

Wild Things at School

Worksheets for Primary School Students



by

Éanna Ní Lamhna

Illustrations by Christine Warner



Wild Things at School

Worksheets

by

Éanna Ní Lamhna

Illustrations *by* Christine Warner



Graphic design *by* Bogfire

Published by Monaghan County Council Heritage Office
The Glen, Monaghan, Ireland
in association with
Laois and Meath County Councils



ISBN 978-0-9563289-1-5

Introduction to 6th Class Worksheets

Herb Robert

Cow Parsley

Birch

Deer

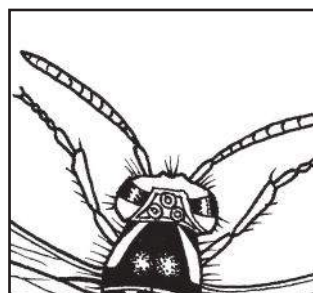
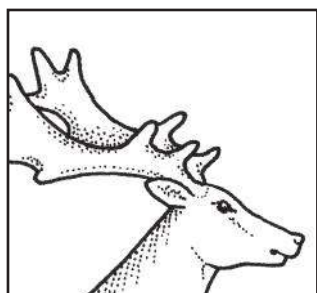
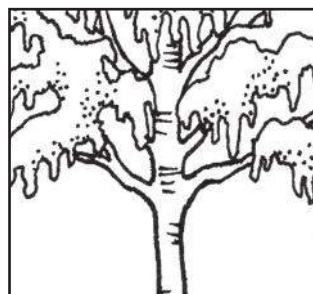
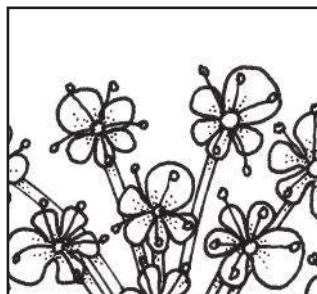
Crows

Wasp

In the Teachers' Book, the lessons on each topic contain suggestions for practical work to be carried out by the teacher with the pupils. The following worksheets are in addition to this and are designed to be used by the pupils themselves, after each of the eight species in the teachers' handbook has been taught. They should be given to the pupils to work on and instructions about what to do on each one should be given by the teacher. The pupils should be taught the lessons on each topic first and then shown the pictures provided for each species. The worksheets, which need not necessarily be done in the order in which they are given, are designed to be photocopied and handed out to the pupils.

There is much emphasis in these worksheets on field work. It is important to bring pupils out to the school grounds on a regular basis to do tasks so that they become familiar with wildlife outdoors. Make sure the item to be seen or collected is around at the time, so pick the time of year accordingly and return any animals collected to the wild.

There is also an emphasis on children finding information out for themselves by use of books and by using the internet. By sixth class, pupils should be encouraged to do research and to use the results to take points of view on environmental issues.



6th Class Teacher Notes

Herb Robert 1

Worksheet

Introduction to plant

This sections requires that the pupils examine the drawing in detail and understand the vocabulary used on the worksheet. They should understand petal, sepal, alternate, opposite, seed and canopy.

Herb Robert 2

Fieldtrip (do this in May)

Ability to find plants

The plant grows in a hedge or woodland edge and flowers in May.

Making a model hedge

This involves making a miniature hedge with the four layers in a box, in class. This can be done by several groups in the class. Each of the four layers of the hedge are collected and placed in the box in the right position.

Cow Parsley 1

(Flowers are in bloom in late May/June)

Worksheet

Introduction to plant

Examination of the drawing and being shown the picture will introduce the pupils to cow parsley. Finding it in a nearby hedge and bringing it back to attempt an accurate drawing increases the familiarity with the plant.

Cow Parsley 2

Fieldtrip

Hunt for insects

Associated with the nectar-filled flowers, this exercise is conducted by using a strong net to sweep a stand of flowers. This should dislodge any insects which can then be examined closely. A warm sunny day is best for this exercise.

Birch 1

Worksheet

Study of tree

Because birch trees are so commonly planted, it should be relatively easy to visit one on a regular basis to find invertebrates. Leaves, bark and around the base of the tree should all be examined.

Birch 2

Worksheet

Key construction

This involves a series of questions to distinguish the individual leaves. It could begin:

1. Leaves compound: go to 2
Leaves simple: go to 4
2. Leaflets attached radially to stem:
Horsechestnut

Leaflets in opposite pairs with one terminal leaflet: go to 3

And so on. There is no right way – the fewer the steps, the more elegant the solution but as long as the key works it is fine.

