Green-Schools

Biodiversity
Green-Schools is in the:
Environmental Education Unit of An Taisce
Green-Schools: The Programme

- International Environmental Programme
- Award Scheme
- Long-term programme
- Holistic
- Ethos
- Whole-school Action
Green-Schools: In Ireland

- 93% of all schools in Ireland
- 4,000 schools registered
- 3,410 schools awarded
- 71,514 teachers
- 782,661 pupils
Green-Schools Themes

1: Litter & Waste
2: Water
3: Energy
4: Travel
5: Biodiversity
6: GC Litter & Waste
7: GC Energy
8: GC Marine Environment
9: GC Travel
10: GC Food & Biodiversity
The National Parks and Wildlife Service support the Biodiversity Theme

Ireland’s 3rd Biodiversity Action Plan

Objective 3: “Increase awareness and appreciation of biodiversity and ecosystem services”
Does Green-Schools Make a Difference?

Green-Schools Biodiversity Awareness Survey
Overall Results May 2019

Proportion (%) of participants that could fully answer the questions:
- What does the term biodiversity mean?
- List three reasons why biodiversity is important
- List three threats to biodiversity
- List three ways to help biodiversity

- 2017:
  - 26%
  - 21%
  - 26%
  - 27%

- 2019:
  - 83%
  - 75%
  - 80%
  - 82%
The Biodiversity Theme had a great year!

> 3500 trees planted

Schools created 194 pollinator-friendly areas

375 schools built and maintained organic vegetable and herb gardens

857 new bird feeding stations were installed by schools
What is Biodiversity?

Biodiversity, or *biological diversity*, is the variety of life forms; from the tiniest flower on your lawn to the largest animals at sea.

A high level of diversity is considered to be very important and desirable.
Why is biodiversity so important?
Why is biodiversity so important to us?
...and some more valid reasons

- Many species are of unknown value to us
- Many species not yet discovered may be of value to us
- All biodiversity is intrinsically valuable for itself
In Ireland, each year:

- Biodiversity is valued at > €2.6 billion
- Earthworms’ work is valued at €1 billion
- Pollination is valued at €52 million

Could we afford to replace these services?
What are the threats to biodiversity?

- Litter & Pollution
- Litter & Pollution
- Climate Change
What are the threats to biodiversity?

- Habitat fragmentation
- Habitat loss and destruction
- Over-exploitation of resources
### What are the threats to biodiversity?

<table>
<thead>
<tr>
<th>Image</th>
<th>Threat</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Intensive farming practices" /></td>
<td><strong>Intensive farming practices</strong></td>
</tr>
<tr>
<td><img src="image2" alt="Invasive non-native species" /></td>
<td><strong>Invasive non-native species</strong></td>
</tr>
<tr>
<td><img src="image3" alt="Also known as ‘Alien Species’" /></td>
<td><strong>Also known as ‘Alien Species’</strong></td>
</tr>
</tbody>
</table>
Green-Schools 7 Steps

&

Ways in which we can help BIODIVERSITY
Step 1: Green-Schools Committee
Step 1: Green-Schools Committee

Essential
➢ Students (N.B. student led)
➢ Co-ordinator

Optional
➢ Sub-Committee for previous theme
➢ Other staff
➢ Parents
➢ Community Members

Remember! Whole school involvement!
Step 2: Review (BEFORE taking action!)

There are 3 ESSENTIAL actions:

1. Biodiversity Awareness Survey (4 essential questions to be answered)
2. Compile a Habitat Map
3. Revisit previous themes & link with Biodiversity theme
# Biodiversity Awareness Survey

## Year 1

<table>
<thead>
<tr>
<th>Date Survey Conducted</th>
<th>Survey 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What % of students and staff knew what the term biodiversity meant?

What % of students and staff were able to list 3 reasons why biodiversity is so important?

What % of students and staff were able to list 3 threats to biodiversity?

What % of students and staff were able to list 3 ways in which we can help biodiversity?
Habitat Mapping

- A **habitat map** shows the geographic distribution of different habitats within a particular area.

- What is the purpose of habitat mapping?
  - Inc. levels of biodiversity?
  - Looking to help protect the area/species present?
  - Simply interested?

