Module Five

MORE ABOUT TREES.

Additional information on why trees

are planted, trees in literature

and trees in folklore.



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Why Trees are Planted

Trees are planted all around us.

They are planted for various reasons.

- ★ For shelter
- ★ As boundaries
- ★ For **aesthetic purposes** because they look nice
- ★ For **privacy** and to screen things
- ★ By accident
- ★ As a crop
- ★ For architectural purposes as a frame or as a backdrop
- ★ For engineering purposes to control erosion
- \star To **beautify** the countryside

In your own local area and around your school, you will see trees which were planted for some of these reasons.



Leaves

If you examine different leaves carefully, you will see that they have a variety of shapes.

 \star Leaves can be **simple**.

One leaf with a stalk attached. The leaf itself can have a wavy outline, a pointed one, a lobed one, or with hairs around the edge.

- ★ Leaves can be compound.
 Several leaves attached to the one stalk (petiole).
- ★ Leaves can be **needle-like**. These will come from evergreen trees.
- \star Leaves can be **scale-like**. These come from evergreen trees as well.

Pressing Leaves

You can keep leaves for years if you press them until they are dry.

- ★ Put your best specimens down on half a page of newspaper.
- \star Enclose a label alongside.
- ★ Fold over the paper and put a weight, such as a heavy book, on it.
- ★ Change the newspaper after two days and put the leaves in fresh newspaper, with the label.
- \star Replace the weights.

When the leaves are dry, mount them on plain white paper. Put the label at the bottom of the page.

The label should have the following information:

Date Name of collector Where collected

When the leaves are dried and mounted, put them into a class **Tree Diary**.

The Tree Diary could also contain details of a tree you are studying.

- ★ The girth of tree trunk
- ★ Estimated height of the tree
- ★ Width of the tree umbrella i.e. the amount of shade the crown casts

Date	
Name of collector	
Where collected	
Name of tree	

Name of tree





Tree Quotations

The following expressions are associated with trees.

- You can't see the wood for the trees. Tá d'umhail ar na mionrudaí agus ní léir duit na mórrudaí.
- **2** You are barking up the wrong tree. Tá an daillait ar an gcapall contráilte agat.
- **3** You are not yet out of the woods. Níl tú thar an mbarra go fóill.
- 4 Touch wood. I bhfad uainn an tubaiste.
- 5 If it's going to happen, it will happen to him/her.Dá dtitfeadh crann sa choill, is air/uirthi a dtitfeadh sé.
- 6 S/he would start a row in Heaven. Chuirfeadh sé/sí dhá cheann na coille ar a chéile.
- 7 We are often the source of our own misfortune. Is minic a bhain duine slat chun é/í féin a bhualadh.
- 8 We are our own worst enemy. Tá a loscadh féin i ngach coill.
- **9** Patience is a virtue. Níl aon chrann sna flaithis níos airde ná crann na foighne.
- 10 S/he won. Tugadh an chraobh dó/di.
- 11 The tree lives longer than the person who planted it.Maireann an chraobh ar an bhfál ach ní mhaireann an lámh a chur.

The following expressions show how we use trees in our everyday speech. Do you know what they all mean?

- \checkmark To hold out an olive branch
- ✓ A chip off the old block
- ✓ To rest on your laurels
- ✓ To turn over a new leaf
- ✔ Finding your roots
- \checkmark A branch of the family
- ✓ To have a very wooden character
- ✓ From little acorns grow mighty oaks.
- ✓ A tree is known by its fruit.
- ✓ Walnuts and pears you plant for your heirs.
- \checkmark As a tree bends, so shall it grow.



Trees in Folk Tradition

Trees are an important part in the lives of people who live on the land. So it is not surprising to find much reference to them in our Irish folk tradition.

Did You Know?

Folk tradition, or *Béaloideas*, is information about the past that is passed on to new generations.

Folk tradition was never written down, but passed on by word of mouth from one generation to another. You may be able to collect some *béaloideas* from older people in your family or neighbourhood.

Here are some folk traditions associated with trees.

Fairy Trees

Fairy trees were usually lone-standing hawthorn trees. It was considered unlucky to cut them down.

Trees at Holy Wells

The barks of these trees were often embedded with coins, and the trees themselves festooned with rags and pieces of paper. This was done to get a cure at the holy well. There are many stories about particular trees at named holy wells.

Rowan or Mountain Ash

The rowan, or mountain ash, was thought to protect people from harm. For this reason, many people liked to have a rowan tree growing near their house.

Elder trees

The elder was sometimes called a boor tree. It was considered an unlucky tree because Judas is said to have hanged himself on an elder tree.

And.

It was also said that children who were slapped with an elder stick would grow no more!



Placenames Associated with Trees

Many Irish placenames are derived from trees or from woodlands.

They can come from

Crann

Cranmore in Mayo, Cranny in Donegal, Cranagh in Tipperary and Wicklow. The word *crannóg* also comes from *crann*.

Coill

Coill means wood. It is sometimes spelled Kyle or Kil. Kylemore in Galway means 'big wood'. Kilnamanagh in Dublin and Tipperary means 'the wood of the monks'. Quilty in Co. Clare is derived from *Coillte*. Kiltyclogher in Co. Leitrim is from *Coillte Clochar*.

Dair

Dair, meaning oak, gives us Derry and Kildare.

Eo from Yew gives us Newry, Mayo (*Maigh Eo*), Terenure (*Tír an Iúir*).

Úl

Úll, from apple, gives us Oulart in Co. Wexford.

Cuilleann

Cuileann, from Holly, gives us Drumcullen, meaning 'holly ridge', in Co. Offaly.

Leamhan

Leamhan, meaning elm, gives us Lucan.

Place names are also derived from *Craobh*, meaning branch, *Garrán*, meaning grove, and *Muine*, meaning a thicket.

Research

Find out as many placenames as you can in your own locality, or in the locality of your school, that are derived from trees.



Surnames Derived from Trees

Some surnames come from trees. Surnames have been used from around the year 1000 A.D. At first, a surname was formed by putting Mac to the father's first name, or O to that of a grandfather. But as time went by, other ways of forming surnames were used, and trees have been used in some of them.

Holly or Cuileann has given us the surnames Cullen, MacCullen and Cullinane.

Blackthorn or Draighneán gave us Drennan, Thornton, Skehan (from *sceach*) Meenagh (from *muineach* or thorns).

Oak or Dair gave us Darragh and MacDara.

Coill itself has many variants such as Woods, Quill, Quilty, McEnhill (*Mac Conchoille* or the 'hound of the woods').

Ashe is an Irish 14th century name in Co. Meath and Kildare. It means 'the dweller by the ash tree'.

For You To Do

Collect some béaloideas yourself.

Ask older people in your family and in your neighbourhood what certain trees were used for in the old days. Ask about trees such as blackthorn, bog-deal or bog oak, ash, hazel, willow or sallies and holly.

Write down what you have been told and bring it to school. This material may be included in a class Tree Diary.

Placenames

Are there many **placenames** in your parish derived from trees?

If your teacher has a large map of the area, look at the placenames on it. Otherwise, write down a list of all the townlands in your parish and see if any of them are associated with trees. Towns and cities often have streets or housing estates called after trees. Check and see if the tree it is called after is actually there.

