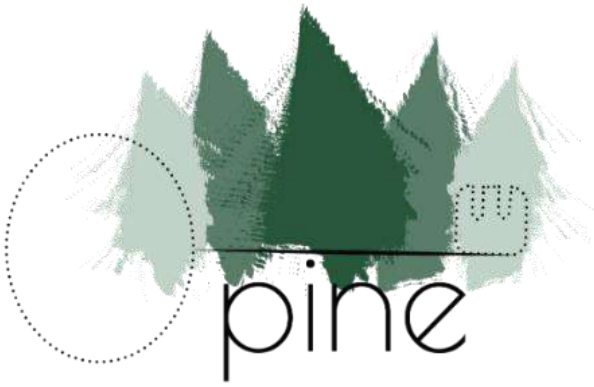


Formal, non-formal and informal field teaching resources

Contents List

INTRODUCTION

Experience without theory is blind, but theory without experience is mere intellectual play.

Immanuel Kant

First part of this brochure is focusing on formal field teaching resources.

Many topics being taught at school are based on concepts and facts, most of which have become dogmatic to the learners and most learners will actually not challenge these ideas, because this is what mainstream education has taught them. For example, when asked the following question or stimulus "what is soil?", a learner might respond to the stimulus with the automatic response, "Soil is a mixture of organic matter, minerals, gases, liquids, and organisms that together support life".

This immediate "correct" response will be made if the connection between the stimulus and response has been built correctly in the first instance, and subsequently reinforced over time; in this manner the associated neural pathways have been practised and strengthened. However, one should note that making a "correct" response does not necessarily imply understanding. By considering the above-mentioned example, a learner might know what soil is, but does the learner know what soil feels like? Has the learner analysed different soil samples and thus concluded that not all soil is the same? Has the learner observed how soil from different sources can give rise to an entirely different ecosystem?

It is important to keep in mind that by no means is this traditional or mainstream approach being scrutinised, however, this approach can be strongly enhanced by complementing it with the practical component, where the learners can experience the knowledge that is being presented. Whilst this frame of mind can be applied to most subjects being taught at school, it can be most relevant (and easily applied) to science subject and topics related to the environment.

Even though in class implications associated with the topic in question can be constantly discussed, most of the concepts can still be considered too abstract for the learners to fully appreciate the topic being presented to them.

Supporting the theoretical component with the practical aspect is a vital aspect of the whole learning process, during which the learners obtain and enhance a number of skills, such as:

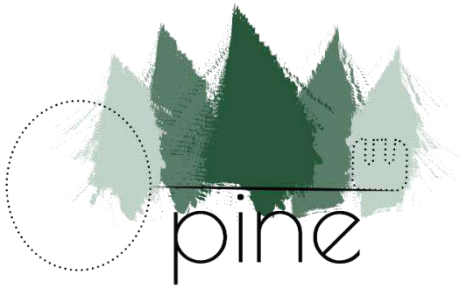
i. Application of knowledge

ii. Appreciation of the knowledge being delivered
iii. Team work and communication skills
iv. Professionalism and leadership skills
v. Critical thinking skills
vi. Problem solving skills

These skills are transversal skills which means that the learner will not only obtain knowledge about the topic in question but will also gain skills that can be applied in different real-life scenarios beyond the classroom walls.

The second part of this brochure is focusing on non-formal and informal field teaching resources for young people with autism spectrum disorder or learning difficulties.

Many researchers have recognized that learning through environmental education help children overcome their initial fears, enjoy learning, increase observation skills, imagination, shape analysis, creativity and logical thinking (Chien-Yu Lin et al., 2016). Concerning environmental education, all special needs, including children with multi-sensory, thus profound, multiple learning disabilities, severe communication and interaction difficulties, including autism need a different approach in terms of inclusion (Thomas and Loxley, 2001; Chapman, & Pease).
The design for special needs' children requires focusing on senses including touching, smelling and hearing and also motor skills, having always in mind the major difference of their senses and their physicality (Hussein, 2010). As some senses of students with special needs malfunction compared to others, gardens can offer through visual, auditory and tactile stimuli further opportunities for exploration, thus understanding of the environment and consequently improving their self-esteem (Mount, & Cavet, 1995; Chawla, & Heft 2002).



