added to the above if time allows, or run separately, with its follow-on Action Learning tasks.
	<ul style="list-style-type: none"> • A4 (1.5 hour) group session with follow-on tasks.
	<ul style="list-style-type: none"> • A5 and A6 (1hr 40mins) run together.
	<ul style="list-style-type: none"> • A7 requires preparation by participants so needs to be run as a separate session and could be delivered in 1.5 hours.
Module 4	Up to ½ day - with follow-up work.
Module 5	1½ hours.
Module 6	3+ hours.
Module 7	2 hours. This is similar to Module 3 Activity 7 but has a wider application beyond schools to play settings and other users of these materials.
Module 8	1½ hours. This module could be run together with Module 7 as the last session of an extended course.

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Module 1:
Introduction and
Attunement

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Module 1: Introduction and Attunement

Learning Outcomes

By the end of the session, learners will be able to

1. Demonstrate an understanding of the PAPPUS project.
2. Understand how natural objects can be used in pedagogical work.
3. Understand the importance of personal connection to nature when working with plants.

Session Summary

This session introduces the PAPPUS project and the training plan. It prepares the ground for using plants and other aspects of the natural world in the pedagogical work, showing the importance of a personal connection to nature.

Trainer Notes

This is an introductory module, with particular emphasis on creating a positive atmosphere for the whole course.

Session Plan - Module 1 Introduction and Attunement

Activity and LO	Time	Content	Method	Resources
Activity 1 LO 1	15 minutes 	Welcome, introduction and attunement Objective: to welcome participants, to introduce the PAPPUS project and the training course, to get to know the space	Whole group	
Activity 2 LO 2	30 minutes 	Introduction with plants Objective: getting to know each other, beginning to think about plants	Individual work Whole group	Plants / seeds / fruits for introduction OR pictures of plants
Activity 3 LO 3	30 minutes 	Childhood in-nature (play) memories Objective: connect to personal experiences of nature as a basis for in-nature work	Individual work Small groups Whole group	Paper / pencil / felt pens / colours, etc.
Activity 4 LO 3	10 minutes 	Film: Nature for All Video about nature (Nature for All) and official opening of the course	Whole group	Video, projector, screen, speakers
Summary	5 minutes	Summing up	Whole group	

Activity 1: Welcome, introduction and attunement

Learning Outcomes:

1. Demonstrate an understanding of the PAPPUS project

Time: 15 minutes

Method: Whole group

Resources

- [Introductory PAPPUS PPT](#)

Activity

Introduction

The object of the opening session is to welcome the participants, introduce the PAPPUS project and the training itself, and set a tone that reflects the course. Prepare a welcoming environment, with chairs arranged in a semi-circle, for example. Dress the room appropriately with photos, images, resources (including plants) so that it looks playful. Chat to learners as they arrive and offer them refreshments.

Welcome the participants and introduce yourself. Before going into any detail about the course, invite everyone to stand for some attunement activities. Ask the group to start walking around the room, paying attention to the physical space where they are going to spend the next couple of days. Turning their attention to their own bodies, ask them to focus on areas of tension and to visualise releasing them. When there is a sense of relaxation in the group, ask them to turn their attention to each other, first making simple eye-contact as they circulate around the space, and then greeting each other with a wave, a handshake, a pat on the shoulder, or a hug, etc.

“Space Geometry”: asking a series of questions relating to the participants, tell them to stand in the different corners of the room according to their answers. Possible questions are:

- What was the main mode of transport you used to get here? Answers: airplane / train / car / public transportation / walk
- What kind of pets do you have? Answers: dog(s) / cat(s) / etc.
- How many children do you have? Answers: No children / 1 child / 2 children / 3 or more children

Gather the group into a seated circle. Present the Introductory PAPPUS PPT and introduce the PAPPUS project and the PAPPUS resources ([Toolkit](#), [Website](#)) and explain the structure of the course and the timing of each session. Run through the house-keeping and evacuation procedures for everyone’s safety. Give a brief introduction to the training plan and how it was developed, and the partners involved (see [page ii](#)).

Outline the structure of the course they are attending, times, refreshment breaks etc., and deal with any initial queries (some of this may be possible when talking to learners as they arrive).

Activity 2: Introduction with plants

Learning Outcomes:

1. Understanding how natural objects can be used in pedagogical work

Time: 30 minutes

Method: Individual and whole group activity

Resources

- Table with a variety of natural objects (fruits, seeds, branches, leaves, etc.)

Activity

Prepare a table full of natural objects, such as fruits, seeds, branches, plants, rocks, etc. The more varied the objects you have, the better.

Ask participants to gather around the table and while looking at the contents to think about how they arrived here, what motivated them to attend and what their expectations are; ask them to notice how they are feeling at the moment. Focusing on the natural objects, each participant selects one object to which they feel connected at the moment, that sums up their presence at the training. Gather everyone back into a circle and ask them to start introducing themselves through the objects they chose. Anyone can start by saying their name and where they've travelled from, and then showing their object, explaining why they chose it. Make time for each participant to share their feelings in this way.

Trainer Notes

There is a variation on this activity if you have access to an outside space in a natural environment. Ask the participants to spend 10-15 minutes outside, familiarising themselves with their surroundings where they can select an object to bring back to the room. NB If they find a live plant, instead of picking it, ask them to take a photo which they can then show to the group.

As a basis for working in nature, make sure to mention that we shouldn't harm the natural environment by picking flowers or breaking off branches "for the perfect photo".

When people are introducing themselves, make sure to set a time limit. In some groups people enjoy sharing about themselves, but in a larger group, the introduction can become too long if everyone shares long stories. Depending on how much time you have, set a limit of 3 minutes per person, and then signal gently when the time is up.

Activity 3: Childhood in-nature play memories

Learning Outcomes:

3. Understanding the importance of personal connection to nature when working with plants

Time: 30 minutes

Method: Individual, small group activity, with whole group sharing

Resources

- Health and Welbeing benefits – see PAPPUS evidence and start to become familiar with what's on the website to support them back in schools/settings. <https://www.pappusproject.eu/training-course-materials>
- Papers, colours

Activity

Ask the group to sit down comfortably and close their eyes. Tell them to pay attention to their breathing to become calm and relaxed. When you see there is a general relaxed state in the group, ask them to think back to their childhood, when they were about 6-12 years old, and remember a time when they were outside, in-nature. Ask them to look around in that memory, pay attention to the scenery, what was around: what colours, shapes, textures? Were there specific plants there? What was their connection to these plants? Were they playing with them, or were they part of the scenery? Then move their attention to the emotions they had in that memory, what it felt like to be there?

Allow a couple of minutes for people to make the memory as vivid as possible, then ask them to come back to the here and now. When they open their eyes, ask them to form groups of 4-5, and give them 10-15 minutes to share their memories. When they are ready, bring them back to the large group and ask if anyone would like to share some impressions with everyone. Ask about their experiences in the small groups – was there anything interesting said in the groups?

After some people have shared their experiences, tell the group that all children have experiences in nature and usually the ones that stick with us are joyful, happy play-memories. Of course, if something frightening happened, such as getting lost in a forest, or coming across a wild animal, that also can be very memorable. Tell the group how essential it is for children to spend time outside, since that is how they build their relationship with their environment; it is where they learn how to be with and in nature. Explain the health benefits of being in nature. Draw attention to the role of adults: when children are playing in nature freely, the role of the adult (just as in an in-door free play session) is to provide a safe environment for them. Of course, accidents can happen, and for these cases the adult needs to remain calm, acting as a role model in terms of how to handle these situations.

Trainer Notes

Before the small group sharing you can also ask participants to draw their memories. Provide paper and colourful felt pens or pencils and give them 5-10 minutes to draw the scene they remembered. Inform them that they can create an abstract scene if they choose, using colours to express the impressions of the memory as opposed to the concrete sights and events. This can also help participants who assume that they cannot draw, which would otherwise block them from the process.

Refer to the PAPPUS evidence - start to become familiar with what's on the website to support them once back in schools and other, given environments.

Activity 4: Nature for All (Video)

Learning Outcomes:

3. Understanding the importance of personal connection to nature when working with plants

Time: 10 minutes

Method: Whole group

Resources

Video about Nature for All on YouTube: <https://www.youtube.com/watch?v=LABTclKQRaY>

- Computer, projector and screen, speaker

Activity

Present the video **Nature for All** (<https://www.youtube.com/watch?v=LABTclKQRaY>).

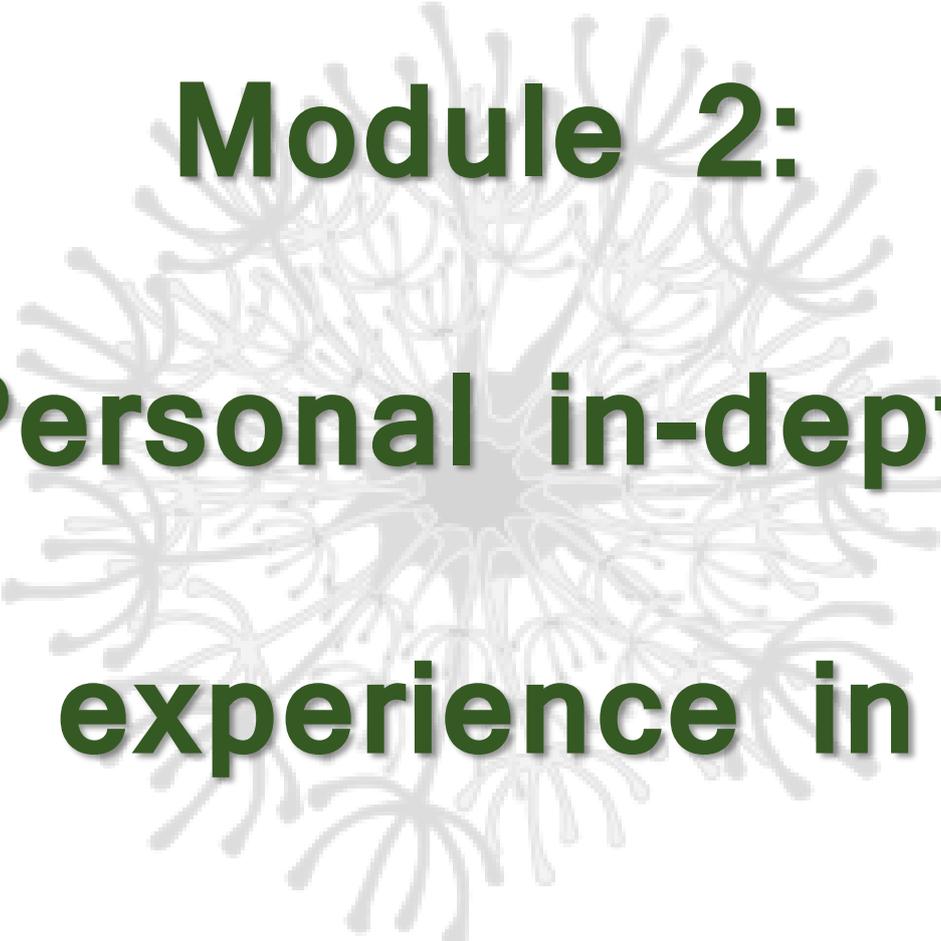
Following the video, outline the two, main objectives of PAPPUS in bringing learning into the open air.

1) to enhance the learning of schoolchildren and to help shape their attitudes towards nature. Discuss the added enjoyment and motivation for children when working outdoors, as well as the focus on building a personal connection to nature through respect and understanding. You can emphasise that the PAPPUS resources are aimed at achieving these objectives, with the Toolkit's activities and information supporting them. The training course is devised to promote a good understanding of how to get the most out of the Toolkit, within the context of how we can talk about nature and help shape attitudes towards it.

Trainer Notes

Set up the video beforehand, and check internet and sound connections.

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Module 2:
Personal in-depth
experience in
nature

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Module 2: Personal in-depth experience in nature

Learning Outcomes:

By the end of the session, learners will be able to

- 1a. Name and identify the PAPPUS 15 – our ‘top 15’ commonly found plants.
- 3a. Show an understanding of the different perspectives of people and of nature.
- 3b. Show an understanding of the ethical questions regarding being ‘in nature’.
- 3c. Show an understanding of the connection between understanding, respecting nature and the need to care for it.

Session Summary

This session focuses on the importance of being able to see ‘with nature’s eyes’, embedding respect for nature and the need and desire to take care of it.

Trainer Notes

An important part of this session is the outdoor experience. You should tell participants beforehand to bring appropriate clothing.

