

# ÁITBHEO

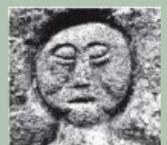
*Place-based Education - Using your local place as  
a teaching resource*

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## Workbook

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**burren** **b**e<sup>o</sup>trust |  
open your eyes to the living burren



This workbook and accompanying podcasts were put together by the Burrenbeo Trust. Burrenbeo Trust is a landscape charity, whose focus is to connect children and adults to their surrounding landscape.

These materials are based on over 10-years of experience in place-based education and were developed to complement the training of national school teachers in using their surrounding environments as learning resources.

We appreciate any feedback or additions to this workbook. Contact us on **trust@burrenbeo.com**. Or write to us at Burrenbeo Trust, Main Street, Kinvara, Co.Galway.

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For further information on place-based education go to **www.burrenbeo.com**

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## WELCOME/ FÁILTE

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Welcome to *Áitbheo*, designed to provide simple strategies and resources through which teachers can effectively integrate the learning resource of their local environment into the school curriculum. This workbook, along with the supporting teacher training course and podcasts, are based on ten years of place-based education experience in the Burren through which scores of teachers and hundreds of students have connected with their own locality as part of the highly interactive and experiential *Ecobeo—My Burren Heritage* programme.

*Ecobeo* is an immersive heritage programme that is delivered free by local landscape charity, Burrenbeo Trust to primary schools throughout the Burren. Over a period of 20 weeks, the students learn about the geology, archaeology, history, flora, fauna, culture, land-use and conservation in the Burren. The course is proven to foster a sense of pride and respect in the student's surroundings, one that will grow hopefully into a responsibility for their environment long into the future. After all, they are the future custodians of their landscape and all it contains.

The **TRAINING COURSE, PODCAST & WORKBOOK** aim to enable teachers to deliver their own condensed localised version of *Ecobeo* in their classroom no matter where they are in Ireland.

### The Training Course

The course *Áitbheo – using your local place as a teaching resource* covers strands of the SESE History, SESE Geography and SESE Science curricula and has the potential to contribute to the development of the oral, reading and writing strands of both English and Irish. Specific themes which are explored in the field and classroom during the 5-day course include landscape, built heritage, cultural heritage, biodiversity and conservation. On completion of this course, teachers will hopefully have gained the skills and resources to allow them to deliver an effective place based educational programme to their students. The skills and ideas explored during the training could also be incorporated into various existing elements of the school programme. In addition, this course helps to connect teachers with the magic of outdoor learning in a fun and interactive way.

## The Podcasts

Aside from the short introduction podcast to the *Áitbheo* course, there will a podcast each around the 5 modules in this programme, each approximately 5-10 minutes long. The teacher should listen to each of these podcasts before embarking on module in the workbook. The modules included are:

- **Landscape**
- **Built Heritage**
- **People & Places**
- **Biodiversity**
- **Building for the Future**

## This Workbook

This workbook is a teaching aid to accompany the podcasts. As mentioned above, it is essential to listen to the podcast before using this workshop. Further detail on activities mentioned in the podcast is provided as well as investigations, resource listings etc.



### Enquiry Board

Each module has an associated 'Enquiry Board' in this workbook. The aim is that these questions should start the process of local investigation – and hopefully throw up additional questions specific to your area.





## Place Book

The 'Place Book' is an ongoing project for each student to get definite output from the investigations in your local area. Each module has a suggested Place Book activity within this workbook.

The work completed from these activities can then be put together to create a book which is a memento of the work completed, and also provides a record of the students investigations of their place at that particular time. The project can be built into the art curriculum, with great scope particularly for the cover (see photo below for examples) or even carried out through Irish. Additional pages can obviously be added depending on further investigations into projects that you wish to pursue, and students can also be encouraged to use their own initiative and add pages where appropriate.



# MODULE 1. LANDSCAPE



## Overview

The *Landscape* module begins the process for local place investigations. The module will provide ideas and resources for investigating the layers you see in your landscape, your local rock type and landforms, and the impact your landscape can have on life in your area.

The relevant curriculum strands and skills covered by this module are:

### Relevant Strands

A sense of place	Geography
Human environments (all)	Geography
The local natural environment	History
Rocks & soils	Geography
Environmental awareness (all)	Science /Geography
Myself	History
Shape & space	Maths
Data	Maths
Drawing/Painting (all)	Art

### Skills

Applying & problem solving  
A sense of place  
A sense of space  
Evaluating  
Exploring  
Questioning  
Observing  
Using pictures & maps

## Enquiry Board

- What visual landscape elements can your class identify locally?
- Can you find out your local rock types?
- What landscape features are connected to this rock type?
- Does the rock type have any impact on the lives of the plants/animals/people in the area?
- How have plants/animals/people adapted to this?
- Any particularly unique landscape elements in your area?





## Place Book

After completing a 'Place Book' cover, the first few pages should give an idea of what your local landscape looks like so the most obvious place to start is by drawing the landscape around you. Get the class outside to really look at their landscape – look at the bigger and smaller elements, take in the colours, layers, shapes and textures. You could also get students to do comparative work between the landscape at the school and the landscape immediately surrounding their homes. You could use a variety of things to do this with like digital photography as well as writing and drawing.

## Indoor Activities

### 1. Tell me about your place



This activity is best done in pairs. List the below questions (and others you think of) on the board and have each pair interview their partner using these questions. Students then report back on their partners answers. You can shorten the reporting back process by challenging students to give their answers in the fewest possible sentences.

Some possible questions could be;

*Do you know the name of the townland you live in?*

*Have you always lived there?*

*What do you like about where you live?*

*What do you not like about where you live?*

*Do you know anything interesting/special/funny about where you live?*

*If the townland name is in Irish, what is it and what does it mean?*

*Note:* Townland details can be found on the Ordnance Survey website, [www.osi.ie](http://www.osi.ie).

## 2. What's in my area



This activity can be very strong – and the results surprising. You will need a copy of the local Ordnance Survey (OS) map – locate each students house on the map and create individual photocopies for the area relevant to each student. The aim is to mark out each students local 3km circle and this will ideally be the area that they focus on for all subsequent activities. The activity often sees students (and teachers!) uncovering numerous features of their local landscape which they were totally unaware of – features which can then be investigated as part of subsequent modules.

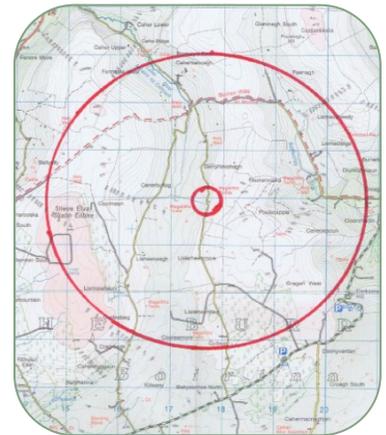
A 3km circle equates to a circle of 12cm diameter on the map – which conveniently is roughly the diameter of a CD. You can also get students to use a compass to create a 12cm circle.

Have students place the CD centre or compass point on their home on the map and draw around to create their own 3km circle.

Using the legend which is included on the map, have students identify the various features which are included in their own circle. You can divide the list into features they were already aware of and ones which are new to them.