Formal field teaching resources

Notes to educator
Important things to consider:
Learners should have a good background or be given a suitable introduction on the following: ↬ Different habitats ↬ The abiotic factors that regulate terrestrial and aquatic habitats ↬ Zonation and distribution ↬ The importance of Natura 2000 sites ↬ Different sampling techniques ↬ Risk assessment of a sampling area
List of resources
Links
ERA (n.d.). *BioSnippet Initiative*. [online] Era.org.mt. Available at: https://era.org.mt/en/Pages/BioSnippet.aspx ERA (n.d.). *Natura 2000 in Malta*. [online] Era.org.mt. Available at: https://era.org.mt/en/Pages/Natura-2000-Malta.aspx Topke, K. (2018). *Rocky shore habitat - Coastal Wiki*. [online] Coastalwiki.org. Available at: http://www.coastalwiki.org/wiki/Rocky_shore_habitat
Scientific articles
Beunen, R. and de Vries, J. (2011). The governance of Natura 2000 sites: the importance of initial choices in the organisation of planning processes. *Journal of Environmental Planning and Management*, 54(8), pp.1041-1059. Carboni, M., Santoro, R. and Acosta, A. (2010). Are some communities of the coastal dune zonation more susceptible to alien plant invasion? *Journal of Plant Ecology*, 3(2), pp.139-147. Deidun, A. and Schembri, P. (2008). Long or short? Investigating the effect of beach length and other environmental parameters on macrofaunal assemblages of Maltese pocket beaches. *Estuarine, Coastal and Shelf Science*, 79(1), pp.17-23.

Deidun, A., Azzopardi, M., Saliba, S. and Schembri, P. (2003). Low faunal diversity on Maltese sandy beaches: fact or artefact? *Estuarine, Coastal and Shelf Science*, 58, pp.83-92.

Evans, D. (2006). The Habitats of the European Union Habitats Directive. *Biology & Environment: Proceedings of the Royal Irish Academy*, 106(3), pp.167-173.

Gauci, M., Deidun, A. and Schembri, P. (2005). Faunistic diversity of Maltese pocket sandy and shingle beaches: are these of conservation value? *Oceanologia*, 47(2), pp.219-241.

Mariani, S., Pinedo, S., Terradas, M., Cefalì, M., Chappuis, E. and Ballesteros, E. (2017). Habitat structure and zonation patterns of northwestern Mediterranean shoreline strands. *Scientia Marina*, 81(2), p.269.

McGarigal, K. and Cushman, S. (2002). Comparative Evaluation of Experimental Approaches to the Study of Habitat Fragmentation Effects. *Ecological Applications*, 12(2), p.335.

Mücher, C., Hennekens, S., Bunce, R., Schaminée, J. and Schaepman, M. (2009). Modelling the spatial distribution of Natura 2000 habitats across Europe. *Landscape and Urban Planning*, 92(2), pp.148-159.

Ostermann, O. (2008). The need for management of nature conservation sites designated under Natura 2000. *Journal of Applied Ecology*, 35(6), pp.968-973.

Schembri, P., Deidun, A., Mallia, A. and Mercieca, L. (2005). Rocky Shore Biotic Assemblages of the Maltese Islands (Central Mediterranean): A Conservation Perspective. *Journal of Coastal Research*, 211, pp.157-166.

Tsiafouli, M., Apostolopoulou, E., Mazaris, A., Kallimanis, A., Drakou, E. and Pantis, J. (2013). Human Activities in Natura 2000 Sites: A Highly Diversified Conservation Network. *Environmental Management*, 51(5), pp.1025-1033.