Deer 1

Worksheet

Food chains

It will soon be apparent in discussion with the class that deer have no natural predators in Ireland.

Importance of top carnivores

Teacher should instigate a debate on the importance of top carnivores and how populations with no top carnivores increase in numbers as long as there is food available. This may mean destroying young forests by eating young germinating trees, or destroying crops on farmland or becoming a nuisance to traffic in parks.

Control of hunting

Hunting deer with guns for sport means removing the very best specimens for trophies whereas natural hunting by wolves would remove the weakest, most easily caught specimens. So culling by controlled removal must mean the removal of the weakest animals to keep the health of the herd up.

Introduced species

This can upset the ecological balance. Muntjac deer, for instance, which have no natural predators in Ireland, will further damage the woodlands where they have been introduced.

Food Chain Game

Revision worksheet in two sections

Revision

This is a revision exercise of the species learned in Primary School. Pupils must know enough about these species to understand their requirements for growth and nutrition.

Food web

By using a ball of string to link each “species” to its food and its prey, a food web can be created. It is then easy to demonstrate the effect on a food web of the loss of even one species. Decide on one species to eliminate and that person lets go all the strings they are holding. See how quickly the web unravels.

Crows 1

Worksheet in two sections

Observation skills

This worksheet requires pupils to look closely at the crows in the school grounds and to realise that there are two different species – a rook and a jackdaw – so this exercise sharpens their observational skills.

Nests

Magpies have solitary nests of sticks high in trees in suburban areas. Rooks nest in colonies on the tops of adjoining trees. Jackdaws nest in chimneys, church steeples and old castles.

Crows 2

Worksheet in three sections

Research skills

Pupils should be able to find out about Ravens, Hooded Crows, Jays and Choughs.

Food

Crows eat a wide variety of food and these lead to the abundance of the species.

Scientific survey

Draw a map of the area surveyed and mark in the positions of the Rook and the Magpie nests. Rookeries will be separate from each other but there may be individual Magpie nests relatively close in areas where there is good feeding available. It is the availability of food and nesting sites that controls the populations of Rooks and Magpies.

Wasps 1

Worksheet in two sections

Identification

Wasps and honey bees are of a similar size but honey bees are hairy with indefinite stripes while wasps are shiny and very definitely striped. Bumble bees are much bigger and hairier.

Mimicry

There are several other non-stinging insects which carry the black and yellow warning colours of bees and wasps. This mimicry has meant that they have evaded being eaten so those that look most like bees most successfully evade capture by birds and leave most offspring. They evolve, therefore, to look more closely like bees and wasps.

