

# Eco-Schools Biodiversity Resources

**KEEP  
NORTHERN  
IRELAND  
BEAUTIFUL**



**ECO-SCHOOLS**

# School grounds provide an ideal opportunity to introduce children to the natural environment and biodiversity in a practical way.

Even if your school is in an urban area with minimal space, you will be able to implement some of these ideas. You will also find that by taking part in the Eco-Schools Biodiversity topic you will be crossing over into other topics like the School Grounds topic and if you are clearing areas for planting or wildlife you could also be covering the topics of Litter and Waste. These ideas are fun to get involved in and can really enrich the school experience for a lot of pupils!

## What is Biodiversity?

- Biodiversity means the variety of life. It includes all plants and animals, their habitats and what links them to each other and their surroundings.
- Biodiversity is not restricted to rare and threatened species and habitats but includes the whole of the natural world from the ordinary to the endangered.

## How can biodiversity be introduced into our school?

- Plants are a great way to introduce biodiversity into your school, either within the classroom or outdoors in the outer school grounds.

## Classroom Planting:

- Many urban schools which do not have outdoor space can make use of classroom planting or the 'indoor garden'.
- Testimonials from many teachers and pupils suggest that having indoor plants enriches the classroom environment.
- A popular idea is to grow plants in small grow bags on the windowsills of classrooms, or to allow pupils to sow sunflower or pea seeds to take home in small pots at the end of term.

## Outdoor Planting:

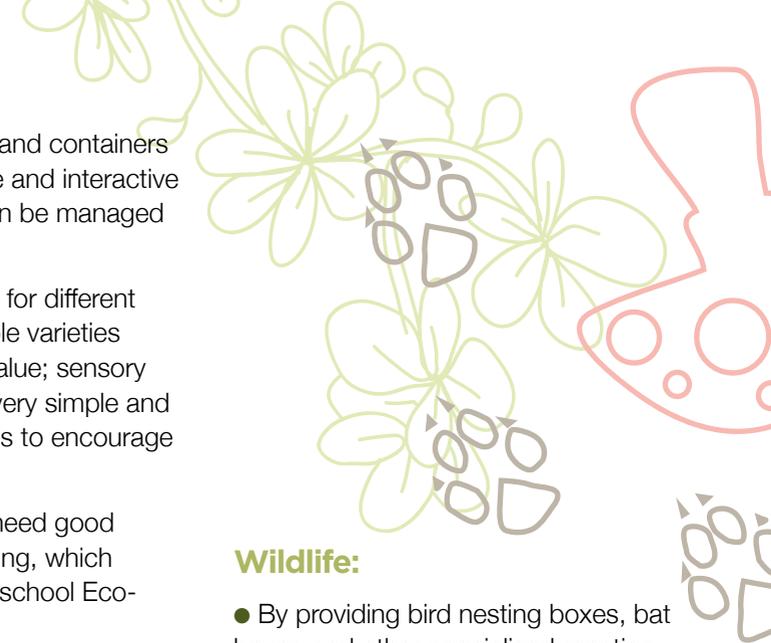
- Borders, raised beds and containers can all provide attractive and interactive growing areas which can be managed by pupils in the school.
- Plants can be chosen for different characteristics, like edible varieties for wildlife, or sensory value; sensory gardens have become very simple and popular ways for schools to encourage biodiversity.
- Small growing areas need good maintenance and watering, which could be the role of the school Eco-Committee.
- Insect friendly native seed mixes can be introduced to the growing areas to attract insects to the school which will in turn attract birds and other wildlife to the school.
- Greenhouses and poly-tunnels provide shelter for planting and allow exotic plants to thrive.

## Trees and Hedges:

- Trees in schools are great areas for children to play amongst, providing shade and shelter as well as food and nesting sites for wildlife.
- A group of untended trees or small forested area can allow for the development of forest school activities within the school.
- Native and wild hedges in the school are a valuable wildlife resource and natural corridor. Bristly hedges provide security, and a habitat for many birds and other wildlife.