THE PRACTICAL ASPECT OF HABITAT PROTECTION

Scenario:

You shall be visiting a Natura 2000 site. During such visits you are going to study the presence and distribution of a number of communities over a specific spatial scale using different types of biological survey techniques. By studying such communities, you will be able to distinguish different habitats. You are also requested to observe any human activities that have or could have a potential impact on the different habitats encountered. With this information you will be in a position to observe whether ongoing management plans are effective in safeguarding specific habitats as well as specific organisms. Finally, you will present your work in an information poster that will be disseminated to the general public.

The following are the aims of your project:

Aim 1: To identify and characterise different habitats over a specific spatial scale.

Aim 2: To devise a sampling technique that show the zonation of different communities along different environmental gradients.

Aim 3: To identify anthropogenic activity within the study area.

Aim 4: To evaluate a management of a protected site and provide suggested improvements.

Aim 5: To disseminate the collected information to the general public.

As you can see the aims are all related and will be grouped in different tasks. Each task will be clearly explained, and the final outcome of each task will contribute to one of each aims.

More information on the habitats and sites that we shall be visiting will be communicated to you during the **briefing** session.

Task 1: Habitat identification and characterisation

1. **Describe** the different habitats that form part of the Natura 2000 site that you visited. In your account you need to:
    a. **Identify** the different types of habitat.
    b. **Characterise** the habitat in terms of possible fauna and/or flora.
    c. **Briefly describe** the biotic and abiotic factors that characterise each habitat observed.
    d. **Include photos** that you took during the field trip to back up your explanations.

Task 2: Carrying out a biological survey

2. Select **TWO** techniques to study the different communities which will be encountered in the different environments visited during the activities. In your account you need to:
    a. **Explain** the application of these techniques.
    b. **Justify** the selection over other established techniques.

3. **Employ** the **TWO** techniques mentioned to identify and quantify the species in an area.

4. **Present** the following results in a suitable and coherent fashion:
    a. Species range and abundance.
    b. Relative dominance of the habitat.

5. **Discuss** any patterns that can be observed in your results.

Note:

- You are requested to present the raw data in the appendices towards the end of your assignment. You are NOT to show the raw data as your answer – you need to present your results in a way that can be easily interpreted.
- Keep in mind that any diagrams, figures or tables need to be adequately labelled – failure to do so will results in deduction of marks.

Task 3: Assessing the impacts of anthropogenic activity

6. Present a **detailed and valid environmental assessment** of the effects on study area caused by various anthropogenic activities.

   You need to provide the following information on the impact(s) on the surrounding environment by considering the following parameters:

   - List of **impact(s)**
   - The **classification** associated with each impact (use the following scale: highly significant, moderately significant or not significant).
   - **Justification** for your choice of significance.
   - Suggested **mitigation** for the mentioned impact.

Task 4: Evaluation of the management plan

7. Access the following link and select the management plan related to the Natura 2000 site that you visited:

   https://era.org.mt/en/Pages/Natura-2000-Management-Planning.aspx

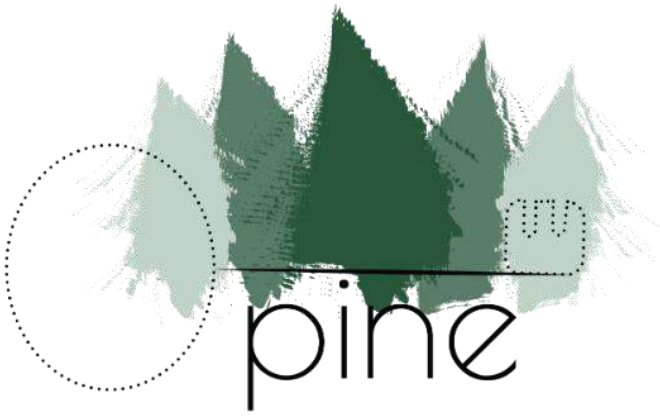
8. By considering what should be happening to safeguard the study area (according to the management plan) and from your own observations, **explicitly evaluate** its **effectiveness** in terms of the following points:

   - Liability and repercussions
   - Technical details
   - Mechanism of implementation

Task 5: Dissemination of Information

9. Consider Tasks 1 – 4 and summarise your work in an information poster.

Notes about the information brochure:
↬ Poster must be A-2 in size.
↬ It is suggested that you use pictures and colours so as to aid in explanation.
↬ The minimum font requirements are: Arial size 11 or Times New Roman size 12 or Calibri size 12 Verdana size 11
↬ Margin size should be 1.5cm x 1.5cm.