Session Plan - Module 2 Personal in-depth experience in nature

Activity and LO	Time	Content	Method	Resources
Warm-up	10 minutes 	Warm-up game Objective: to energize participants	Whole group	
Activity 1 LO 1a, 3a	45 minutes 	Walk in the forest / park Objective: to have a personal in-depth experience in nature and to get familiar with the 15 PAPPUS plants	Small groups	List of the 15 PAPPUS plants Access to a natural site
Activity 2 LO 3a, 3b, 3c	45 minutes 	Plants' perspective and dramatic presentation Objective: to use imagination and creativity to understand and express different perspectives about nature	Small groups + whole group presentation	
Summary	5 minutes	Summing up	Whole group	

Activity 1: Walk in the forest / park

Learning Outcomes:

- 1a. Name and identify the PAPPUS 15 – our 'top 15' commonly found plants
- 3a. Show an understanding of the different perspectives of people and of nature.

Time: 45 minutes

Method: Small group

Resources

- Cell phones / cameras / appropriate clothing

Activity

Inform the participants that the next session will be in the open air so that they can dress appropriately. Remind them to bring cell phones/cameras with them. Once they are ready, take the group to a nearby park (if you are in a city), or a forest/ natural space if you have access to it.

Explain that they will each now have 30 minutes in the chosen environment to identify and note down/photograph as many of the PAPPUS 15 plants as they can, as well as any other notable plants.

Ask each participant to choose one plant that they particularly like or find interesting, preferably one of the PAPPUS 15 (you might want to review and discuss the list). Get them to study their chosen plant for a while and then to try to see the world from the plant's perspective. For example, get down to ground level if this is where the plant grows, climb up if it's a creeper etc. What does the plant see? How does it feel? Take some pictures from this perspective, spending at least 5-10 minutes with this one plant.

After 30 minutes, call the group back together.

Trainer Notes

There is a *variation on this activity* which also involves access to an outdoor space and suitable clothing. The participants should search the ground for a natural object that they feel drawn to (a colourful leaf, a twig, a cone etc.), and study it in the same way as in the activity above, considering things from its perspective, photographing and in this case handling it.

Remind people to take cell phones /cameras with them to take pictures.

When giving out the instructions, refer them to the PAPPUS Literacy [Learning Springboards](#).

Activity 2: Plants' perspective and dramatic presentation

Learning Outcomes:

- 3a. Show an understanding of the different perspectives of people and of nature.
- 3b. Show an understanding of the ethical questions regarding being 'in nature'
- 3c. Show an understanding of the connection between understanding, respecting nature and the need to care for it

Time: 40 minutes

Method: Small groups and plenary presentations

Activity

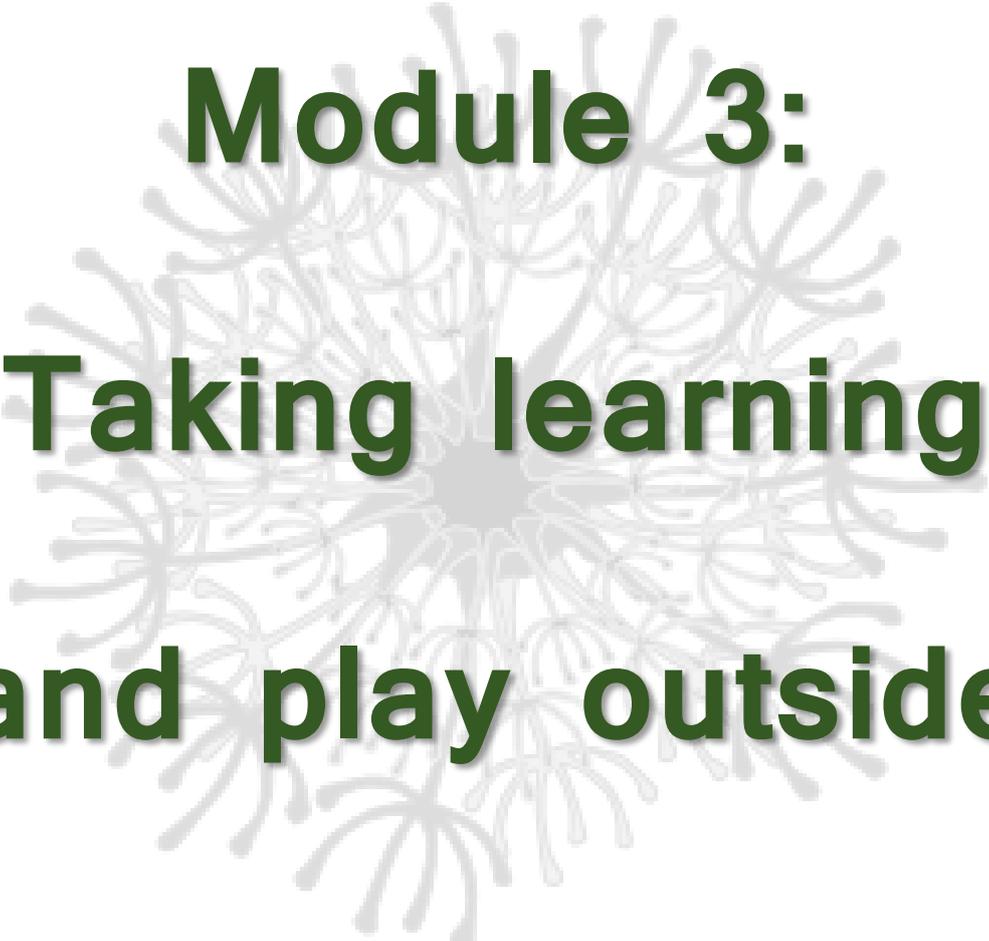
Inform the group that this next activity recalls the plant/natural object that they chose in the previous exercise. Ask them to form small groups of 4-5 people, and within the groups to share the story of the plant /natural object. When each person has shared their story, each group should build a story to include the chosen plants or objects of the group members, creating a 5-minute dramatic presentation. The overall activity should take about 30 minutes.

Encourage the groups to be creative with the presentations which can take any form they choose. For example, it can be spoken/explained or be silent; it can be abstract or follow a conventional narrative or series of monologues. Encourage participants to consider presenting outside in the open air, if this suits the style of their piece.

When they are ready, gather participants for the presentations. Each group can follow their presentation with a brief discussion about taking forward what has been learned so far. Facilitate a discussion about the connection between nature and human beings, and the ethical considerations when we find ourselves outside in nature. Explain how a basic respect for nature underpins our need to protect it and take care of it. When we take the perspective of a plant, this connection is forged and reinforced.

Trainer Notes

Refer to the Religious Education [Learning Springboards](#) from the PAPPUS Toolkit – to show how different religions have different understanding of the connection between humans and nature.



Module 3:
Taking learning
and play outside

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Module 3: Taking learning and play outside

Learning Outcomes:

By the end of the session, learners will be able to

2. understand how natural objects can be used in pedagogical work

- 2a. Describe the benefits and importance of playing and learning outside, with plants.
- 2b. Show an understanding of the opportunities within the formal curriculum to take learning outside.
- 2c. Demonstrate the importance of planning, preparation and risk management to facilitate regular and progressive use of the natural world for play and learning.
- 2d. Show confidence in using the outdoors to deliver purposeful learning activities.
- 2e. Be familiar with the full range of PAPPUS resources and how to use them to deliver specific learning outcomes.
- 2f. Use the PAPPUS resources to build up a pedagogical process for their pupils

Session Summary

This module particularly addresses the concern of teachers for whom taking a class outside is perceived to be more difficult than in play settings. Play leaders may wish to skim the activities related to curriculum delivery.

The purpose of the activities in this module is to support teachers and play leaders to take play and learning outside with plants and to understand the benefits and practicalities of outdoor learning in their own schools/settings, including risk management.

The activities are a guide for face-to-face workshops. For schools it will be especially beneficial if several teachers/play leaders from each school work on this together and support each other.

Trainer Notes

We ask that trainers use the PAPPUS resources throughout, rather than any of their own, to ensure learners become familiar with them as part of this module.

Each activity includes trainer notes to help modify this course if required.

Session Plan - Module 3 Taking learning and play outside

Activity and LO	Time	Content	Method	Resources
Activity 1 LO 2a, 2e	40 minutes - 1 hour  	Benefits of outdoors to children's well-being and attainment Objective: to identify key benefits to inform pedagogical process	Individual Whole group discussion Practical tasks outside	Access to outdoor spaces Sketch book/paper and chosen art/mark making materials (pencils etc) PAPPUS PSHE Learning Springboards
Activity 2 LO 2a, 2b, 2c, 2d	1 hour  	Site Mapping Objective: to consider management of children's behaviour and attitudes to learning	Small groups Whole group discussion Action learning, with children, back in school/setting	Site plan or satellite image of grounds. PAPPUS 15 Plant ID Fact Sheets
Activity 3 LO 2c, 2e	1 hour   	Risk Management Objective: to review implications for school/setting	Individual Group discussion Action learning, with children, back in school/setting	RBAs The grounds PAPPUS 15 Plant ID Fact Sheets.
Activity 4 LO 2c, 2e	1.5-2 hours  	Time and planning for regular outdoor learning Objective: to identify issues and solutions	Group discussion Action learning, with children, back in school/setting	Materials to make "Grab Bags" PAPPUS Maths Learning Springboards

<p>Activity 5</p> <p>LO 2d, 2e</p>	<p>1 hour</p>   	<p>What subjects can I take outside?</p> <p>Objective: to assist curriculum planning within the school/setting</p>	<p>Group discussion</p> <p>Practical tasks</p>	
<p>Activity 6</p> <p>LO 2b</p>	<p>45 minutes</p> 	<p>Recording the Learning</p> <p>Objective: to plan most appropriate methods in the school/setting</p>	<p>Group discussion</p>	
<p>Activity 7</p> <p>LO 2b, 2c, 2e, 2f</p>	<p>1.5 hours plus preparation</p>  	<p>Bringing it all together - an action plan for your school</p> <p>Objective: to create a robust, achievable action plan for the school/setting</p>	<p>Outside activity: staff meeting</p> <p>Role Play</p>	
<p>Summary</p>	<p>5 minutes</p>	<p>Summing up</p>	<p>Plenary</p>	

Activity 1: Benefits of outdoors to children's well-being and attainment

Learning Outcomes:

- 2a. Describe the benefits and importance of playing and learning outside, with plants.
- 2e. Be familiar with the full range of PAPPUS resources and how to use them to deliver specific learning outcomes.

Time: 40 mins - 1 hour

Method: Group and individual

Resources

- 4-slide [PAPPUS Introductory PPT](#)
- PSHE Learning Springboards <https://www.pappusproject.eu/learning>
- Country Specific Evidence on Erasmus+ page of website <https://www.pappusproject.eu/erasmus>

Activity

- 1) Look again at the 4-slide PAPPUS Introductory PPT prepared to help you to disseminate PAPPUS to your school/setting (with a view to adding to these for your own school at the end of the session).
- 2) Look at the evidence collated on <https://www.pappusproject.eu/training-course-materials>
Review benefits evidence and discuss benefits in the context of own school/setting.
- 3) Discuss Learning Springboard PSHE - 'Find time for mindfulness'.
 - a. Look at the following PSHE learning springboards and chose one of them.
 - PSHE - Silent walk
 - PSHE - Micro-hike or sitting contemplation
 - PSHE - Winter walking and cloud watching
 - PSHE - Mindful observation and drawing
 - b. Go into any outdoor open space where you can see and feel plants, trees, shrubs, grass. Make yourself comfortable on a log/mat/portable seat. Carry out the activity, enjoying the mindfulness, and taking notice of any changes you feel within yourself when immersed in the natural world. Relax and enjoy the feeling.
- 4) Ask yourself and colleagues these questions, and note the answers in your sketch/notebook
 - a. How did you feel when you worked outside?
 - b. What evidence did you feel was most useful to promote in your school/setting to help change the culture around outdoor learning?

- 5) How can you disseminate this in your school/setting? Draft an addition to the PPT slides to make them bespoke to your school.

Trainer Notes

Activity 1 - Present 4-slide [PAPPUS Introductory PPT](#)

Activity 2 - Present the evidence as PPT slides.

Activity 3 - Offer printouts of the selected learning springboards. Learners can then find themselves quiet spots in the grounds of the venue to carry out the activity.

Activities 4 and 5 - Use the questions as discussion prompts facilitated by the trainer.

Activity 2: Managing children's behaviour and attitudes to learning - site mapping

Learning Outcomes:

- 2a. Describe the benefits and importance of playing and learning outside, with plants.
- 2c. Demonstrate the importance of planning, preparation and risk management to facilitate regular and progressive use of the natural world for play and learning.
- 2d. Show confidence in using the outdoors to deliver purposeful learning activities.
- 3a. Show an understanding of the opportunities within the formal curriculum to take learning outside.