Should placenames and names of streets and housing estates be choosen at random, or should they be associated with the area?

Surnames

Has anyone in your class a surname derived from a tree?

Surnames of people in Ireland come from many sources. Make a list of all the surnames (in Irish) in your class, including your teacher's. See if you can work out the the origins of the names. Some surnames are very obscure, and even experts do not know their origins. There are reference books of surnames and placenames which you can get from a library if you want to find out more.



Trees as an Inspiration to Poets

Many poets spend a lot time observing nature, so it is no wonder that there are so many poems about trees.

- **Nursery Rhymes** The very earliest nursery rhymes you learned included ones about trees. Can you remember 'I had a little nut tree' or 'Rock-a-bye Baby'.
- **Limericks** These are nonsense rhymes written in a certain way. They are five lines long and many were written by Edward Lear. Here are two he wrote on trees and bushes.

There was an old lady whose folly	There was an old man who said, 'Hush,
Induced her to sit on a holly.	I perceive a young bird in this bush.'
Whereupon, by a thorn	When they said, 'Is it small?'
Her dress being torn,	He replied, 'Not at all,
She quickly became melancholy.	It is four times as big as the bush.'

Writing a poem about Trees

Here are some ideas to help you write poetry about trees.

Word-Bank

To write poems and stories about trees, we need to know lots of tree words. Write down as many words as you can that relate to trees. Don't forget words about what trees and their leaves do – like rustle, grow, fall, decay etc.

Limericks

Try writing a five-line limerick about trees using the same rhyming scheme as Edward Lear.

Special Poems

- Think of a tree. Now think of lots of words that are associated with trees and particularly about the tree you have chosen. Write down all the words <u>in the shape of a tree</u>. Your poem will look like a tree and be an **architectural** poem.
- ★ Imagine you are a tree yourself. Write a poem as if you were a tree. What would you be thinking about? Maybe the different seasons, the animals in your branches and bark, the people you see. Perhaps you are old and afraid you will fall or be cut down.

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★ Write a poem about a tree during the four seasons of the year, with one verse for each season. You can draw a picture to go with each verse. It does not have to rhyme.

	The oak before the ash,
This rhyme forecasts whether it	We'll have a dash.
will be wet or dry in summer.	The ash before the oak,
	We'll have a soak.

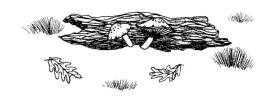


Trees in Poetry

Poets have often lamented the felling of trees. Read the following two poems. One was written in England in the 1700s and the other in Ireland in the 1600s. Compare them. What do these poems tell us about trees? What pictures do they paint of the landscape?

The Poplar Field William Cowper

The poplars are fell'd; farewell to the shade, And the whispering sound of the cool colonnade. The winds play no longer and sing in the leaves Nor Ouse on his bosom their image receives.



Twelve years have elapsed since I first took a view Of my favourite field and the bank where they grew And now in the grass, behold, they are laid And the tree is my seat that once lent me shade.

Cill Cais Anon. (This is also sung to a traditional Irish Air)

Cad a dhéanfaimid feasta gan adhmad Tá deireadh na gcoillte ar lár. Nil trácht ar Chill Chais ná a teaghlach 'S ní chluinfear a cling go brách. An áit úd ina gcónaíodh an dea-bhean, Fuair gradam is meidhir thar mhná. Bhíodh iarlaí ag tarraingt thar toinn ann 'S an t-Aifreann binn dá rá.

Where the hazels afford him a screen from the heat And the scene where his melody charmed me before Resounds with his sweet flowing ditty no more.

The blackbird has fled to another retreat

My fugitive years are all hasting away And I must ere long lie as lowly as they, With a turf at my breast and a stone at my head Ere another such grove shall arise in its stead.



Ní chluinim fuaim lachan ná gé ann, Ná iolar ag éamh cois cuain, Ná fiú na mbeacha chun saothair Thugadh mil agus céir don slua. Níl ceol binn milis na n-éan ann Le hamharc and lae ag dul uainn, Ná an chuaichín i mbarra na gcraobh ann A chuireadh an saol chun suain.



Ta ceo ag titim ar chraobha ann Nach nglanann le gréin ná lá. Tá smúit ag titim ón spéir ann Is a cuid uisce go léir ag trá. Níl coll, níl cuileann, níl caor ann Ach clocha is maolclocháin: Páirc na foraoise gan craobh ann Is d'imigh an géim chun fáin.





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The blackbird has fled to another retreat Where the hazels afford him a screen from the heat And the scene where his melody charmed me before Resounds with his sweet flowing ditty no more.

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Trees in Spring

E.S. Nesbitt

The silver birch is a dainty lady; She wears a satin gown. The elm tree makes the old churchyard shady; She will not live in town.

The English oak is a sturdy fellow; He gets his green coat late. The willow is smart in a suit of yellow While brown the beech trees wait.

Such a gay green gown God gave the larches, As green as He is good. The hazels hold up their arms for arches When Spring rides through the wood.

The chestnut's proud and the lilac's pretty; The poplar's gentle and tall But the plane tree's kind to the poor dull city: I love him best of all.

Loveliest of Trees

A. E. Housman

Loveliest of trees, the cherry now Is hung with bloom along the bough And stands about the woodland ride Wearing white for Eastertide.

Now, of my my three score years and ten, Twenty will not come again And take from seventy springs a score, It only leaves me fifty more.

And since to look at things in bloom, Fifty springs are little room, About the woodland I will go To see the cherry hung with snow.

Sweet Chestnuts

John Walsh

How sweet the woods were! Not a redbreast whistled To mark the end of a mild autumn day. Under the trees the chestnut cases lay, Looking like small green hedgehogs softly bristled.

Plumply they lay, each with its fruit packed tight, For when we rolled them gently with our feet, The outer shells burst wide apart and split, Showing the chestnuts brown and creamy white.

Quickly we kindled a bright fire of wood, And placed them in the ashes. There we sat, Listening how all our chestnuts popped and spat And then the smell how rich, the taste how good!



The Song of Wandering Aengus

WB Yeats

I went out to the hazel wood, Because a fire was in my head, And cut and peeled a hazel wand, And hooked a berry to a thread; And when white moths were on the wing, And moth-like stars were flickering out, I dropped the berry in a stream And caught a little silver trout.

When I had laid it on the floor, And went to blow the fire aflame, Something rustled on the floor, And someone called me by my name: It had become a glimmering girl With apple blossom in her hair Who called me by my name and ran And faded through the lightning air.

Though I am old with wandering Through hollow lands and hilly lands, I will find out where she has gone And kiss her lips and take her hands; And walk among long dappled grass, And pluck till time and times are done, The silver apples of the moon, The golden apples of the sun.

Beech Tree

Patrick Kavanagh

I planted in February A bronze-leafed beech. In the chill brown soil I spread out its silken fibres,

Protected it from goats With wire netting And fixed it firm against The worrying wind.

Now it is safe, I said, April must stir My precious baby To greenful loveliness.

It is August now, I have hoped But I hope no more My beech tree will never hide sparrows From hungry hawks.