Wasps 2

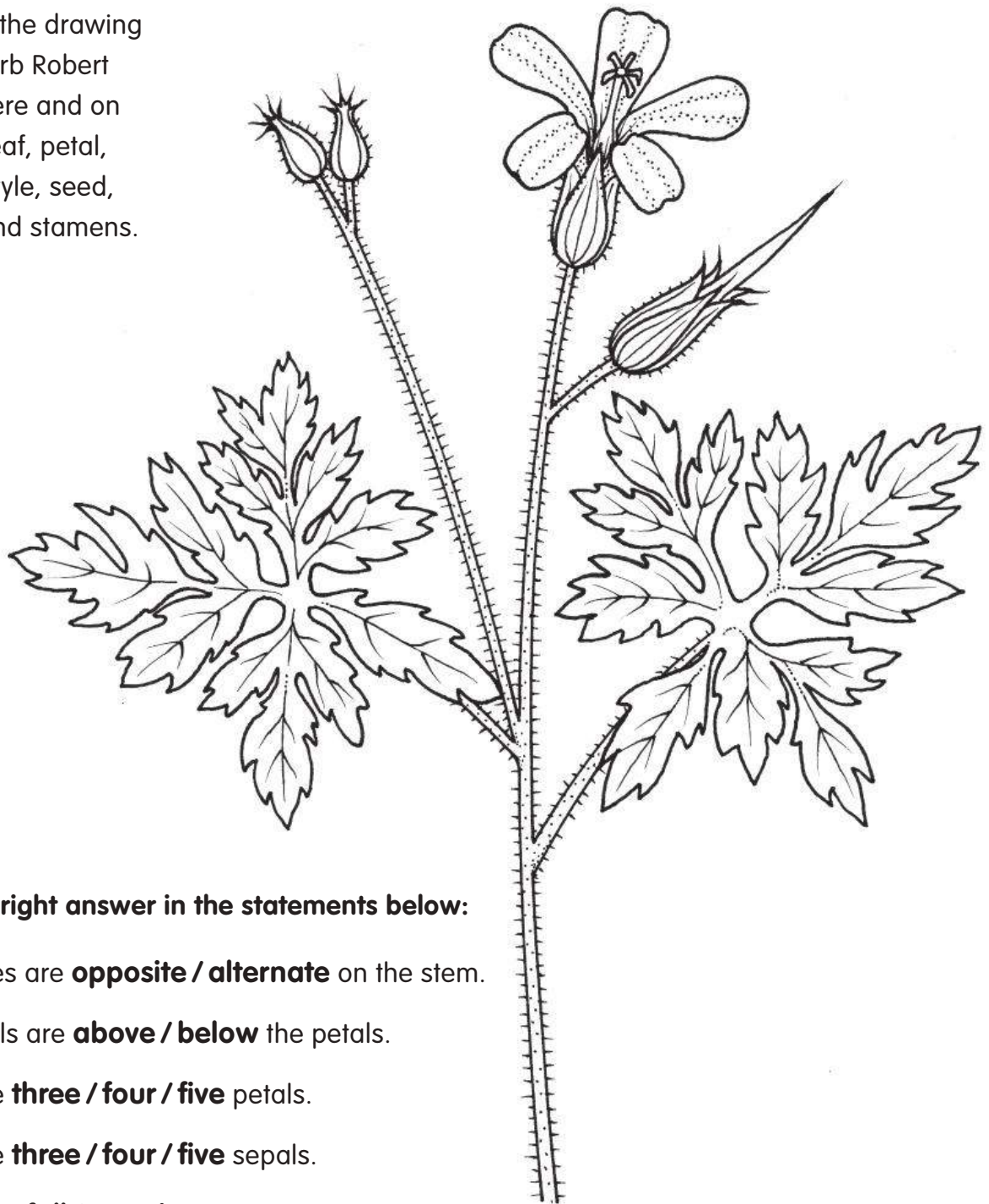
Debate

There is a learned response among children that wasps are hateful, nasty things which are out to sting us. This exercise in looking at how wasps live and should make them realise the important role played by wasps in keeping down crop pests such as aphids and greenflies. Neither bees nor wasps are “better” than one another – they are both very important parts of biodiversity.

Plant introduction

Herb Robert is a woodland and hedgerow plant that flowers in Spring. It is a member of the cranesbill family, so called because of the shape of the seed.

Examine the drawing of the Herb Robert drawn here and on it mark leaf, petal, female style, seed, sepals and stamens.



Ring the right answer in the statements below:

The leaves are **opposite / alternate** on the stem.

The sepals are **above / below** the petals.

There are **three / four / five** petals.

There are **three / four / five** sepals.

The sepals **fall / remain** when the seed forms.

In a hedge, Herb Robert is part of the **ground layer / shrub layer / canopy**.

FIND OUT:

What colour are the petals of Herb Robert? _____

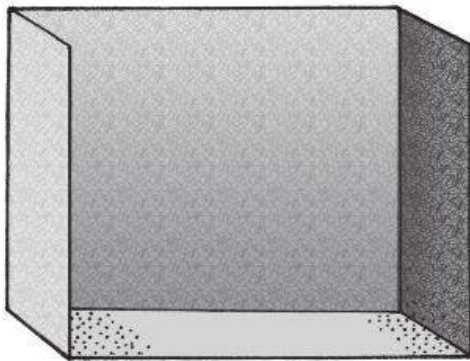
Create a hedge

Herb Robert is a hedge/woodland plant that flowers in April.

Find some growing in a hedge near your school.

Smell the flower – it has a pungent smell like that of a fox. It tastes horrible and slugs, woodlice and snails never eat it.

Following your fieldtrips to a hedge this year, you can build up a model hedge with four layers in class.



You will need: a large box of the size and shape of a large cornflakes box. Cut off one large side and one end. Stand it vertically on its other end, as illustrated.