Time: 1 hour discussion, followed by time in school working with children

Method: Group discussion (and facilitated site walkabout) followed by work back in school after the training session

Resources

- Site plan or satellite image of grounds.
- PAPPUS 15 [Plant ID Fact Sheets](#)

Activity

- 1) **Children's attitudes to outdoor learning** - Small group discussion Note 2 or 3 examples from your experience of children who have 'bloomed' outdoors. Think about their experience from their point of view. Think also about children who perform well inside, but feel at a disadvantage outside. (This is also character building.) Imagine yourself in the shoes of these children. What was it about the activities the children were carrying out that improved their on-task behaviour? Use this information when you 'map' the grounds.
- 2) **Curriculum Mapping** (Trainer to lead discussion on carrying out this activity back in school for feedback at a follow up training session if this is planned) – Find a site plan of your grounds (or use a satellite image).
 - a. Participants take a group of children outside to map the grounds in terms of learning and play 'affordances' (or participants can carry out this exercise themselves and/or with a colleague from the same setting).
 - b. If children are involved they can draw their own maps and record memorable learning experiences outdoors. Ask them to explain why they thought it memorable, and how they felt it impacted on their behaviour. This will be instructive and give you an insight into planning to promote positive attitudes to learning.

**See Handout [Module 3: Activity 2](#) for further instructions.*
- 3) **Practicalities** - Think about how you manage groups for regular outdoor activities already, such as PE (usual procedures for inhalers etc. will apply- see [Activity 3 - Risk Management](#)). Do you need

any additional procedures (e.g. a 'recall' system such as a whistle/horn when children are dispersed to roam within agreed boundaries while carrying out a task). This is also for emergency use and to bring them together so they can hear your 'talking' voice.

4) Dissemination

- a. Discuss your map, photos and procedural thinking with colleagues.
- b. List any action points that arise (such as targets for regular outdoor learning, or a timetable/booking system for any key outdoor spaces?) This document can be shared with senior leadership and become the beginning of a development tool.

Trainer Notes

Activity 1, 3 and 4 - Discussion prompts.

Activity 2 - Support this activity as a walkabout discussion in the Training venue just by looking at the grounds. In a school/setting use its own site plan and take some time over this, with the staff working in groups. Facilitate a plenary discussion.

Activity 3. Risk Management

Learning Outcomes:

- 2c. Demonstrate the importance of planning, preparation and risk management to facilitate regular and progressive use of the natural world for play and learning.
- 2e. Be familiar with the full range of PAPPUS resources and how to use them to deliver specific learning outcomes.

Time: 1 hour plus on-site work with children

Method: Discussion and independent work in school with children

Resources

- RBAs
- The grounds
- PAPPUS 15 [Plant ID Fact Sheets](#)

Activity

- 1) **Review your school Risk Benefit Assessment (RBA).** This will cover learning outside in the school grounds without any additional requirements for separate assessment (but do check with your senior leadership team if you have any concerns.) Your usual plans for PE, (access to toilets, epi-pens/inhalers etc) will apply to any learning outside too. (e.g. use a white cloth shoe bag with a red cross on it, for example)
- 2) **Talk to site managers.** Check with your site management what arrangements are in place to remove any particularly toxic species, but also discuss that children need to learn from experience that some are prickly (brambles) or sting (nettles) and that these should not be removed from the whole site.
- 3) **Identify suitable plants.** Take a group of children outside with the PAPPUS 15 Plant ID Fact Sheets. Discover which plants are edible, which have been used for medicinal purposes etc., [referring to the plant identification sheets in the online toolkit](#). In section 2 you reviewed the grounds to plot where natural materials are plentiful, you will need to do this during several seasons of the year. Children can be encouraged to use and pick plentiful plants for activities and learn when not to pick or lick!
 - a. Think about how you will help children learn that some plants are prickly, irritant or toxic.
 - b. Know where to look for sources of advice about plants.

Trainer Notes

Activity 1 and 2 - Use as discussion point in general about RBA.

Activity 3 – Support the exploration of the site to review the plants. Or if in a training venue, discuss the plants in the vicinity of the venue.

Activity 4. Time and planning for regular outdoor learning

Learning Outcomes:

- 2c. Demonstrate the importance of planning, preparation and risk management to facilitate regular and progressive use of the natural world for play and learning.
- 2e. Be familiar with the full range of PAPPUS resources and how to use them to deliver specific learning outcomes.

Time: 1.5-2 hours

Method: Group discussion

Resources

- Materials to make “Grab Bags”
- PAPPUS Maths [Learning Springboards](#)

Activity

1) Think about the practicalities

**See Handout [Module 3: Activity 4, sheet 1](#) for further instructions.*

2) Resources

**See Handout [Module 3: Activity 4, sheet 2](#) for further instructions.*

3) Plan an activity with your class outdoors using the resources

- Look at the Maths Learning Springboards, and plan an activity relevant to your class for next week. E.g. Maths (Algebra, Carrol diagrams, Venn diagrams.) or Maths (Place Value).

Discuss the benefits and any issues with colleagues and note any changes in procedure etc that would facilitate similar activities.

Trainer Notes

Activity 1 - Use as discussion prompts

Activity 2 - Bring examples of children’s and teacher’s ‘grab bags’ and ask participants to share their ideas.

Activity 3 - Print off the Maths learning springboards and ask participants to work in pairs to carry out the tasks using found objects and resources from the ‘grab bags’.

Activity 5. What subjects can I take outside?

Learning Outcomes:

- 2d. Show confidence in using the outdoors to deliver purposeful learning activities.
- 2e. Be familiar with the full range of PAPPUS resources and how to use them to deliver specific learning outcomes.

Time: 1 hour

Method: Group discussion

Resources

- PAPPUS resources
- Copies of subject notes printed out
- Participants to be able to access the LS and PS on their phones? Otherwise these can be printed.

Activity

The notes below can be split into subjects and given to groups to discuss.

*See Handout [Module 3: Activity 5](#) for further instructions.

The PAPPUS Learning Springboards

The subject and plant specific documents on this website have been devised as springboards for your own creativity as leaders of learning and play.

This activity asks you to take a closer look at these springboards to become familiar with all that they offer. Remember too that some of the tasks suggested in the springboards could be given as homework tasks as well.

In England, a very useful reference is the Council for Learning Outside the Classroom (LOtC), which also offers an LOtC Mark accreditation scheme to schools that recognises the use of the school grounds, local area, expert visitors, trips and other experiences outside the classroom. <https://www.lotc.org.uk>

TASKS

1. Discuss the subject overviews in the handout. What can you add?

2. Playful learning - class task.

Choose a core school subject (such as maths, or literacy) and think about a specific topic within that subject. The idea of this activity is to think about how these topics might be taught in playful ways. You will know which of the PAPPUS 15 plants you have easy access to. Look at the Play springboard for these plants. Plan an activity for your class/group to carry out next week. (using the ideas in the play springboard for your chosen plant)

After the task, ask the children to evaluate both their learning and the impact of being outside using plants.

There are countless ways to make classroom activities playful. Teachers may teach in the way they have learnt and practiced, especially when newly qualified, but playfulness in teaching is beneficial to the children and the teachers too. Discuss playfulness in pedagogy with your colleagues.

3. Subject specific planning- class task.

Choose one curriculum subject (see overviews in handout).

Look at the learning springboards in that category and your medium term plans for the subject.

Some subjects are taught with very specific schemes of work set out, but even within those constraints you can use your creativity to incorporate an idea from the learning springboards that takes the learning outside with plants. Make a clear plan to carry out with your class this term

After the task, ask the children to evaluate both their learning and the impact of being outside using plants. Discuss the benefits and any issues arising and solutions that can make it easier to take the learning outside on a regular basis.

Trainer Notes

- Activity 1 - Divide the participants into subject groups (give them copies of the notes to aid their discussion.) Feedback to large group.
- Activity 2 and 3 - Each group is given one of the two tasks to carry out. Support the delivery of both tasks.
- Support the evaluation feedback.

Activity 6. Recording the Learning

Learning Outcomes:

- 2b. Show an understanding of the opportunities within the formal curriculum to take learning outside.

Time: 40mins

Method: group discussion

Resources

- 4-slide [PAPPUS Introductory PPT](#)

Activity

1) **Question the need for recording learning.**

Sometimes, in primary education especially, it is instructive to observe Early Years practitioners for how children learn outside. You will see that you don't necessarily need lots of resources or recording, but that much of the learning takes place because of skilled questioning by the staff. This is true inside your classroom too, so why does this inhibit some teachers from taking the learning outside? Is it a cultural issue in the school? Does senior leadership encourage enrichment of learning outdoors? Do other staff think that only 'play' takes place outdoors? Do you need to show your staff the [PAPPUS 4 slide, staff meeting PPT](#), and disseminate more about the value and benefits of learning outdoors?

2) **Methods of recording learning.**

Individual cameras and iPads help the children to record their activities. Printed photos can be annotated by them. Sketch books and scrap paper/ notes recording data etc., can also be stuck into work books. Parents also like to see them on open evenings. Evidence of this type of work also shows it is part of the long term planning.

Plan what will work best in your school.

Trainer Notes

Support discussion.

Activity 7. Bringing it all together - an action plan for your school

Learning Outcomes:

- 2b. Show an understanding of the opportunities within the formal curriculum to take learning outside.
- 2c. Demonstrate the importance of planning, preparation and risk management to facilitate regular and progressive use of the natural world for play and learning.
- 2e. Be familiar with the full range of PAPPUS resources and how to use them to deliver specific learning outcomes.
- 2f. Use the PAPPUS resources to build up a pedagogical process for their pupils

Time: 1-1.5 hours plus preparation time

Method: Staff meeting

Resources

- Make Character cards from Appendix to hand out to participants.
- You may wish to prepare a template for an Action Plan or use a layout that the school is already familiar with.

Activity

This task needs to be carried out with your staff team, outside if possible.

Prepare a summary of the key outcomes from the previous activities and present the Curriculum and Plants Maps from [Activity 2](#) and [3](#).

Activity 1 - Staff Meeting.

Ask participants to get into small groups and review the outcomes from the previous activities. Each group identifies what they feel should be the main objectives.

Compare and agree the key objectives.

Activity 2 - A staff meeting "In Character"

It may be helpful to look at the objectives from different perspectives. This adds a bit of fun too. Present them with different characters, (*See Handout [Module 3: Activity 7](#)), and ask the group to imagine themselves in the position of that person and imagine how this person would react to the objectives. Spend a few minutes in this character's shoes, then move to the next character.

Make notes during the discussions on a flipchart, pointing out the different ideas.

After going through all the viewpoints draw the attention of the group to the notes you have made and ask them to look at the list. Ask them to go back to their objectives with a clear mind (that is, no longer in their characters) and see if there is anything that they would like to change in them, based on the list of reactions from the characters.

Do you need to make any edits to the school development plan?

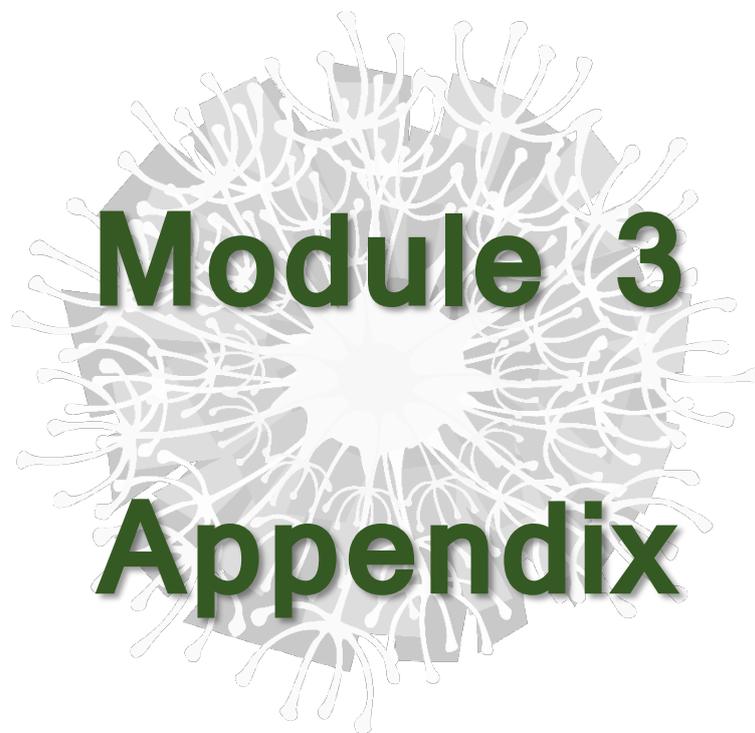
Create an action plan, with target dates and tasks allocated. What are your next practical steps - this week, next half term, next year?

