



A GUIDE TO INCREASING BIODIVERSITY IN YOUR SCHOOL

BY EDD MOORE

KIDS
against
PLASTIC

WELCOME!

Welcome to Edd Moore's guide to increasing biodiversity in your school. This guide has been put together by Edd for Kids Against Plastic and contains a variety of surveys, ideas and helpful links that you can complete to assess an increase the biodiversity in your school.

But who is Edd Moore?

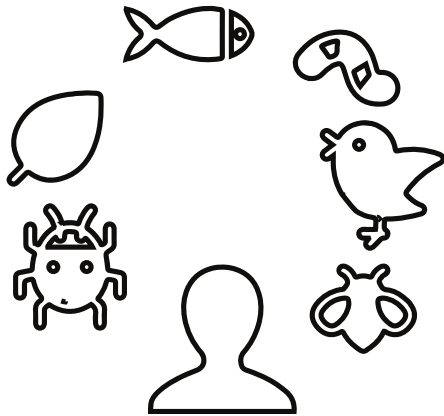


Edd Moore has been at the forefront of education around environment and sustainability for the last twelve years. In one of his schools, he built up school's Eco work from a blank canvas to become one of the top Eco Schools in the country, embedding the environment into the school's curriculum. He led his school to win multiple national environment awards that include Eco Schools Primary Eco School, Surfers Against Sewage Schools Champion, Jane Goodall's Roots & Shoots Education Institution of the Year.

He was 1 of 500 people to be named as a Coronation Champion for his Environmental work.

So, what is Biodiversity?

Biodiversity is every living thing, including plants, bacteria, animals, and humans. It is an important process that supports all life on earth. Without a wide range of animals and plants, we cannot have the healthy ecosystems that we rely on to provide us with the air we breathe and the food we eat.



All living things exist within their own communities, or ecosystems, oceans, forests, deserts, ice caps and even cities.

As humans, We have overfished the oceans, cleared forests & woodlands, polluted water sources and created a climate crisis.

These actions are impacting biodiversity around the world, from the most remote areas to your own school grounds.