Cill Cais

Anonymous (This is also sung to a traditional Irish Air)

Cad a dhéanfaimid feasta gan adhmad Tá deireadh na gcoillte ar lár. Nil trácht ar Chill Chais ná a teaghlach 'S ní chluinfear a cling go brách. An áit úd ina gcónaíodh an dea-bhean, Fuair gradam is meidhir thar mhná. Bhíodh iarlaí ag tarraingt thar toinn ann 'S an t-Aifreann binn dá rá.

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Bluebells

O. Enoch

In the bluebell forest There is scarce a sound, Only bluebells growing Everywhere around.

I can't see a blackbird Or a thrush to sing, I think I can almost Hear the bluebells ring.

Ah! There is a bunny, And he's listening too, Or perhaps he's thinking – What a sea of blue.



Stopping by Woods on a Snowy Evening

Robert Frost

Whose woods these are I think I know. His house is in the village though; He will not see me stopping here To watch his woods fill up with snow.

My little horse must think it queer To stop without a farmhouse near Between the woods and frozen lake The darkest evening of the year.

He gives his harness bells a shake To ask if there is some mistake. The only other sound's the sweep Of easy wind and downy flake.

The woods are lovely, dark and deep, But I have promises to keep, And miles to go before I sleep, And miles to go before I sleep.

Trees

Sara Coleridge

The Oak is called the king of trees, The Aspen quivers in the breeze, The Poplar grows up straight and tall, The peach tree spreads along the wall, The sycamore gives pleasant shade, The Willow droops in watery glade, The Fir tree useful timbers gives, The Beech amid the forest lives.

The Weeping Willow Tree

In the morning light I see, By the gate, a willow tree. In the wind it swirls like sea, Cool and green and grey.

In the dark I see it stir Like a cloud of witches' hair. Strange that tree by day so fair, At nighttime frightens me.

The Greedy Monster

Irene Rawnsley

A greedy monster Came and ate The leaves from the trees.

The wind was sad. He had no one to tickle with his breeze.

The greedy monster Came and ate The branches, every bit.

The birds flew, sulky, In the sky; They had nowhere to sit.

The monster Ate the forest, Trunks and roots, in a day

Now houses stand Where the forest stood And the birds have gone away.

The Wood of Flowers

James Stevens

I went to the Wood of Flowers (No one was with me) I was there alone for hours; I was happy as could be In the Wood of Flowers.

There was grass on the ground, There were buds in the tree, And the wind has a sound

Of such gaiety, That I was as happy, As happy could be, In the Wood of Flowers.

Pussy Willows

Aileen Fisher

Close your eyes And do not peep And I'll rub Spring Across your cheek–

Smooth as satin, Soft and sleek– Close your eyes And do not peep.

Leaf Buds

by Aileen Fisher

All winter in the tree buds The little leaves lie packed, With tiny coats of April green, All folded and exact.

And when the time is ready (I wonder how they know?) They quietly unfold themselves And break and grow.



Trees as Sites for Other Plants

Did you know that trees can be a home for other plants? Different groups of plants use trees as a surface to grow on.

Mosses

In wet places, mosses cover the bark of trees. In woodlands, especially where there is a lot of rain, the trunk of the tree is often completely covered with a carpet of bright green moss. In drier woods, the moss only grows on the sheltered side of the trees. So if the wind usually blows from the south-west, as it does in Ireland, the moss grows on the north-east side.

Ferns

Ferns often grow on flat branches and in the forks of trees where some soil can lodge and they can become established. *Polypody* is the usual fern that grows on trees and there are often many of them growing along a large branch.





Lichens

Lichens are small grey-green plants that grow on the bark of trees. They grow on bare trees, so don't look for them on trees covered with moss or ivy. A lichen is made up of two different sorts of plants, an **algae** (or seaweed), and a **fungus** (or mushroom). A lichen has no roots, so it gets all its nourishment from the air and from the rain. If the air and the rain are very clean, large bushy lichens will grow on trees. If there is some air pollution, you will only find crusty lichens on the trees. If the air is very dirty, as in

the centres of big towns and cities, you won't find any lichens on the tree at all, just the powdery green algal part. It grows by itself as a green powder that rubs off on your hand.

Fungi

Fungi are not green plants. They cannot make their own food, and so must live off other plants. Many fungi live on dead trees and can be found by looking at a fallen log. Fungi are very important because they break up the dead tree and turn it back to crumbly soil again. Some fungi live off live trees and are harmful **parasites**. Most fungi have fruiting bodies – mushrooms and toadstools – in autumn.



Higher Plants

Ivy grows on the trunks of many trees. It holds on with its clinging roots and forms a home for many insects who live between the roots and the tree. Its black berries, which form late in the year, provide valuable food for birds.

Mistletoe also grows on Oak and Apple trees. Thrushes eat the berries, which have very sticky seeds. They have to wipe these off their beaks on other trees, and so the mistletoe spreads. It grows in France, from where we import it for Christmas. It is not native to Ireland and will only grow if planted.



Fungi

Autumn is the best time to observe and collect fungi.

You will need

★ A basket to put the fungi into, if you wish to bring them back.

Plastic bags are not suitable because the fungi get squashed in them.

The fungi will be growing in association with the trees but they may not necessarily be on them.

Fungi on the **ground** may be growing on the roots of trees.

Bracket fungi grows on the lower half of tree trunks.

Dead trees may have many different fungi on then. Look carefully at them. Pull off some of the bark and see if you can see white fungal threads behind it.

> **Dead logs** on the ground are also good places to look. Fungi break down dead timber and restore it to the soil.

Fallen leaves can have many different fungi on them.

Use your nose!

Many fungi have strong (and unpleasant) smells and can be detected by sniffing the air.

Lichens

Look at the same group of trees and see what sort of lichen (if any) is growing on them.

Lichens can be **crustose** – stuck to the bark of the tree. They can only be removed with a bit of the bark attached.

Lichens can be **leafy**, which means that they are like flat leaves, stuck on one place.

They can be **shrubby**, which means that they are branched and look like little bits of green steel wool.

Trees with all three sorts grow in areas of perfectly clean air. Shrubby lichens cannot stand much pollution and quickly disappear when the air gets dirty. Leafy lichens can put up with some pollution, but if you have only crustose lichens on your trees, it means that the air is quite dirty.

Many trees won't have lichens on them but if you can find any, you will know what the air quality is like.

Under the ground.

Down among the roots, another collection of animals lives. Here in the soil are earthworms and flatworms which get their food from the soil and drag

down dead leaves from above. The roots act as rafters for badger setts and fox dens, which may be dug out by these animals under the tree.











Irish Forestry

The last Ice Age ended about 10,000 years ago. At that time, there were no plants or animals in Ireland. As the weather became warmer and the ice melted, animals arrived and plants began to grow here. For 3,000 years, these plants and animals were undisturbed by humans.

When the first people arrived here about 7,000 years ago, they saw that the country was covered in woodlands of ash and elm on the fertile soil, alder and willow in wet places, oak and holly on acid soil, and pine and birch on the sides of mountains.

But the people needed land for farming and slowly they set about clearing some of the forests. Timber was used for building houses, for ships and for fuel. By the 1600s, much of the eastern half of the country had no forests left.

As the population of Ireland increased, the demand for timber grew so that by the middle of the 1800s, there was very little left at all. After the Ice Age the whole country had been covered with forest. By 1920, only half of 1% of the country had forest left.