Your Action Plan task list might include some of the following:

- ✓ review the school risk benefit assessment and mobile phone policy
- ✓ invest time in setting up grab and go resources for yourself and the pupils
- ✓ work with other staff to pool ideas and resources and share best ideas
- ✓ celebrate learning outside with the parents
- ✓ build routines with the children as this will save time in the long run
- ✓ have fun!

Trainer Notes

Your task here is to facilitate the staff meeting and the role play and help the teachers to generate an Action Plan.



Handout: Module 3, Activity 2

- 1) Identify, take photographs and plot on the drawn map/site plan/satellite image:
 - Places already used for specific activities.
 - Places for small group activities.
 - Large scale class gathering places for plenaries.
 - Quieter places (away from traffic and other disturbances)
 - Places with an abundance of plants to observe/interact with.
 - Key habitats.
 - Places where loose natural materials can be collected (Sticks, stones, leaves etc.)
 - Changes in topography
 - Good vantage points for field sketching
 - Places with access to water for big wet messy activities
 - Playground markings and grids for versatile activities.
 - Specific features that are currently used to support learning outdoors
 - Think creatively about new places and features that could be used to support learning outdoors

- 2) On a separate plan, plot the locations of any of the PAPPUS 15 plants that are already on your site. (see PAPPUS Plant ID Fact Sheets and Module 4). This will help all your staff at your setting to make use of these common plants to carry out the activities in the Learning and Play springboards. Think about where you might plant some of the missing plants.

Handout: Module 3, Activity 4, sheet 1

1) What?

Review your planning documentation, long-term/mid-term and short-term. Is there an “outdoors” prompt? (As well as a prompt to consider trips/visitors etc. to enrich learning.) Many schools find an ‘outdoors’ reminder very helpful to think about any aspect of the learning that would benefit from a session outside, even if it is only a few minutes to gather some data, or collect some words.

Subject specific planning will be discussed in the next section.

2) When?

If outdoor clothing takes time to put on, then plan tasks for when the children are dressed for outside anyway, such as before or after break, or take registration outside (if it is on a mobile system.) Make notes about what would work for you.

3) Toilets and hand washing?

You may find that children ‘need’ the loo less when they are busy and engaged outside. There is a lot of advice out there, and your school/setting will have its own policies. At the simplest, if you are working outside close enough to the building children can go inside. Making your own DIY ‘Tippy Taps’ from recycled containers may be a solution to handwashing in some places.

Review the situation in your school and note any changes needed.

4) Clothes?

Review your uniform policy and the parents’ home/school agreement. Does it need editing to require children to wear suitable clothing to be outdoors in all weathers, and do you have a blanket permission for brief, off-site trips into the local area?

Clothing is an issue for many schools, even where this is a requirement, but it is most important to collaborate with parents to ensure children arrive ready to learn outside, (suitable clothes and footwear) as an everyday expectation throughout the year. Being outside for play and learning, as an everyday practice, will also help parents realise that their children need outdoor clothing every day, and not just on ‘Welly Wednesdays’ There will be times when outside is uncomfortable, but effective beneficial activities do take place and resilience is learned!

Help parents to understand the value of learning outside for their children’s education, health and wellbeing, through your regular communication channels, open days etc.

5) Where?

Curriculum use of the grounds has been discussed in the mapping exercise in Activity 2 above. In this exercise think about where you personally will be confident to take your class at this stage. Be familiar with which of the PAPPUS plants are on your site and where.

- Quick/close to classroom – ‘inside’ work just outside the classroom.

For this, you may only need the children themselves and a space to stand. (e.g. a paired talking task, or a circle time/plenary discussion.) For some individual tasks they may need only clip boards and a space to gather, either sitting or standing. Remember that if children have clip-boards they can rest them on any surface, such as a wall.

➤ Further afield

New tasks that support the key learning objectives, but require the children to explore further. This could be a task such as searching for twigs and sticks to make a fraction wall, or a variety of leaves to make a symmetrical pattern, or to gather data for charts and graphs.

➤ Longer term plans for a progressive series of outdoor tasks.

As you become more confident, and outdoor learning is embedded, you will spend more time outside on more complex tasks and may move further away from the building to use playing fields or woodlands, (if you are lucky enough to have these on-site.) Even in an urban site you will find creative ways to engage your learners and develop a new expectation for using the outdoor environment on a regular and progressive basis.

➤ No paper homework

Schools have become even more proficient in planning this due to home schooling with parents during Covid. (E.g. going for a walk to discover something relevant to a learning outcome, or a Nature table challenge to bring in something the teacher can't ID!)

Handout: Module 3, Activity 4, sheet 2

1) Children's outdoor 'grab bag' kits

Plan for the children to need to take NO special resources, or very few, to learn outside. Skilled questioning is often more important than lots of resources. Take a leaf from Early Years practice and model the inquiry process with your children outside.

For primary children, this is a useful kit; a clip board (pencil attached), simple 'sit mat'. (small piece of yoga mat/old tarp, or a small plastic bag with a folder newspaper inside, taped together) and a chunky chalk or two for some activities. A piece of rope that is cut to a 1m length, marked in 10cm increments is a very versatile piece of kit for a wide variety of mathematical and artistic tasks outside. If they can each bring a 'bag for life' to keep in school with this kit in, it will always be ready for use. You will add to this as your repertoire expands. At the end of each session the children will need to check that their kit is complete and hang it on the peg ready for the next day. This becomes routine after a while and saves a lot of time in the long run.

2) Teacher's outdoor 'grab bag' kit?

Develop your own 'grab bag' of whatever you need to feel comfortable working outside; clothing/footwear, phone/tablet, communication cards, your own sit mat/camp stool, and resources such as an A2+ **what does this mean? Do you mean A4 or A3? A2 is massive to cart around outdoors and expensive to buy** chalk/clip board, if required – PAPPUS top tip: white-boards do not work well in damp conditions!

Many of you will be very familiar with working outside with your class, but for others this may be more of a challenge, so do start with where you feel comfortable. There are several options, progressing from tasks similar to inside, working close to the building, to wider use of the grounds and natural materials as learning resources. Some practicalities are also discussed here to help answer some common concerns.

Aim to provide an environment that helps to focus on the learning. There is nothing simpler than natural materials, found objects and a well prepared 'grab bag'.

Handout: Module 3, Activity 5

DISCUSSION - SUBJECT OVERVIEWS

Literacy

The ideas in the literacy springboards are just a taster of the many ways that plants can be a stimulus for a wide variety of fun and engaging learning tasks outside. The starting point is often the plant itself, perhaps as part of an introductory relaxation exercise, followed by scaffolding for descriptive and metaphorical use of language in poetry and then extending into Shakespeare, for example.

This is a suggested process for language development.

- observation of a plant
- sensory experience through handling
- listing/naming its parts
- turning these nouns to adjectives
- using the adjectives metaphorically or as simple images to apply to human being/situations
- seeing how Shakespeare and other authors do it

Some of the springboards also look at opportunities for reading and writing non-fiction texts, myths, legends, etymology, drama and verbal presentations.

Maths

The natural loose parts resources provided by plants are very versatile and can be used as 'manipulables' to explore a number of mathematical concepts, particularly at KS1 and KS2.

If the principles of maths can be explored actively in a fun and engaging way outdoors, the quality and variety of mathematical language used will help to clarify pupils' thinking. The written work back in class is then likely to be completed with greater understanding. These springboards aim to provide ideas for getting outdoors and active with your pupils, on a regular basis. Plan for a progression of tasks to support the key learning objectives throughout each school term.

The Sciences

Plants are an obvious element of the biology curriculum with which you will be very familiar. These springboards give you more detail on how they can also contribute to Chemistry and, perhaps surprisingly, to Physics too. Some activities relate directly to the PAPPUS 15 plants while other activities cover use of plants more generally.

Plants lend themselves to inquiry-based learning in so many ways. Growing from 'seed to seed' shares with pupils the whole lifecycle of a living thing, and indeed helps to answer the question, 'Is this alive?' Pupils also need to learn to ask if a plant or berry can be touched or eaten, so introducing them to the risk of irritants and poisons is a life lesson well learnt early.

The study of biology and other sciences without fieldwork takes away the opportunity for pupils to feel the excitement of discovery. This reduces the quality of their learning experience. It can render the subject drier and less relevant to their everyday lives and the importance of other inhabitants of the planet with which we co-exist and on whom we depend.

SAPS www.saps.org.uk is an essential reference for Science and Plants in UK schools.

Creative Arts

There are many positive benefits of using the outdoors for the creative arts, not least that the endorphins can run more freely, generating positive feelings, which in turn can spark greater creativity.

The space available outside offers more scope for louder, wetter, messier and more physical activities and gives pupils more freedom to express themselves with fewer constraints.

The natural world can offer artistic inspiration along with plant-based materials and resources with which to work on colour, pattern, texture, line, form, space, biomimicry, biophilia, dramatic interpretation, sound and music.

Some of these ideas are specific to the PAPPUS 15 plants, and other activities can use any plants, so are very versatile.

Social Sciences

Our history and the geography of our land is evident all around us. Plants can play a valuable role in helping children to understand the evolution of landscapes, woodland history, clearances, enclosure etc. Uses of plants in the past can be linked it to current uses in medicines and cosmetics for example. The ancient Greeks and Romans ate dandelions and used them medicinally.

Investigation skills and field sketching using plants enriches understanding of how the landscape around us is shaped by people and nature.

In religious education, the springboards explore how faiths and their sacred texts discuss plants and ecology in the context of our responsibilities as humans to the other inhabitants of our planet.

Design Technology

Use of tools, selecting materials and design for function and structural stability is a key element of DT education. Biophilia and biomimicry are exciting areas of exploration with increasingly interesting new applications in industry to solve problems relating to materials and function.

There are many ideas on the springboards for activities using coppiced and natural materials which are very versatile for DT projects (e.g. [Play springboard - Hazel!](#)).

Food and cooking are obvious uses of plants in the curriculum. Information about edible plants and recipes for cooking are found mostly in Playful Springboards.

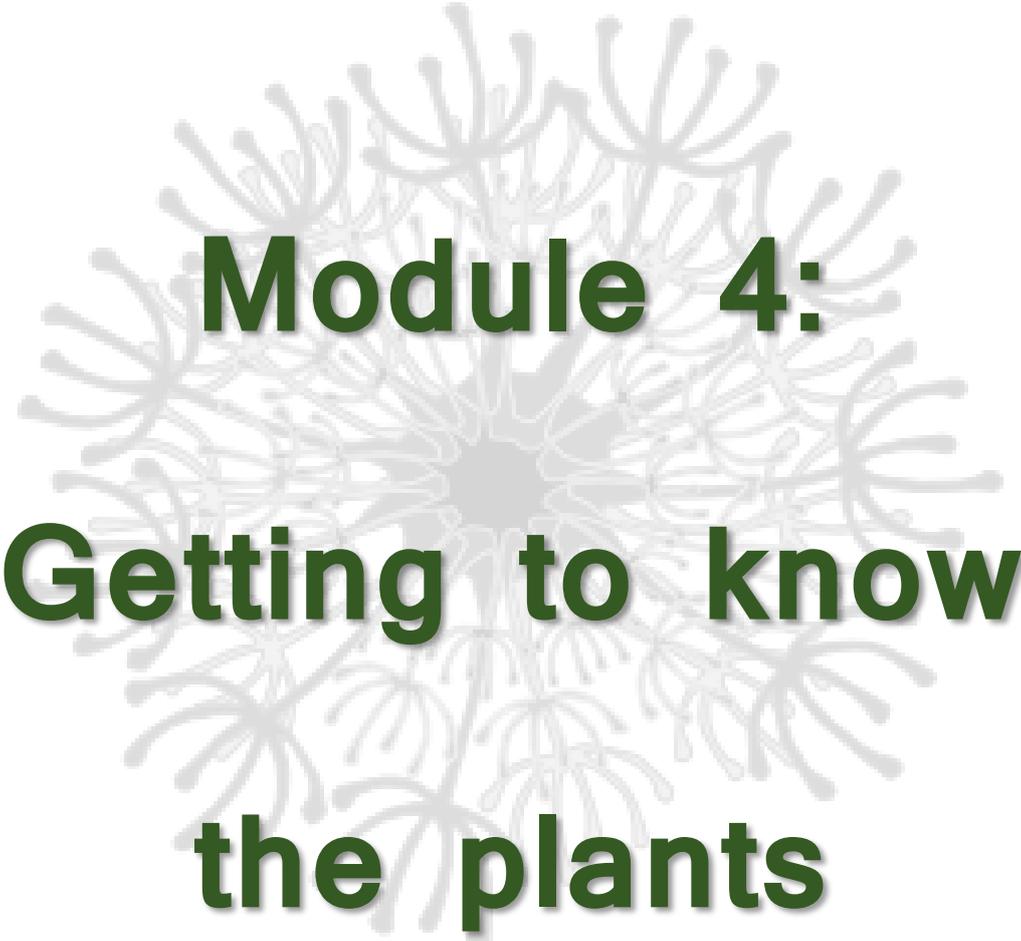
Handout: Module 3, Activity 7

Trainer's 'Character' notes

You can make this activity a fun, light-hearted one. Ask the group to imagine this person's mindset deeply and act/talk in an exaggerated manner, using their bodies as well. If they like something, they should be very loud and expressive about it! They can also stand on the chairs if they want! If they really don't like an idea, they should express that as well in a very vivid way. Go outside for this activity, as the change of scenery and natural stimuli might help participants to change their mindsets as well.