- Your school’s habitat map should:
  - Show the layout of your school and grounds
  - Include any and all types of habitats on the grounds including the yard, pitches, trees, hedging, raised beds etc.
  - Provide a base for you to plan how you can increase the biodiversity on the grounds.
Habitat Mapping

- You can find a guide to creating a habitat map for your school in the Biodiversity Resources section on [www.greenschoolsireland.org](http://www.greenschoolsireland.org) and on pages 8-9 of the Handbook.
- Start by making an outline of the school grounds and buildings (as accurate as possible)
- Once your outline is drawn work in groups to walk around the grounds and mark any different areas of habitat on map including pitches, pathways, yard etc. Make sure you include smaller habitats such as individual trees, hedging, raised beds etc.
- Also mark any points of interest such as bird feeders, compost bin, any animal species seen etc.
- After the group work is done make a master version of the map which is colour coded and contains symbols or initials which correspond to a code.
Habitat Mapping
Step 2: Review

Recommended Actions
Investigate your habitats
Record species
How to record/investigate

Ask yourself some questions & record the answers in your Nature Notebook

- What am I going to investigate - trees, plants, animals, invertebrates?
- Download some nature identification sheets and bring with you.
- What time of the year is it, spring, summer, autumn or winter?
- What time of the day is it?
- What is the weather like?
- Where are you/what habitat are you investigating?
Biodiversity in Ireland
Plant diversity
<table>
<thead>
<tr>
<th>Date</th>
<th>Weather</th>
<th>Place</th>
<th>Habitat</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&lt;sup&gt;th&lt;/sup&gt; of May</td>
<td>Windy</td>
<td>Oak Woods</td>
<td>Mixed woodland</td>
<td>Tortoiseshell Butterfly</td>
</tr>
<tr>
<td>30&lt;sup&gt;th&lt;/sup&gt; of July</td>
<td>Cloudy</td>
<td>Walk to the Pond</td>
<td>Shallow lake (lots of plants)</td>
<td>Spotted a frog</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; of August</td>
<td>Sunny &amp; breezy</td>
<td>Walk to school</td>
<td>Hedgerows</td>
<td>Lots of small birds</td>
</tr>
<tr>
<td>14&lt;sup&gt;th&lt;/sup&gt; of September</td>
<td>Sunny</td>
<td>The park</td>
<td>Mixed (grasses/trees/shrubs)</td>
<td></td>
</tr>
</tbody>
</table>
# Data sheets for secondary schools

<table>
<thead>
<tr>
<th>Name of recorder*</th>
<th>Species name*</th>
<th>Grid reference (6 figure if possible)*</th>
<th>Date*</th>
<th>Location*</th>
<th>County</th>
<th>Abundance</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The name of the person(s) that made the observation.</td>
<td>The name of the recorded species.</td>
<td>A six-figure grid reference, employing three digits in each coordinate, to determine a 100 m square. The preferred format is:</td>
<td>The date that the observation was recorded.</td>
<td>A description of where the organism was observed. For example: “A kilometre north of Maam Cross”. Ideally supply appropriate Ordnance Survey maps feature names or townland names if available.</td>
<td>Kildare</td>
<td>1</td>
<td>Resting</td>
</tr>
</tbody>
</table>

Joe Bloggs  
White Tailed Bumblebee  
M518152  
dd/mm/yyyy  

• The first 5 columns are mandatory  
• The optional columns are recommended by the Data Centre for use where appropriate. You may want to add additional columns yourself to suit your own data e.g., altitude, status, life stage. You can add as many of these as you like.
Never stop exploring & recording.....

...............you never know what you might see!
Step 3: Action Plan

Two overall objectives

1) Increase levels of awareness

2) Practical improvements

<table>
<thead>
<tr>
<th>Action</th>
<th>Person/Group Responsible</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carry out a Biodiversity Awareness Survey to examine the level of awareness among students and staff</td>
<td>Green-Schools Committee</td>
<td>Early to mid September</td>
</tr>
<tr>
<td>Habitat Map the school grounds and do up a list of the biodiversity in our school</td>
<td>Green-Schools Committee</td>
<td>Early to mid September</td>
</tr>
</tbody>
</table>
Step 3: Action Plan

1) Increase levels of awareness

- Letters home
- Develop new Green Code (poster/slogan competition/projects)
- Analyse surveys from the review
- Habitat/species surveys (home/school/local area)
- Develop a connection with nature
- Find out about species specific to local area
- Develop nature trails
- Examine food chains (top predator present?)
2) Practical improvements

- Build bird boxes (unused/old wood)
- Create a pond/log pile/leaf mould/wildlife area/’mini-beast’ hotel
- Develop an organic garden
- Leave areas ‘unmanaged’ (hedgerows/grass areas)
- Plant native trees/flowers
Further actions

• Get involved in national surveys in conjunction with The National Biodiversity Data Centre (e.g. Butterfly/Bumblebee surveys) [www.biodiversityireland.ie](http://www.biodiversityireland.ie)

• Download their All Ireland Pollinator Plan or the JUNIOR Pollinator Plan for information and tips on how to make your school more pollinator-friendly.