Why biodiversity education is important

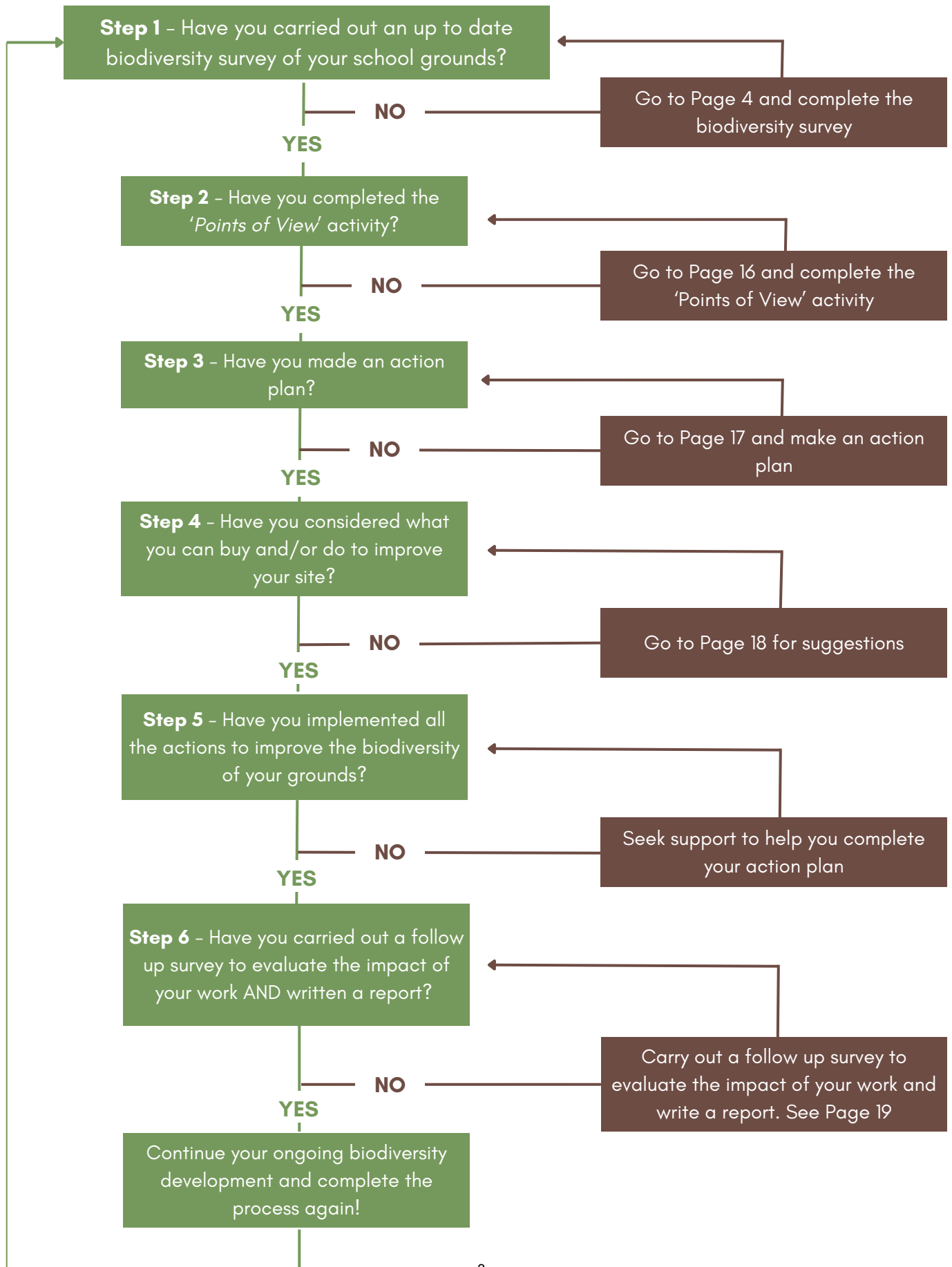
Boosting biodiversity on school grounds enhances learning by allowing pupils to see and interact with various plants and animals. This supports local wildlife by providing essential habitats and food. Green spaces also improve the mood and well-being of both students and staff.

Additionally, it fosters a sense of environmental stewardship in pupils, encouraging them to adopt sustainable practices and develop a deeper appreciation for nature, contributing to a healthier and more engaging school environment.

We hope this guide inspires biodiversity education and helps schools to embark on a journey of ongoing improvement to their schools grounds and wildlife areas.

Biodiversity Development flowchart

Use the biodiversity development flowchart to help inform your biodiversity action.





STEP 1

Carry out a biodiversity survey of your school grounds.

In Step One, you will survey the biodiversity of your school grounds – habitats, flowers and fruits, trees and shrubs, minibeasts and birds.

Use the tables and information below to complete an audit of your school grounds.

Aims:

- To become familiar with habitats in your school and their role in supporting wildlife.
- To understand how to differentiate between trees and shrubs in your school.
- To identify birds, minibeast and pollinators in their habitats
- To identify what needs to be implemented to attract more wildlife to the school grounds.

What you will need:

- Pen
- Pencil
- Eraser
- Print out of School Map
- Ruler
- Identification Sheets

Introduction

Have you made or are you planning to make biodiversity changes for wildlife?

Yes / No

Survey completed by:

Start date and time:

Use Google Maps to find the coordinates of your school grounds

Approximate size of your school grounds (if known):

If you do not know the size of your school grounds, discuss together how you might estimate or measure it. You may need a printed off map of your school and a ruler.



WEATHER & HABITATS

Circle the symbol that describes the weather:



What is the temperature? degrees Celsius.

How windy is it at the moment? **Still** **Light Breeze** **Windy**

Take a walk round your school grounds and complete the table below to investigate what habitats you can find.

