Forests and Biodiversity

LESSON PLAN

INVESTIGATE FORESTS

Habitat Mapping in the School Grounds

Aim:

To the map current habitats in the school grounds and to build on this map by putting in plans for new habitats in the school grounds

Note:

There are two stages to this activity:

Step 1:	Map current habitats
Habitat Map	Recording what we have (If a school is only beginning)
Step 2:	**Plan for new habitats**
Habitat Plan	What we can add (If a school has already started to work on a Habitat Map)

Curriculum Links:

Living Things
Myself & the wider community

Global Goals/SDG Links:

Goal 11 – Sustainable Cities and Communities
Goal 13 – Climate Action
Goal 15 – Life on Land

Skills:

Research; Observing; Recording; Investigating; Identification; New Words, Art

New Words/ Focal Nua

Citizen Science: this is when people (young and old) help to collect data for research purposes.

You can submit sightings of plants, animals and insects that you find in your school grounds. If you are beginning – use the Backyard Biodiversity Sheet. If you are feeling a bit more confident, you can record sightings at Citizen Science Portal Biodiversity Ireland.

Plant-blindness: is defined as the inability to see or notice plants in your own environment, leading to a lack of understanding of their importance in our daily lives and our biosphere. It also leads to a lack of connection with nature. The same can be said of habitats. Start to notice the plants and habitats we pass by in our daily lives.

Background Information:

The government has declared a 'Biodiversity & Climate Emergency'. The most important action your school can take is to have space for wildlife habitats and biodiversity in the school grounds. We have to move away from concrete jungles to habitats and spaces for wildlife.

In this activity, you are aiming to record what you have in the grounds and start planning for more biodiversity habitats as school projects. It is likely that there is more biodiversity in your school grounds than you initially thought, e.g. ivy on fences/walls, wildflowers in the mown grass area, long grass in corners, trees, hedges, rubble/"waste" ground, etc.

Don't worry if you do not know all the names of the various species you find, you can research these with your students.

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This map is a work in progress, keep the information general and add in as you learn more.

Invite a local nature group, Council Biodiversity Officer or school community member to help.

Equipment:

- ✓ Current Habitat Map per group (or sample map if not)
- ✓ Habitat Map Checklist per group
- ✓ Clipboards/Pencils/Paper to take notes
- ✓ Tablet/Camera to record work

Methodology:

Step 1:	Map current habitats
Habitat Map	What we have

1. Break the students into groups of 3-4 to work together with a copy of Year 1 Habitat Map.
2. On the Map, record the date, weather, North-East-South-West (use compass).
3. Walk the grounds of your school with the students, making notes as you go based on the steps below. Use the checklist of sample habitats to help with this activity.
4. Include buildings, parking, playing pitches, concrete spaces, etc.
5. Make a note of any windy spots, cold spots, warms spots, shady spots, etc.
6. Include your neighbours – (community centre, housing estate, busy or quiet road)
7. As you walk the school grounds, record what you see - any existing trees, hedges, green spaces, thickets, overgrown spaces, wildflowers, bird boxes, drains, sloping ground or any wet areas.
8. On your walk, if you find any insects or see any birds, make a note of them too and where you found them.
9. If you want to bring maths (estimating/measuring, counting) into the activity, ask the different groups to measure the various lengths of ground (footsteps will do). Include these in the map.
10. Now you have completed mapping the current habitats in your school grounds.

Step 2:	Planning for new habitats
Habitat Plan	What we can add

1. Based on your Habitat Map, now you can start to add to it. Identify spaces to include a number of future habitats. These can include a small native woodland, mixed native hedge, wildflower areas, log piles, insect hotels, hedgehog and frog corners, pollinator spaces, beetle banks, ladybird corners, food garden, fruit trees and bushes, small wildlife pond, only for wildlife areas, etc.
2. Link the habitats together by drawing a simple nature trail, which connects them all together (see sample map).
3. Make a simple timeline so that you can focus on one project at a time.

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4. Over time, you can start to create these habitats as part of your biodiversity actions.

5. Over time, you can create signs at these 'habitat and biodiversity hotspots', as an educational nature trail for the wider school community to explore.