The different characters are:

- An idealistic young teacher, who has just finished university and is enthusiastic, wanting to do the best for children.
- A Year 5 child with ADHD.
- The school principal, who is generally supportive of innovative ideas, but has to keep in mind all the bureaucratic/administrative issues, take account of the interests of different stakeholders (parents, governors, local government, etc.) and know exactly how this change can be managed.
- A Year 6 child using a wheelchair or walker.
- A very involved and well-respected caretaker. This is a practical person who wants to know what each change means from a practical standpoint. The school does pay attention to her/his viewpoints, as it has been proved time and time again that s/he knows what s/he is talking about.
- A grumpy, sad teacher. This teacher doesn't have illusions: s/he knows that in the end all ideas fail, even if they are not entirely useless, and actually nothing really changes. S/he is very good at pointing out the flaws of a plan and is not shy in giving voice to these concerns.
- A parent of two children in the school, who has only just heard about this idea and wants to know the detail and information behind it and why the school is doing this.



**Module 4:
Getting to know
the plants**

Pappus

Module 4: Getting to know the plants

Learning Outcomes:

By the end of the session, learners will be able to

- 1b. Show confidence in identifying a range of plant species.
- 1c. Know where to find further support to help you and the children identify plants.

Session Summary

This session is to support participants in getting more familiar with the PAPPUS 15 plants, and to become more confident in identifying a wide range of species. Participants get to know several playful activities, through which they can get to know these plants.

Trainer Notes

This session can be easily adapted by the trainer: look at the PAPPUS Springboards, and choose the activity that you think is most fitting for your group. The objective is to support participants in understanding the many different and playful ways we can work with plants.

Note also that you can show the participants the more detailed, botanical information available on the website including a very comprehensive glossary of terms and further, in-depth annotated images of the botanical details for several of the PAPPUS 15 plants.

Session Plan - Module 4 Getting to know the plants

Activity & LO	Time	Content	Method	Resources
Activity 1 LO 1b, 1c	20 minutes  	Botany basics Objective: getting familiar with identifying plants	Individual, group work	Plant ID Fact Sheets Happy Families Cards Botany Basics PPT slides
Activity 2 LO 1b, 1c	65 minutes   	Plant recognition Objective: getting to know different playful activities for plant recognition	Sensory descriptions Playful Plants A site 'Flora' Explore plant ID Apps	Access to outdoor spaces PAPPUS Plant ID Fact Sheets and Happy Families Cards Links to other plant ID Apps Camera/sketch book.
Summary	5 minutes	Summing up	Plenary	

Activity 1 - Botany basics

Learning Outcomes:

- 1b. Show confidence in identifying a range of plant species.
- 1c. Know where to find further support to help you and the children identify plants.

Time: 20 minutes -1 hour

Method: Individual and group work

Resources

- [Botany Basics PPT slides](#)
- Access to outdoor spaces
- PAPPUS Plant ID Fact Sheets and Happy Families Cards
- Links to other plant ID Apps
- Camera/sketch book
- Detailed botanical glossary on website
- Further annotated images of plant botanical details

Activity

Botany basics

Look at the [Botany Basics PPT slides](#).

Participants examine the PAPPUS 15 plants. How many do they know already?

Select one or several that you know you can find growing in the training venue.

Take copies of the [Happy Families Card](#) and the [Plant ID Fact Sheet](#) for your selected plants. They cover the four seasons, so you can do this at any time of year for most plants. Take a very close look at the details in the photos, and in the Fact File.

Identify the key features of the plant itself using a magnifying glass to get up close. You might be surprised by the additional details you see. How many new botanical terms have you learnt? Enjoy the exploration, make sketches/ notes and share your discoveries with another colleague (if you are working on this as a group).

For Elder there is also a 'virtual' video tour to help you.

Discuss carrying out the above activity with a group of children and asking them to record their findings in a sketch/notes. You can pre-select plants that you know are growing in the location you are working in. Children can work in pairs looking at different plants, then report back to the whole group.



Trainer Notes

You may show the group the [Botany Basics PPT](#) slide to remind participants what we mean by plants, and the key definitions of basic parts of a plant.

You will also need to identify which of the PAPPUS 15 are growing in the training venue.

Discuss the benefits and pitfalls of using of [plant ID Apps](#).

Activity 2 - Plant recognition

Learning Outcomes:

- 1a. Show confidence in identifying a range of plant species.
- 1c. know where to find further support to help you and the children identify plants.

Time: 65 minutes

Method: Individual, pair-work

Resources

- The grounds/garden/park
- PAPPUS 15 Plant ID Fact Sheets and Happy Families Cards.
- Literacy Springboard 10
- Plant ID APPs

Activity

Roots, stem, leaves, flowers, seeds. These are the basics of most plants that everyone learns as children. In this course you will also learn some more botanical terms as you work through the PAPPUS 15 plants. Each plant has a Fact Sheet identification guide that goes into a lot of detail. These help children's observational skills as they compare the annotated images with the actual plants. In the PAPPUS resources we also have sets of 'Happy Families' cards for each plant. These offer a very basic set of images to use with younger children to learn to recognise plants from their most obvious features. Depending on the time you have available, you can choose one or more of these activities.

1. Using your senses - feely box game.

Work in pairs, whether working as a group of adults, (or include a group of children from the school). Each pair cuts up a small portion of their plant and puts it into a 'feely box' or cotton bag (or use blindfolds) for another pair to identify through touch and smell. Then give the specimen and two different Plant ID Fact Sheets to the next pair (one sheet being the correct plant and one being a 'spoof').

One person describes what they feel, in detail, and then smells the plant too.

Describe the texture of the stems and leaves, how many 'buds there are, how they are arranged. Are they 'opposite' or 'alternate' up the stem? This can be a very important ID feature when looking at similar plants so do observe this. The other person in the pair compares the descriptions to the two Plant ID Fact Sheets and decides which it is. Swap with new sets of plants.

2. Playful plants

For your selected plants, look at the associated Playful Springboards sheet, and chose any activity for the group (or include a group of children from the school). For example:

- a. **Meet the tree** (Conifer Playful Springboard)

Participants pair up. One of them is blindfolded, while its pair leads them to a tree. The blindfolded person can touch, smell, (even taste) the tree, and stay as long as they want. When they are ready, their pair leads them back to where they started. They take the blindfold off, and the person has to find the tree they got to know. Then the pair change roles.

b. **Arts and craft** (e.g. Poppy Playful Springboard)

You can use different plants for making some arts and crafts. Collect poppy petals, and make printings of them on paper by pressing them with something heavy.

Another possibility is to create a "window": use a sticky paper and cut out a small window in the middle. Then remove the non-sticky part and stick it to a regular white sheet – now it will only stick where the "window" is. Explore the area for tiny parts of plants to stick on your window, creating a little picture.

c. **Flower feedback** (Dog Rose Playful Springboard)

At the end of the session, you can ask for feedback from participants by using the dog rose as a metaphor. Ask them to think about what brought them joy during the session (what was the rose), what they didn't like (the thorn) and what will happen next (the bud).

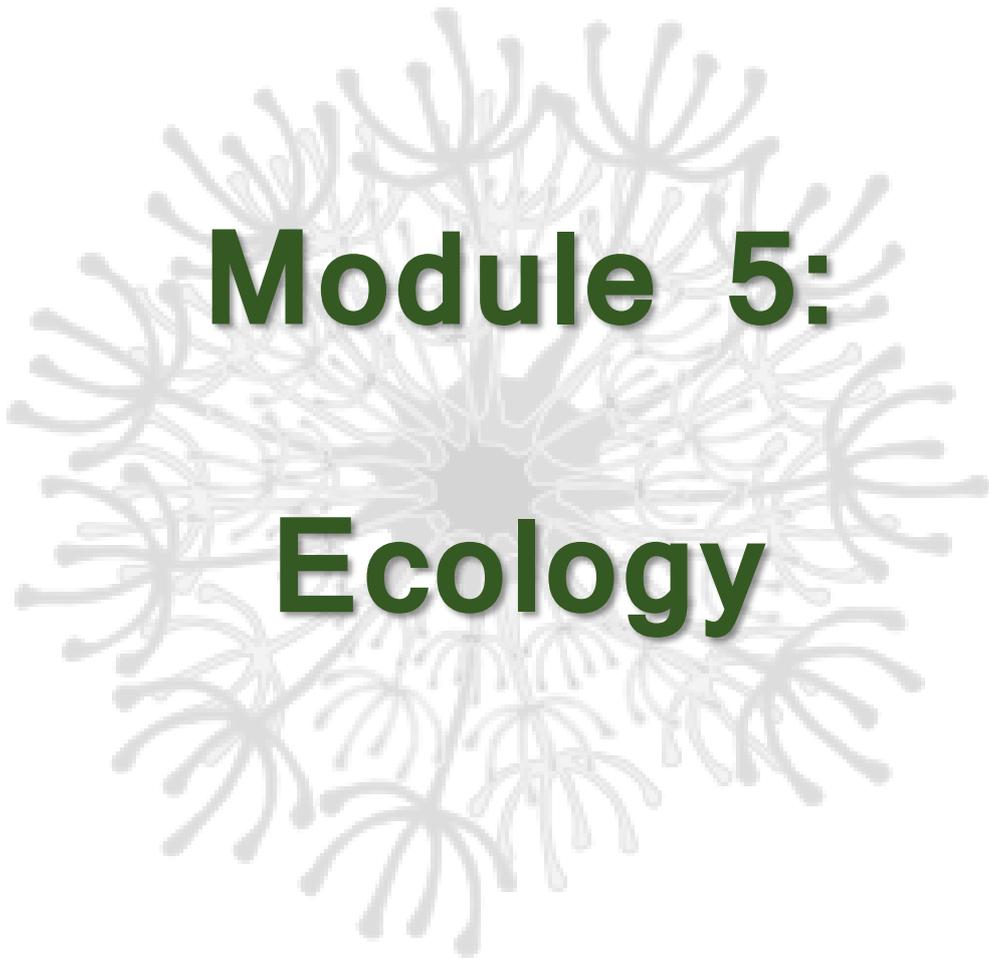
3. Start a site: "Flora"

Refer to Literacy Learning Springboard - 'school grounds guide'.

As you become familiar with all the plants in your grounds/garden/park, you and the group can start to develop a site "Flora". This is a data base of plants found in your selected site. Children can build on this over time and it can become an interesting record of the development of your site, seeing what plants come and go, and how the biodiversity of the site changes if you take positive steps to change site management.

4. Explore Plant ID Apps

There are many useful online plant ID apps, such as [Plant Snap](#) and [PlantNet](#). Take a look at the Apps that are available and try them first on plants that you know you can identify. Ask children to do the same, and evaluate which ones work best for you.



Module 5: Ecology

Pappus

Module 5: Ecology

Learning Outcomes:

By the end of the session, learners will be able to

- 4a. Demonstrate an understanding of basic ecological principles
- 4b. Demonstrate an understanding of co-dependency and system thinking
- 5a. Experience increased cooperative attitude
- 5b. Experience development of negotiation and communication skills

Session Summary

This session focuses on basic ecological principles, including the interconnected nature of the ecological system, of which humans are a part, and the co-dependency of the different parts of the system. It also shows how these principles affect real life.

Trainer Notes

If you are not familiar with the topic of ecology, it is worth reading up about it beforehand, so you can support participants in their understanding of these principles.

Session Plan - Module 5 Ecology

Activity and LO	Time	Content	Method	Resources
Activity 1 LO 4a	60 minutes 	Video about ecology and game Objective: to understand the basic principles of ecology and the interconnected nature of our environment	Plenary	Video on ecology; computer, projector, screen, speakers
Activity 2 LO 4b, 5a, 5b	90 minutes  	Farming game – system perspectives Objective: to understand how elements of an interconnected system affect the system, and how that relates to the way we think about nature	Small groups and Plenary discussion	Farming game handout
Summary	5 minutes	Summing up	Plenary	

Activity 1: Video about ecology

Learning Outcomes:

4a. Demonstrate an understanding of basic ecological principles

Time: 60 minutes

Method: Whole group

Resources

- [Video on ecology](#)
- Computer, projector screen, speakers

Activity

Ensure all participants have a good view of the screen for your video presentation about ecology (duration approximately 30 minutes).