The Irish government started to plant forests at that time and has continued to do so ever since. Mostly coniferous forests are planted because these trees, native in more northerly countries, grow very well here.

Our planted woodlands contain spruce, larch, fir and pine. There is now over 7% of the country covered with forest. Forestry is very important for our economy and provides much employment.



Trees as Pictures of the Past

You can work out how old a tree was by counting the rings in its trunk. Deciduous trees stop growing in the winter. When leaves come on the trees in spring, the trees make a sudden spurt of growth. It then continues to grow at a slower rate all summer until autumn comes. Then the leaves fall off and growth stops.

Next year, the same thing happens all over again. When you look at the cross-section of a tree that has been cut down, you can see a series of rings. Each one is a year's growth, starting with the spring growth and ending in autumn. By counting the rings, you can tell the age of the tree.

But these rings can tell us much more than just the age of the tree. As you know, the weather each year is not exactly the same. Some years are more suitable for the growth of trees than others. In a good year, the growth ring is much bigger than for a year when the weather was not good for tree growth. If we cut down

a group of trees of the same species, for instance oak, the ring pattern will be the same in each one.

> As a result of this, it is possible to make a master pattern for oak rings, using older and older trees to bring the pattern farther back in time.

Now that we have this master pattern, we can use it to date oak timber found in old buildings, under bogs, in archaelogical digs. Just expose

the rings, compare them with the master pattern, and see what dates correspond with this. This science is called **dendrochronology**.

Tree Dating at Emain Macha

Near the city of Armagh is Emain Macha. It is an important Celtic site which consists of a number of earthworks. Navan Fort is the largest circular earthwork at Emain Macha. Although it is called a fort it was not used for defence.

The size of the earthwork indicates that it was a very important site. It was used for settlement during the New Stone Age, the Bronze Age and the Iron Age. During the Iron Age, it was also used for ritual purposes.

As the first step in creating the mound, a huge round wooden structure, 40m in diameter, was erected. It can be dated to 94 BC because the base of its central post, which was sunk deep into the sub-soil, survived for tree dating.

Because of the size of the structure, it is thought that Navan Fort may have been a royal palace or a royal temple.



The Tree Alphabet

In ancient times in Ireland, before people used the letters and writing we use nowadays, a form of writing called **Ogham** was used.

We can still see some examples of this on carved standings stones in old monastic sites, and in the National Museum of Ireland and in the Ulster Museum.

Ogham came from an earlier form of writing, the tree alphabet, where the letters came from the trees the people were familiar with and used. There were only twenty letters in this alphabet.

Α	(ailm)	Scots Pine	М	(muin)	Bramble
В	(beith)	Birch	Ν	(nion)	Ash
С	(coll)	Hazel	Ng	(ngetal)	Reed
D	(dair)	Oak	0	(onn)	Gorse
Ε	(eadha)	Aspen	Q	(quert)	Apple
F	(fearn)	Alder	R	(ruis)	Elder
G	(gort)	Ivy	S	(saille)	Willow
Н	(huath)	Hawthorn	т	(tinne)	Holly
I	(idho)	Yew	u	(ura)	Heather
L	(luis)	Rowan	Z or SS	(straif)	Blackthorn





Ireland is abundantly favoured with many features of great beauty in her mountains and coasts, in her forests and farmlands, in her rivers and lakes. These are easily accessible for relaxation and recreation to us all and to all our visitors.

If our countryside is to retain its beauty and attraction, everyone who uses it for recreation must care and guard it so that its use does nothing to interfere, either with its value to its owners or its enjoyment by others. Very little damage is done deliberately : most is due to lack of thought or lack of knowledge of what may result from apparently harmless actions.

To help you avoid damage and disturbance and enjoy rural Ireland more fully this Country Code offers some simple "do's" and "don'ts".

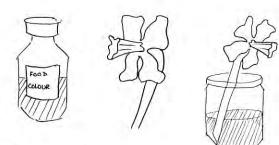
- RESPECT THE RIGHTS OF LAND OWNERS
- KEEP TO PATHS
- CLOSE GATE IF YOU OPEN THEM
- DO NOT DAMAGE FENCES, HEDGES, AND WALLS
- BE CAREFUL WITH FIRES
- LEAVE NO LITTER
- WATCH YOUR DOG
- RESPECT THE THINGS OF NATURE
- HAVE CONSIDERATION FOR OTHERS
- TAKE CARE ON ROADS



An Experiment - To show how water rises up a stem

What you need

- One bottle of food colouring
- Some freshly cut flowers such as daffodils or carnations (white carnations are very suitable)
- This experiment also works well with celery stalks.



What you do:

- Stand the flower in a bottle or jar with diluted food colouring.
- Leave undisturbed for one hour.

Now, answer the following:

1. What happened to the flower?

2. Why do you think this happened?

3. What does this tell us about the direction water travels in a plant?

4. Draw what you have seen.





-An Experiment - Do plants need light -

What you need

- Cardboard (30 cm x30 cm)
- A patch of grass

What you do

• Place a mat, a board or a piece of cardboard on a patch of grass. (30 cm x 30cm)

Answer the following:

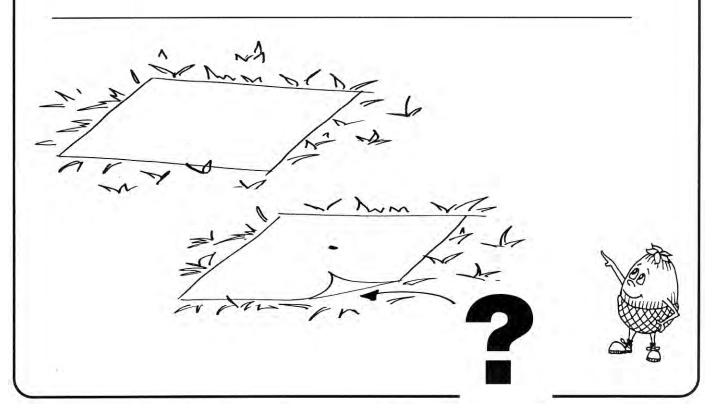
1. What colour was the grass before you covered it?

Leave it for a week and then look at the grass underneath.

2. What changes do you notice?

Remove the cover and check the grass again in two days.

3. What changes do you notice now?





-An Experiment - Do plants need light -

What happens when the temperature surrounding growing plants is increased?

What you need

- · A clear container
- A patch of grass or a seed tray with growing seeds

What you do

- Place a clear container over a patch of grass or over one section of seeds growing in a seed tray.
- Observe the effects of this mini greenhouse by comparing the grass or section of the tray covered by the container with one that is not covered.

Answer the following:

1. Are there any differences between the grass on the inside and on the outside?



2. What causes these differences?

3. Why?





Experiments with fungi-

Experiment 1:

What you need

- Apple cores and bread.
- A Magnifying glass
- Plastic bags
- String or elastic bands

What you do

• Put the fruit in a clear plastic bag and the bread in another. Add a little water to each bag. Tie the bags and leave them for a week in a warm place.

