



Natural Connections Resource kit

On the Trail of the Pine Marten and Habitats workshops



"I feel that it has benefitted the children greatly in exploring areas and issues that they would be maybe not have explored, it was really excellent."

Nicole Burns
Abronhill Primary School

"The workshops have further developed the children's understanding and awareness of how we share the environment with other animals etc."

Marina MacLeod
Condorrat Primary School



Before you came here (school) I didn't know what pine martens were and now I know a lot about them. I would love for you to come back and teach us even more about animals."

Connor
Aged 10



"My favourite activity was actually smelling the animal droppings, but you really need some way to prove that the droppings actually smell that way because it is hard to believe they actually smell that good"

Brady
Aged 10



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On the Trail of the Pine Marten and Habitats workshops

Purpose

This document is a 'How to Guide', which will detail the structure of the Natural Connection workshops and define where the files for each workshop are and how to use the information to deliver them to you group(s). You can find all the materials on our website – Cumbernauldivinglandscape.org.uk

The Pine marten workshop aims to teach children aged 8-12 years about local wildlife using deductive reasoning during fun activities. The Habitats workshop asks the children to think about their local space as an animal habitat and gauge the quality of that habitat from an animal's point of view.

1.1 Structure – The workshops

There are two workshops in the series which are – **On the Trail of the Pine Marten** and **Habitats**, Groups/schools are encouraged to book these workshops with a maximum of three weeks between each in order for the participants to be able to remember them and to understand the link between the two. The main idea of both workshops is to showcase the natural connections present within an area i.e. Cumbernauld and go on to highlight how important these connections are.

2.1 Background information useful for presentation

The European pine marten *Martes martes* is an elusive member of the Mustelidae family. This family include stoats, weasels, badgers, otters and ferrets. They are approximately the size of a domestic cat with their pelage being reddish brown with a distinctive creamy yellow throat patch called a 'bib'. They are unique in the mustelids due to retractable claws which allow them to climb trees. Nesting in hollow of old and ancient trees they will also take old squirrel drays and large birds' nests or even nest underground for short periods. Active during the night they will forage for nuts, honey and berries and hunt field voles bird's eggs insect's frogs etc. For the baiting of trail cameras they are partial to peanut butter, jam and deer carrion. Territories can range from 2km to 35km with territories marked with scat which is tarry black in colour, twisted but yet smells sweet like Parma violets. This scat can be mistaken for fox if not for the smell!

The average lifespan of a pine marten is approximately 10 years, new research suggests that up to 5 kits are born every two years as opposed to annually. The females have the ability to delay implantation with kits being born in March/April; they are then fully independent 6 months after birth and appear from the den in June.

Once hunted to near extinction a remnant population of the pine marten remained in the north-west of Scotland, their population has since increased due to protection under Schedule 5 of the Wildlife and Countryside act 1981. Population increase has resulted in increased spread and as of 2012 the pine marten discovered in Cumbernauld was at that point at its southernmost range in Scotland excluding reintroductions (Dumfries and Galloway & Wales). The pine marten in Cumbernauld was verified through scat analysis and photographic evidence.

3.1 On the Trail of the Pine Marten – the workshop

On the Trail of the Pine Marten highlights the wildlife that can be found in the Cumbernauld area – this can be adjusted easily to accommodate other areas. This workshop is designed to inform the audience about the animals which can be found in their local area with emphasis on the pine marten due to it being an indicator species. A booklet has been designed for each child, these can be taken home as a reminder of their day. All activities conform to the Curriculum for Excellence for formal education purposes.

3.2 Presentation

This is a short presentation using facilitated discussion as the main method of delivery. The slides are white writing on a black background this format is one used specifically for the Cumbernauld Living Landscape presentations. It has been found to be very effective when presenting onto a blank wall space, this is extremely useful when there are no screens available.

Slide 1 – Introduction



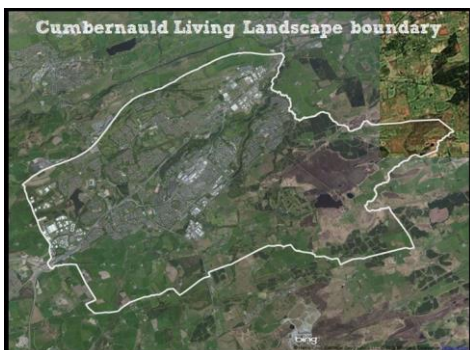
Use this slide to introduce yourself and your team, retain your logos on the white band. Give a quick description of the Natural Connection series.

Slide 2 – Challenges



This slide details the programme the children will be doing and the wildlife in their area. Introduce the booklet at this point and relate to the challenges that the children will be taking part in and inform them at this point that they will move around each station filling in their booklets.

Slide 3 – Map



Have a map of your area on this slide. Ask the children where they are on the map (hot/cold game), point to some places on the map highlighting parks to raise their awareness of local greenspaces. Use the map to show green corridors where wildlife can safely travel to and from other areas.

Slide 4- 6



Slides 4-6 are photographs taken in the local area. Ask if the children know the animals on the screen. Highlight the area and ask if the children have visited them and tell them of the abundance of wildlife they can find on the site. The animal species is hidden until they answer; click to reveal the species name under the photograph

Slide 7 & 8



Ask the audience what the animals are. These two images have been taken with Trail cameras; inform your audience on how these cameras work, very handy to have a camera to show the audience. The animal species is hidden until they answer; click to reveal the species name under the photograph

Slide 9 & 10



These two slides are your final reveal of the pine marten. The images come onto the screen in 3 clicks.