### **NB A few map reading tips:**

- OS divides the country into 89 sections, and each section is then broken down further which is marked by letters.
- Look at scale on your map (usually 1:50,000). So 1cm on map is 50,000cm or 500m or 0.5km in reality. The grid squares on the map are 2cms which is then 1km in reality.
- To give a grid reference you need to know the OS map number of the location, then find from the map which letter area it is in. You will then need to find the specific point using eastings (numbered vertical lines. Take reading from line to the left) & northings (numbered horizontal lines. Take reading from line below). That will give you the box which the point appears in on the map. To pinpoint the exact spot, estimate tenths from the grid line to the point for both the Eastings and Northings to give a third number for each.
- A sample reference would look like *51 M 179 095* – so it's map number, section letter, eastings with tenth estimate and northings with tenth estimate.



### 3. Let's get ready to rock!



Students may have some interesting rocks or even fossils at home which they have collected in the past. Bringing these in to show the class and share the related story can help to highlight the many different rock types which exist. You could also challenge the students to find something in their home which is made of rock and see the diversity of items which they find.

Don't be too concerned about identifying the rock types, fossils etc. – trying to do this as a class could be an add-on activity – the real strength is just recognising the diversity which can exist. However, if you want to explore the rocks you can group them in colours or have you a school microscope that you can look at the rocks closer or can you see any fossils, crystals or other interesting features.

### 4. Our place in time



The aim of this activity is for students to become more familiar with the events that have formed their landscape as they see it today – and to help them realise the very brief duration of human existence on the planet.

You will need to create time-line pictures before this activity (see pages 12-15). These pictures represent the periods described by the eight statements below. For a more difficult version of this activity you can leave the dates and accompanying pictures separate from each other, and get the students to match them.

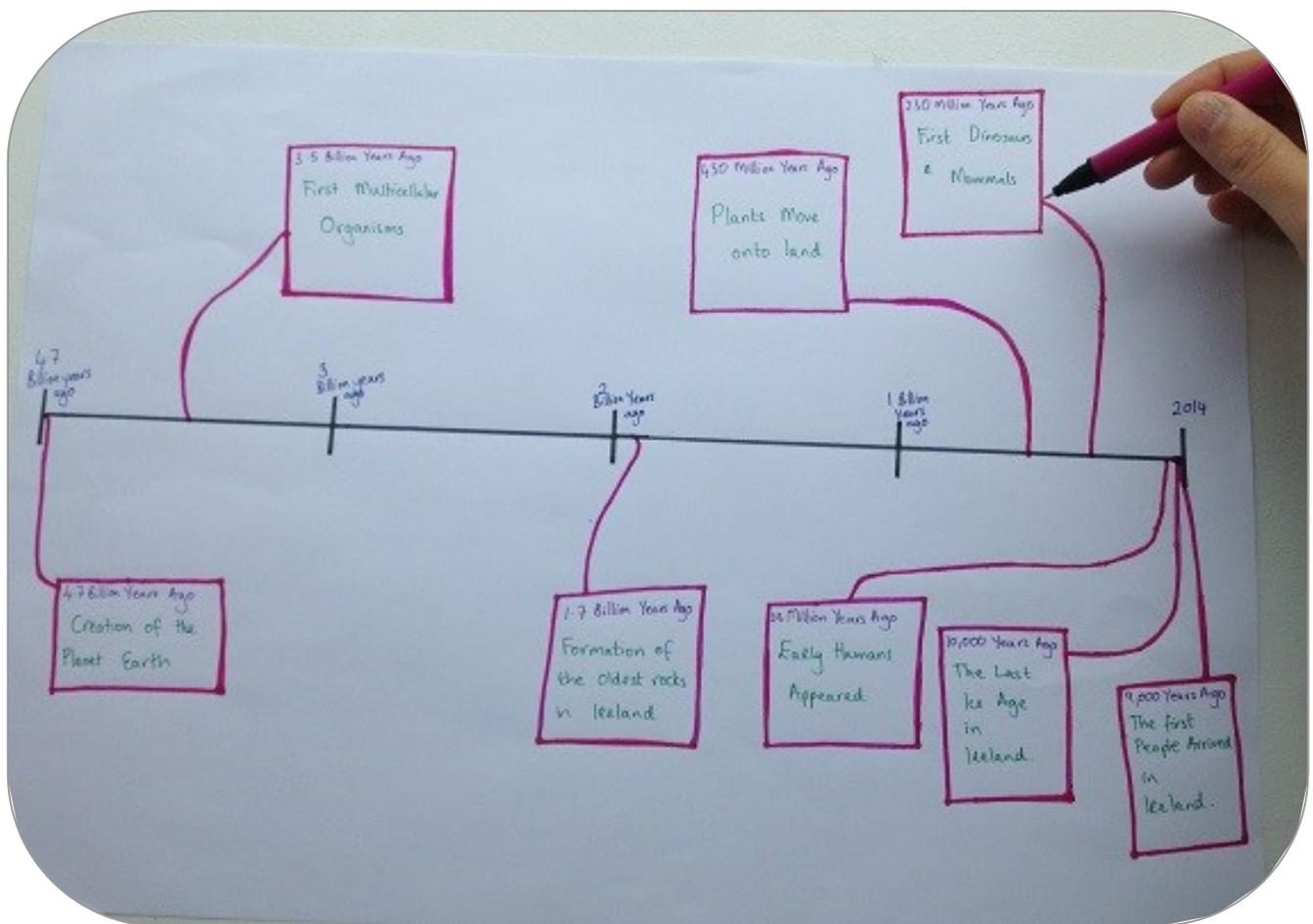
The first people arrived in Ireland	9,000 years ago
The last Ice Age in Ireland	10,000 years ago
Early humans appeared	2.3 million years ago
First dinosaurs and mammals	230 million years ago
Plants move onto land	450 million years ago
Formation of the oldest rocks in Ireland	1.7 billion years ago
First multicellular organisms	3.5 billion years ago
Creation of the planet earth	4.7 billion years ago

Stick/pin up the 8 pictures for the time-line around the classroom (not in order and at a height that all the students will be able to read them properly).

Put the students into groups of preferably 2 but no more than 3 and make sure that they all have pieces of scrap paper of about A4 size. Students must walk around the room looking at the pictures and make notes about them. They are not to remove any from the walls. Students must next work out what order the pictures should go in with starting with the most recent at the top and working their way down to oldest. They should start a rough copy of their time-line on the scrap paper. For the more difficult version they must assign the times to each event first.

To create the timeline, draw a line from side to side of a landscape sheet of paper, then turn it on its side. This will be the timeline the events will be added to. The timeline can be drawn not to scale with the events in chronological order alternating from below the timelines or above, or make it more difficult the students can draw their timelines to scale.

Students will need help deciding a scale – covering from 4.7 billion years ago to the present day. The simplest way to do this is to divide roughly in half each time so mark 2 billion years ago roughly in the centre and then divide each side in half and so on. Each event can be added to the timeline at the appropriate position along the scale (see below). The timeline can include some written information (what happened and when it happened) and a picture to illustrate it. The timeline should be as colourful and well presented as possible.