Useful Links:

Green-Schools Biodiversity Resources:
https://greenschoolsireland.org/resources/theme_category/biodiversity/

Green-Schools Biodiversity – The Great Plant Hunt:
https://greenschoolsireland.org/register-now-for-the-great-plant-hunt/

GLOBE – Tree Phenology
https://www.globe.gov/web/european-phenology-campaign/overview/autumn-2019

Backyard Biodiversity Survey Sheet:
http://www.biodiversityireland.ie/record-biodiversity/backyard-biodiversity/

Citizen Science Biodiversity Ireland:
http://www.biodiversityireland.ie/record-biodiversity/

https://records.biodiversityireland.ie

Flower–Insect-Timed Count (FITC) Sheet:
https://pollinators.ie/record-pollinators/fit-count/

All Ireland Pollinator Plan Resources:
http://pollinators.ie

Heritage in Schools – Teachers Resources:
http://www.heritageinschools.ie/teachers-resources

Tree Council of Ireland:
https://treecouncil.ie

Wild Flowers of Ireland:
http://www.irishwildflowers.ie

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STUDENT ACTIVITY SHEET

INVESTIGATE FORESTS

Habitat Mapping Checklist

Name/Ainm: _____ Date/Dáta:_____

Stage 1	Map current habitats
Habitat Map **Starting point: record what we have**	

School Type	Notes
Rural	*Orientation – note NSEW on your school map and the direction of the SW wind and N wind
Suburban	
Urban	

CURRENT HABITATS	YES/NO/Notes
1. Grass area/Lawn/Sport Pitch (mowed short)	
2. Wildflower areas (allowed to grow longer)	
3. Concrete areas	
4. Playing Pitches	
5. Waste Ground	
6. Flower Beds	
7. Plants in pots/window boxes	
8. Vegetable Beds	
9. Compost Heaps or Bins	
10. Herbs	
11. Trees (what kind?)	
12. Hedge (what kind?)	
13. Walls (concrete or stone?)	
14. Ivy growing on walls	
15. Insect Hotel	
16. Wildlife Pond	
Any other?	

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STUDENT ACTIVITY SHEET

INVESTIGATE FORESTS

SPECIES LIST:

Record any **Plants or Animals, Insects, Birds** you see in the school grounds

What you saw	Where? In what tree? On what flower?...
Eg. Clover in grass	

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STUDENT ACTIVITY SHEET

INVESTIGATE FORESTS

Habitat Mapping Checklist

Name/Ainm: _____ Date/Dáta:_____

Stage 2	Plan for new habitats
Habitat Plan **Next Step – what we can add**	

School Type
Rural
Suburban
Urban

FUTURE HABITATS	YES/NO/Notes
1. Small Native Woodland (in corners of school grounds)	
2. Native Hedgerow (along boundary)	
3. Food garden – vegetable patch	
4. Compost area - wormery - recycle school food waste	
5. Herb bed – good for wildlife & for sensory element in garden	
6. Pollinator areas – pollinator friendly flower beds – wildflower meadow	
7. Insect habitats – insect hotel, solitary bee hotel, hedgehog hibernator, bat boxes, bird boxes, beetle banks, ladybird corners etc.	
8. Living Willow Fence (as screen or to protect vegetable garden from clós)	
9. Willow Dome (to use as quiet space, with simple log seating) or half dome/archways/archway entrance/mini domes linked with tunnel	
10. Fruit Trees - apples, pears, plums etc.	
11. Fruit Bushes - blackcurrants, gooseberry, raspberries etc.	

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FUTURE HABITATS	YES/NO/Notes
12. Wild Areas – (not mowed) long grass – wildflower meadow (in corners of school grounds)	
13. Leaf Piles – Log Piles (under hedges and trees or corners)	
14. Wildlife pond - places for frogs	
Any other? If there are habitats from the first list that you do not have, include them too.	

OTHER IDEAS	
Simple Nature Trail (to highlight habitats)	
Educational Signs (to inform the wider school community)	
Green-Schools Notice Board – display map and plan	