Following the video, ask the participants to stand in a circle for a game where they need to secretly choose two other participants (making sure not to reveal their choice to anyone). When they are ready, their task will be to position themselves so they are at an equal distance from the two people they chose. As they start to move, they will see that it is very difficult to achieve an equilibrium, as when anyone moves to a better position for themselves, it causes the movement of all the people who chose her/him. When the group has finally found a relatively still/calm position and stopped moving, choose someone to be stationary for the next round, when they simply stay in one position. The others' task is the same as before: to place themselves at an equal distance from the two people they chose. When the activity comes to a natural close, explain that this game demonstrates how an interconnected network functions: if one part of the system moves, it automatically brings about the movement of others connected to it. Explain that our whole ecosystem works in this way: there is not a 'single thing' you can do without affecting others.

Finally, ask if they have any questions, and facilitate a discussion about ecology.

Trainer Notes

Prepare the IT equipment beforehand, test the sound, the speakers, the projector.

Activity 2: Farming game and system-perspective

Learning Outcomes:

- 4b. Demonstrate an understanding of co-dependency and system thinking.
- 5a. Experience increased cooperative attitude.
- 5b. Experience development of negotiation and communication skills.

Time: 90 minutes with discussion

Method: Whole group / 4 small groups

Resources

- The handout containing the game rules and the scoring table is in the Appendix [Module 5: Activity 2](#).

Activity

- 1) Divide the group into four smaller groups where they are each out of hearing of the others. Inform each group that they are now a farm. The four farms have a common pasture, where their cows can feed. They receive one or two cows per year from the state, and the weight of the cows at the end of the year is their profit. The goal of the game is to accumulate as much profit as possible.
- 2) All four groups / farms are invited to select a name to formulate a group identity. All four farms are handed an activity sheet (see [Handout Module 5: Activity 2](#)), providing the exact rules and the scoring table. If necessary, explain the scoring table. The rules of the game – especially its goal – can only be repeated if the participants request it. All groups are allowed to negotiate as indicated on the rule sheet (i.e. after the third round, and then after two-two rounds). It's up to each group whether they want to enter into negotiations or not.
- 3) The trainers should make constant notes (on paper but if possible also on a flipchart not visible to the participants) on group choices and group profits. If a meeting is required between groups, the instructor organises this, keeping it to a maximum of 3-4 minutes (exact time to be decided in advance).
- 4) Leave some time for the groups to discuss their strategies after each round and each negotiation.
- 5) There would normally be about 10-12 rounds. If for two rounds all parties score 0 points, the trainer as "The state" intervenes, and threatens the farms with withdrawal of the licences in order to push for a common solution. If all parties score the maximum (ask 1-1 cows) over at least three rounds, the game can be stopped.
- 6) Follow the game with discussion / debriefing (approximately 45 minutes):
 - a. What are your feelings right now?
 - b. What were the group strategies? How did you decide within your group?
 - c. What happened at the game level?
 - d. In what way can what happened at game level be found at societal level?

- e. Discussion on game theories and common interdependent actions. What is the optimal action?

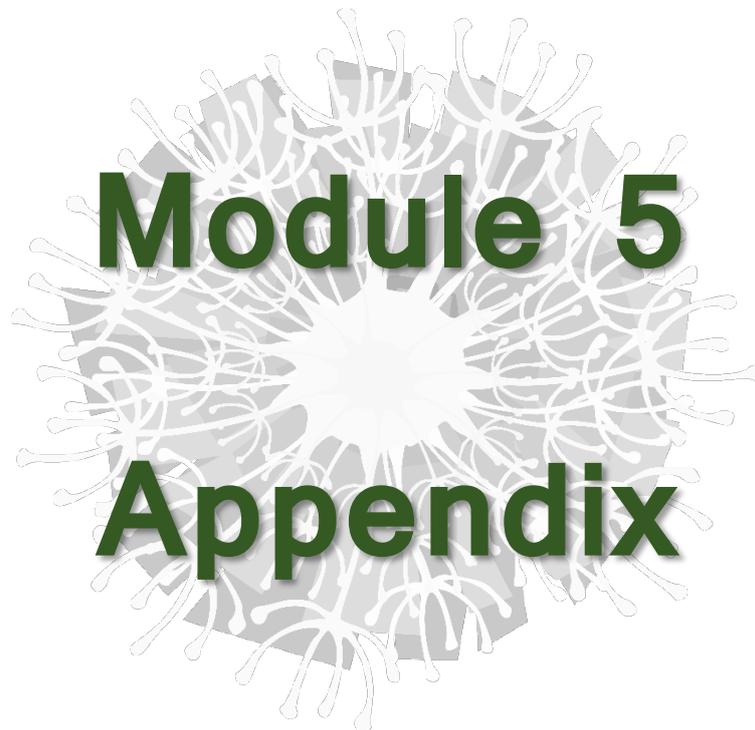
Trainer Notes

Beware: this exercise can bring out high levels of competitiveness and strong emotions.

At the debriefing after Question c (above), it is important to point out that the maximum score per round for the whole group is 1,600 points, and 16,000 points for 10 rounds, and optimally 4,000 for each team for ten rounds (or calculate for the rounds you played).

This situation played in this game is the 'tragedy of the commons' system model, and further information can be found here: https://en.wikipedia.org/wiki/Tragedy_of_the_commons

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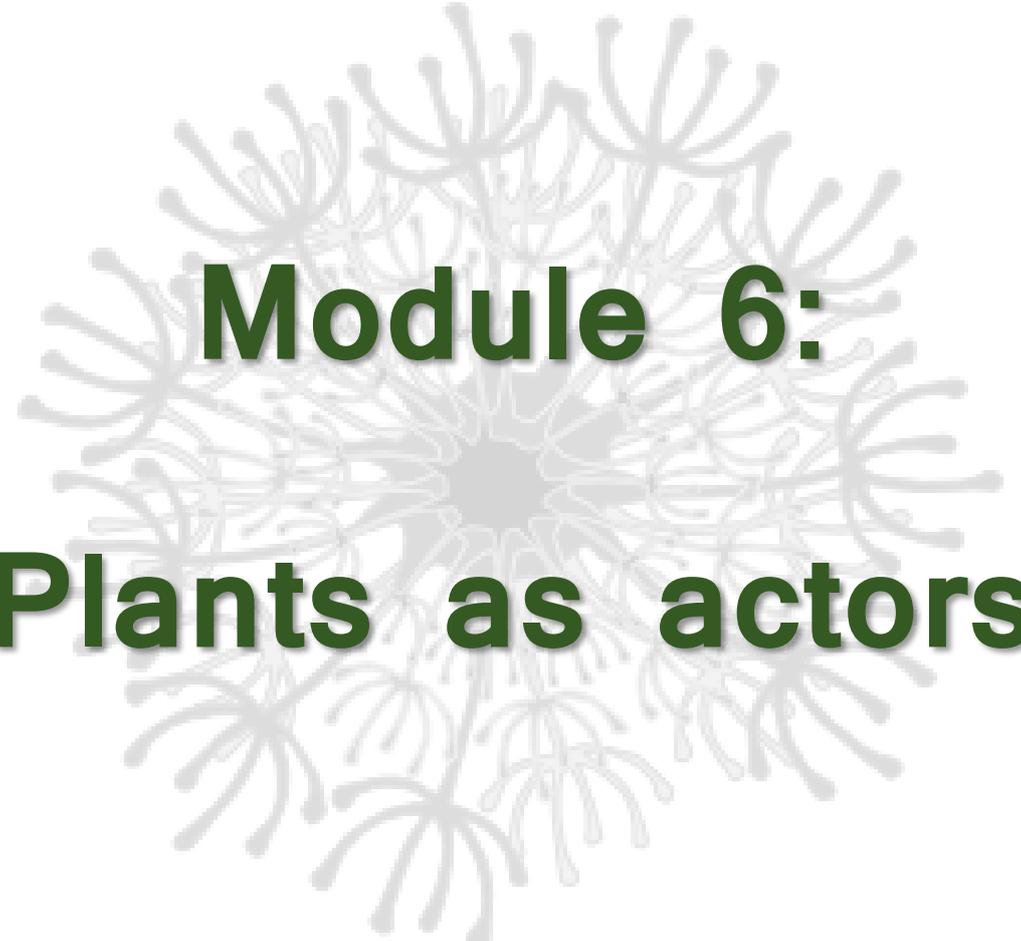


Handout: Module 5, Activity 2

FARMING GAME

1. Divide the group into four teams. The objective of the game is to make as much profit as possible.
2. Each team represents a farm (an agricultural firm) breeding cows. Their profit is measured in weight of the cows they breed.
3. There is a common field available for the four farms to breed their cows.
4. All four farms can apply (as state support) for 1 or 2 cows every year in the spring. In the autumn the state buys back the cows (either one or both) based on their weight. 1 kg = 1 point for the farm.
5. All four farms must decide whether to keep/breed 1 or 2 cows in the given year. One is the minimum, more than two is not allowed.
6. The game should last about 10-12 rounds (farming years).
7. In between turns, the groups can initiate meetings with each other, however the first meeting can only be held after the 3rd turn, and there must be at least 2 turns between meetings. It is not compulsory to take part in a meeting.
8. The efficiency of the field depends on the number of cows breeding on it. This table describes how much weight a cow can reach depending on the number of cows.

Possible result		1 farm		2 farm		3 farm		4 farm	
1 cow	2 cows	No	kg	No	kg	No	kg	No	kg
4	0	1	400	1	400	1	400	1	400
3	1	1	300	1	300	1	300	2	600
2	2	1	200	1	200	2	500	2	500
1	3	1	100	2	200	2	200	2	200
0	4	2	0	2	0	2	0	2	0



Module 6:

Plants as actors

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Module 6: Plants as actors

Learning Outcomes:

By the end of the session, learners will be able to

- 3d. Build positive attitude towards plants and nature
- 3e. Build positive feelings and attitude towards nature through the creative arts
- 4c. Understand how the language we use determines the way we think
- 4d. Present and develop examples of positive language use and reconnection with nature

Session Summary

This session focuses on the different ways we can think and talk about plants whether as passive resources for humans or as active agents themselves. Eco-linguistic perspectives are introduced. Participants can discover how in the arts plants usually appear as active agents. Through these activities, participants can develop a positive attitude towards plants.

Trainer Notes

If you are not familiar with the topic of eco-linguistics, it is worth reading up about it beforehand, so you can support participants in their understanding of these principles.

Session Plan - Module 6 Plants as actors

Activity and LO	Time	Content	Method	Resources
Warm-up	10 minutes	Warm-up game Objective: energizing participants after a break	Whole group	
Activity 1 LO 3d, 4c	90 minutes   	Interactive lecture on plants as actors Objective: introducing how plants can be viewed as passive and active actors, depending on how we use language to talk about them	Plenary	Video about plants as actors A paper theatre tale
Activity 2 LO 3e, 4d	90 minutes 	Plants as actors in the creative arts Objective: showing how in arts plants are usually more active agents	Individual and small groups, with plenary presentation	Paper, pens, colours, thick A3 sheets
Summary	5 minutes	Summing up	Plenary	

Activity 1: Interactive lecture on plants as actors

Learning Outcomes:

- 3d. Build a positive attitude towards plants and nature.
- 4c. Understand how the language we use determines the way we think.

Time: 90 minutes

Method: Lecture / whole group / individual / small group

Resources

- [Lecture video](#)
- [Lecture PPT](#)
- [Handout for participants](#)

Activity

- 1) Participants watch the projected PPT/lecture.
- 2) The lecture includes an exercise ([slide 5](#)) where all participants are given a handout with three different descriptions of the same plant. Allow time for everyone to read the descriptions and then discuss the following:
 - a. How is the same plant described in each case?
 - b. What are your feelings about the plant after each description?
 - c. What is the plant described as doing? Look for the verbs, which show the actions of the plant itself! NB: *The second and third descriptions should not contain these actions.*
- 3) Following the exercise describe how the language we use shapes our feelings towards nature, and discuss how people and children can be “re-minded” for nature.
- 4) Divide the participants into small groups to look for poems which describe plants as actors. You can also refer to the Literacy section of the PAPPUS Toolkit.

Trainer Notes

*See additional information and references in [Module 6 Appendix](#).

Activity 2: Plants as actors in the creative arts

Learning Outcomes:

- 3e. To build positive feelings and attitude towards nature through the creative arts.
- 4d. Present and develop examples of positive language use and reconnection with nature.