Type of habitat	Description	Number of habitats present
Food Resource 	Plant beds or flower beds	<input type="text"/>
	Tall grass wildflowers	<input type="text"/>
	Trees and shrubs	<input type="text"/>
	Bare ground, soil, sand or gravel.	<input type="text"/>
Nesting Places & Shelters 	Bird boxes	<input type="text"/>
	Bee Hotels	<input type="text"/>
	Bee Hives	<input type="text"/>
	Bug Hotels	<input type="text"/>
	Damp Places	<input type="text"/>
	Other: Dead wood, rubble, walls etc.	<input type="text"/>
Other 	Short grass mown as lawn	<input type="text"/>
	Bare walls or fence	<input type="text"/>
	Concrete or tarmac	<input type="text"/>





TREES, SHRUBS, FRUITS & FLOWERS

Walk around the school grounds and count how many different species of trees, shrubs, fruits and flowers you can find.

Help with identifying trees:

- The Woodland Trust A-Z of British Trees
- Download the iNaturalist app
- The Woodland Trust - ID Leaf Identification sheets

Trees / Shrubs / Bushes	Species / Group	Quantity

Fruits / Flowers	On trees	On shrubs	Unknown
<p>Number of different flowers (pollinator food)</p> 			
<p>Number of different fruits (bird food)</p> 			
















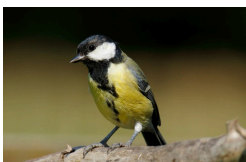

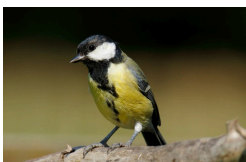

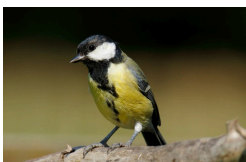
BIRDS

Instructions

- Please walk round your school ground site for 10 minutes in small groups.
- Use binoculars if you have any handy!
- Please remember to keep quiet so as not to disturb the birds.
- Why not try to stop and listen, looking straight ahead for a few seconds at each tree or bush to see if any birds are moving.
- Please only record birds within your school grounds. If we've missed any in the table, there is space for you to sketch more.

Help with identifying birds:

RSPB A-Z of Birds

Bird	Number Seen		
<p data-bbox="347 1137 678 1176">Eurasian Blackbird</p> <table border="0"><tr><td data-bbox="137 1205 539 1451"><p data-bbox="290 1227 384 1254">Female</p></td><td data-bbox="563 1205 965 1451"><p data-bbox="730 1227 799 1254">Male</p></td></tr></table>	<p data-bbox="290 1227 384 1254">Female</p> 	<p data-bbox="730 1227 799 1254">Male</p> 	<p data-bbox="1171 1137 1382 1176">Tally / Total</p> <div data-bbox="1091 1205 1497 1451" style="border: 1px solid black; height: 110px;"></div>
<p data-bbox="290 1227 384 1254">Female</p> 	<p data-bbox="730 1227 799 1254">Male</p> 		
<p data-bbox="347 1482 678 1520">Common Chaffinch</p> <table border="0"><tr><td data-bbox="137 1556 539 1803"><p data-bbox="290 1579 384 1606">Female</p></td><td data-bbox="563 1556 965 1803"><p data-bbox="730 1579 799 1606">Male</p></td></tr></table>	<p data-bbox="290 1579 384 1606">Female</p> 	<p data-bbox="730 1579 799 1606">Male</p> 	<p data-bbox="1171 1482 1382 1520">Tally / Total</p> <div data-bbox="1091 1556 1497 1803" style="border: 1px solid black; height: 110px;"></div>
<p data-bbox="290 1579 384 1606">Female</p> 	<p data-bbox="730 1579 799 1606">Male</p> 		
<p data-bbox="459 1827 604 1865">Great tit</p> <table border="0"><tr><td data-bbox="137 1892 539 2139"><p data-bbox="290 1915 384 1942">Female</p></td><td data-bbox="563 1892 965 2139"><p data-bbox="730 1915 799 1942">Male</p></td></tr></table>	<p data-bbox="290 1915 384 1942">Female</p> 	<p data-bbox="730 1915 799 1942">Male</p> 	<p data-bbox="1171 1827 1382 1865">Tally / Total</p> <div data-bbox="1091 1892 1497 2139" style="border: 1px solid black; height: 110px;"></div>
<p data-bbox="290 1915 384 1942">Female</p> 	<p data-bbox="730 1915 799 1942">Male</p> 		