Non-formal and informal field teaching resources for young people with autism spectrum disorder or learning difficulties

Notes to educators:
⁓ The following sessions are only suitable in an outdoor green space. ⁓ The sessions are designed for groups of up to 25 young people with autism spectrum disorder or learning difficulties.

Session 1: Importance of Nature

Session Theme: A discussion based activity in nature to talk about why nature is important.

Time: Up to 1.5 hours

Resources and handouts:

- Notebook and pencils each
- Blindfolds in pairs
- Empty pots per group
- Different types of Herbs

Learning outcomes (knowledge):

- Maintaining and developing entrepreneurship skills
- Increasing creativity and focus.
- Learning to work in a team and communicating

Key competences developed:

- Inclusion
- Environmental value
- Active citizenship
- Communication
- Entrepreneurship

Background and research:

1. *Importance of nature on human health*

- Increased creativity and problem solving
- Reduces stress and depression – relieves anxiety and puts us in a more relaxed mind-set
- Improves focus and cognitive abilities – awareness, reasoning and observational skills
- Increases physical activity
- Improves social interaction – green spaces give a sense of ownership, community identity and attachment, bring people together to socialise
- Improves self-discipline
- Develops independence

2. *Why are plants important?*
   Food
   Plants provide natural food sources, need to be colourful to attract pollinators and seed dispersal mammals which spread the plants helping to reproduce the plant.
   Medicine
   Nature provides us with medication such as aspirin, morphine, treatment for cancer, HIV however ecosystems which have provided the most beneficial medications to date are the most endangered e.g. forest, coral reefs
   Oxygen
   Plants absorb the carbon dioxide animals breathe out and release oxygen from their leaves that animals need to breathe in.

Session Outline (with timings):

Discussion - What does nature mean to us? (5 minutes)

Have the group discuss what nature means to them, ask them the following questions to help them think of the answer

- How do you feel when you walk around the city? What do you hear/see/smell?
- Discuss what nature means to us? What do you think about when you hear the word nature?
- Who has been to a nature reserve/clifftop/sea/local green space/park and just walked along taking in the wildlife, the habitats and the sounds? How did it make you feel? What did you hear/see/smell?
- Which memory do you prefer? City or nature?

Explore nature – Walk around garden (15 minutes)

Immerse the group in nature. Have them sit on the ground/benches and close their eyes, walk around quietly and look at the plants, pond, trees, listen to natural sounds, feel the breeze, feel the grass/plants/trees, smell the plants.

After spending 5 minutes immerse in nature. Have the group discuss how they felt during and after. Ask them the following questions:

- Are you more relaxed? Feel closer to nature? Happier?
- How do you think nature benefits our health?

Explore nature – Sound Map (20 minutes)

Split the group into 2 groups. One group starts in a garden/green space while the other starts in a built up area. Each group sits for 5 minutes with a piece of paper recording all the sounds they can hear. Make sure they have labelled which area they are in to refer back to later. If they can hear birds, they should record the different songs separately. The groups to come together and` pair up to discuss what they heard.

Discuss and ask them:

- What are the differences in the locations?
- Were there more natural sounds in the garden/green space or the built up area? If so why?

Groups should then swap and just sit and listen without recording what they can hear for 5 minutes. They should come back as a group. Once in the large group, ask them which area they preferred and why.

Explore nature – Natural cocktails (20 minutes)

Prepare smell pots prior to student's arrival. Smell pots should be different herbs in the pots mixed together. Working in small groups (3-4) students to work their way through the smell pot, go through the smells and try to find where they came from in the garden. E.g. rosemary leaf in pot, student smell and smell all the plants around the garden until they find matching smell.

Once this has been completed, the group should be asked:

- Why are plants important?

