

Foyers Primary School: *A Year in the Life of Loch Bran*



March 2005 'A mild, sunny and rainy day at Loch Bran. Jake, Daniel and Luke saw a red squirrel jumping from tree to tree. And when we were looking through some binoculars at the peninsula we saw a heron flying over the loch.

No date: A mysterious trail of dried grass scattered around the wood, so we acted as though we were detectives but at last we found the nest. It was a field vole's.

18.08.06 A dreary start to the day, the thick mist covering the Mountain like a war has just ended, nothing stirs.

At Loch Bran, we saw 2 buzzards flying elegantly over the loch. We could hear nothing apart from the leaves rustling.

While we were walking along the path to get to the loch, Jake and Daniel saw common blue damselflies showing off their magnificent colours and wings off.'

Matthew P7 from his diary on 'A Year in the Life of Loch Bran'

Foyers Primary School sits above Loch Ness-side, in the middle of a large coniferous forest and has just a modest tarmac playground. A setting of tranquillity – you can actually hear yourself think. Personal experience confirms it really hasn't changed in 40 years!

But inside the school, the pupils are buzzing with enthusiasm for their project – Loch Bran, its wildlife, plants, ancient history and secrets. They want to tell you all about it, what they've seen, what they've done and what's amazing. What's really interesting is where their enthusiasm lies – particularly the boys! It's not in doing field drawings, getting their feet wet, or taking photographs – although they touched on these too - but in the recording and monitoring! Just coming from the teachers, this would be hard to believe. But since Autumn of 2004, the recording and monitoring of the loch and its surroundings have become an enormous part of school life and central to many of the daily curricular activities.

So why has it grabbed the children's attention and enthusiasm? You'd think that children living in such a rural setting would be very in touch with the environment and diversity of wildlife around them. They can visit Loch

Bran any time. Maybe that's so, but access to TV, video, computers and playstations is just as easy in rural communities these days as in towns. And the consumerist pull of the City of Inverness is only 25 minutes away.

Monthly monitoring included:

- Air Temperature
- Water Temperature
- Plant and mini-beast life with quadrants
- 'Pond' life
- Link to downloadable monitoring graphs

Then consider the size of the school with a total of just twenty two pupils – the size of the average class for one year group in the rest of Scotland. P4-P7 makes up one class and numbers hover around eight. It might sound like heaven, but keeping up enthusiasm, enjoyment and avoiding repetition as children progress through the years with the same teacher and in the same classroom requires ingenuity. Setting

group challenges are difficult as the age range is so wide in just one class. You can hardly give the one child in P6 a class award for 'This week's Star Writer'



When you ask Maureen Brown, Headteacher (class teacher for P4-7) what the greatest benefit of the Loch Bran Project has been to the school, she firmly places this at the door of fun and enjoyment which she sees as a key stimulus for learning.

However, the opportunity to study regularly in an increasingly familiar setting, has allowed pupils to gradually assume joint ownership of the place they visit, share their excitements and experiences, which are in turn reflected in their classwork. Personal and shared memories and photographs are greater triggers for producing good poetry and creative artwork than computer screens and textbooks. This isn't new thinking, but 'A Year in the Life of Loch Bran is tremendous evidence'



**Through the microscope:
all in a drop of water.**

*A shiny sphere, dripping
Heavy and transparent,
With the outside world in it.
A diamond, falling reflections
Trying to stay upside down,
Sparkling.*

*Zooming in, it is a mystery world:
Moss floating with hidden seed cases,
Like an elf on a skidoo.
Silver droplets invading a ghostly
twig.
Transparent seeds with veins
As thin as thread,
Crashing into each other.*

*Zooming out again, it is a drop
Dripping with the outside world.*

Jake MacMillan, P5

The Project idea

Project 'A Year in the Life of Loch Bran' started off as a study of the changes, richness and variety of life on the Loch through all four seasons Autumn 2004 – Summer 2005.

Two and a half years later, Maureen Brown says she had no idea it would 'take over' the focus of the school so completely and particularly the work of P4-P7 – it's still running! In fact, much of the continuation of the

project is down to the enjoyment it's given combined with the creative thinking of staff and pupils on where the project can go next.

Some background

Loch Bran, a Site of Special Scientific Interest is renowned for its varied population of dragon and damselflies and its rich combination of bog, fen, woodland and water. Accompanied by school staff and Countryside Ranger, Katy Martin, the children visited the Loch once a month to record and analyse information and images of the loch and its wildlife.



It's a small, shallow loch, about 200 metres above Loch Ness and consists of two parts, separated by a long tongue of land. The west part is mainly shallow. It has been filling up with peat washed in from the hills and water lilies, rushes and other water plants have taken root to cover the surface.

The eastern part is deeper up to about fifteen metres. Brown Trout and Char live here, but most interestingly, it is one of the best places in Britain for dragonflies and damsel flies to breed, with about eleven different species here.

“Lucky Foyers Primary” you might say – to have all of this on their doorstep, but it would be easy to just take it for granted, or for the class to do a quick audit of the loch in the sunshine of the summer term. To complete the kind of project Foyers undertook, takes inspiration, enthusiasm and dedication on behalf of staff and pupils and should in no way be undervalued.



The Four Seasons

So has the project really engaged the children?

Katy Martin, Countryside Ranger told us that she was amazed at how the children's observation skills have developed and their awareness increased through the course of the project.