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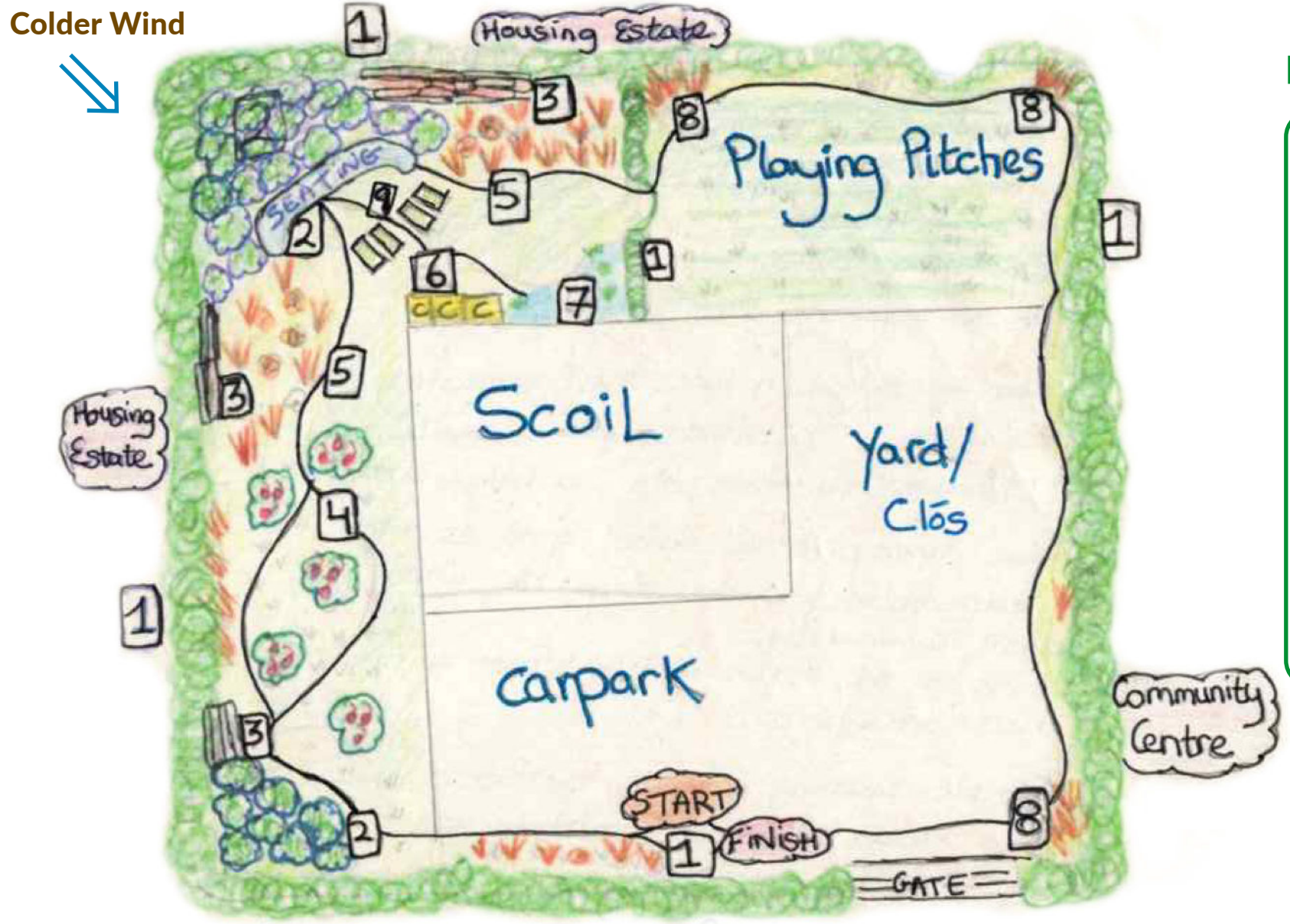
SAMPLE SCHOOL HABITAT MAP