Plenary (20 minutes)

Discuss and review why nature is important. After this short discussion have the group discuss the following questions:

- What do you think this area looked like 100 years ago? Less buildings/roads/people, more wild spaces and wildlife
- What if everyone slept for 100 years and woke up, what do they think the area would be like? More built up/buildings/roads/ people, less green space, wildlife
- Give them a challenge: Have them find somewhere this week to enjoy nature in their free time.

Session 2: Connecting and Respecting

Session Theme: This is a number of activities and games to show that all nature is connected, therefore we need to respect nature.

Time: Up 1.5 hours

Resources:

- Blindfolds
- Binoculars
- Clay
- Hula hoops
- Radio/phone to play music
- Different pictures/names of birds and minibeasts – enough for all the group
- Sticks – these can be collected by the group

Learning outcomes (knowledge):

- Increase environmental value
- Increase communication and team work skills

Key competences developed:

- Inclusion
- Environmental value
- Active citizenship
- Communication
- Entrepreneurship

Session Outline (with timings):

Explore nature – Blind walk (20 minutes)

Have the group work in pairs. One of the pair (A) will be blindfolded, the other (B) will be guiding them through a green space.

Partner B will be guiding partner A through a green space and having them using their senses (other than sight) to explore the green space. Partner A should listen, smell and feel their surroundings. This will highlight the diversity of nature, even in a small space.

Partner A should remove their blindfold at the end of the walk to see if they can identify some of the plants they may have felt on their blind walk. Partner A and B should then swap.

Explore nature – Binoculars (15 minutes)

Give each a pair of binoculars to use. (or one between two)

They should then walk around the green areas and use their binoculars as much as possible.

Make sure they enjoy nature respectfully, from a distance and without disturbing it.

At the end of the walk ask them the following questions:

- How many birds you see?
- Where were they?
- Were they easy to spot?

Activity – Tree faces (20 minutes)

Give each student a ball of clay and have them choose a tree they would like to create a face for. If there is not enough trees, have pairs use the same tree but use opposite sides of the tree.

Tell them they need to create a face for their tree. Have them use fallen twigs, leaves, stones and other natural items reminding them not to pick any leaves or flowers.

Explain to the group that these trees have been around for many years, as trees are slow growers. Ask them the following questions whilst they are working: -

- What helps trees grow?
- What animals could be living in it or feeding from it?
- What do trees need to grow?

In groups walk around and look at each other's work. Discuss what story the trees telling.

Game – All connected (30 minutes)

This game is aimed to make the group discuss about how all things are connected.

Each student needs a name/picture of a bird or mini beast. Make sure the group is split half birds and half minibeasts.

Lay out enough hula hoops for every pair around a green space and explain that these hoops represent plants/trees, each hoop can only hold one bird and one mini beast.

To keep everything balanced a tree/plant need minibeasts to keep them healthy and birds to eat the minibeasts so they don't get over run with minibeasts.

Start playing some music. Explain to the group that when the music plays they need to walk around the hoops. When it stops a bird and a minibeast need to find a hoop to be safe in.

Before starting the music again, a hula hoop needs to be removed. Explain to the group that this represents deforestation. As each tree/plant is lost, there are less places for the group to rest.

At the end of the game explain that if we lose trees and plants, we also lose minibeasts and birds as they are all connected.

Session 3: Let's investigate some plants!

Session Theme: Using different arts and crafts to explore different aspects of nature.

Time: Up to 1 hour

Resources:

Paper, crayons, pencils, notebooks

What we need to survive cards (found in the appendix)

Learning outcomes (knowledge):

- Increase environmental value
- Increase ID skills of wildlife
- Increase team work and communication skills
- Improving theoretical and practical knowledge
- Improve creativity and expression

Key competences developed:

- Inclusion
- Environmental value
- Active citizenship
- Communication
- Entrepreneurship

Session Outline (with timings):

Explore nature – Hidden patterns (10 minutes)

Plants and trees are beautiful to look at and they have lots of different patterns and textures.

Give each person a crayon and paper.

Tell them each to find as many patterns that are hidden in nature as they can. Encourage them to look at tree trunks, leaves, petals, stones, pine cones etc.