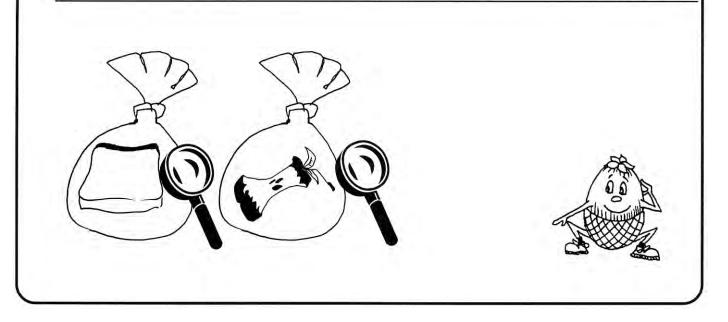
Answer the following:

1. What has happened to the Bread or does it look like it did before?

2. What has happened to the Apple or does it look like it did before?

Get a magnifying glass, what do you see?

3. Are there differences between any changes on the bread and changes on the fruit?





-Experiments with fungi

Experiment 2:

What you need

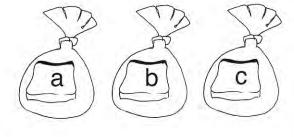
- 3 slices of bread
- Labels

What you do

- Place the bread on 3 separate plates.
- Put water on one, milk on another and leave the third one dry.
- Put each one in a plastic bag, label them A, B and C and store for a week in a warm place.

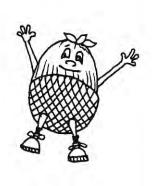
Answer the following:

1. What do you notice has happened to the bread on each plate?



3:		
·.		

2. Could this happen to your sliced pan at home?





-Experiments for watching seeds grow

What you need

- •A clear container
- Some seed (peas or beans would be most suitable)
- Paper towel
- Newspaper or compost
- Labels

What you do

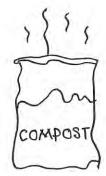
- Line the inside of the jar with a damp paper towel.
- Fill the jar with damp newspaper or compost.
- Insert the seeds between the paper towel and container.
- (A), Plant one seed on its side
- (B), one pointing up
- (C), one pointing down
- (D), and one flat on its side
- Place on a windowsill to grow.
- Make sure the paper is kept damp.
- Observe closely how the seeds grow.

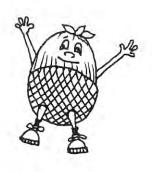
Answer the following:

1. Do all seeds grow the same way?

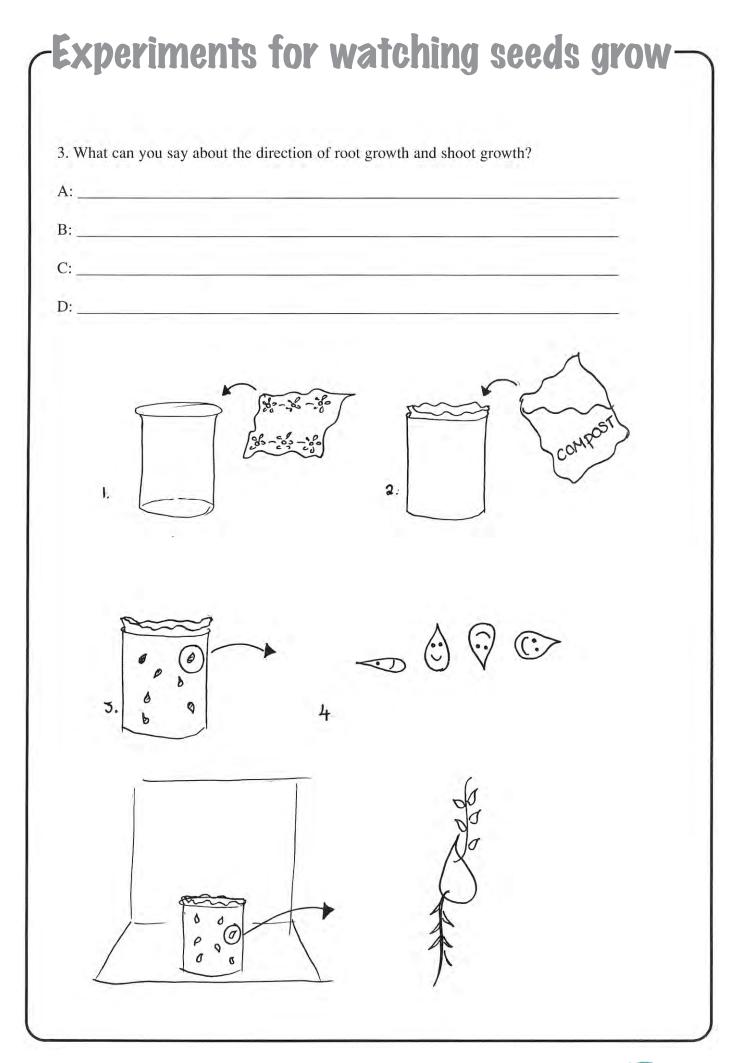
Identify the root and shoot.

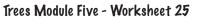














Experiments to show how plants grow towards the light

What you need

- Two shoe boxes
- Two small pots of seeds already growing

What you do

• Cut a hole in the top of one box (A) and place the growing seedlings inside.

- Cut a hole in the side of other box (B) and place the seedlings inside.
- Put both boxes on a windowsill to grow for one week.
- Water regularly to keep moist

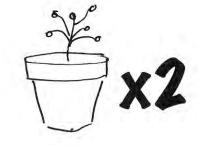
What do you notice?

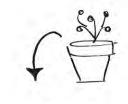
Imagine you were the seedling, how is it different to be in:

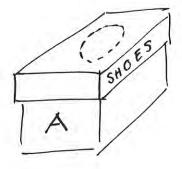
Box A: _____

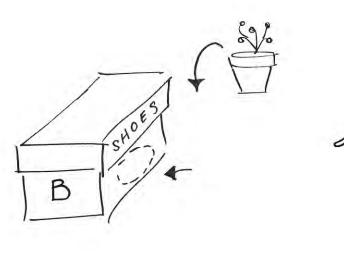
Box B: _____













Experiments to show how plants grow towards the light

Experiment 2:

What you need

- Two healthy pot plants, preferably tall ones.
- Labels

What you do

- Grow plant A upright as usual on a windowsill.
- Place plant B on its side.

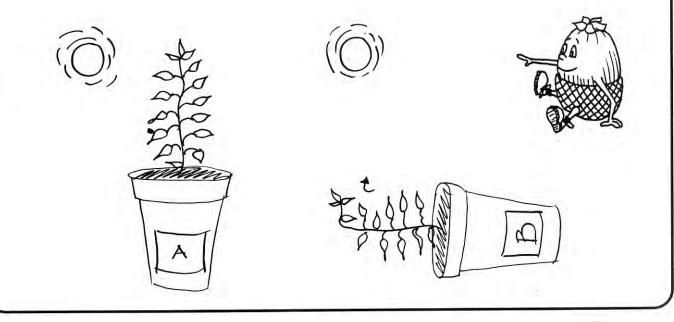
What do you notice happens to plant A?

What do you notice happens to plant B?

After a few days place this plant upright again.

1. What do you think will happen?

2. After some time, what do you notice?





-Leaf fall ------

What you need:

• Fairly regular access to a collection of different types of trees.