This is where you assemble your model hedge. You may wish to cover the box and paint it green. On the bottom floor of the box is the litter layer. This will be moss and dead leaves.

On top of this is the ground layer where the flowers grow. Collect some Herb Robert as well as other hedge flowers for this layer.

The shrub layer and canopy layer of the tall trees in the hedge complete the model hedge.

These can be collected on this fieldtrip and the whole model hedge assembled back in class.

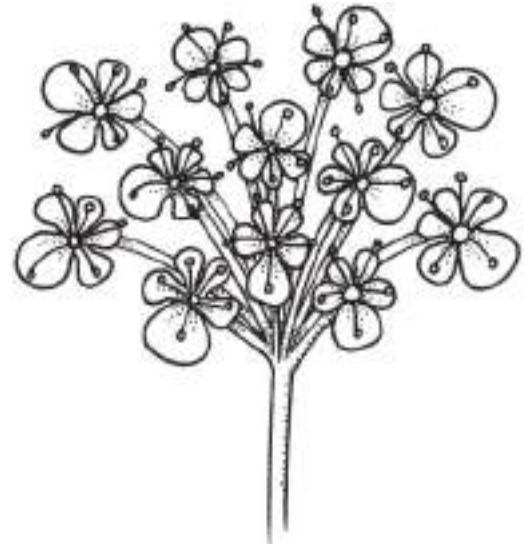
Fieldtrip

Cow Parsley is a particularly common wildflower in May and June. It grows along hedges on roadsides and in fields. It belongs to a family of flowers called *umbelliferae* because the heads of flowers on the plant are like an umbrella.

Examine the drawing.

How many petals on each flower? _____

Are the petals all the same size? Describe them.



FIELDTRIP

Go outside and collect a specimen of Cow Parsley. Bring it back to class and make your own drawing here. Trace the outline of a whole leaf on to this page.

Describe the smell of the flowers. _____

Look at the stem and describe it. Has it a hollow or solid stem? _____

Put the flower into the ground layer of the hedge you are making in the box.

Fieldtrip

Cow Parsley is common in hedges and is very attractive to wildlife as each little individual flower contains lots of nectar.

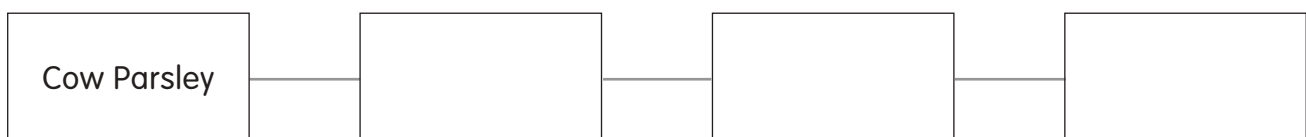
Find a stand of Cow Parsley.

1. Observe your Cow Parsley stand and see what flying insects appear looking for nectar.

2. Sweep the flowers with a net and then empty the net into an open umbrella and see what is there.

3. Look in the dried-out stems in winter to find hibernating earwigs.

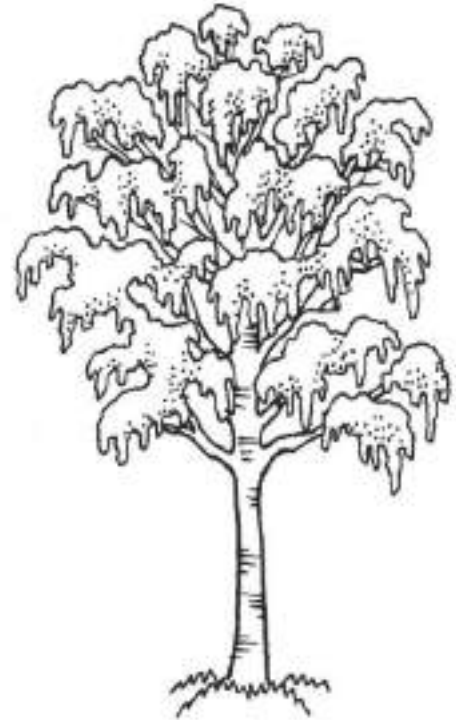
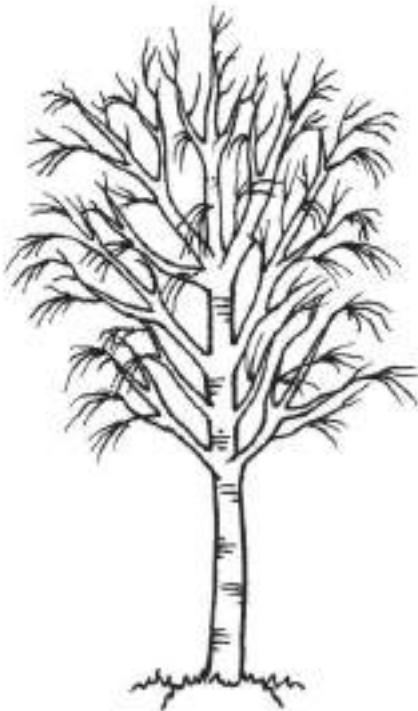
4. Use your results to make food chains with Cow Parsley at the bottom.