**PHOTOCOPY THE PHOTOS OVERLEAF AND CUT OUT TO SUIT YOUR NEEDS FOR THE 'Our Place in Time' ACTIVITY.**

4.7 Billion years ago



Creation of the planet earth

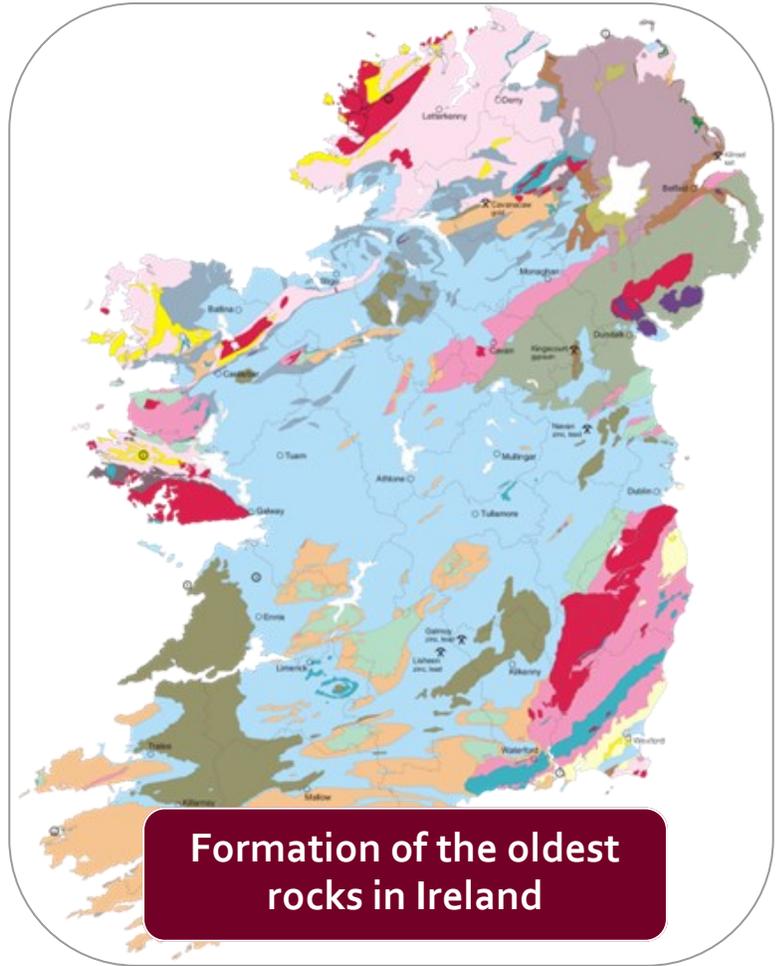


3.5 Billion years ago



First multicellular organisms

1.7 Billion Years Ago



450 million years ago



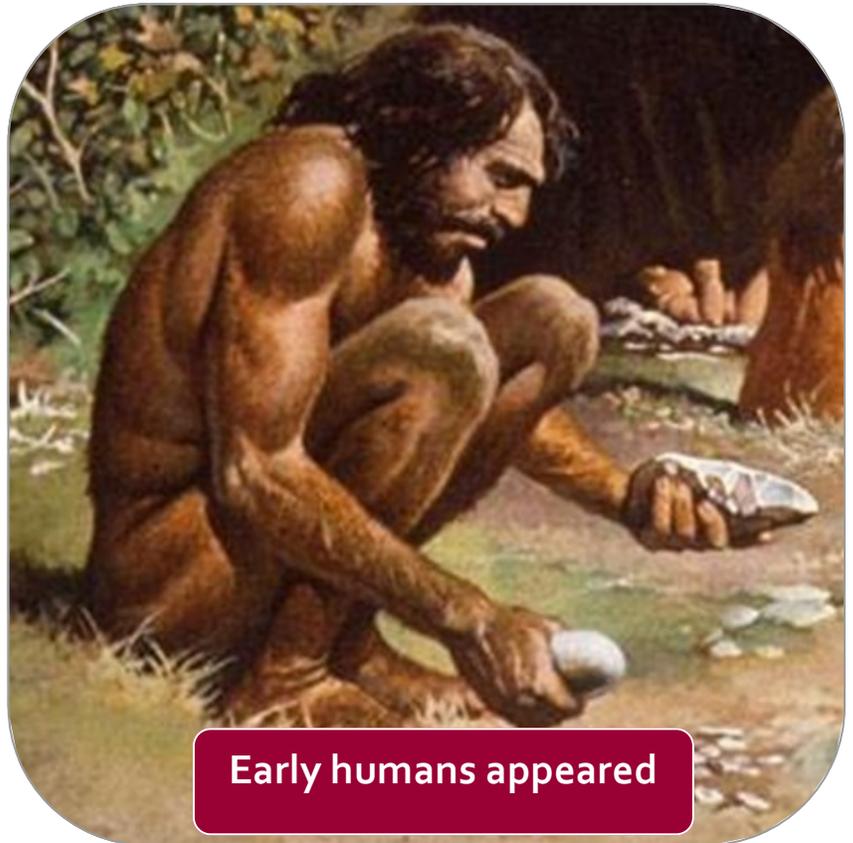
230 million years ago



First dinosaurs & mammals



2.3 million years ago



Early humans appeared

10,000 years ago



The Last Ice Age in Ireland



9,000 years ago



The first people arrived in Ireland

## 5. Ice Age Noses



Read out the clues for the animals which would have been found in Ireland during the Ice Age. Tell the students to put their finger on their nose when they think that they know what creature is being described. If, after the next clue, they decide they don't actually know what creature it is then they can pretend they were just scratching their nose and take their finger away. At the end of the clues see how many students have their fingers on their noses.

### Woolly mammoth

1. I can grow over 3m high.
2. I have long bushy hair which can grow to over 1m long and is a red/brown colour.
3. I have a thick layer of fat under my skin which can be up to 8cm thick to help me keep warm.
4. I am vegetarian.
5. I use my long tusks to dig through snow to find food.
6. My tusks could grow up to 5m long.
7. I am extinct worldwide today.
8. I was called Manny in the film Ice Age.

### Giant deer

1. I can grow up to 2m high.
2. I am a herbivore.
3. Our males have antlers that could grow to more than 3m long and weighed about the same as a large bag of coal (40Kg)
4. I used my antlers to fight.
5. A smaller form of me is still alive in Ireland today.

### Brown bear

1. When I lived in Ireland I was mainly carnivorous.
2. I do not live in Ireland anymore.
3. I like to hibernate in caves in shallow pits.
4. There is a cartoon made of me where I like to steal picnic baskets!

### Fox

1. I still live in Ireland today.
2. I am the size of a small dog and I have four legs and sharp pointed ears.
3. I have scent glands on my feet which leave trails that I can follow at night.
4. My eyesight is poor in daylight but good in the dark.
5. My tail is sometimes called a brush
6. I have a reputation for being cunning.
7. I like to eat rabbits, rats, mice, hedgehogs, pigeons and chickens if I can get them.

## Wolf

1. We do not live in Ireland any more.
2. We are excellent hunters.
3. We have two layers of fur – a top coat and an undercoat – which helps to keep us warm.
4. We are carnivorous and can run very fast.
5. When we catch our food in packs the alpha male and female eat first.
6. We live in packs that can be as small as 2 or as large as 20.

## Spotted hyena

1. We don't live in Ireland anymore. Today we can be found in Africa.
2. We are the size of a large dog and are strong but very cowardly.
3. We are nocturnal and live in groups called clans.
4. We are carnivorous. We hunt animals and also eat carrion.
5. When we get excited we make a noise that sounds like laughter.



## For further thoughts & investigations on Geology.....

### [www.burrengeopark.ie](http://www.burrengeopark.ie)

Website for the Burren and Cliffs of Moher Geopark. A free geopark activity pack can be downloaded here.

### [www.geoschol.com](http://www.geoschol.com)

An Irish Geology for schools website. Information on geological periods, geology of Ireland and the world and the impact geology has on our lives.

### [www.gsi.ie](http://www.gsi.ie)

Website for the Geological Survey of Ireland. Detailed educational resources as well as geology maps for Ireland.