What you do:

In September/early October you should identify the different types of trees, using the Tree Council Poster (as an aid), then carefully and regularly note the changes in the leaves of each tree over the early autumn.

Answer the following questions about the leaves you have chosen:

1. What are the differences between the evergreen and deciduous trees?

2. Which varieties of tree change leaf colour first?_____

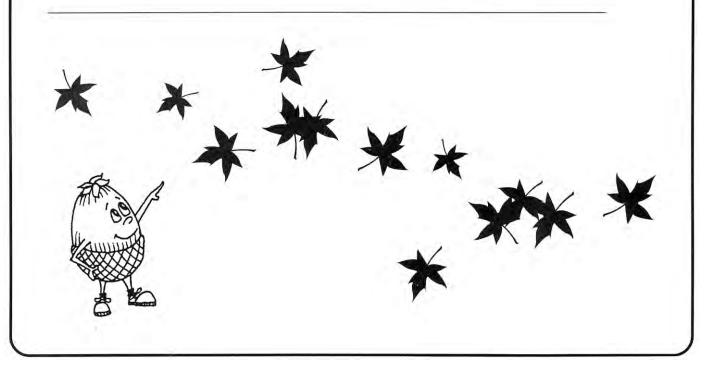
3. Which fall first?

4. How long does it take for all the leaves to fall?

5. Do all trees of the same family behave in the same way?_____

6. What do you think causes the leaves to fall?_____

7. What happens throughout the winter. Do the dead leaves stay the same size?





Experiment - To show how acid rain harms plants

What you need

- Three x 2 litre plastic bottles.
- A cup
- Three potted plants
- A bottle of vinegar or lemon juice.
- Six labels

What you do

- Fill one bottle with water and label it 'water'.
- Pour a quarter cup of vinegar into one bottle and top it up with water. Label it 'a little acid'/'dilute acid'
- Pour a full cup of vinegar into a third bottle, top it up with water and label it 'a lot of acid'/'concentrated acid'
- Label the pots with labels similar to the bottles.
- Set the plants next to each other on the window sill.
- Whenever the plants need water (every 3 or 4 days) water each one with water from the bottle that matches its label.
- 1. See how long it takes for the effects of the acid to show.
- 2. What do you notice about the plants?

Note any changes that occur.

A little acid

Water:

A lot of acid:

Ex3	A Solo a	3 LAJELS X6
water	a little acid	a lot of acid
WATER (Anna Anna Anna Anna Anna Anna Anna Anna	



-Plants need water —

What you need

- 3 healthy plants in pots e.g. potatoes/geraniums.
- Labels 1, 2 and 3

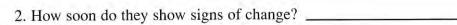
What you do

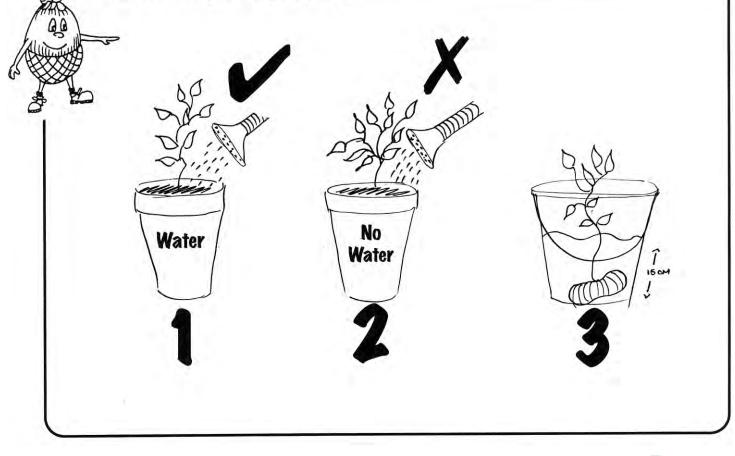
- Water Plant 1 normally.
- Give no water to Plant 2
- Submerge Plant 3 constantly in a bucket of water to a depth of 15 cms.

Observe the plants and answer these questions:

How do the three plants differ?

1: ______ 2: ______ 3: _____







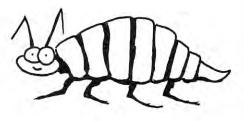
Million and	Children Constants	x2	
What you need	A A	ď / /	Datument
 2 jam jars with lids. Damp cotton wool. Some seed e.g. peas or cress. Labels 		£ ())	B
What you do	X_Y	د رگخ	ABAB
 Place the damp cotton wool a Put some seed on the cotton v When the seeds are growing v Leave the other jar without a 	vool and allow them to well, seal one of the jar	germinate.	\$ \$
Observe what happens after a f	ew days.	R	A
Jar A:	/	_	
Jar B:		- cn n	
Why:		$\left(\begin{array}{c} c \\ c \\ c \\ \end{array}\right)$	(33)
		Teris,	
NO AIR-	A EE3CC	B CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	AIR



Experiment - A study of a common Woodland insect

A Woodlice

It should be easy to collect some woodlice and to keep them in a box in the classroom for a few days. They feed on dead plants, especially wood. They need to be kept in damp, cool conditions. A magnifying glass would be useful for close observation.



Answer the following questions:

1. What colour is this creature?_____

2. How many legs has it?_____

3. How many joints are in each leg?

4. Does it move slowly or quickly?_____

5. Does it have wings?_____

6. What does it eat? _____

7. How does it move?

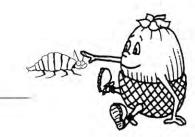
8. Has it a head?_____

9. Turn it over and examine it. What do you notice?_____

10. Does it have feelers at the front of its body?_____

11. Use the answers to the above questions to make a detailed drawing of woodlice.

12. What job does it do in the wild? _____





Experiments with leaves 1

X3

×2.

What you need

- Three pot plants on saucers
- Two clear plastic bags
- Elastic bands
- Labels

What you do

- Place a bag over the leaves of plant A and secure it round the stem with an elastic band.
- Place a bag over the plant and the pot of plant B. Place an elastic band around the pot to seal it.
- Leave plant C alone.
- Place all three plants on a windowsill and leave for a few days.
- Water the plants by pouring it directly into the saucer.

What do you notice?

1. What forms on the inside of the bags?

2. Where does this come from?

3. Could water rise from the compost? _____

4. What part of the plant takes in water?



Experiments with leaves 2-

What You need

- 4 large leaves, as fresh as possible
- String
- Vaseline
- Labels

What you do

- Smear Vaseline over upper surface of leaf 1.
- Smear Vaseline over lower surface of leaf 2.
- Smear Vaseline over both surfaces of leaf 3
- Leave leaf 4 as it is.
- Thread string through leaves and hang for one week.

What do you notice happened to each leaf:

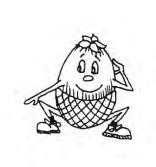
Leaf 1:

Leaf 2:

Leaf 3:

Leaf 4:

Draw leaves 1 to 4 before and after experiment.