Bird

Blue Tit

Female



Male



House Sparrow

Female



Male



Tree Sparrow

Adult



Juvenile



White Wagtail/Pied Wagtail

Adult

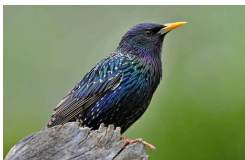


Juvenile



Common Starling

Adult



Juvenile



Swift

Adult



Adult



Number Seen

Tally / Total

Tally / Total

Tally / Total

Tally / Total

Tally / Total

Tally / Total

Bird

Collared Dove

Adult



Adult



Robin

Adult



Juvenile



Wood Pigeon

Adult



Juvenile



Redstart

Adult



Adult



Magpie

Adult

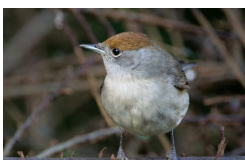


Juvenile



Eurasian Blackcap

Female



Male



Number Seen

Tally / Total

Tally / Total

Tally / Total

Tally / Total

Tally / Total

Tally / Total

Bird

Sardinian Warbler

Adult



Adult



Sketch

Description

Sketch

Description

Sketch

Description

Adult

Description

Sketch

Description

Number Seen

Tally / Total

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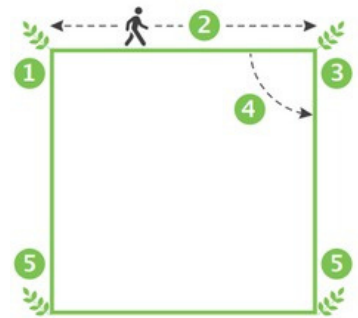


POLLINATORS & FLOWERS

Instructions

Choose a site that is a typical representation of green environments in your school grounds. There should also be some flowering plants present. The size of the area must be at least 5x5 metres. If you are planning to make changes in your school grounds, please choose the location where this will take place.

- Place a marker on the ground (e.g. a stick or cone).
- Walk in a straight line for 5 metres.
- Place a new marker on the ground.
- Turn 90 degrees clockwise.
- Repeat steps 2-4 until you have a 5x5 metre area.



Species Group	Picture Aid	Total Number Seen
Bumblebee		
Honeybee		
Solitary bee		
Wasp		



POLLINATORS & FLOWERS

Species Group	Picture Aid	Total Number Seen
True Bug		
Butterfly		
Moth		
Hover Flies		
Other Flies & Mosquitos		
Beetles		





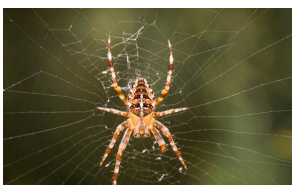







MINIBEASTS & LEAF COUNT

Instructions

Look for five minutes (use a timer) for minibeasts in the square metre.

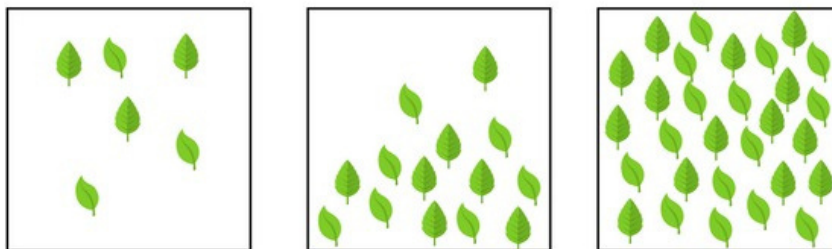
Use the table below to write how many minibeasts of each species group you observe.