As the seasons changed, so did the children's focus. Autumn provided rich helpings of colour in leaves, fungi, mosses and lichens. During the dormant Winter months, the study concentrated on the social and economic history of the area around the Loch and human uses of the environment. Spring brought lots of nymphs, frogs, toads and pond skaters. Summer provided the wealth of dragonflies and damselflies they'd all been waiting for, ducks, new plant life, lots of different spiders and otter poo!

Documenting all the children's findings would take a long time and would just duplicate their fantastic work in boring black and white.

They have a wonderful gallery of photographs which can be downloaded for inspiration and their finds and comments are documented in their own words in an end of project report. Keen to share their findings, however, the children designed and distributed posters locally, which advertised a week long public exhibition of the Loch Bran project at the end of its first year, which was held at the school.



Worth a mention ...

Diaries of not-so Edwardian Pupils

Each child kept a diary which replicated the style of 'Diary of the Edwardian Lady', with 'highlighted' capital letters to start each paragraph and drawings to visualise their writing. As the year progresses, the children's observations become more poetic, but equally more measured.

A few highlights

It would be awful to miss such a public opportunity to highlight a few of the 'wow' experiences the pupils have had since 2004. These must have given everyone involved the inspiration to continue their hard work.

Scores of damselflies

'It was a warm sunny day in May. Loch Bran was coming to life again after the long winter. Suddenly, we saw scores of damselflies, drying out their wings in the sunshine. They flew around us and landed ..



on our hands



on our hats



and even on our noses!

Caddis Fly Larva mystery

'We found a Caddis Fly Larva at Loch Bran in the peat at the bottom of the Loch. Its case was made out of twigs, leaves and mud. Then the caddis fly came out of its case. It was a yellowy brown colour and transparent. It had yellow and brown stripes on its head. Then the caddis fly turned over and we saw 3 round balls on its tummy. We do not know what the 3 round balls are. We are trying to find out what they are. Afterwards we put it back in the loch' **Emily P5**



The school wrote to Dr Ian Wallace of Liverpool Museum (National Caddis Distribution Mapping Project Organiser) for help in identifying the white spheres. He admitted that he'd never seen anything like this in 30 years. The spheres may be some sort of parasite. The photograph is currently posted as a mystery object in 'Freshwater Life'.

Breaking news – there was great excitement on 1 March 2007 when another caddis with spheres was found while pond dipping! With the experts still puzzled, the children are hoping to go down in scientific history!

Demoiselle hatching

Jake found a Damselfly nymph climbing a Donkey Tail stem. He put it in a pot with a stick to hang on to and left it while he carried on with his work. The next time he looked, it had hatched into a Branded Demoiselle!

[Link to Jakes notes on the Branded Demoiselle](#)

History and culture

Many local people were able to contribute valuable information on the history of the site at the school's request for help. Details of formal local industry and transport came to light and many mysteries of different aspects of the loch surrounds were solved.



Penny Peat Moss lies just to the north of Drumtemple and the children were puzzled by the name. Enquiries told them that when local people used to cut peat for fuel their children would press pennies into the bank and leave them until the acid in the peat burnished them till they looked newly-minted. Foyers pupils decided to replicate the experiment – and of course, it worked!

What's happening now

You'd think one loch would run out of educational mileage even for a small number of pupils after 2 years. But the children have been busy designing and preparing for a set of interpretation panels to put up on location. Together with Katy Martin, they have been instrumental in the writing and design of material, constructive criticism of the draft panels and in preparation of the ground where the panels will be located.

P4-P7 now visit the Loch once every 3 months and the school has had to find new angles for their work as they can't do the project all over again – after all, some of the pupils in this class have done it all before. They are trying to use data-logging devices to measure both air and water temperatures for the intervals between visits which should allow them to obtain very detailed information which the children can translate into graphs and tables. The idea being that not only will this enable them to do comparisons throughout the year but can also be used in future to compare different years – will they find evidence of global warming?; are there any correlations between variations in temperatures and the kinds of plants and animals they find in different years?

The infant class is starting their outdoor education early and go regularly to the little streams in the woods near the school. P4-P7 have begun their study of the gradual decomposition of a rotting log!

Building knowledge and life skills

It's the extent of *all* the children's knowledge at Foyers which strikes you most. Their memories of different aspects of their work haven't faded like those of the average one-off school trip. Species names roll off the tongue and the historical information they impart is accurate.

Asked what they want to do when they're older there's the usual selection of 'don't know's' and 'I'd like to be a ranger'

But one young man says quietly and with measure that he'd like to be an Entomologist. He doesn't elaborate, he's just certain.



Take a rotting log

Guess how long it'll take to decompose – research and compare findings; monitor the mini-beast, fungi and surrounding plant populations; examine parts of the wood under digital microscope; regularly monitor and record! Maths, Literacy, Art, ICT, Geography, they're all there.

*A sparkling purple sphere,
Reflections glittering,
Chequered diamonds
Dropping softly.*

*Zooming in, I see
Soft seeds floating elegantly
around.
Tear-drop shapes,
Deep red.*

*Zooming in, I see
A ghostly mucus, moss
Shining - a gloomy outline
Fallen from a height.*

*Stepping back, I see
Just a drop of water -
But I know more!*

Emily Grainger, P5

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[Link to interpretation panels 1 and 2](#)