## Wildlife:

- By providing bird nesting boxes, bat boxes and other specialised roosting boxes schools can create hibernation sites and nests for a variety of wildlife for the school – even in urban areas.
- Various species of birds are highly visible in their activities; nests can be set up for them to create focal points in the school for pupils to study through the curriculum.
- Species of insects, such as butterflies and bumble bees, are equally as visually appealing and can easily be attracted through specific planting and feeding stations.
- Bats can be more secretive, although many schools now make use of bat boxes with web cameras so that they can be viewed from the classroom making links with ICT in the curriculum.
- Allowing children to assist in the construction of bat and bird boxes ties in with technology and design in the curriculum.



# Biodiversity topic ideas



## Wildlife Pond

- 1 Mark out the perimeter of your wildlife pond using pegs and string or similar markers to determine the shape and size of the area.
- 2 Make sure you have spades, a wheel barrow, something to line your pond with and a source of rainwater which will make sure your pond will stay wet!
- 3 Extras you can include are plants, rocks and pebbles to allow for wildlife to be attracted through sheltered places.
- 4 The pond should have sides with various sloping gradients which will allow creatures to get in and out; drastic sloping or straight sides will hamper frogs, toads, newts and small animals being able to use the pond to live in and drink from.
- 5 The pond should be lined with a durable pond liner; many rubber liners are available from garden centres and are very reliable. Plastic formed liners are durable but have an undesirable texture for many forms of wildlife to climb on.
- 6 Create an irregular shape for the pond which is more attractive to wildlife.

- 7 The pond will also need to be in a sunny place. Be careful not to put it under a large tree as the leaves will congest the pond during the autumn months.



## Sensory Garden

- 1 Include lots of plants in the school sensory garden. The rule of thumb is – the greener the better.
- 2 Raised beds are a great idea for schools, as they allow for pupils to tend the plants but minimise staff effort for installation as the ground does not need excavation or prepared as thoroughly.
- 3 Another idea for the visual sensory aspect of the garden is the addition of climbing plants on a trellis supported by a wall; plants like this can disguise an unattractive wall or area.
- 4 Different textures and varieties of wood can be included in the sensory garden to encourage the sense of touch and texture.
- 5 Planting greenery, shrubbery or foliage with different textured and



shaped leaves will also help assisting the sense of touch.

- 6 Using items hung from trees can be an excellent way to create sounds in the sensory garden, such as wind chimes.
- 7 A popular idea is to attach reused items that can be used as percussion instruments, such as large plastic containers attached to walls or long tubes or pipes are also excellent recycled percussion instruments.
- 8 Adding herbaceous plants like parsley, basil and mint to the garden can be a fantastic way to involve the senses of smell and taste into the garden.



- 9 If you are growing mint, be careful as it has a tendency to take over and is better potted than planted directly into earth.
- 10 If the school budget allows or if space permits, growing berries and vegetables is another fantastic way to encourage taste into the garden.

## Nature Trail

- 1 Creating a nature trail can be a great way to work with the nature and wildlife already in place in and around the school.
- 2 Create a puzzle, quiz or treasure hunt asking questions about the names of the trees, insects, flowers or wildlife



that can be found in the immediate area or beyond.

- 3 These do not need to be especially well developed or wooded and can be as simple as taking a walk to the nearest park or green space if your school is in an urban area.
- 4 The pupils should be prepared to come back to the classroom and discuss what they have discovered.
- 5 The pupils can then draw or paint things that they have found during their expedition, which can form the basis of a really visually interesting and creative display.



## Butterfly Garden

- 1 To create the butterfly garden you will firstly need to attract caterpillars into the garden.
- 2 Research what plants attract caterpillars in your area; milkweed and parsley are two plants which successfully attract caterpillars in Northern Ireland.
- 3 Choose plants which will provide nectar to the butterflies, popular examples include buddleia, hyacinth, lavender, mint, clover, nettle and nasturtium and many others which are easily maintained.