Time: 90 minutes

Method: Whole group / individual / small group

Resources

- Paper, pencils, colours

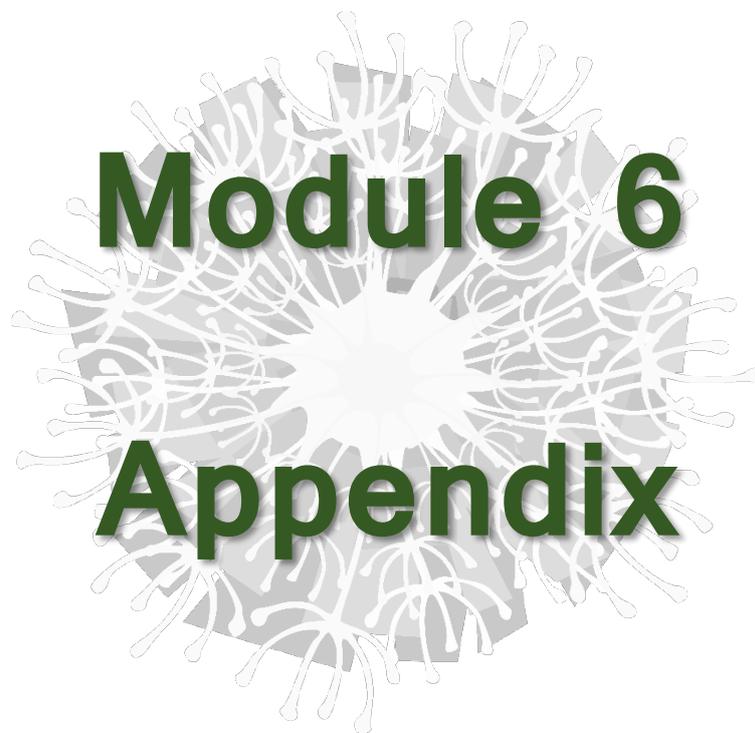
Activity:

- 1) Present a good example of positive language use around plants and nature, such as a folk tale, or a poem. If in the previous activities there were some good examples, you can refer to them here. Look for one with illustrations, for example, a 'kamishibai' or 'Paper Theatre' tale. Exercise should take about 5-10 minutes.
- 2) Individual exercise - 15-20 minutes:
 - a. Ask each participant to find a plant they are drawn to in the outside space available.
 - b. Write a poem or an ultra-short story about it. It can be very short one, such as a haiku:
 - Include descriptions and sensible experiences regarding the plant
 - Include emotions that the plant evokes
- 3) When people are ready with their poems, put them into pairs, or groups of 3-4 people- exercise should take about 45 minutes.
 - a. First, ask the participants to share their poems.
 - b. The groups then decide which of the poems they would like to illustrate. Groups can collaborate to create these poems together
 - c. The groups now design and draw their illustrations. Provide good quality (thick) paper for this exercise.
- 4) Each group presents their poem with the illustrations.

Trainer Notes

Provide enough paper and crayons etc., to cater for all the groups.

You can use a Paper Theatre tale as a reference, and then use the [Paper Theatre frame](#) for presentation.



Module 6: Additional information and references

Reconnection to nature through the language we use.

It is common knowledge that the way we use language determines the way we think about something. Positive psychology uses this for changing our picture of ourselves and others – empowering us to talk more positively. Here we empower ourselves to talk more positively about nature.

Our relationship with nature, and within it with plants and animals, is also very much affected by the way we talk about it. Ecolinguistics targets this area with the concept of “re-minding”, which according to Stibbe is “*explicitly calling attention to the erasure of an important area of life in a particular text or discourse demanding that it be brought back into consideration*” (Stibbe, 2015:164). In our case this is our relationship and relatedness to nature. The way re-minding can work is to give “salience” to these areas, giving them importance and reminding us of its value as an approach. Stibbe (among others) stresses that giving salience happens most successfully through visual description, relating something to our senses.

David Abram, philosopher, in his famous work *The Spell of the Sensuous* (1996) describes how we are very much bodily disconnected from nature, and how this reflects on our sense of self and our relationship with nature and our natural embeddedness. In his work, *Becoming an Animal* (2010) he argues that we need to find “a new way of speaking, one that enacts our interbeing with the earth (...) A style of speech that opens our senses to the sensuous” (Abram 2010:3).

How does salience work? How can we change our way of speaking about nature to have a deeper connection?

As Stibbe (and Abram) points out, it is important to use sensual descriptions, also perhaps including emotional relationships (like awe, fear, love), which in turn give back the animal or plant its agency.

After reading three descriptions in the handout, we can already feel the difference in how we start to relate to the flower itself. In the first example, the flower is important in itself (as we just learned, this is a hermaphrodite plant) – an agent that acts; the second describes the flower in a detached way (a passive use of verbs), while in the third it becomes only a tool for production.

According to cognitive theory (see Lakoff and colleagues on metaphors, 1980) our use of language is very much body-based – we formulate the meaning based on our embodied experience, which means that the more visually and sensually we describe something, the more emotions are invoked. We cannot really get attached to a plant which meets an increasing demand on production (description C); the same is likely to be true of a herb with ‘lanceolate leaves and hermaphrodite flowers’ (B – although biologists might be an exception here); however pictures of a yellow flower in the sunset housing a bee and opening its petals quickly can invoke emotions. This flower has its own life and activities, it is an active being, an agent in itself.

Fairclough (2003:150) describes the process as impersonalization (here we apply this to plants - also active, living beings) where people (and other living beings) are represented only as elements of organizational structures and processes. We can clearly see this in the descriptions provided, but it is easy to find examples in our daily life.

We encourage you to view the video on plant competitions again with this in mind, noting the language use of the lecturer who often personalizes the plants, giving us a unique opportunity to connect to them.

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- Fairclough, N (2003). *Analysing Discourse Textual Analysis for Social Research*, Routledge
- Deng, Y. C., Hua, H. M., Li, J., & Lapinskas, P. (2001). Studies on the Cultivation and Uses of Evening Primrose (*Oenothera* spp.) in China. *Economic Botany*, 55(1), 83-92.
- *Oenothera biennis* link: https://en.wikipedia.org/wiki/Oenothera_biennis, retrieved 26th July, 2021.

Module 6: Activity 1 - presentation slide

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The evening primrose

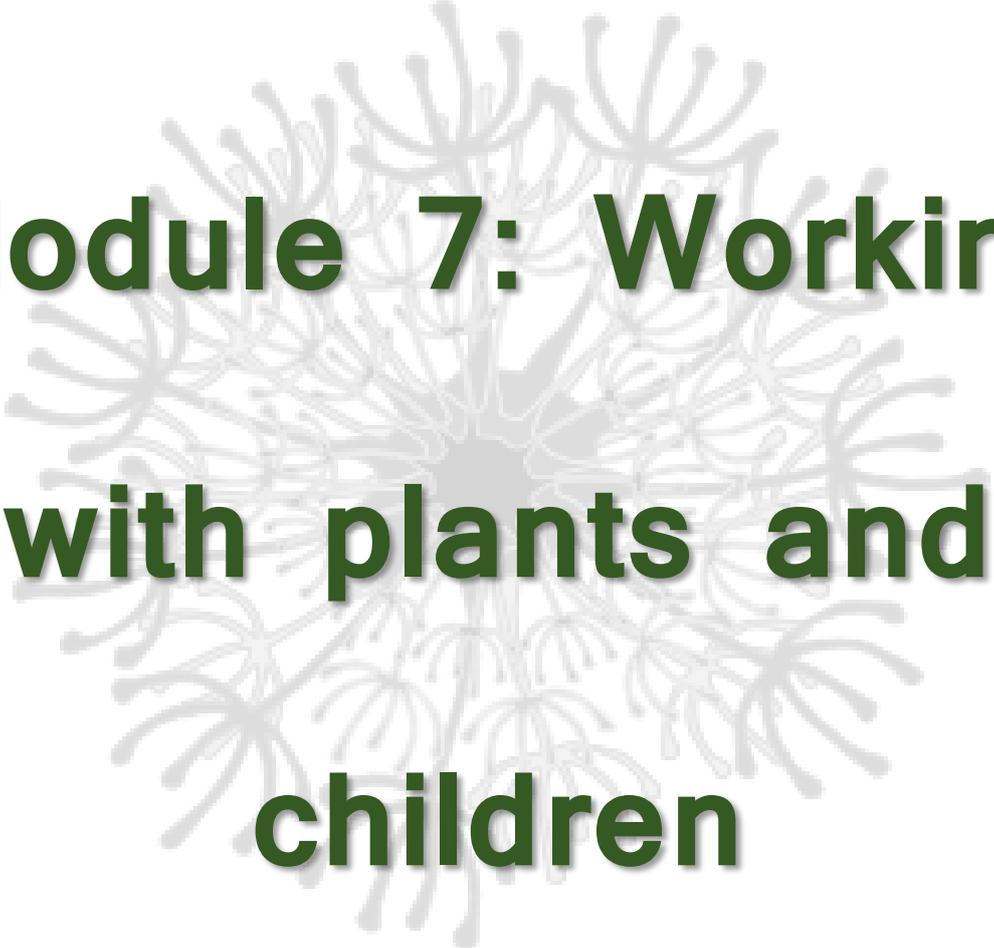
- a) The little girl sat there in the orange sunset light, and waited for the evening primroses to open. “Look” –she screamed happily – “the bee climbed into the flower”. “Yes, she might look for a place for resting a little. She might be tired” – I responded. Meanwhile the flower popped up and started to open her beautiful yellow petals. It was like in an Attenborough movie – the whole blooming took less than a minute, the petals opened up, and the bee found herself outside again, with a big baggage of pollen sticking to her feet. At the very same moment, a withered petal – maybe from the flower of the previous night – slowly dropped to the ground. We all stared the process with awe. I felt my throat tightening with a basic existential fear of loss.

Yellow buds pop up

Blossom for one night only

It is all we have.

- b) “***Oenothera biennis***, the **common evening-primrose**, is a species of flowering plant in the family *Onagraceae*, native to eastern and central North America, from Newfoundland west to Alberta, southeast to Florida, and southwest to Texas, and widely naturalized elsewhere in temperate and subtropical regions.^[3] **Evening primrose oil** (EPO) is produced from the plant. (...) *Oenothera biennis* has a life span of two years (biennial) growing to 1.6 m (5 ft 3 in) tall.^[6] The leaves are lanceolate, 8–18 cm (3–7 in) long and 2–6 cm ($3/4$ – $2+1/4$ in) wide,^[6] produced in a tight rosette the first year, and spirally on a stem the second year. Blooming lasts from late spring to late summer. The flowers are hermaphrodite, produced on a tall spike and only last until the following noon” (Wikipedia)
- c) “Evening primrose originated in North America and became naturalized in the north-east of China about one hundred years ago, where it has been used as famine food and animal feed. New uses for the seed oil, which contains γ -linolenic acid (GLA), that have been developed in China and overseas since 1980 have created a much larger commercial demand for the seed. There are eight species of *Oenothera* L. growing wild in China, of which *Oenothera biennis* L. is preferred. The maximum annual production of wild evening primrose seed is estimated to be about 3000 tons but, since 1986, evening primrose has also been cultivated for its seed and oil using *O. biennis* (primarily in the provinces of Jilin, Liaoning, Hebei, and Shandong) to meet the increasing demand. New production techniques have been developed and disseminated, and reported seed yields range from 750 to 3000 kg ha⁻¹. Commercial production follows a cyclical pattern, with the largest harvest to date, in 1999, estimated at 16 000-19 000 tons of seed.” (Yu-Cheng Deng et al, 2001:83)



Module 7: Working with plants and children

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Module 7: Working with plants and children

Learning Outcomes:

By the end of the session, learners will be able to

2f. Use the PAPPUS resources to build up a pedagogical process for their pupils

Session Summary

Within this session, participants can focus on how the strategies and approaches learnt throughout the PAPPUS course can be used to inform their own pedagogical work. They can support each other in creating a basic plan on how to use the PAPPUS resources for their specific pedagogical aims.

Trainer Notes

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Session Plan - Module 7 Working with plants and children

Activity and LO	Time	Content	Method	Resources
Warm-up	10 minutes	Warm-up game Objective: to energize participants after the break	Whole group	
Activity 1 LO 2f	90 minutes 	Design a pedagogical process Objective: to design participants' own pedagogical processes, using the PAPPUS resources	individual and small group	Blank sheets, pens
Summary	5 minutes	Summing up	Plenary	

Activity 1: Design a pedagogical process

Learning Outcomes:

2f. Use the PAPPUS resources to build up a pedagogical process for their pupils

Time: 90 minutes

Method: Individual / small group

Activity

Tell participants that having had the chance to get familiar with the PAPPUS resources, that they now have the opportunity to practise integrating the new information into their teaching programme for their own students.

Ask participants to spend around 10 minutes thinking about the groups of students to whom they are planning to introduce the PAPPUS programme, identifying their objectives for the groups (i.e. what they want to achieve by introducing PAPPUS, what subjects they may be teaching through PAPPUS).