VASELINE

×4 (

Making a detailed study of one tree

Choose one tree situated in a safe place near the school.	Look at the tree closely and
answer the following questions:	

1. What is the name of the tree you have chosen?_____

2. Does it loose its leaves in autumn?

3. Are the leaves needle-like or flat?

4. What is the width of the tree (measure one metre from the ground)?

5. Is the bark rough or smooth?

6. What colour is the bark? _____

7. Is there any lichen or moss growing on the bark? _____

8. Is there any ivy or ferns growing on it?

9. Is there any damage or disease to be seen?_____

9. Look at the leaves. Which words describe their shape?_____

10. Describe the edges of the leaves?

11. What plants are growing under the tree? _____

12. Can you see any nests? _____

13. Are the branches growing upwards, outwards or down?

14. Has the tree any seeds? If so describe them

15. How do the seeds get away from the tree?

16. Disturb the leaf litter under the tree. What did you find?





Making a detailed study of one tree -

17. Stand some distance from the tree and draw its outline.



Plant a tree for the Honeybee

Extract from address given at Arbor Day Tree planting in Ballina, Co. Mayo, by Daniel F. Deasy, on March 13 2000

Since time memorial Woodlands have been the national habitat of Honey Bees and of course, all other species of pollinating insects.

Nectar and Pollen bearing trees and shrubs provide valuable food sources for Honey Bees. It has been estimated that a mature Lime tree will provide as much nectar as an acre of clover.

Trees also contribute to the beauty and character of the countryside. They attract $\bigvee \bigvee$ tourists. They provide us with timber and fuel. They improve the quality of our environment, they provide shelter for buildings, crops and stock. They help to screen unpleasant views and provide for wild life conservation.

Experts now maintain that one mature tree can absorb the poisonous carbon-monoxide produced by ten motor cars.

The oak tree is the most valuable for the support of wild-life. It has been estimated that the oak tree supports over 80 different species of insects.

"The monarch Oak, the patriarch of trees, comes springing up and spreads by slow degrees. Three hundred years he grows and three he stays, secure in state and in three more decays".

The Poet - Dryden (1631-1700) described the Oak in the following lines: Modern farming practices are not good for Bee Keeping: the reclaiming of rough land, the bulldozing of fences and hedges and the cutting and trimming of roadside fences have removed rich sources of nectar and pollen, much worst, it has destroyed the natural habitat of small birds and all species of insects.

[•] Hedge-cutting should be prohibited from mid-March to mid-July as this is the most important time for nesting animals.

Ivy is a valuable source of nectar and pollen for our Bees. It provides shelter for birds and insects during winter-time and its berries provide food for birds.

A few weeks back, I was discussing with an aged man the present state of our environment. He informed me with much regret, that he will never again enjoy the bloom of the Hawthorn blossom as he walks down his local roadway.

The bloom was magic to me as a child - Hawthorn blossom arching our roadway making it look like a white-scented tunnel.



Our Irish Poet, D. F. MacCarthy 1817-1886 composed a beautiful poem:

"Waiting for the May" Ah, my heart is weary waiting, Waiting for the May -Where the fragrant hawthorn brambles, With the woodbine alternating, Scent the dewy way. Ah, my heart is weary waiting, Waiting for the May.

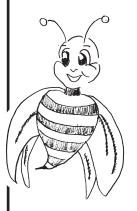
A great number of nectar-bearing trees in our urban areas are disappearing to make way for concrete jungles. To compound our misfortune, thousands of our lordly Elm trees have been obliterated by Dutch Elm Disease.

The following gives a list of some of our best known nectar and pollen bearing trees and shrubs:

the Maples, the Chestnuts, the Limes, the Oaks, the Beeches, the Hazels, the Hawthorns, the Willows, the Walnuts. Shrubs include: the Fuchia, the flowering currant, Cotoneaster, Pyracantha, Holly, Snowberry, Cherry.

In fact, mostly all the shrubs in your gardens are good for Bee forage. Of course, we cannot afford to forget our orchard fruit trees both soft and hard, as they are also rich sources of nectar and pollen.

Daniel F. Deasy, Nat. Dip Sc.(apic) is the Life Vice-President and P.R.O. of the Federation of Irish Bee Keepers Association he was also founder member of the Tree Council Of Ireland





-Trees in our heritage

When the first people came to Ireland after the Ice Age – some 9000 years ago, they came to a country that was completely covered in woods. There were woodlands of ash and elm on the good soil, woodlands of oak and holly on the acid soil and forests of Scots pine up on the mountains. They lived, hunted and slept in these woods so of course they were very familiar with all the trees. They knew which ones were good for burning as they cooked over timber fires. They had to know which had edible fruit and nuts. They needed to know which were strong enough to make shields and wheels for chariots. They quickly found out which ones were pliable and bendy enough to make house frames, baskets and bows. And of course they knew which were magic and kept away evil.

So it is not surprising that when Irish people began to write down the spoken word, they used the names they had for the trees to form the alphabet.

Writing began in Ireland in the 4th century and took the form of carving on stones. This writing was called OGHAM and consisted of straight lines that could be easily carved. There were 20 OGHAM letters that were called after trees or important shrubby plants.

The Irish alphabet came later on and continued in use right up to the 1960s. The Irish alphabet has 18 letters, 17 of the original ogham letters plus the letter P.

These alphabets with the corresponding tree names are all shown overleaf.



The Irish Tree Alphabet-

	1	1	Yew	lođha	A Contract
	Е	e	Aspen	Cadha	Aut Carrier
	υ	u	Heather	Ura	
	0	0	Gorse	Onn	A CARLER
	A	٨	Scots Pine	Ailm	
					Oak
	R	R	Elder	Runs	represents the letter D
	Z	z	Blackthorn	Scraif	
	Ng	Ng	Reed	Ngetal	
	G	G,	lvy	Gort	
	Μ	CD	Bramble	Dunn	
	Q	q	Apple	<i>Диск</i> с	A Black
	С	С	Hazel	Coll	See Seg.
	Т	С	Holly	Tinne	and the second
	D	ð	Oak	Dair	
_	н	b	Hawthorn	Duach	20
	N	N	Ash	Nın	Ash
	S	s.	Willow	Saille	represents the letter N
	F	F	Alder	Геакп	
	L	L	Rowan	Luns	4
	В	В	Birch	Berch	
					The second se

Tree Council

offreland

To do

To do 1

Can you write your name in Ogham?

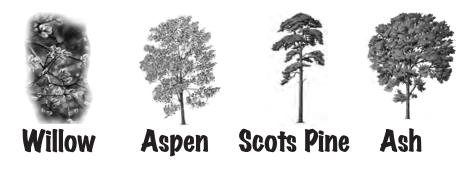
Remember Ogham is written from the bottom up – one letter above another. The letters all have a central vertical stroke, which is often just the corner of the Ogham stone on which they are carved.

Note that there is no J, K, P, V, W, X or Y in the Ogham alphabet.

To do 2

Can you name the trees and plants the letters of your name represent?

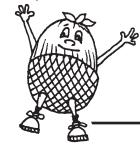
Look up these trees if you don't know them. See if you can find them growing near you



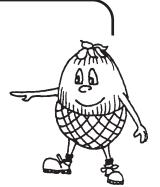
To do 3

What is your name in Irish? Can you write this in the old Irish letters?

Remember H was only used at the beginning of a word and after a consonant (i.e. not a vowel). It was replaced by a seimhiú (dot) on top of the consonant. For example SIOBHÁN becomes SIOČÁN in the Irish alphabet.