### [www.Irelandstory.com](http://www.Irelandstory.com)

A good website for explanatory charts etc. e.g. the formation of bogs.

# MODULE 2. BUILT HERITAGE



## Overview

The *Built Heritage* module will provide ideas and resources for investigating the buildings and monuments in your area. These investigations will provide a basis for establishing an understanding of historic time periods, the changing use of land and buildings overtime and the richness of built heritage which exists throughout Ireland.

The relevant curriculum strands and skills covered by this module are:

### Relevant Strands

Continuity & change (all)	Geography/History
Bronze Age people	History
Stone Age people	History
Early Christian Ireland	History
Building, sites or ruins in my locality	History
My locality though the Ages	History
Life, society, work & culture in the past (all)	History
Making constructions	Art

### Skills

A sense of place  
Cause & effect  
Change & continuity  
Time & chronology  
Using evidence

## Enquiry Board

- Is there an old monument or building in your area?
- What methods could you use to find out more about it?
- How can you interest your students in the building?
- How can you present the story of the building in an interesting way?





## Place Book

A suggested Place Book activity for the *Built Heritage* module is to create an historic character puppet, write their story in the book and finally to create the pop-up model of the local building or monument which you have chosen.

Before you start the activity take your class to visit your local building or monument. Have them think about the people that lived there and maybe carry out some of the activities suggested below.

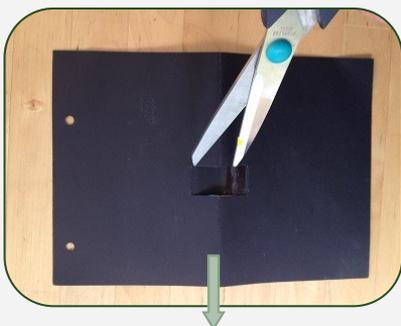
*Identify what man made features are present?*

*Can they guess what they are all used for?*

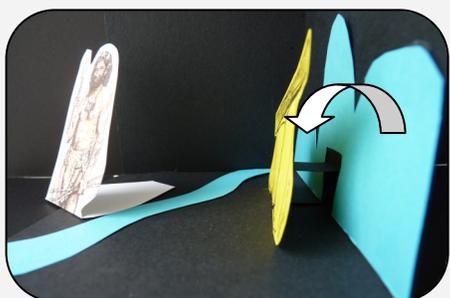
*What was it like for children living in Ireland when this site was most active? (or in the past in general)*

Can they imagine what life would have been like when this monument was active? Give an insight into family set ups, tribal set ups, agriculture, laws and folklore from that time. Man's reliance on the moon, sun, stars etc. Perhaps start to question current student's 'usual' way of spending free-time – their dependency on man-made items.

Back in the classroom, to create the character give each student a narrow piece of card (c. 2inch width). Have them draw their character half-way along the length of the card – the card below the drawing can then be folded backwards to allow the character to stand. Cut out the extra card around the character once finished.



To create the 'pop-up' monument for the character, draw the monument and cut it out. Fold the book page in half from left to right. Cut two slits on the folded side near the middle. When you open the fold, the slits can be pulled out to form the pop-up. Stick your monument onto one side of the slit and it should now pop up. Decorate around the monument.



# Indoor Activities

## 1. Artefacts from your life



After discussing the difference between monuments and artefacts, in groups have the students come up with 10 'artefacts' that would tell the story of their lives if an archaeologist was to excavate around their house in 2,000 years time.

Discuss what items would actually survive and which would disintegrate. Of the items how many of them do they think would still be used? Would the archaeologist be able to figure out what they were intended for? What do these artefacts tell us about our lives?

It can be interesting to combine all the groups suggestions and then try to broadly categorise – often the items will fall under food, sport, entertainment, hygiene etc.

## 2. Monument modelling



Using modelling clay or plasticine have students 'build' their local monument. Have them think about the physical work which would have been required to create the monument when it was originally built.

## 3. Day in the life



Building on the work the students have started for their place book – you can do a series of 'Day in the Life' activities whether it's a) the people from the local monument, or b) a specific time period or c) an archaeologist as suggested. Below is a sample which you can supplement for the archaeologist activity. Obviously if an archaeologist could visit the class and tell them about their day that would be a richer experience.

*My name is Áine and I work as an Archaeologist. I love researching the history of times before writing began – all the sites that we work on have amazing stories to tell – you just have to know how to read them! A lot of the information comes from the artefacts that we uncover when we're carrying out a dig at a site. That's what it's called when we're investigating somewhere- a dig....makes sense, right?! Some of the artefacts we might come across would be arrowheads, pots, jewellery etc.... But it's not just about the artefacts – the remains of the buildings and walls also help us to put together the story. You can also work out really interesting stories about how healthy the people were and what they ate just from looking at the bones or seeds that we find during the dig.*

*People often wonder how we decide on what sites to work on - often sites are discovered by*

*accident, just someone out walking or maybe working in a field and they come across something. Aerial photographs can also be a big help to show up strange bumps and lumps on the land.*

*The work at a dig site has to be really careful – you don't want to destroy any of the historic evidence. The first thing to do is to create a plan or map of the area – that way you can mark down where everything is found. When we start the dig we use small trowels, brushes and shovels and move the earth carefully and slowly. Sometimes we even need to use sieves to find the smallest of artefacts. All the artefacts need to be labelled and photographed. You need to keep really thorough records – write everything down! Interesting artefacts are sent to museums or to science labs – carbon 14 dating can be used to get pretty exact ages for things like bones....that's handy! When all the evidence has been collected it then starts to get even more interesting because we've to try to put the whole story together and maybe make conclusions about the people that built the monument and why they built it. It's pretty important work that we do – putting together the story of the past!*

#### 4. Bow & arrow making



You can give students the opportunity to experience life as a hunter gatherer. Have each student (or in groups) create a bow and arrow – and attempt to hit a target 'to catch their dinner'. You'll need sticks for the arrow (ash or sycamore saplings work well), a thicker piece of ash or sycamore sapling for the bow - needs to be pliable yet firm, strong string or twine, small flattish, pointed stone for the arrowhead and a target. You could create one sample in the class and then have students locate the materials at home to create their own. If they're not successful hitting the target with their bow & arrow, they could try and hit the target using the arrow as a spear. Or make some axes using similar method. Obviously carry out the necessary safety rules for these exercises.



#### 5. Recreate a dig



If you can't get out and experience a real life dig in action, you can recreate the dig setup in the classroom. Prepare some trays for the dig – half fill with sand and place some 'stone age' items into the sand (eg. sea shell; animal bone; pointed stone; hazel nut). Cover the sand and items with a plastic sheet or newspaper. Add more sand and then put more modern items in the sand and cover with remaining sand (eg. birthday candles; lollipop sticks; top of plastic water bottle; snack packet; small toy).



Assign groups depending on the number of trays you have. Get them to allocate team roles – director, mapper, recorder, excavators etc. They must decide on a grid for the tray numbers 1-4 on one side and letters A-C on the other.

You could have the director fill out a license application (Name, Team Names, Dig Site, Date etc.), assign roles to the group, ensure the dig site remains tidy and rotate the excavators.

Excavators use a small trowel (or equivalent) to carefully remove small amounts of sand at a time. When they come across an artefact they use brushes to remove excess sand. The artefact can then be removed and recorded on an artefact recording sheet – make sure they include the grid reference for where the artefact was discovered. Once the modern layer has been fully excavated and recorded have a class discussion on what has been found and what it means. What event are these artefacts evidence of? What have we learned about the people that produced these artefacts?