• NPWS – why not investigate one of Ireland’s six National Parks and find out why they are so important.
## Step 3 (sample) Action Plan

<table>
<thead>
<tr>
<th>Action</th>
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<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Send a <strong>letter</strong> home to parents informing them that the school is now participating in Green-Schools Biodiversity.</td>
<td>Green-Schools Coordinator</td>
<td>Early September</td>
</tr>
<tr>
<td>Carry out a <strong>Biodiversity Awareness Survey</strong> to examine the level of awareness among students and staff</td>
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</tr>
<tr>
<td><strong>Habitat Map</strong> the school grounds and do up a list of the biodiversity in our school</td>
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<td>Early to mid September</td>
</tr>
<tr>
<td><strong>Quantify &amp; Display</strong> the results of the surveys on the Green-Schools notice board</td>
<td>Green-Schools Committee</td>
<td>Mid September</td>
</tr>
<tr>
<td><strong>Analyse</strong> the survey and suggest recommendations.</td>
<td>Senior classes</td>
<td>During maths periods mid-late September.</td>
</tr>
<tr>
<td>Hold a <strong>poster/slogan competition</strong> to come up with a new Green Code relating to biodiversity</td>
<td>Whole school</td>
<td>Late September – early October</td>
</tr>
</tbody>
</table>
Step 4: Monitoring & Evaluation
(mini reviews at key stages)

1) Evaluate levels of awareness
   • Repeat the Biodiversity Awareness Survey

2) Evaluate progress on practical improvements
   • Create a new Habitat Map in Year 2
   • Identify practical improvements (log pile/bird box)
   • Has the no. of sightings/no. of species inc.?
   • Has species richness increased?

Note:
Increasing numbers can be tricky business & tricky to evaluate!

Don’t be discouraged, action is as important as results!
**Biodiversity Awareness Survey**  
*Year 2*

<table>
<thead>
<tr>
<th>Date Survey Conducted</th>
<th>Survey 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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Sample graph showing % increase in level of awareness between Year 1 & Year 2

Proportion (%) of students and staff who could answer the Green-Schools Biodiversity Survey Questions

- **What does ‘biodiversity’ mean?**
  - BEFORE: 24%
  - AFTER: 84%

- **List 3 reasons why biodiversity is so important**
  - BEFORE: 22%
  - AFTER: 79%

- **List 3 threats to biodiversity**
  - BEFORE: 26%
  - AFTER: 79%

- **List 3 ways in which we can help biodiversity**
  - BEFORE: 25%
  - AFTER: 83%
Habitat Map Year 2

The Habitat Map in year two should show any practical improvements made to improve biodiversity in the school. Note any trees planted, wildflower areas installed, areas where bird feeders were hung etc.
Step 5: Curriculum Work

**Maths**
Provide real life situations for mathematical analysis (graphs/charts)

**SESE Science**
The living things strand, study of habitats & species

**Art**
Poster design promoting biodiversity
## Step 5: Curriculum Work

### Languages
Essay topics, new Green Code, species names as Gaeilge

### Science
Animal families, structure of plants

### Geography
Mapping the school grounds

‘Let our generation protect all creation’
Step 5: Curriculum Work

**Home Economics**
Examine where our food & textiles come from

**Woodwork**
Design & construct bird tables/boxes

**History**
Loss of habitats & species throughout time
Step 6: Informing & Involving

- Green-Schools Notice Board
- Local Press
- School Newsletter
- Action Day (International Biodiversity Day 22nd May, Tree week, National Spring Clean event, Clean Coast Event)
- Parents/Grandparents/Neighbours
- National Parks & Wildlife Service
Step 7: Green Code

Aim: To state the objectives that demonstrate the school’s commitment to environmentally friendly actions

- Display on your Green-Schools notice board
- Poster/slogan competition
  - Rap
  - Song
  - Poem
  - Code of Conduct
Some examples:

Roscommon Community College, Co. Roscommon

'Ecosystems can be a bog, a bush or a hedge, So protect and promote, Be a ledge!'