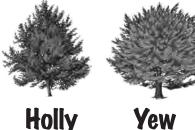


-How imporant are you?-

Trees had value in ancient Ireland; some were worth more than others. Here is a list of the values of native Irish trees and woody plants. GROUP A are the most valuable and Group D are the least valuable.

Note: There are more trees than letters

GROUP A - NOBLES OF THE WOOD		GROUP B - COMMONERS OF THE WOOD		
Tree	Letter			
		Tree	Letter	
Oak	D			
Hazel	C	Alder	F	
Holly	T	Willow	S	
Yew	I	Hawthorn	H	
Ash	Ν	Rowan	L	
Scots Pine	Α	Birch	B	
Apple	Q	Elm	-	
		Wild Cherry	-	



Holly



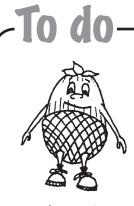
Scots Pine

GROUP C - LOWER DIVISIONS OF THE WOOD

GROUP	D	-	BUSHES	OF	THE	WOOD
VINUVI	•		VUUIFU	VI.	1116	

Tree	Letter	Tree	Letter
Blackthorn	Z	Gorse	0
Elder	R	Bramble	Ň
Aspen	E	Heather	U
Spindle tree	-	Bracken	-
Whitebeam	-	Broom	-
Arbutus	-	Wild rose	_
Juniper	-	Bog myrtle	-





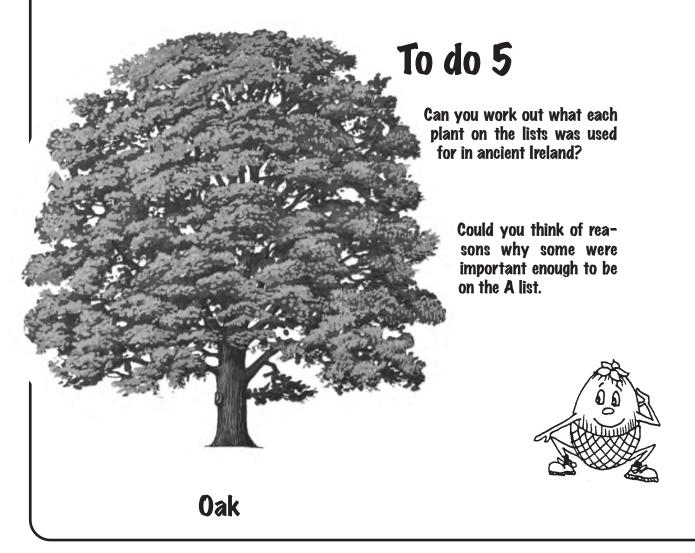


List the trees that your name represents. To which group does each one belong.

Note: Some of the trees representing letters in the Ogham and Irish alphabets are not included in this list. So if your name includes the letters P, G or H the tree or shrub was not considered valuable enough to make even the D list.

Whichever group has the most letters in the group to which you belong.

Are you a commoner or a noble? Sean has 2 letters in the noble group so he is a noble.





Magic trees and plants-

Rowan, Elder, Hawthorn, Holly and Ivy all had magical associations.

ROWAN protected milk and milk products against supernatural evil. It was kept in the byre to safeguard the cows, put around the churn to ensure that the profit of the milk wasn't stolen. Herders drove cattle with rowan twigs.

Rowan was brought in the curragh to bring luck to fishing. It was tied as a collar on a hound to increase his speed. It was also used to keep the dead from rising (and apparently was very effective).

ELDER was an unlucky tree because it was the tree on which Judas hanged himself. God was so disappointed by this act of despair that He cursed the tree saying that its timber should never be strong enough again to hang a man. And to this day the elder only has pith in its twigs and not wood. Also the leaves and twigs have a very strong disagreeable smell. People did not like it growing near the house. It was never used for fuel or for making a boat. Children and animals should never be struck with elder, as it will stop them arowing bigger.

HAWTHORN was the fairy tree and should never be interfered with. The blossoms should never be brought into the house, as bad luck would follow. And certainly hawthorn trees should never be cut down as bad luck and even death would follow particularly if a lone hawthorn bush was cut down. There are many stories of people dying shortly after felling lone hawthorn bushes, particularly if they ignored warnings not to do so.

HOLLY AND IVY had great significance long ago because they kept their leaves in the winter when all the deciduous leaves had fallen off the other trees. In those days people worshipped the sun and worried every year that the sun would go away and not return. So in winter around the shortest days on the 21st of December they brought branches of holly and ivy into their houses because the evergreen leaves showed that they were still living. There was life still in these special trees and by giving them a special place of honour in the house this life was respected. The sun would return and the days would stop getting shorter and start to get longer again. And it always worked! And to this day we bring holly and ivy into our houses at Christmas.





-To do

To do 1

Find a piece of each magic tree mentioned above. Draw a picture of each twig with the leaves on. Ask your parents or grandparents or any older neighbours if they know of any special things associated with these trees. Perhaps you can find other examples of superstition and magic.

To do 2

Some of the words used in the descriptions above are no longer in common use, particularly in towns and cities. Write a sentence with each of the following words included which shows that you know what they mean.

BYRE, CHURN, HERDERS, CURRAGH, JUDAS, PITH, WORSHIPPED.

To do 3

Imagine you lived in Ireland long ago. What trees would you want near to your house and why? (Think of trees useful for food, for building materials, weapons, and ones that would keep away evil).





-Place names

As trees were such visible and important landmarks it is not surprising that they are part of the place-names of many of our counties, towns villages and town lands. Sometimes it is easy to spot the tree part of the place name, sometimes not so easy.

The following word bank gives many of the Irish words for trees and shrub that appear in our place-names. Look carefully at them, and then see if you can answer the following questions.

Wordbank

CRANN : TREE MUINE : THICKET CRAOBH : BRANCH FIODH : WOOD DAIR : OAK ÚLL : APPLE TROM : ELDER SAIL : WILLOW COILL: WOOD (Sometimes Kyle or Kil) GARRÁN : GROVE ROS : WOOD DOIRÍN : LITTLE GROVE EO : YEW CUILEANN : HOLLY LEAMHAN : ELM BEITH : BIRCH

To do

- 1. There are at least three counties in Ulster, two in Connacht and one in Leinster named after trees. What are these counties and explain how they are named after trees or words to do with trees.
- 2. The following towns get their names from trees that once grew nearby. Can you interpret? NEWRY, YOUGHAL, DERRY, KILLARNEY, KILRUSH, EDGEWORTHSTOWN, NEW ROSS, ROSCREA, TRIM,
- 3. In urban areas many of the old town-land names are still kept. Some of these remind us that the places were once woods. What do you make of the following BALLYMUN, TERENURE, LUCAN, KILNAMANAGH
- 4. Many Irish towns and villages are called after trees and villages. Try the Irish version of the name it's usually clearer where the name came from. FETHARD, BAGNELSTOWN, ADARE, ASHFORD, BALLAGHADERREEN, BAILIEBOROUGH, CLONAKILTY, COLLOONEY, CREEVELEA, EDENDERRY, FIDDOWN, GLENBEIGH, KILBEHENY, KILTYCLOGHER, KYLEMORE, PARKNASILLA, OULART, MOYCULLEN, QUILTY.
- 5. Look at the town-land names in your parish. Can you work out if any of them come from trees?