Species Group	Picture Aid	Total Number Seen
Earthworms		
Ants		
Millipedes and Centipedes		
Woodlice		
Spiders and Harvestmen		
Beetles		

Species Group	Picture Aid	Total Number Seen
True Bugs		
Insect Larvae		
Snails & Slugs		
Crickets, Grasshoppers, & Earwigs		

Leaf count - living vegetation

Look at the images below. Which most closely matched your 5x5m sampling area?
Circle your choice.



How many different kinds of leaves of grass and other plants you can find within the 5x5 square metre from living plants?

- Count the number of different types of leaves you can see.
- It does not matter if there are flowers on the plant or not.
- Do not count mosses.

Total number of different kinds of leaves:



NATURE JOURNAL

Making a nature journal is a lovely way to record what you find in your school grounds by drawing pictures, writing facts & descriptions as well as 'I wonder' questions.

Equipment:

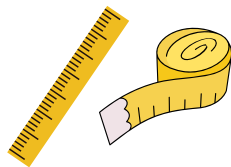
Blank notebook or paper



Pen or pencil



Ruler or tape measure



Magnifying glass



Binoculars



Coloured pencils



Paints & paintbrush



Draw to...

See * Think * Wonder

Journaling is a powerful way to understand something around you - it helps you notice more. Once you have completed your school grounds survey, the children, or yourself, can record all of the wonderful things you saw, think about each one carefully and record questions you might like the answer to next.

What to include:

- Words - Describe, make observations, ask questions or even write poetry.
- Pictures - Sketch pictures, maps, diagrams, cross sections, comics or even different views.
- Numbers - Measure, count and estimate what you see in the school grounds.

Your survey will definitely help with this part!