Joseph’s Foundation, Adult Education Centre, Co. Cork

'St. Joseph’s Foundation is Green
Our Campus is Clean
And we are Biodiversity Keen’

Stokane National School, Co. Sligo

‘Let our generation protect all creation’
Images from Biodiversity schools
Renewal Process

- Online Application Form – **to be submitted by 27th March 2020. You must have received your visit before you submit your application form,**
- Renewal visit can take place at any stage during Year 2
- National Awards Ceremony May
- Flag raising ceremony
Green-Schools website

- General information on biodiversity
- Presentations
- The 7 steps
- Case studies
- Worksheets
- Links to other useful sites

www.greenschoolsireland.org
The Great Plant Hunt

The Campaign:

• A 1-year programme in 15 European countries.
• In Ireland... it’s for Junior Infants to 6th Class
• All actions support the overall Bio. theme

All Participating Schools........ Will receive:

- Biodiversity educational materials
- 6 Animal/Plant Info Cards per year group
- Ongoing additional communications, links and supports

.... Will be expected to take the following steps:

• Register by **October 4th** 2019.
• Submit results and photographs twice in the year.
• Email **cpatten@eeu.antaisce.org** to register or for info

Participating schools have a chance to receive a full day of custom-built Biodiversity Training!
Investigate Forests Project

This project is now fully booked for 2019/2020

• 2019/2020 is the first year of the project
• Open to primary and secondary schools
• This project gives students an opportunity to learn about forests and discover connections that trees have with their daily lives
• Will support the Biodiversity theme

All Participating schools will receive:
• A free one day workshop with an Investigate Forests Facilitator
• Teacher Training, educational resources and advise on continuing learning

Email cpatten@eeu.antaisce.org with any queries
National and International Biodiversity Events for your Diary

National Tree Week

• National Tree Week takes place each year in March/April.
• The week is not scheduled yet for 2020 but details will be announced here: [https://treecouncil.ie/initiatives/tree-week/](https://treecouncil.ie/initiatives/tree-week/)
• There may be local events for your school to get involved in listed above or why not plant a tree on your school grounds or go for a local tree walk!

International Biodiversity Day

• Friday, May 22nd is International Biodiversity Day which is celebrated around the world.
• This would be a great day to hold your “Day of Action”

International Year of Plant Health

• 2020 has been designated the International Year of Plant Health by the UN
• There may be opportunities for your school to get involved in the worldwide photo contest, take part in events and access educational resources from December 2019. [https://www.ippc.int/en/iYPH/](https://www.ippc.int/en/iYPH/)
'Biodiversity underpins the functioning of the ecosystems on which we depend for food and fresh water, health and recreation, and protection from natural disasters. Its loss affects us culturally and spiritually’

Ban Ki-moon, Secretary General of the United Nations
What’s available?

Workshops for teachers & children
- Primary and post primary workshops
- Facilitators visit the school for a day of workshops
- Content of workshops: sustainable energy, climate change & how everyone can make a difference to the environment

Resources
- Online & hard copy teaching resources for primary and post primary
- Posters for raising awareness
- Many available in Irish
- Developed by teachers and educational experts

One Good Idea competition
- Schools are in with a chance to see their film on the big screen (cinema)
- Open to all schools, submit ideas by end October

www.seai.ie/schools
Green Schools will be running regional training for the new Climate Action Teacher Resource in the following locations:
- Tipperary (September 30th)
- Dublin (October 1st)
- Waterford (October 3rd)
- Sligo (October 8th)
Please contact Grainne at gryan@eeu.antaisce.org to find out more.

Climate Action Week will run from October 14th to 20th this year
• Actions taken during this week can count towards your Green Flag application
• For resources and to download climate action pledges go to www.greenschoolsireland.org
Become a Climate Ambassador!

Do you have what it takes to be a climate ambassador?
• Attend climate and communications training
• Take meaningful action for positive change in your school, campus or community
• Ongoing support and advice from An Taisce’s Climate Action Officers
• Win a Climate Hero Award!
• Open to secondary school students and teachers in primary and secondary schools
• Apply at www.climateambassador.ie
• Applications open from October 14th
• Contact Climate Action Officer Gary at gtyrell@eeu.antaisce.org
upcycle challenge 2019

We want Ireland to get thinking creatively about reuse. We are so looking forward to seeing what creative ideas #UpcycleChallenge19 will bring, so why not join in and take part!

read more details ➔
Thank you for your attention!

Clare Patten Green-Schools Biodiversity Officer

- Tele: 01- 400 2222
- E-mail: cpatten@eeu.antaisce.org

Any questions?