Tree study

Birch trees are commonly planted in towns, parks and school grounds.

Where is the nearest one to your school? _____



Find your nearest birch tree and study it over the school year, starting in September. Wildlife is particularly fond of birch trees and 229 insect species are associated with it.

Visit your tree every two weeks and keep a diary of whatever wildlife you find. Shake the leaves, look in cracks in the bark and search down at the bottom of the tree. Look out for flying insects.

Diary of examination of Birch tree

	Date	Condition of leaves	Insects found
September 1st fortnight			
September 2nd fortnight			
October 1st fortnight			

And so on until June.

Note changes in the leaves, when all the leaves have fallen, condition of bark, buds, catkins, seeds etc, Keep a note of the number and variety of creepy-crawlies found.

Plant key

By this stage, you will have learned about 8 trees in school.

Here is an outline of all the leaves to remind you.

--	--	--	--



--	--	--	--

Name each leaf. Construct a key to the eight leaves.

Helpful pointers: compound leaves, simple leaves, number of leaflets, leaf edges (prickly, wavy, toothed, deeply-cut) and leaf shape (pointed, rounded).

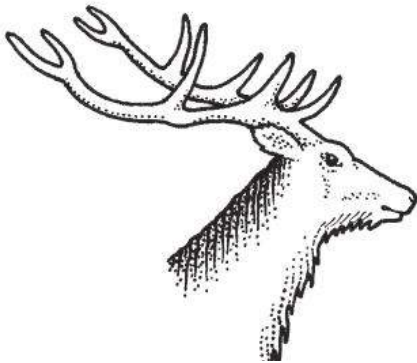
The class can be divided into groups of 4 or 5 and each group makes a key. They need not all be the same as long as they work. You can test your key on another group.

The best keys identify the leaves with the fewest steps. A typical key would have 6 steps.

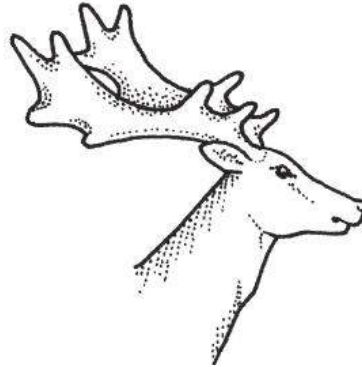
My Plant Key

Debate

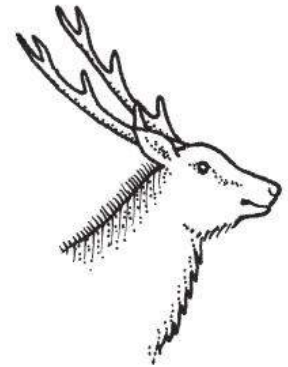
Deer are herbivores that feed on grass, leaves, young growing trees and the bark of trees. There are three wild species in Ireland.



Red Deer

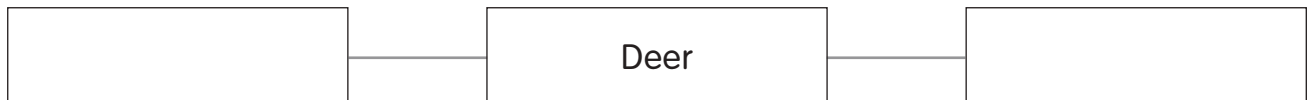


Fallow Deer



Sika Deer

Make two food chains with deer.



What carnivores feed on deer in Ireland? _____

Wolves are carnivores on deer but they have been extinct in Ireland since the 1700s.