Teams can then proceed to the lower layer and repeat the process.

## 6. Local monument map



Using the National Monuments Service website (as explained on the podcast) identify all your local monuments. Working as a class or with students focusing on their own 3km circle, create a map which includes all the local monuments. Decide amongst the class which built heritage features interest you most then explore the following eg. What year was it built? Who built it? What was it used for? What's the most interesting feature about the monument? For each monument get a photograph and then answers questions the group have decided to explore. Add these to the relevant location on the map. Before long you'll have a really rich local heritage picture – which you can add to as you uncover more information. You can also use google street view to get another angle of photo on the monument.

## Outdoor Activities

### 1. Picture & Map Activity

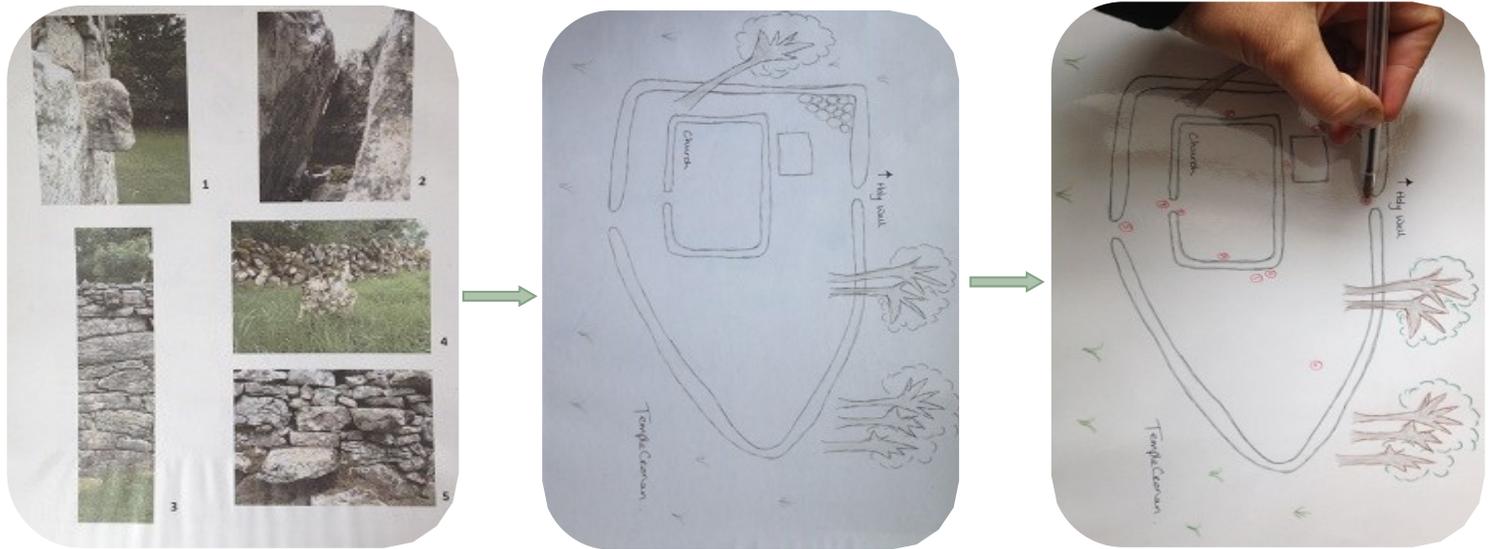


This activity is a great way to study the stories of a local monument in depth. In preparation do some research on a local monument that you could visit with the class. Go to the monument and take a selection of up close photographs of identifiable features. Create a sheet with about 10 of these photos and number each photo (see photo below). Create a simple map of the site, marking any significant features.

Take the class to the site and in teams have each group find each photo and mark its location on the map using the number from the photo. You can do this as a race if you wish.

Once finished, have the class take you to each number to check if they have found them accurately. For each photo try to have an interesting story/information about the monument to teach the students about some of the history of the monument.

It could also be a good project to have the older class groups put together the activity – taking photos, drawing the map and finding out the stories – and then having the younger students try to find them with the older students passing on the information they have learned. They could also do this with parents/family groups –spreading the learning in the community.



## 2. Interview a monument



This is an excellent contemplative activity for students to carry out at a local monument or building. The interview questions could also be the basis for the information on your monument map. Have students think of questions they'd like to ask the building/monument. Have them think of the monument as a person – what questions would you ask a person? What's your name? What age are you? Why are you here? What do you like about where you are? What don't you like? Do you ever get lonely? Do you have any 'friends' in the area?

Have students write out the interview and include pictures where possible. Doing this activity in the field while the students are at the monument would produce the richest output.



## For further thoughts & investigations on Built Heritage.....

**[www.archaeology.ie](http://www.archaeology.ie)**

National Monuments Service website with information on built heritage in Ireland and sites throughout the country.

**[www.buildingsofireland.ie](http://www.buildingsofireland.ie)**

Information on Ireland's listed buildings.

**[www.digitkids.ie](http://www.digitkids.ie)**

Archaeology experiences for children.

**[www.flickr.com/photos/buildingsandmonumentsofireland/sets](http://www.flickr.com/photos/buildingsandmonumentsofireland/sets)**

OPW pictures of monuments in Ireland.

**[www.itsabouttime.ie](http://www.itsabouttime.ie)**

An excellent resource for investigations of archaeology and built heritage with detailed lesson plans and activities.

**[www.webgis.archaeology.ie/NationalMonuments/FlexViewer/](http://www.webgis.archaeology.ie/NationalMonuments/FlexViewer/)**

The National Monuments Service online map – will pinpoint all of your local monuments and may have some information on them as well. Find your area and then use 'search custom shape' to see what's around you.

# MODULE 3. PEOPLE & CULTURE



## Overview

The *People & Culture* module is the next step in your place-based learning journey – you’ve established the stories of the buildings in your area, but what of the people that lived in them. Amongst the topics that are investigated are the local folklore and legends, the movement of people into and out of areas, the various sources of information, and a look at local culture.

The relevant curriculum strands and skills covered by this module are:

### Relevant Strands

Myself and my family/local studies (all)	History
Story (all)	History
Continuity & change (all)	History
Language & culture in the 19th & 20th centuries	History
People living & working in the local area	Geography
Living in the local community	Geography
All	Visual Art, Music & Drama

### Skills

Cause & effect  
Change and continuity  
Communication  
Time and chronology  
Questioning  
Using evidence

## Enquiry Board

- What can you find out about the people who lived locally?
- What methods can you use to find out more about the people and stories of your area?
- How can you present the stories of your area?
- Are there local historians/musicians/storytellers that could visit the class to add to the experience?





## Place Book

The suggested Place Book activity for the *People & Culture* module is to interview an older member of the local community – to try and get an idea of what their place was like in the past

Decide on the interview questions in class – you can take a single focus or keep the questions broad to get a good overview of the past in your area. Topics that might be interesting could be local folklore, changes in school life, the changing use of local buildings, entertainment in the past, food developments, local field and placenames and their meanings etc.

Have the students interview at least one older person and write it up in their Place Book - then sit around in a circle and have a storytelling session as a class by reading out some of the tales from above.

## Indoor Activities

### 1. What's in a name?



Placenames can help to tell stories of the past. You can begin with any local field names which are known and add them to the maps you have previously created. You could try to write them in their original Irish language format and attempt to write down their meanings in English. These can often be connected to the owners of the land. Another great resource for finding out local placenames and their meanings is the [www.logainm.ie](http://www.logainm.ie) website. You can search for names that you know to find out their meaning or also do a general area search to find out street/place names for your locality.