Ask them to delicately make rubbings of their patterns or if this not possible (for example a petal or lead) have them draw them.

Once they have finished their design, they should discuss which is their favourite pattern and why.

Competition - What do I need to live? (10 minutes)

Hide around a green space the "What we need to survive" cards.

Split the group into 5 and designate them a colour.

Once they have been hidden, ask the group what do plants need to survive?

Explain to them there is cards with these items on the cards all hidden around the green space.

Each team has to collect all of their cards with the teams corresponding colour. First team to collect them all wins!

Game – Tree Tag (15 minutes)

Have the group discuss why are trees important? Promoting that they keep our air clean air, provide oxygen, provide homes and food for wildlife and they reduce noise pollution. The idea of this game is to discover how people can make it easier for the trees to survive.

Split the group in half. One half of the group are trees and the other half are humans that are wanting to chop down the trees.

The humans have to tag the trees. Once the trees have been tagged, they have been "chopped down" and are out.

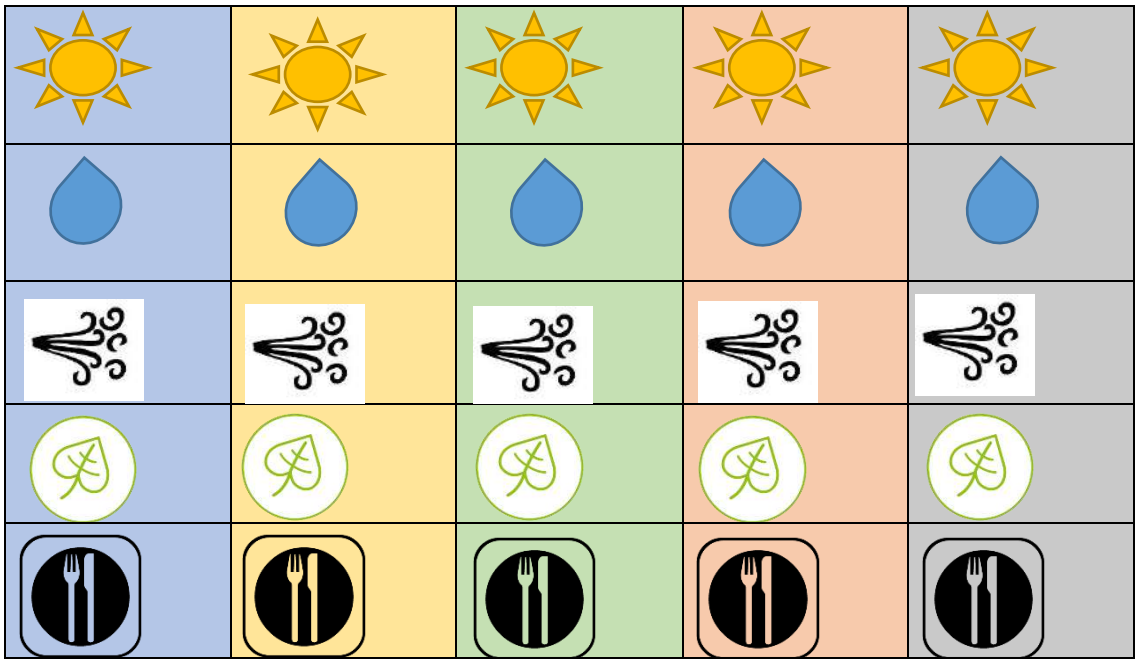
Once all the trees are out, discuss with the group how they can make it harder for all the trees to be chopped down.

If they are struggling with ideas, suggest that maybe one or two of the humans can be planting trees to replace those that are chopped down. The planters can tag the tree to bring it back to life again.

Once this has been completed, try changing the ratio of trees and humans.

Plenary - Discussion – Homes for wildlife (10 minute)

Have the group discuss which animals could be living in the plants they have investigated. Did they come across any animals whilst they were looking?



Session 4: Let's investigate some animals!

Session Theme: Exploring different habitats to connect with nature.