What is the result of deer having no natural predator? _____

What controls the deer population in Ireland? _____

How do uncontrolled numbers of deer affect the following environments:

Native oak woodland? _____

Farmland near deer upland territory? _____

Enclosed parkland where a deer herd is kept? _____

So deer in Ireland have to be managed. But how?

Is hunting a good way to control deer numbers? _____

What other, more effective, conservation measures could be used? _____

Recently it was reported that a 4th species of deer – the Muntjac Deer – has been

introduced to Ireland. Is this good or bad? _____ Why? _____

Food Chain Game

Each member of the class picks one of the following species and writes the name in big letters on a piece of paper. Take turns to pick and make sure that some from each group are picked.

PLANTS	HERBIVORES	CARNIVORES	OMNIVORES	DECOMPOSERS
Buttercup	Deer	Ladybird	Robin	Earthworm
Nettle	Pigeon	Hedgehog	Fox	Woodlouse
Hawthorn	Bee	Wasp	Badger	
Oak	Rabbit	Kestrel	Blackbird	
Hazel	Swan	Frog	Jackdaw	
Primrose	Squirrel	Heron	Magpie	
Cow Parsley	Snail	Spider		
Elder	Butterfly	Bat		

One name is fixed to the back of each pupil without their seeing what the name is.

The class divides up into twos.

Each member of the pair can see the other's name, but not their own.

To find out what name is on their back, each pupil can ask their partner questions about it. The only questions allowed are Yes/No ones. They can keep asking until they get a 'No' and then it is the other person's turn.

Example

Person (wearing ladybird name) asks:

Is it an animal? Yes. Is it a carnivore? Yes. Has it wings? Yes. Is it a bird? NO.

Other person (wearing a nettle name) asks:

Is it a plant? Yes. Has it flowers? Yes. Are the flowers yellow? NO.

First person's turn again.

You can all now form a food web by standing in a circle and passing a ball of string around from each species to its food.

Identify

Crows are a family of birds that have seven species in Ireland. The most common species are Rooks, Jackdaws and Magpies.



Magpie



Jackdaw



Rook

Look carefully at the drawings above.

Which one has the longest tail? _____

Which one has the thickest beak? _____

Which one is the smallest? _____

Which one is black and white? _____

Which are in your school grounds? _____

Fieldtrip to see Crows (do this in September and again in May)

Spend 15 minutes in the school grounds looking for crows.

Which species was the easiest to see? _____

Which one was the most common? _____

Which species was walking in the school field? _____

Were they only with their own kind or were there mixed groups? _____

What species were together? _____

How many of each were there? _____

FIND OUT:

Where do Magpies nest? _____

Where do Jackdaws nest? _____

Where do Rooks nest? _____

Research

There are seven different species of crow in Ireland. You already know three. Find out what the other four species of crows in Ireland are:

1. _____ 2. _____ 3. _____ 4. _____

Crows are omnivores.

As herbivores they eat _____ .

As carnivores they kill and eat _____ .

They are also scavengers and eat things that are already dead: _____

_____ .

Because of these different methods of feeding, they can always find something to eat and so are very successful birds.

Hunting for Nests

Rooks and Magpies, in particular, make very obvious nests in Spring.

Survey your area in March before the leaves come on the trees and count the number of nests you find.

Rooks' nests _____

Magpies' nests _____

Survey

Are there more Magpie nests or Rook nests? _____

Which species nests in a colony of nests? _____

What are the advantages of this system? _____

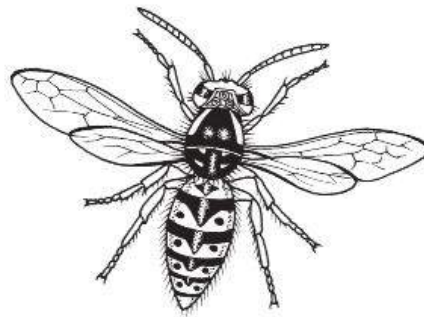
Which one nests alone? _____

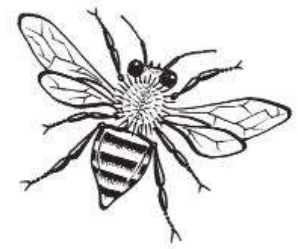
What are the advantages of this? _____

Identify

Wasps spend all summer long collecting greenflies, blackflies and white flies to feed their young.