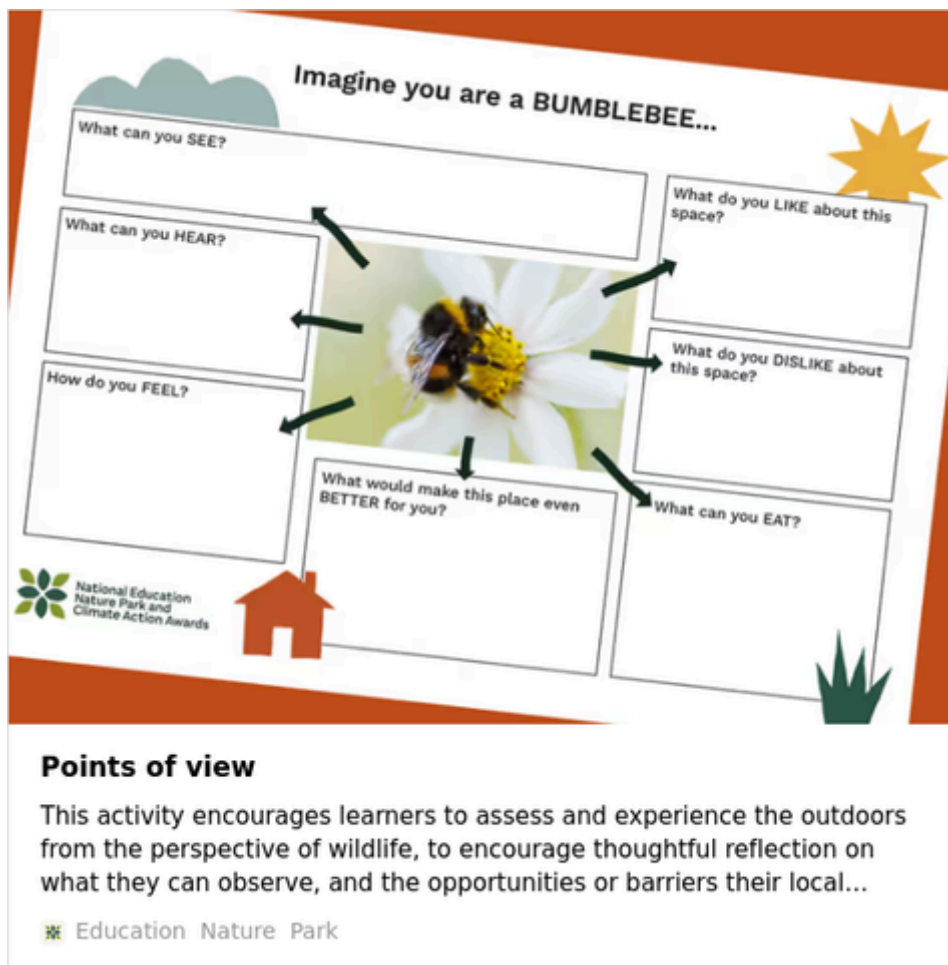
STEP 2

Assess and experience the outdoors from the perspective of wildlife.

How good is the biodiversity of your grounds?

Assess and experience the outdoors from the perspective of wildlife, to encourage thoughtful reflection on what they can observe, and the opportunities or barriers their local environment might present for nature.


Look at your surveys and complete the Points of View Activity form Education Nature Park: <https://www.educationnaturepark.org.uk/resource/points-view>



The form is titled "Imagine you are a BUMBLEBEE..." and features a central image of a bumblebee on a white flower. Surrounding the image are six text boxes with arrows pointing towards the bee, each containing a question: "What can you SEE?", "What can you HEAR?", "How do you FEEL?", "What do you LIKE about this space?", "What do you DISLIKE about this space?", and "What can you EAT?". A seventh box at the bottom asks "What would make this place even BETTER for you?". The form includes a logo for "National Education Nature Park and Climate Action Awards" and a house icon.

Points of view

This activity encourages learners to assess and experience the outdoors from the perspective of wildlife, to encourage thoughtful reflection on what they can observe, and the opportunities or barriers their local...

 Education Nature Park



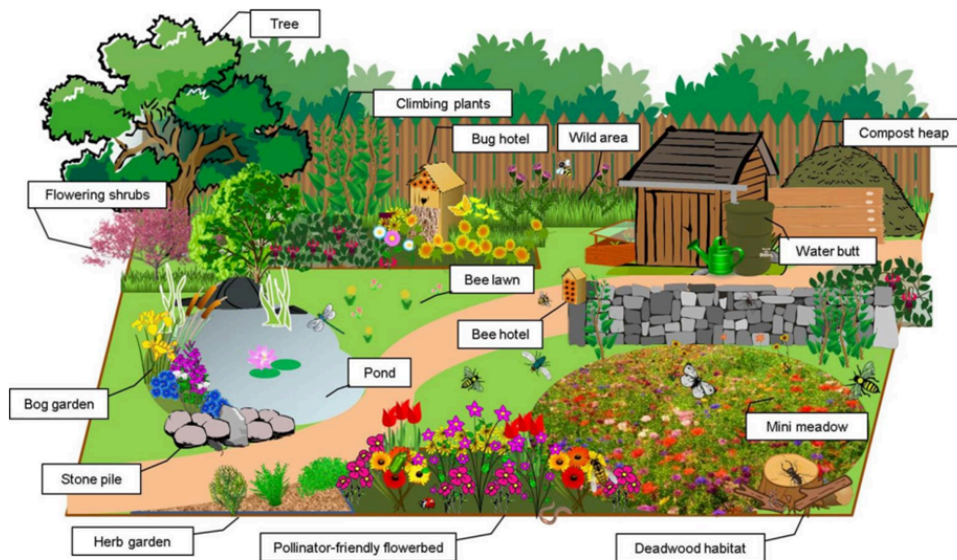
STEP 3

Action planning for better biodiversity

How are you going to improve the biodiversity of your grounds?

What do you need to add, change or develop in your school grounds to make it more biodiverse?

This illustration from the Wildlife Trust might give you some good ideas.



Simple Action Plan

Think about what you need and what you need to do to increase biodiversity.