Place names may also be worth including in the interview questions for the Place Book exercise.

### 2. Families of the past (& present)



Students can try to trace their own family in the area. You can select one family and trace as a class e.g. following a well know family from the locality by using the census records from 1901 and 1911, which are both available to view on [www.census.nationalarchives.ie](http://www.census.nationalarchives.ie). Searches can be conducted on place, surname, county etc. so you can decide what thread you want to follow. The records will give information on the age, sex, religion and relation to head of household and also pictures of the

actual census record can be seen. Again, you could add details to your maps on where people lived at certain times in the past.

Another resource for tracing the people of the area is through the records of Griffiths Valuation, which can be viewed on [www.askaboutireland.ie/griffith-valuation/index.xml](http://www.askaboutireland.ie/griffith-valuation/index.xml). These are the records of the first full-scale valuation of property in Ireland. It was overseen by a man called Richard Griffith and was first published between 1847 and 1864. Searches need a surname to get started – and can be supplemented by place names. The information will provide details on who lived where and how much land they had at the time.

The [www.irishgenealogy.ie](http://www.irishgenealogy.ie) website might also fill in some of the details for the people who lived in your area in the past. This website provides search options for civil, church, census, property, migration, graveyard, military and police records. Although not all options may be available free of charge.

### 3. Who's in the picture?



Old photographs can be a really rich source of information and connection to the past. An online search can often turn up some old images, or get students to ask at home to see if they have any old photos of people from the area or places in the locality. There are also a number of databases of old images of specific areas. For instance, Robert Cresswell visited Kinvara in Co. Galway and there is now an archive of his photos from 1950's available on [www.kinvara.com/cresswell](http://www.kinvara.com/cresswell) Is there one for your area?

[www.irishphotoarchive.ie](http://www.irishphotoarchive.ie) has multiple collections and images available to search, purchase or view online.

[www.nli.ie/en/photographs-introduction.aspx](http://www.nli.ie/en/photographs-introduction.aspx) houses the National Library of Ireland photo archive – a selection of which are available to view digitally.

If photographs of people or the area are obtained, get students to compare them with the present. A really interesting exercise can be to visit the place in the photograph and ask people if they know anything about the picture, the people in it or the changes that have occurred. People are often very happy to share their memories and stories – all it takes is asking! Also your local library might have an archive of pictures from the area worth looking at.

### 4. Inspiration from my place



Irish culture has long been inspired by place. Using local examples as a starting point, have students write poems (even a limerick, a haiku, or an acrostic), stories (or even songs and tunes) using their place as an inspiration. Get them to focus on the small details that are relevant to them - it doesn't have to be the most obvious feature of your place, it's about what's important to them.

There are also great opportunities for students to express themselves and represent their place through art projects. You can very easily incorporate your place based learning into the art curriculum.

#### 4. Tell me a story, play me a tune



Many communities have a musician or story teller who would be happy to visit the class and share their talents with the students. It may even be a student's grandparent or parent – people are often delighted to be asked. Have students prepare a few questions for the visitor and then document their experience. The students could also share their music, song, stories and dance on the day.

Online videos and recordings are also a great resource for using in the classroom. You can play videos of local musicians, or maybe even storytellers. You can also find songs and tunes which were written about or inspired by the place in which you live – something different if you can't find someone locally

### Further thoughts & investigations on People & Culture....

**[www.askaboutireland.ie](http://www.askaboutireland.ie)**

Lewis Topographical Dictionary 1837, Griffiths Valuation of Tenements 1850's

**[www.bealbeo.ie](http://www.bealbeo.ie)**

Folklore recordings.

**[www.census.ie](http://www.census.ie)**

Historic census records available to view.

**[www.digital.ucd.ie](http://www.digital.ucd.ie)**

Folklore games

**[www.duchas.ie](http://www.duchas.ie)**

Project working to digitalise the Irish Folklore collection.

**[www.logainm.ie](http://www.logainm.ie)**

The Irish place-name database.

# MODULE 4. BIODIVERSITY



## Overview

The *Biodiversity* module will start your students thinking about the importance of the natural heritage that surrounds them. Through investigations of local habitats, the complex connections of nature and the benefits and uses of biodiversity, students should hopefully take a more responsible attitude to conservation and the environment now and into the future.

The relevant curriculum strands and skills covered by this module are:

### Relevant Strands

Plants & animals	Science
Human life	Science
Environmental awareness & care	Science/Geography

### Skills

A sense of place  
Exploring  
Questioning  
Observing  
Recording & communicating



## Enquiry Board

- What is/are the main habitat/s in your area?
- What chain (or web) exists in this habitat? (ie flower > insect > bird > carnivore & beyond)
- Is there anything strange or exciting you have discovered about the biodiversity in your area?
- What can be done to help preserve your local biodiversity?





## Place Book

Ask each student to draw a local flower or plant from an insect's view, i.e. magnified to really observe the plant. Any flower books you may have to help them would be handy. Ask each student to name at least one animal that they can think would use these flowers or plants for food and to draw them in the picture as well into their Place Book.

Taking the time to carefully look at any of our natural heritage can be a very interesting activity. Give students time and encourage quiet observation, allowing them to study the biodiversity around them in depth.

## Indoor Activities

### 1. Web of life



Ask the students to stand in a circle. Start asking questions about what everything needs to live. Hopefully it won't take long for students to work out that the sun is the most important thing. Select a student to be the sun and give them one end of a ball of string and tell them not to let go! What uses the energy from the sun to grow? Hopefully students will come up with plants so select the next student to be a particular type of plant (and to remember what they are if possible), pull out the ball of string from the sun until it reaches the plant and give them the string to hold onto. What eats the plant? Pull out the string from the plant and give to the next in the food chain. Keep going on and on with what eats what moving up and down the foodchain (e.g. when the top animal in the chain is reached think of something else that it eats and move down the foodchain that way) until everyone is connected by the string. Make sure that students also include humans in the web.

Discuss how everyone is connected then make up some scenarios – e.g. the sun dies (sit down sun). If you feel a pull on your piece of string then sit down – all the students will end up sat down – this tells us everything in the web depends upon the sun. Try a simpler scenario – use of pesticides on a farm so all the insects must sit down – again the whole chain/web will be affected and will have to sit down. However, you can also ask them to imagine that there were no insecticides sprayed and the insects lived happily (all insects stand up) and everything related to them gets to stand up again, and so on.

## 2. Local habitat map



Using your Ordnance Survey map, as well as your own local knowledge – map out the different local habitats that you can identify. For each habitat put together a habitat chain or web – starting with the food producers and building up to the highest predator. The Heritage Council document on habitats which can be accessed here: [www.heritagecouncil.ie/fileadmin/user\\_upload/Publications/Wildlife/Guide\\_to\\_Habitats.pdf](http://www.heritagecouncil.ie/fileadmin/user_upload/Publications/Wildlife/Guide_to_Habitats.pdf) will give you information on most of the habitats found in Ireland and their associated species.

## 3. Feed the birds!



You can make simple birdfeeders using old milk cartons or plastic bottles. More information can be found on the education section of [www.birdwatchireland.ie](http://www.birdwatchireland.ie) – where they also have instructions for making and erecting a bird table. Watching the birds that visit the feeders or a bird table is an excellent way to learn more about local birdlife. If possible have the feeders near a window for observation – but do also go outside and watch them where possible. You can keep records of the birds that visit, the time of year etc. You could use both Irish and English names for the birds.