Time: Up to 1 hour

Resources:

- Eye loupes
- Insect pots
- ID sheets – birds, insects and ponds
- Binoculars
- Pond nets and buckets

Learning outcomes (knowledge):

- Increasing environmental value and respect towards wildlife
- Increased communication skills
- Increased team work skills

Key competences developed:

- Inclusion
- Environmental value
- Active citizenship
- Communication
- Entrepreneurship

Background and research

1. *What is a minibeast?*

   A minibeast refers to invertebrates, which is the name given to living things that don't have a backbone. They are the most numerous of the animal kingdom. They have an external skeleton (unlike vertebrates)
   What habitats do minibeasts live in?

   A habitat is the home for minibeasts. Large numbers of minibeasts can be found in every main habitat – rivers, ponds, lakes, marshes, grasslands, woodlands, hedgerows and seashores. Gardens and buildings can also be home to some minibeasts. Some minibeasts like to be in dark and damp places and some like to be on leaves and flowers.
2. Why are minibeasts important?

   Minibeasts are of great important to nature for a number of reasons. They are eaten as a food source, they help pollinate plants, they can decomposes and eat dead or decaying matter and recycle nutrients back into the ecosystem.
3. *How can we encourage more minibeasts?*

   There are lots of different things you can do in your garden to encourage more minibeasts.

Bug hotel – Lots of mini beasts like to be dark and damp. Building a home for them if the garden doesn't have lots of place for them to live will help to encourage them.

Log and stone piles – Put a log or large stone in an earthy corner and wait for different minibeasts move in. Show the groups how to lift and replace the log or stone very carefully so minibeasts do not get squashed.

Wildflower garden – Plant a patch of colourful flowers to attract bees and butterflies. They love lavender, cornflowers, marigolds and poppies and herbs such as thyme and majoram. (more information can be found here:

Bees – Bees are very important for the environment, as they are pollinators! Their numbers are declining because they do not have enough food or their habitat is vast. Building bee hotels, planting flowers or having small pools of water for them to drink from will help encourage bees to visit your garden.

For more information please refer to these links

- What is a mini beast? https://ypte.org.uk/factsheets/minibeasts/print
- What habitats do mini beasts live in? https://ypte.org.uk/factsheets/minibeasts/where-do-minibeasts-live)
- Bug hotel - https://*www*.rspb.org.uk/get-involved/activities/give-nature-a-home-in-your-garden/garden-activities/build-a-bug-hotel/
- Wildlife garden - https://www.rspb.org.uk/get-involved/activities/give-nature-a-home-in-your-garden/garden-activities/make-new-wildlife-friendly-plants-to-share-the-love/)
- Bees - https://thehoneybeeconservancy.org/how-to-save-the-bees/

4. *Suggested actions for nature:*

- Bird tables, bird boxes, bird food
- Minibeast hotels
- Compost bins
- Veggie plot
- Native planting
- Hedgehog houses
- Bat boutiques

Session Outline (with timings):

Discussion – Respectfully (5 minutes)

Start off with discussing with the group about how everyone should look for wildlife? Tell them they need to be quiet, gentle, and respectful. They should not pick up, not to capture and to leave the homes as they found them.

Minibeast hunt (15 minutes)

Have the group look for areas in the green space they think mini beasts might be.

Point out that some minibeasts like to be dark and damp, but others like to be in the sunshine. Log piles and the leaf litter are great places to start looking.

Explain to them how to look for minibeasts carefully, without hurting them or destroying their homes.

Using the ID sheets have the group try and ID all the minibeasts they find.

Bird spotting (15 minutes)

Hand out binoculars and the bird ID sheets to the group.

Have the group walk around trees or open spaces looking for birds.

If they are struggling to find any birds, have them listen to see if they can work out where they are. Then have them search for them using binoculars.

Ask them if they can ID them by sound or sight? And how many different calls can they hear?

Pond dipping (15 minutes)

Have the group gather around the pond and discuss with them what wildlife might live there.

Fill one of the buckets/trays with pond water.