4 In Northern Ireland there are hundreds more varieties of moth than there are butterfly, both of which will make day time appearances.

5 To encourage moth and butterfly populations it is also beneficial to leave some areas of the garden uncultivated and allow weeds and wild plants to grow, this will allow a larger variety of moth and butterfly caterpillar as well as insects to thrive in the garden.

6 Bear in mind if you are also growing edible plants in your garden for the school or pupils own use, that the caterpillars will also like the taste of them!



### Wildflower Meadow

1 A Wildflower meadow sounds like a vast space, although with a few square feet to spare, an outdoor space can be transformed into a wealth of colour and biodiversity.

2 At school if you can prepare an area which catches the sun well, then wildflower seeds can create a beautiful wildflower meadow – all you will need is a selection of seeds which are readily available online. Ensure that you select native species of seeds.

3 Good ground preparation is essential for the success of the

meadow, the less fertile the soil the better – otherwise weeds will take over the area.

4 The seeds will need a winter frost to break them in from dormancy, so it is preferable to sow them in autumn to allow them to be growing by the Spring/ Summer.

5 To get an even spread of wildflower seeds, it is a good idea to sow them in sand or sawdust and then rake the surface and pat it down firmly.



### Willow Dome:

1 To create a willow dome or willow tunnel in your school, all you will need to do is have a patch of grass to grow it on and some willow whips or cuttings from willow trees.

2 Willow cuttings can be propagated to grow willow whips from, which can then be woven into the structure, or alternatively, willow sculpture kits can be purchased online.

3 You can ask the Environmental Officer in your local council for additional advice.

4 Mark out a trench, either in the shape of a circle to create the dome; or in the shape of two parallel lines to create your tunnel.

5 Dig the trenches about 12 inches wide and at least 4 inches deep.

6 Fill and dig the trench/trenches with compost to allow for the willow to take successfully.

7 Use at least 8 whips of willow, each around 4 meters long to create the diameter of the structure by pushing one end of each whip into the composted trench.

8 Spread the whips evenly apart and leave a space for the frame of the doorway, use the sturdiest whips for the door frame.

9 Tie opposite whips together in a horseshoe shape and then once completed, tie all whips together in the centre. Using a garden twine would be suitable.

10 Using very long whips, plant one end of these in between the trenches of each of the already implanted sections and weave throughout the structure in an upward diagonal pattern.

11 Weave willow whips all over the structure, as though you were weaving a basket, until there is a sturdy structural wall all around the willow dome.

12 All you need to do now is wait for the leaves to grow, weaving any erroneous leaves and branches into the dome as it grows to ensure a neat and sturdy arrangement.



### Minibeast Mansion:

1 Creating an area for minibeasts to live will attract birds and small mammals to even urban schools and can assist in the pollination of flowers.

2 If you have a shady, sheltered and slightly damp area in your school grounds, it could provide the perfect area for a small mini beast motel or a minibeast mansion.

3 Near a hedge or a tree would be the ideal location to place the minibeast habitat.

4 A collection of large stones or a log pile would be ideal for a smaller area, which will provide a place for invertebrates to eat, hunt or live.

5 If you have a bigger space available, using wooden pallets as the main structure of your minibeast habitat is a great idea, then using a selection of the following to build the inner structure: stones, rocks, dead wood, leaves, dried plants, old bricks, tubes of any kind, small branches, and some plant life to allow a variety of minibeasts to inhabit.





# Eco-Schools Biodiversity Resources

For further information,  
ideas and biodiversity  
in schools case studies  
visit:

[www.eco-schoolsni.org](http://www.eco-schoolsni.org)

[www.eco-schoolsni.org/Case-Studies.aspx](http://www.eco-schoolsni.org/Case-Studies.aspx)

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