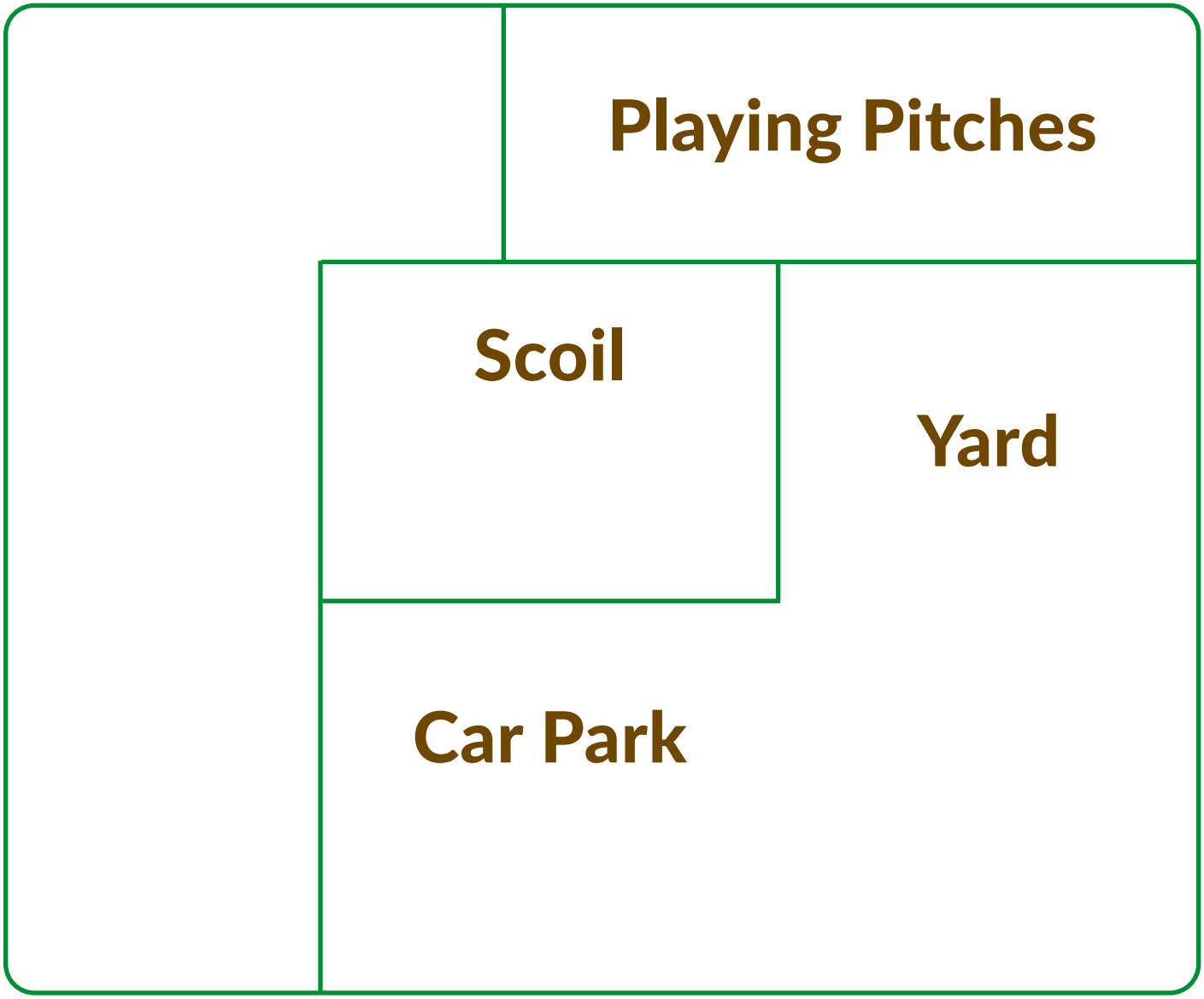
Key to Map

1. Mixed Native Hedge
2. Mixed Native Woods
3. Log piles / Insect Hotels, Frog & Hedgehog Piles
4. Fruit Trees & Bushes
5. Wildflower Meadow
6. Compost / Leaf Compost
7. Wildlife Pond
8. Long grass

Future Habitat

9. Food & Herb Garden

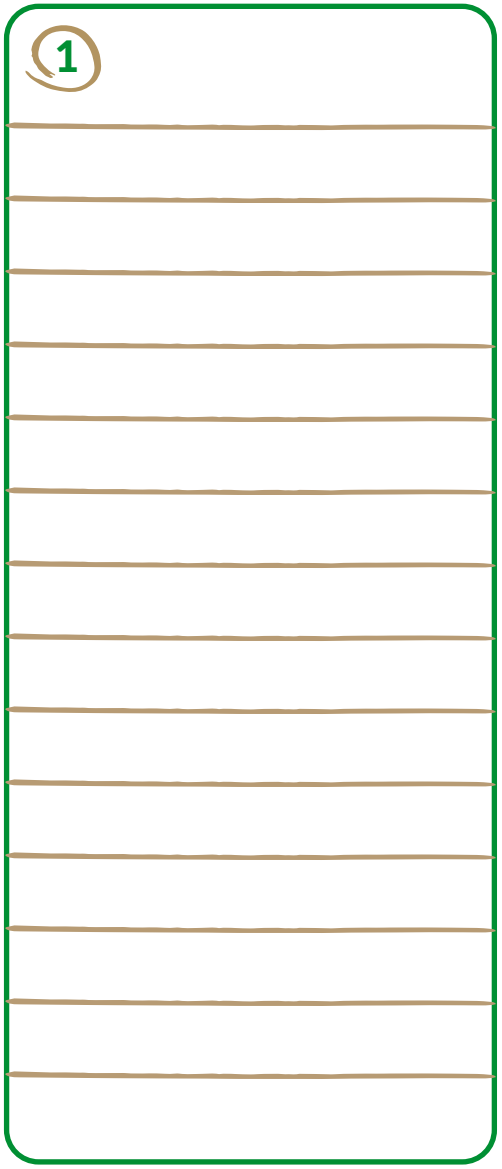
Sample School Habitat Map



----- Busy Road -----

S/W Prevailing Winds

Key to Map



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SUPPORT SHEET

INVESTIGATE FORESTS

Recommendations

Log Piles

- Incorporate them into hedges
- Use hedge & branch clippings
- Have many of them around school grounds & planted trees

Compost/Leaf Compost

- Compost grass clippings, garden waste & leaves
- If you can gather lots of leaves, create a separate leaf compost area

Nature Trail

- Create a simple nature trail, connecting the various habitats, with a number of "Biodiversity Hotspots", e.g. hedge, woods

Educational Signs

- These transform the school grounds into an educational resource for the whole school community
- Signs at the individual habitats & specific trees and plants

Create Seating

- Simple seating enables outdoor classes
- Use logs. Get 30 seating logs cut

Water

- Wildlife pond can be as small as as a baby bath / basin or a large pond
- Incorporate water collection into your plan

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