What we need	What we need to do



STEP 4

Make improvements to your school grounds

Implementing improvements to your school grounds

Now's time to start making the changes to your school site.

To make or buy:

- Bug hotel
- Bird box
- Hedgehog home
- Bird feeders
- Bird bath
- Mini pond
- Raised beds
- Water butts
- Bee hive
- Hedgehog Highway
- Frogitat and toad house
- Bat boxes

To buy and plant:

- Trees and bushes
- Flowering native grassland mix with lots of perennial plants.
- RSPB Flowering hedges
- Sensory garden plants
- Bee and butterfly wildflower seeds

To do

- Put together School Nature Watch every month recording what seen in school grounds put on to school website encouraging community to get involved too.

To buy:

- Bird watching kit
- Identification books
- Binoculars
- Pond lining kit
- Wildlife ID swatch book
- ID Trees and wildlife sheets and books
- Wildlife night camera
- Bird camera
- Nest box camera
- Seed bombs
- Camouflage hide fold up
- Live caterpillars to butterfly kit

Minibeast kit

- Magnify glasses
- Viewers
- Trays
- Clipboards

Gardening kit

- Forks
- Trowels
- Eco pots



STEP 6

Evaluating the impact of your action

How have your actions impacted biodiversity?

After some time after the changes have been made consider what difference you have made. Perhaps redo your survey. Ask people in school if it is a more enjoyable site.

You might want to consider the following:

- How many more nesting places and shelters are there?
- How many more different flowers and fruits are there?
- Are there more and different kinds of birds as a result?
- Are there more insects for pollination? (See survey method)
- Has there been an increase in the number and types of insects?
- Has there been an increase in the number and type of mini beasts?
- Has there been an increase in the number and variety of leaves from vegetation?
- How do people feel about the area?
- Do people feel more positive about the area and if so how has this affected them?
- Have people noticed any changes and improvements, if so what?
- Does the “improved” area encourage you to spend more time out there?
- How else would they like the area to continue to be improved?

Write a report

Celebrate your actions by writing a short report or blog post for your school website. If the pupils can be involved in writing the report, even better. Maybe some of the students could present the key findings of your biodiversity development the school during an assembly, or to the Governors?

It's never over ...

Don't stop there! It's always possible to improve biodiversity, so keep going. Go back to the start of the flow chart and start again.

Ideas of activities and national surveys you can take part in during the school year

- Nature Journaling
- Identifying wildflowers, trees in grounds and recording in a book using pictures, facts, I wonder questions, It looks like.... Keep adding to book over time.
- Put together School Nature Watch every month recording what seen in school grounds. Put on to school website encouraging community to get involved too.
- RSPB Big Schools Birdwatch in January <https://www.rspb.org.uk/whats-happening/get-ready-for-big-schools-birdwatch>
- Plant life No Mow May <https://www.plantlife.org.uk/campaigns/nomowmay/>
- Butterfly Conservation Butterfly Count in July <https://bigbutterflycount.butterfly-conservation.org/>
- Discover best biodiversity food for insects and birds
- Collect wildflower seeds from other wildflowers and sow in school grounds. You don't always have to buy the seeds from the garden centre for example buttercup seeds that look like small pineapples. <https://www.cornwallwildlifetrust.org.uk/blog/rowena-millar/collect-and-grow-your-own-seeds-wildlife>
- Make twig and leaf piles
- Nature night camera to see what is coming out at night.
- Build a bug hotel from pallets - whole school <https://www.edenproject.com/learn/eden-at-home/how-to-build-an-insect-home>
- Build a bird box <https://www.rspb.org.uk/helping-nature/what-you-can-do/activities/build-a-birdbox>
- Make a hedgehog home <https://www.wildlifetrusts.org/actions/how-build-hedgehog-home>
- Make bird feeders <https://www.rspca.org.uk/adviceandwelfare/garden/pledge/ecobird>
- Bird bath <https://www.rspb.org.uk/helping-nature/what-you-can-do/activities/make-the-perfect-bird-bath>
- Make a mini pond <https://www.wildlifetrusts.org/actions/how-create-mini-pond>
- Bee hotel <https://www.rspb.org.uk/helping-nature/what-you-can-do/activities/build-a-bee-hotel>
- Dead wood piles <https://www.wildlifetrusts.org/actions/how-make-log-shelter>
- Rubble
- Make seed bombs using recycled paper <https://onelittleproject.com/diy-seed-bombs/>
- Flower pressing <https://www.nhm.ac.uk/discover/how-to-press-flowers.html>