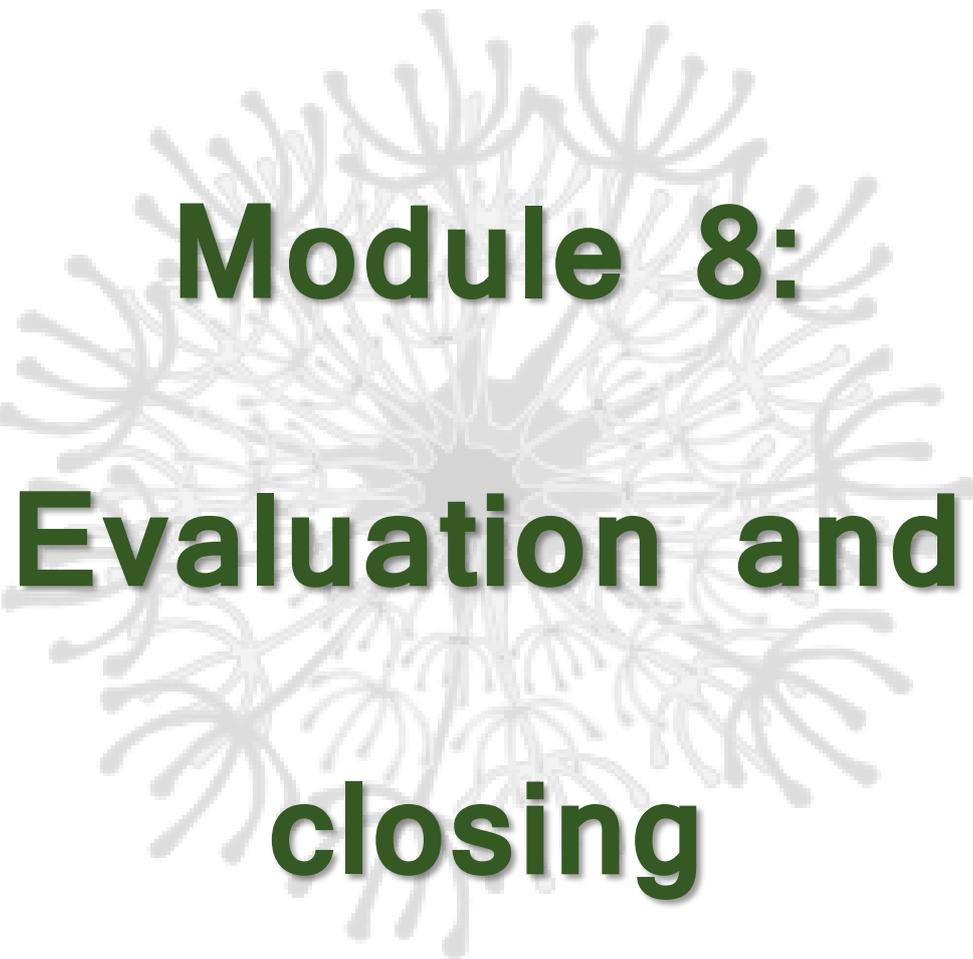
When they are ready, ask participants to form small groups of 4 people where they can support each other's goals by brainstorming together. If there are participants whose groups have similar characteristics (e.g. they are both teaching maths for 8-10 year olds), bring them together. Each participant will have 20 minutes for their own "case", where they tell everyone about their plans which the group then brainstorms, suggesting ways this could be achieved. They can use specific activities from the training course, or scroll through the [PAPPUS website](#) / [PAPPUS Toolkit](#) to look for activities that might fit their goals. Participants can also share their own practice.

Advise participants of 20-minute intervals so that they can move on to the next person.

Trainer Notes

Make sure the participants know when the 20 minutes is up, and emphasize that it's important to move on so that everyone has a turn. (If the groups decide not to move on because they want to work on a single plan, that is OK).

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**Module 8:
Evaluation and
closing**

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Module 8: Evaluation and closing

Learning Outcomes:

By the end of the session, learners will be able to

- 3d. Build positive attitude towards plants and nature
- 4. Demonstrate an understanding of interdependency and connection
- 5c. Give/receive individual positive feedback
- 5d. Describe experiences

Session Summary

This is the closing module of the PAPPUS course. Within this session participants can reflect on the course, evaluate it and give feedback on the course and to each other.

Trainer Notes

-

Session Plan - Module 8 Evaluation and closing

Activity and LO	Time	Content	Method	Resources
Warm up	10 minutes	Warm up game		
Activity 1 LO 5d	30 minutes 	Evaluation game and discussion Objective: to evaluate the PAPPUS course	Whole group	Cards displaying emotions
Activity 2 LO 3d	30 minutes 	Mandala Objective: to reflect on the week and create a mandala together with plants	Whole group	Access to nature
Activity 3 LO 4, 5c	30 minutes 	Spider web Objective: to say goodbye	Whole group	A ball of yarn
Summary		Summary and close		

Activity 1: Evaluation game and discussion

Learning Outcomes:

5d. Describe experiences

Time: 30 minutes

Method: Whole group

Resources

- A set of cards that display different emotions.

Activity

Towards the end of the training, spend some time evaluating the course, asking for feedback from participants concerning their enjoyment and how useful they found it.

We propose two activities:

Firstly, ask the participants to stand in a circle and to come up with a gesture (it can be accompanied by a sound as well) that represents their general impression of the training and how they've felt during the training. Ask someone to start, showing their gesture, and ask the others to repeat that gesture. Make sure everyone gets to share their gesture, and have it mirrored by the rest of the group. This can be quite an emotive exercise and you might like to discuss this.

The next exercise requires a set of cards displaying emotions (such as "Bear cards", "Cat cards", or similar), and lay them down in the middle of the group. Ask everyone to choose one card that represents how they feel about the training. When they've made their choice, ask someone to start by showing their card and explaining why they chose it and how they found the training.

Activity 2: Mandala

Learning Outcomes:

3d. Build positive attitude towards plants and nature

Time: 30 minutes

Method: Whole group activity

Resources

- Access to natural resources/pre-prepared plant parts.

Activity

- 1) Ask all participants to go out into the available open-air space and collect plants and plant parts, fruits, nuts etc., meanwhile reflecting upon their learning during the course.
- 2) Prepare a large sheet of paper, or a dedicated area to create the Mandala.
- 3) As people come back inside with their objects, ask them to arrange them on the Mandala, which they create together in this way. Try to encourage this activity as a silent or quiet process. Play some relaxing music to help the creative process.
- 4) When the Mandala is completed, participants can be encouraged to place other items created during the week, all around it.
- 5) Invite people to have a look at all these creations in silence.
- 6) Follow this by asking everyone to stand in a circle around the Mandala, joining hands if the group is close enough.
- 7) Create a Sound Bubble together by humming or singing simple sounds.
- 8) Bring the exercise to a close.

Trainer Notes

If there is no outside space available, you can provide a variety of different coloured nuts, grains, leaves, dried flowers, spices, etc.

Activity 3: Spider web

Learning Outcomes:

4. Demonstrate an understanding of interdependency and connection
- 5c. Give and receive individual positive feedback

Time: 30 minutes (can be longer if you have time)

Method: Whole group activity

Resources

- A ball of yarn

Activity

- 1) Have the group sitting in a closed circle with no empty seats or too much space between them.
- 2) Using a ball of yarn (the more colourful the better) tell the participants that whenever they get the ball, they have to wind some of the thread around their finger. They then choose someone else to throw the ball to so that they are now connected with a 'thread line'. They should give some positive feedback directly to that person, avoiding talking about him/her in third person (so "I very much enjoyed doing this or that with you" instead of "I choose her, as she is this or that").
- 3) For the first round, everyone should choose someone who hasn't yet had a turn so that the yarn is eventually returned to the person who started the activity. If there is time, go around the group again, providing further feedback and increasing the visual (and felt) web of connections.
- 4) Close the exercise by drawing attention to the extent of the web and how interconnected the group has become. Point out that no-one can make a move without it having an impact on many other people in the circle.

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**Warm Up
Games**

Warm-up game 1: Samurai

Learning Outcomes:

- Increasing the focus and concentration of the group
- Warming up

Time: 10-15 minutes

Method: Whole group

Activity

The whole group stands in a circle. There should be about one arm-length between participants. Everyone takes on the role of a Samurai. The aim of the game is to find the best two Samurais. Allow plenty of time for all the participants to learn the steps/fight choreography before moving on to the competition:

1) One iteration:

- Holding the sword with two hands pointing down, the person starting swings it above their head and while holding it there, shouts: 'Hi' (pronounced {i} not {ai}).
- The two people either side swing their imaginary swords as if they are going to cut him/her in half, while shouting 'JAAA', before withdrawing.
- The person who started the competition now swings their sword down to point a new person, and shouts 'SAAAA'.
- The new person selected repeats the activity.

2) Competition: anyone making a mistake, such as those listed below, has to leave the circle, dropping out of the game.

- a. reacting too slowly
- b. not reacting
- c. not being synchronous with their partner on the other side
- d. reacting when not involved etc.

3) The game ends, when there are only two Samurai left, and they are the winners.



Warm-up game 2: Mazeltov

Learning Outcomes:

- Increasing the focus and concentration of the group
- Warming up

Time: 15 minutes

Method: Whole group

Activity

The instructor teaches a series of actions to the group who are standing in a circle. When the game begins, there can only ever be one person performing the given action.

Possible actions:

- The person who begins turns to one side and shouts 'KIA' with two hands stretched forward at hip level, and palms up. The KIA action always has to travel in the same direction, so if you receive the action from the person on your right, you can only pass it on to the person on your left (i.e. you don't change direction).
- The person receiving the KIA can decide to repel the action by crossing his/her arms in front of their body, and saying "USHIBUSHI". This sends the action back to the sender.
- The person receiving the KIA can decide not to pass it on to the next person but instead to someone else in the circle, by performing the same action but saying "KIAMIA" instead. The person receiving the action now chooses how they will pass it on (i.e. in what direction and what accompanying word).
- The person who receives the action can decide on a group action, and greet everybody by holding one arm up and saying "MAZELTOV". The whole group follows, repeating the same action while shouting "MAZELTOV". The person who initiated the action can then decide to continue with any other action (apart from USHIBUSHI, as there is no action to be thrown back, as s/he was the last actor).
- The person whose turn it is can decide on a group action, saying "NOBEL PRIZE" and walk proudly into the circle while the others celebrate /cheer them for winning the prize. After this, the same person continues with a different action.
- The person whose turn it is can decide on a group action, saying, "FIESTA", at which point everyone cheers and dances to a different place in the circle. After this, the same person continues with a different action.



Warm-up game 3: Rock/Paper/Scissors

championship

Learning Outcomes:

- Increasing the focus and concentration of the group
- Warming up

Time: 5 minutes

Method: Whole group

Activity

- 1) The instructor describes the idea of the game, which is that participants meet for 'fights' using representations of rock/paper/scissors. Each pair counts to three together, after which they make a shape with their hand to represent one of the following:
 - a. stone: the hand in a fist
 - b. paper: the hand open, fingers stretched out
 - c. scissors: index and middle fingers in shape of scissors

Stone beats scissors, scissors beat paper, paper beats stone.

- 2) The participants start to walk around the room, chanting their own name, as if cheering themselves on. When they come face to face with someone else, they count to three and produce their 'weapon'. Whoever loses has to stand behind the winner with their hands on their shoulders, shouting their name as they join up to find a new 'fight'.
- 3) Whoever wins the next fight is joined by the chanting line of the loser (however many people are in it), until there are only two lines, and finally just one - the winner!

Warm-up game 4: Marilyn Monroe

Learning Outcomes:

- Increasing the focus and concentration of the group
- Warming up

Time: 15 minutes

Method: Whole group

Activity

The group stands in a circle, with one person in the middle who points at someone else, calling out one of the names below. Each of the names requires an action/short scene to be performed as quickly as possible by that person and the two people on either side of them. If any of them fail to perform the action (or if someone not involved starts to move) they have to change places with the person in the centre.

Suggestion names/ actions (you can add your own)

- Marilyn Monroe: the one in the middle is Marilyn Monroe trying to hold down her skirt, while the people in the circle are the wind trying to lift the skirt up.
- James Bond: the one in the middle holds up an imaginary gun while the people either side shake in terror.
- Washing Machine: the people on either side create a frame for a washing machine, while the one in the middle makes circles with their head as if they were in the machine.
- Toaster: the people on either side hold their hands together creating the slots in a toaster, while the person in the centre is the toast, jumping up and saying “bip”.
- Palm tree: the person in centre stands with their hands held above their head, and palms facing up. The two people on either sides are “dancing” under the palm tree.

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