## 4. Whose song is it anyway?



There are many CD's, Apps, and online recordings to help you identify different bird songs. Having identified the birds that visit your feeders you can then listen to their songs and try to identify them in the wild. If you can spot the bird that's singing by following it's song all the better. This is an experience that will stay with students for a long time to come, and maybe something which they continue to enjoy into their adult life.

## 5. Bringing nature into the classroom



A class nature table is a great way to keep track of the local impact of the changing seasons. Ask students to bring in an interesting nature item – obviously putting in the required restraints e.g. size, no dead animals, etc. Have students explain what they've brought in, label and date it. If you repeat the activity a number of times during the school year you'd expect to see some changes in what is being brought in – and will no doubt get to see some pretty interesting items.

## 6. What has biodiversity ever done for me?



One way to trigger interest in biodiversity is by focusing on the many benefits of and uses for plants and healthy ecosystems.

Divide the class into groups (based on the number of ecosystem services you identify). Give each group one of the below statements (an ecosystem service). Have the group act out this free service that biodiversity and healthy ecosystems performs without which the world wouldn't function. Have the other groups guess what they are trying to act out by writing it down. When all groups have finished get them to read out the answers to each one.

Sample services;

Insects, birds and bats help pollinate.

Wetlands help clean water.

Some species help control potential pests.

Some organisms decompose organic matter.

Plants help control erosion and flooding

Plants convert the sun's energy into energy we can use.

Plants and animals work together to help maintain the balance of gases in the air.

Plants provide food and medicines for people.

Have each group research how their ecosystem service is performed and share this with the class. Discuss what would happen if one of these services was no longer performed.

## 7. Learning from nature's genius



Biomimicry is a growing area of study using the years of development and evolution in nature to improve the design and production of materials, structures, and systems - literally mimicking biology. Having explained the concept to the students and provided them with some examples (available on [www.biomimicry.net/about/biomimicry/case-examples](http://www.biomimicry.net/about/biomimicry/case-examples)), have groups of students come up with 3-4 shared interests in their life e.g. sports, music, machinery, computer games. They should then identify some issues with the interest and see can they come up with any example from nature which could in some way help with the issue. Encourage imagination and creativity – the science doesn't have to be accurate once they get the concept.

Feedback ideas to the class and have students build on and feed into each other's concepts. Try to agree on 5 of the best concepts and have the students document the issue, solution and any other suggestions they have.

# Outdoor Activities

## 1. Bug Hunt



*Note to teachers: On the off chance that you're not a big fan of creepy crawlies/spiders, don't let your own feelings influence the group! Also try to discourage the negative attitude if some students are expressing it. No one has to do anything they're uncomfortable with but hopefully you'll have plenty students happy to search, touch and look at the wonders under their feet.*

Using jars, anything will do – old soup containers, glass jars, Tupperware etc. ask the students to go find some insects to bring back to base, where you could have a bigger box to put all in. Explain that insects like to hide in cool, damp places, so encourage the students to lift stones, look under leaves, in flowers etc. Ask them to collect them carefully using a piece of card. They should try not to mix different types of insect just in case they eat each other! If available give students magnifying glasses to see what the insects do. Or put them on a piece of paper to look more closely at them....how many legs do they have? What colours are they? Do they have any patterns on them? What do their faces look like? How do they defend themselves? etc. Ask the students to draw one or more of their insects, making them big and putting their names and date on the bottom of the drawing. When they have finished drawing, remind the students to put the insects back where they found them.

## 2. Flower Race



You'll need some flower identification sheets relevant to your area and the time of the year. Split students up into groups of 3 or 4 and give each group a flower sheet. Pick a flower (that you have definitely seen on the day) and shout out its name. The first group to stand by the correct flower has won. A harder variation is that each group elects a captain who is given the flower sheet then if the rest of the group does not know what that particular flower looks like then the captains must help the rest of the group locate the correct flower by describing it to them (but not showing them the sheet).

You can also simplify this by getting students to find flowers or particular colours rather than particular species, or stand beside a flower, tell them this is a red clover for example, and ask them to go stand beside their own one.

### 3. Find that rock/tree



Split students into pairs and give each group one blindfold. Explain to the students that they are to blindfold one member of their group and to carefully lead them to a rock or tree. The blindfolded student then has to spend some time really feeling and smelling the rock or tree and it's surrounds. The blindfolded student is led back to the starting point, has the blindfold removed and then must try to locate the rock/tree that they were taken to. A variation or additional game can be that the members of the group have to take the blindfolded student on a short walk and get them to touch different items along the way and guess what they are, or they collect different items and ask the blindfolded person to identify what they are.

### 4. Find your mate



You will need pairs of laminated animal cards (or if students can read just write pairs of animal names on separate small pieces of paper). Give each student a laminated animal card/written name – make sure that you give out two for each animal (if there is an odd number of students in the group have one option for 3 animals). Tell each student that they have 10 seconds to think of how their animal will behave. Students then are told to behave like their animal (making the sounds/movements etc) and they have to move around the room to find their mate (the other student who was given the same animal card). The only sounds they are allowed to make are their animal's sound and they cannot show anyone their card or say the name of their animal. Finally, you can ask each pair to act out their animal to the class and the class has to work out what they are.

### 5. Bat & Moth



Explain to students that animals use different methods to get their food. Some use speed, some stealth, some have really great hearing etc. Ask the students to stand in a circle. Select one student to be blindfolded, they will be the bat, and select another pupil to be a moth. The bat and moth cannot leave the circle. The bat is trying to capture the moth to eat it but cannot see it. To find the moth the bat must use the sense of hearing and so every time the bat calls 'bat' the moth must say 'moth'. When the bat has captured the moth, the moth becomes the bat and a new moth is selected. If the moth is good at evading capture, get all students to take a step in to make the circle smaller (habitat reducing). You can also add a number of moths to the circle at the same time.

## 6. Fox & Rabbit



Explain to the students that animals use different methods to get their food (unless already done in previous game). One student is selected to be the parent rabbit and they are blindfolded and stood in the middle of the room with the baby rabbits – 3 or 4 small beanbags (or equivalent) arranged around them. All the other students are going to be the foxes who will use stealth to try and steal the baby rabbits for their dinner. They stand in a circle around the parent rabbit. Explain that the foxes will get their turn to catch the baby rabbits only when you have pointed to them. Have about 3 or 4 foxes catching the rabbits at one time or you can just select one fox at a time. If the parent rabbit thinks they hear a sound they must shout ‘freeze’ and point in the direction from where the sound came from. When the parent rabbit has shouted ‘freeze’ all the foxes must stop and if they are being pointed to then they must return to the edge of the circle and their turn is over. The parent rabbit can also try to grab anyone they think they can hear is close enough to try to steal one of their babies. Any contact made between rabbit and fox means that the fox’s turn is over and they must return to the edge of the circle. The game is over when all the baby rabbits have been stolen for the fox’s dinner.

### Further thoughts & investigations on Biodiversity.....

#### [www.wildflowersofireland.net](http://www.wildflowersofireland.net)

A personal record of Ireland’s wildflowers including images, English, Latin and Irish names and flowering times.

#### [www.seaweed.ie](http://www.seaweed.ie)

This site is a source of general information on all aspects of seaweed.

#### [www.pfaf.org](http://www.pfaf.org)

Plants for a future is a site about edible and medicinal plants.

#### [www.giyireland.com](http://www.giyireland.com)

The *Grow It Yourself* website provides information, tutorials and recipes for growing your own food.