Useful Resources

- Team Wilder Ecological Advisory Service (each Wildlife Trust County has one) <https://www.avonwildlifetrust.org.uk/team-wilder-ecological-advisory-service>
- Alex Boon, Nature Journaling <https://alexboonart.com/nature-journaling>
- Bees4Schools <https://britishbeecharity.com/bees-for-schools-terms-conditions/>
- Buglife Identifying a bug <https://www.buglife.org.uk/bugs/identify-a-bug/>
- Buglife <https://www.buglife.org.uk/get-involved/gardening-for-bugs/>
- Earthwatch Europe, Tiny Forest Wildlife Count <https://earthwatch.org.uk/tiny-forest-wildlife-count>
- Eco Schools Biodiversity School Projects <https://www.eco-schools.org.uk/ten-topics/biodiversity/>
- Forestry England, Wellbeing Journal <https://www.forestryengland.uk/wellbeing-journal>
- Hedgehog Highway <https://www.hedgehogstreet.org/help-hedgehogs/link-your-garden/>
- John Muir Laws, Nature Journaling for beginners <https://johnmuirlaws.com/nature-journaling-starting-growing/> and <https://www.wildwonder.org/what-is-nature-journaling>
- Learning Through Landscapes, Educational Resources <https://ltl.org.uk/projects/natural-nations/>
- Learning Through Landscapes, Natural Nations <https://ltl.org.uk/news/boost-biodiversity-school-grounds-surveys-natural-nations/>
- Learning Through Landscapes, 5 ways to develop your school grounds. <https://ltl.org.uk/news/5-ways-to-develop-your-school-grounds/>
- Learning Through Landscapes Nature Grants of £500 <https://ltl.org.uk/projects/local-school-nature-grants/>
- National Education Nature Park <https://www.nhm.ac.uk/about-us/national-impact/national-education-nature-park-and-climate-action-awards-scheme.html>
- Nature Journaling Books and inspiration <https://www.naturejournalingweek.com/books-and-inspiration>
- Natural History Museum <https://www.nhm.ac.uk/our-science/our-work/biodiversity.html>
- RSPB Learning RSPB Nature Rich Curriculum
- RSPB Biodiversity Action Plan <https://www.rspb.org.uk/helping-nature/what-you-can-do/activities/biodiversity-action-plan>
- RSPB Bird feeders <https://www.rspb.org.uk/helping-nature/what-you-can-do/activities/feed-the-birds>
- RSPB Bird Box <https://www.rspb.org.uk/helping-nature/what-you-can-do/activities/build-a-birdbox>

Useful Resources (continued)

- Wildlife Trust, Hedgehog Hole <https://www.wildlifetrusts.org/actions/how-create-hedgehog-hole>
- Wildlife Trust Leicestershire and Rutland, Improving biodiversity in school grounds with activities and resources
https://schools.leicester.gov.uk/media/6341/increasing_biodiversity_school_grounds.pdf
- Wildlife Trust 30 Days Wild <https://www.wildlifetrusts.org/30dayswild>
- Wild Writing <https://dorset-nl.org.uk/park-event/creative-writing-inspired-by-seasons/>
- WWF, Teaching Tools about Biodiversity <https://www.worldwildlife.org/teaching-resources/toolkits/teaching-tools-about-biodiversity>
- Woodland Trust, Examples of Seasons all year-round flowers to plant to increase biodiversity. <https://www.woodlandtrust.org.uk/blog/2023/04/increase-garden-biodiversity/>
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