Using the nets gently scoop the water and put the contents into the bucket/tray.

Have the group try to ID the creatures.

Tell the group to make sure to place the wildlife back in the pond gently.

Plenary (10 minutes)

Discuss with the group how they think minibeasts could be encouraged to visit. See background research to see how this can be done. These methods can be done in the green space to encourage more minibeasts.

Session 5: Taking Action for Nature!

Session Theme: Hands on activity

Time: Up to 3.5 hours

Learning outcomes (knowledge):

- Learning to work in a team
- Improving leadership schools
- Learning how to manage time effectively

Key competences developed:

- Inclusion
- Environmental value
- Active citizenship
- Communication
- Entrepreneurship

Resources:

- Video cameras
- Notebook, pencils
- Bird table kits
- Bird box kits
- Hammers
- Nails/tacks
- Fat ball ingredients: lard, bird seed, meal worms, mixing bowls, pine cones, yoghurt pot or coconut shell
- Spades
- Shovels
- Hoes
- Watering cans
- Veggie – seeds or roots
- Plant labels
- Sharpies
- Wooden signs and stakes
- Wooden crates
- Natural resources for hotels
- Wood

Session Outline (with timings):

These activities can be implemented over a few days or only one activity can be done. This all depends on time and space. Begin with an action plan to determine these factors and move one to the take action appropriate to the task the group would like to complete.

Action Plan (30 minutes)

Have the group split into small groups. Have them discuss what actions they can take in their green space and how they can improve the space for wildlife, environment and us.

Have the groups discuss their ideas in detail and what resources would be needed to create these ideas.

Bring the group back together and share the ideas with everyone; make a list of ideas and resources needed. Some of the ideas might be the same so group these together.

Discuss as a group which idea they should start with first and determine an action plan.

Take Action – Birds (1 hour)

Ask the group where they think is the best place to put bird feeders or bird tables?

Split into 3 groups. Each group will need to make a bird table and bird box. Each person will be making a fat ball. Have the group decide who's going to be in charge of what and have them swap roles in the groups so everyone gets a chance to do everything.

Action 1 – Bird table (per group)

Action 2 – Fat ball (per student)

- Mix all the dry ingredients together in a bowl
- Add the fat and give it a good mix around
- Plaster all over a pine cone, put it round the inside of a coconut shell or press into a yoghurt pot.
- Food can be pressed together and made into a bowl. This then can be placed on the bird table.

Action 3 – Bird box (per group) – each student to decorate part of the bird box. Draw images of natural things and sign with their name.

As a large group place the bird tables securely and place the food on the tables.

Decide where the bird boxes should go. If there is a site manager or gardener, make sure they are informed on where the bird boxes will be so they can be secured correctly and safely.

Take Action – Veggie plot (30 minutes)

Ask the group where the think is the best place to place a veggie plot. Reminding them what plants need to survive.

Clear the area designated for the veggie plot of weeds and loosen soil ready for planting.

Plant seeds or roots leaving enough space in between each. Plant the same veggies in a line.

Write the name of the veggie on a tag and place next to it.

Remember to water the area regularly.

Take Action – Insect Hotel (30 minutes)

Discuss with the group about where they think is more appropriate place for an insect hotel. Remind them that insects such as bees and butterflies like to be in the sun.

Using recycled bits of wood or stake make a wooden frame, fixing the wood with screws or nails.

Fill the frame with steams, twigs and sticks.

Fix a wire loop to the back of the frame and hang in the area that was discussed.

Take Action – Minibeast hotel (30 minutes)

Discuss with the group about where they think is the most appropriate place for a minibeast hotel. Remind them that minibeasts like to be dark and damp.

Using a recycled crates and logs, stack them together and stuff leaf litter, pine cones and twigs into the gaps, creating spaces for minibeasts to make their homes.

Make sure it is stable and completely stuffed to ensure it lasts.

Take Action – Signage (30 minutes)

Hammer the stake and the sign together before designing.

Create signs for bug hotel, veggie plot, bird tables, bird boxes

Hammer the signs in appropriate places.