Above are drawings of a wasp, a bumble bee and a honey bee.
Can you tell which is which?

A _____ has the fattest body.

All three have _____ wings.

A _____ has no waist.

A _____ has yellow and black eyes.

Both types of _____ are hairy.

A _____ has a shiny body.

A _____ has a horizontal stripe on its thorax (middle part of its body).

A _____ has large stripes all down its body.

Label each of the three drawings above.

Mimicry

Insects with yellow and black stripes are not eaten by birds. This is because birds think all these insects have stings but actually only bees and wasps have. Other insects look like wasps and so avoid being eaten. This is called mimicry.

Look up pictures of the following insects: Hoverfly, Woodwasp, Bee Hawk Moth.

Which one is the best mimic? _____

A Debate

Wasps and Bees are very important. Without them, life on earth could not continue.

Your class is going to have a debate about the importance of bees and wasps. It is divided into two groups – one for bees and one for wasps. There will be three speakers for each side in the debate. Each half of the class helps their speakers to have information to speak about. This is called doing research. The work is divided up so that everyone finds out something.

Bees	Wasps
How many bees in a colony?	How many wasps in a colony?
What do bees eat?	What do wasps eat?
What are baby bees fed?	What are baby wasps fed?
What is the result of bees looking for food on flowers?	What is the result of wasps collecting this food on garden plants?
What crops of food depend on bees?	What crops of food depend on wasps?
Why do bees have stings?	Why do wasps have stings?
Do all bees have stings?	Do all wasps have stings?
Why do bees swarm?	Why do wasps not swarm?
What would the world be like with no bees?	What would the world be like with no wasps?

The speakers take turns to say good things about bees and wasps and try to prove which is the most important. Another class can be invited to listen to the debate.

Wild Things at School DVD

The DVD at the back of this book contains resources that you can use when teaching the *Wild Things at School* programme. Irish and English versions of the *Wild Things at School* worksheets are on the DVD. The two *Wild Things* books by Eanna Ní Lamhna are provided so that you can use them in many different ways. You can, for example, print out worksheets for students and project them onto the wall or whitescreen. All of the original drawings by Christine Warner are on the DVD together with actual photographs of all the wild things to enhance the learning experience.