**[www.theorganiccentre.ie](http://www.theorganiccentre.ie)**

Has a free community garden guide.

**[www.habitas.org.uk](http://www.habitas.org.uk)**

Natural History Museum of Ulster website has information on a wide range of Natural Heritage topics

**[www.mothsireland.com](http://www.mothsireland.com)**

Website mapping the moths of Ireland.

**[www.birdwatchireland.ie](http://www.birdwatchireland.ie)**

Numerous educational resources and information on Ireland's bird life.

**[www.butterflyconservation.ie](http://www.butterflyconservation.ie)**

Information on gardening for butterflies, lifecycles and maps for species in Ireland.

**[www.butterflyireland.com](http://www.butterflyireland.com)**

The Dublin Naturalists Field Clubs Butterfly website.

**[www.iwdg.ie](http://www.iwdg.ie)**

Irish Whale and Dolphin Group.

**[www.biodiversityireland.ie](http://www.biodiversityireland.ie)**

The National Biodiversity Data Centre which is taking records for all species in Ireland, hoping to map them all. Also has information on native/non-native species and invasive species.

**[www.mcsuk.org](http://www.mcsuk.org)**

The Marine Conservation Society has information on depleting stocks etc.

**[www.npws.ie](http://www.npws.ie)**

The National Parks and Wildlife have details on Special Areas of Conservation, Nature Reserves, National Parks etc. You may be able to find sites locally.

**[www.Bordbia.ie](http://www.Bordbia.ie)**

Information on food and conservation.

# MODULE 5. BUILDING FOR THE FUTURE



## Overview

Having taken your class through the various earlier modules you should now have an excellent grounding in place-based learning and bringing your local place into the classroom. Place-based learning aims to inspire your students to learn more about their local place and to feel empowered to look after their environment into the future. The work that you do with your class will help to build up stewards of the landscape. Taking as much time outside as possible is going to help with this, overleaf are some activities that you can pull out at any time in the outdoors to engage them in where they are. Good Luck!!

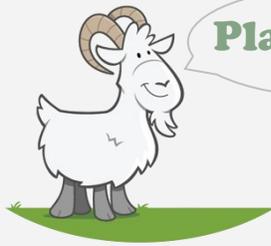


## Enquiry Board

- Do you think your students would like to know more about their 3km around their school?
- Do you feel you could fit a lot of the activities in the podcasts and workbook into the curriculum?
- Do you have access to a local monument?
- Do you know of a local story teller or musician that you could bring in to talk to your class?
- Is there a green area near your school that you could use to look for bugs within walking distance?
- Do you think your area is rich in built, cultural and natural heritage?



If the answer is YES to any or all of these, no time like the present to get going on it.



## Place Book

Hopefully your students will now have a good representation of their place in their Place Book. You can include reports/pictures from any of the activities that they carry out.

You can continue to build the book throughout the school year – leaving students with a memento of their place and their time in school. The Place Books can then form the basis for the community showcase where students can display the ongoing work they have been doing rather than creating an entire body of new work. This may include the maps, posters, and even plays about local figures, tunes and stories. It will also be of interest to their families and neighbours as it is their place too. After all, we are all still learning about our place .....

## Outdoor Activities

### 1. Sense meditation/exploration



This activity works best when students are in a calm mood, although it can help calm the group too. Set the boundaries at whatever habitat/monument you are visiting. Give students clear instructions as they will all be carrying out the activity individually. Students must pick a space to sit away from all other students. As they sit they should try to see the smallest and the biggest thing, the quietest and the loudest noise, the strongest and the weakest smell, the softest and hardest texture. The activity has to be done in silence. Have an agreed sound that the teacher will make to call them back after about 5 minutes (if they are engaged leave them for longer). Have them discuss what they saw, heard, smelled, touched in pairs or small groups.

## 2. Numbers game



When out on a walk this can be useful for getting from one place to the next as it keeps the students engaged with what is around them. Have them write the number 1-10 on a scrap of paper. You can also include random numbers to make it more challenging. They must then find something that corresponds to each number eg. 1 magpie, 2 hazel trees, 3 buttercups etc. But there must only be 1 magpie, 2 hazel trees etc.

## 3. Scavenger hunt



There are two variations on this activity. For both, do highlight any rare/stinging/poisonous species and tell students not to pick them.

The first option is to give the students a printed list of descriptions and challenge them to find a nature item which corresponds to each description. A suggested list is provided below. Once they have found the items have them discuss/look more closely at the features as suggested by the questions.

Something soft - what really makes it soft? Look closely.

Something spiky - why do you think it has spikes?

Something smooth - what caused the object to be smooth?

Something strong - why is it strong? Does it protect something fragile?

Something fragile - what keeps this object from being damaged?

Something old - how can you tell that the object is old?

Something new - how can you tell that the object is new?

Something sharp - be careful! Was this object originally sharp or did it break?

Something with a shell - what could the shell be protecting and why does it need protection?

Something closed - is this object ever open? Why would it ever be open?

Something open - is this object ever closed? Why would it ever be closed?

Something moist - what would change if it became dry?

Something very dry - what would change if it became wet?

Something an animal has left behind - did the animal leave it behind on purpose? Why or why not?

Something a human has left behind - what makes it obvious that a person left it?

Something ugly - would anyone or anything find this object beautiful?

Something beautiful - What makes it beautiful to you?

For the second variation, gather up a number of items which can be found locally and hide them under a jumper/coat. Have students look for one minute and then try find all the items themselves.

You can also do these activities in teams where only one member gets to look at the hidden items or item list and then has to report back to the rest of the team.

#### 4. Camera game



In pairs one student is the camera and one is the photographer. The camera closes their eyes and is led by the photographer to a previously selected 'image' the photographer positions the camera and then pushes their 'button'- a tap on the shoulder. The camera opens their shutter (eyes) for 30 seconds to take the picture the photographer has selected. The camera then closes their eyes again and is led away. The camera opens their eyes and finds the photograph they've taken by leading the photographer back there. Encouraging close up observations can make it particularly interesting. This is a great way of creating a memory or 'snapshot' of the day.

#### 5. My journey string



Have the students in groups of 3 or 4. This is probably best played on the way back to the coach/starting point. Give each group a long length of string (about 1m) and tell them that on the journey back to the bus they must collect small items (not flowers) that they can tie onto their string which will remind them of their experience. Back at the bus each group must explain the significance of their objects on the string.

#### 6. Owls & crows



Split the class into two groups. One group are owls and the other are crows. Have the groups line up toe to toe and then take two steps back. Assign two bases, one behind each group. The base behind the crows is true and the base behind the owls is false. Call out statements related to the work you've been doing, eg. foxes are blue, trees have leaves, spiders build nests, people have been in Ireland for 9000

years etc. If the statement is true the owls must run to the true base – with the team on the crows side trying to catch the owls before they reach the true base. If students are caught they switch teams and if a student runs the wrong way i.e. thinks the statement is false when it's true, they are out. Continue until all students are out or one team has caught all the other team. The activity can get a bit hectic but good energiser or way to review information.



*This is a really a terrific resource and has great potential for use in our primary schools. I especially love the time perspective and the way it helps conceptualise the relative modernity of the human impact.* Declan Kelleher, former President of INTO and current Vice-President of the NCCA.

For more information on teaching resources, teacher training or the work of Burrenbeo Trust go to

**[www.burrenbeo.com](http://www.burrenbeo.com)**

Or contact us on [trust@burrenbeo.com](mailto:trust@burrenbeo.com) /  
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