Disk contents



Wild Things at School: A book for Primary School Teachers
by Eanna Ní Lamhna



Wild Things at School: Worksheets for Primary School Students
by Eanna Ní Lamhna



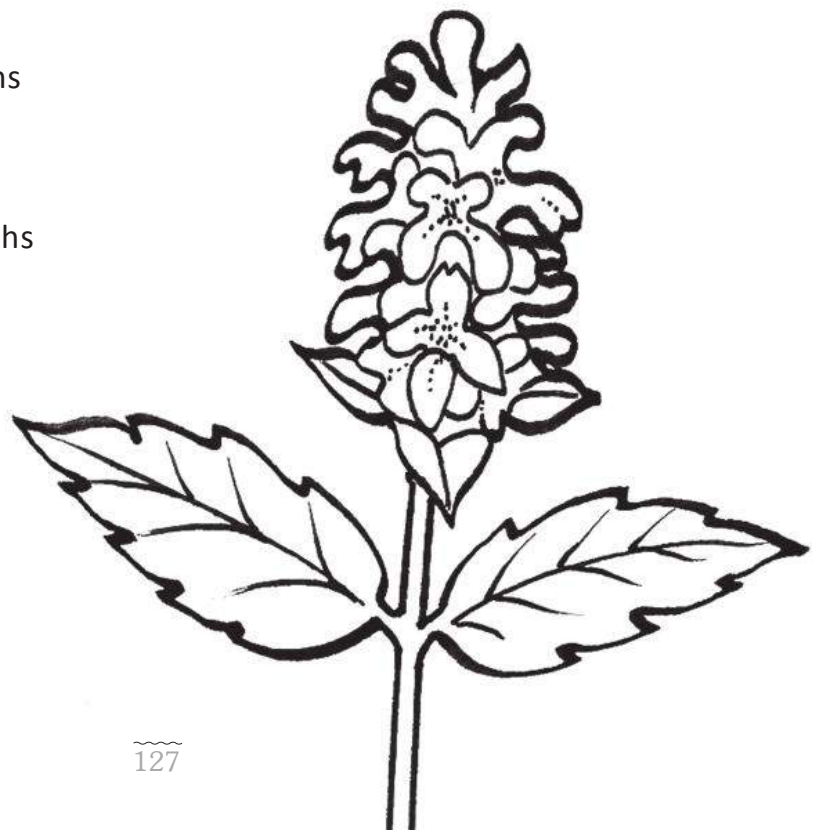
Irish version - *Nithe Fiáine ar Scoil*



Wild Things illustrations



Wild Things photographs



Acknowledgements

The *Wild Things at School* series has been developed to help engage primary school children and teachers with nature. The original publication, *Wild Things at School*, a book for primary school teachers has been positively received by teachers all over Ireland and has proved to be a valuable teaching resource. This new publication of *Wild Things Worksheets* is designed to accompany the teacher's book providing material for use in the classroom. Exercises are divided into class groups, from the simplest counting for junior infants to stimulating debates and field studies for the older children.

The exercises have been created and developed by wildlife expert Éanna Ní Lamhna, who has many years experience visiting schools all over Ireland. Christine Warner's beautiful illustrations were specially commissioned to enhance the learning experience on every page. Photographs of all the wild things are included on a DVD along with the worksheets and original teacher's book. The worksheets are available in Irish and are also on the DVD.

This publication is funded by the Heritage Council Heritage Plan fund, Monaghan County Council Heritage Office and Meath County Council Heritage Office.

The publication design is by Connie Scanlon and James Fraher at Bogfire. Proof reading was undertaken by Graham Smith of Wordsmith. Irish translation of the worksheets is by Máire Mhic Thaidhg. Pronsias Ó Donnghaile proofread the Irish version. Photographs are mainly from Eric Dempsey and Shirley Clerkin.

I hope that the production of these worksheets will assist teachers to deliver the *Wild Things* programme. Enormous thanks goes to those who have been involved with this project, particularly Eanna and Christine whose creative partnership has resulted in a fantastic teaching resource. It has been a labour of love for us all; a love for nature that we genuinely wish to pass on to its future custodians.

We wish you luck with the *Wild Things* programme.

Shirley Clerkin
Heritage Officer
Monaghan County Council
heritage@monaghancoco.ie



About the Author



Éanna Ní Lamhna

Éanna Ní Lamhna is best known for her environmental expertise as a broadcaster on the radio programme *Mooney Goes Wild*. Her Co. Louth accent gives her one of the most instantly recognisable voices on radio. Her ability to bring her subject to life is legendary and her no-nonsense approach to romantic views about wildlife is well known.

She is first and foremost a botanist with degrees in both botany and ecology from University College Dublin. Her interest in the environment has expanded with her work over the years, to include birds, mammals and in particular creepy-crawlies whose doings hold a particular fascination for her. Her ability to awaken enthusiasm for these creatures in her listeners is exemplified by the remark made to her lately, "Whenever I see a spider I always think of you and put it outside instead of stamping on it."

She began work in 1974 in the Biological Records Centre — in its first incarnation in An Foras Forbartha. She quickly realised that if she was to receive any biological records from the Irish public she would first have to go and teach them about Irish wildlife. So began a career of teachers' courses, radio programmes, lecturing at third level, field trips with Secondary School pupils and most significantly of all, visits to Primary Schools to teach the pupils and indeed the teachers there, about the wildlife around them.

Her publications include *Talking Wild*, *Wild and Wonderful*, *Straight Talking Wild* and *Wild Dublin*. She has just completed a five-year term of office as President of An Taisce and is currently the Vice-President of the Tree Council of Ireland.

About the Illustrator



Christine Warner

Christine Warner is an illustrator and calligrapher working mostly in the field of education. She provides full colour illustrations, line diagrams and cartoons for textbooks, workbooks and posters. She has worked for many educational publishers and also for Dúchas, Forfás and Trócaire.

While she illustrates material on a wide variety of subjects, she specialises in science, having science degrees from University College Dublin and Trinity College Dublin. She particularly enjoys producing wildlife illustrations and cartoons. She has been an environmental activist for many years. Christine may be contacted via email at cwarner1@gmail.com

Published by Monaghan County Council Heritage Office
in association with Laois and Meath County Councils



An Chomhairle Oidhreachta
The Heritage Council



This project was supported by
the Heritage Council through
the County Heritage Plan fund.



ISBN 978-0-9563289-1-5



9 780956 328915 >

ISBN 978-0-9563289-1-5