1. Picture of the pine marten, ask the audience if they know the animal is
2. Reveals the name of the species and the third reveals a
3. Day time shot of the pine marten. Describe the pine martens features (claws and bib) and their behaviour (shy elusive).

Ask how many images were taken to get the very first image. Explain that the first image is a small area of a bigger picture and highlight the difficulties involved with identification. This very first image of the pine marten was sent to the Vincent Wildlife Trust for confirmation. Ask how many images have been taken to date (50,000 images with only 12 of the PM). The final image is the most up to date from May 2014.

Slide 11



Place all partnership logos on this slide and take the opportunity to thank your audience for listening and taking part.

Time to deliver this presentation is approximately 10 minutes.

3.3 Challenges

There are five challenges that the audience will each visit. These challenges are designed around the Curriculum of Excellence to allow the workshops to be taken into schools. Each station will have a set of instructions for the participants to follow. The link to these instructions can be found on each of the links in Table 1. Allow 5 minutes maximum at each station with an additional 5 minutes for moving around.

Feeling furry*

The fur is inside a feely box which prevents the participant from seeing what it is. The idea is for them to gauge the size of the animal, how rough or soft the hide may be and to identify which animal it belongs to.

***You must ask if there are any participants who may be allergic to animal fur this is extremely important especially for asthmatics and any participant who may be prone to anaphylactic shock episodes.**



Feeling furry images



Skull-duggery

There are four skulls with four photographs of animals that each skull might match. The participants must match each skull, thinking about the type of food they eat, the size of the skull and the comparative size of the animals in the photograph. Images include Badger, roe deer, fox and pine marten.



Skull-duggery images

Tell-tale tracks

Five tracks have been made from clay, there is an associate key that participants can follow to give them the results. Help out the participants by showing them the key and how to use it and explaining that a main base pad is separate from the toes. Wildlife include fox, squirrel, mallard duck, badger and pine marten. NB. The link has updated images of the wildlife seen below.



Tell-tail track images

Dropping hints

Ask the participants to smell each box and match the scat to the photograph of the animal using the clues on each of the following animal cards: Pine marten, Otter, Badger and Fox. You can help by explaining that two of the predictors (fox and pine marten) hunt mice and they eat every last bit of the mouse. That means that when the mouse comes out the other end the scat includes the fur and bones, so the end of the scat is pointed and twisted. The larger animal generally leaves the larger scat (unless it is a fox cub) the participants can then decipher which animal belongs to which scat. To give an easy clue for the otter box make sure you paint water in your model.



Dropping hints images

Time to complete these 4 activities – 25 minutes

Sounds like

This activity is best executed as a group at the end of the activities as it is easier to keep the group quiet enough to hear the sounds. There are four wildlife sounds: pine marten, hedgehog, squirrel and badger. These sounds are best heard from a MP3 player with docking station as speakers, it is very quiet through the laptop. Describe the sound for each animal from these clue cards: pine marten, hedgehog, squirrel and badger.

Time to complete activity – 10 minutes

3.4 Booklets

Ensure pencils are taken for each participant, it is also vital to obtain numbers from group/school leaders in order to print off the correct amount of booklets again one for each child. Each activity has its own worksheet: Feeling furry, Skull-duggery, Tell-tale Tracks, Dropping Hints and Sounds Like. All booklets are printed in black and white to reduce costs. Information sheets for each station can be printed in colour to capture the children's attention as there is only one set for each station. It is important to maintain consistency throughout with the materials for a professional look; this is true for both the booklets and worksheets for each station.

Booklets		Font	Size	Position on page	Colour
Headings		Sketch Rockwell	26	Right	Black
Main text		Calibri (body)	14	Right	Black
Logos			Size	Position on page	Colour
Cumbernauld Landscape	Living	-	4.03 x 4.42 cm	Front page Bottom centre	Black and white
Full set		-	8.8 x 12.88 cm	Rear page Bottom centre	Black and white

Font sizes for clues, Instructions and worksheets will vary depending on text length, but good practice to keep it consistent where possible. The same font types apply to headings and main text with the addition of sub text of Calibri (body) this should be smaller than the main text - i.e. Main text - Calibri (body)14 Sub text Calibri (body)12.

3.5 Homework assignments

Each child is given two A4 sheets of paper, one with an oak leaf and the other with. On the oak leaf they are asked to draw their favourite place to play outside. On the acorn they are asked two questions:

1. What do you like about being outside?
2. What would make your greenspace better?

The aim of the first questions is to inform us of any barriers that are stopping them from venturing outside to play and to see which type of habitats they like to play in, i.e. play parks, woodlands etc. The second question informs us of their knowledge of local space and their understanding of the links to wildlife requirements in relation to the workshops they have just taken part in.

The data collected from this assignment can be used for future projects.

3.6 Equipment required

Table 1. *Equipment required for On the Trail of the Pine Marten

Activity	Activity description	Equipment required	Cost or materials needed
Presentation	5-10 minute presentation	Laptop Screen Projector	These should be available through the Trust, some groups/schools can let you use their Smartboards 4GB Flash drive ~£8
Feeling furry*	This activity contains real animal furs please ask if anyone is allergic to fur before activity begins. Guess the animal in each box using size and roughness of furs as hints.	4 feely boxes 4 animal hides	Feely boxes constructed by SWT RPO using materials in warehouse total cost for wood cutter and hinges ~£40 Animal hides: roe deer, fox, badger and pine marten ~£260 Add cost of MDF/ply
Skull-duggery	Match the skulls to the pictures, thinking about size, teeth type position of eyes.	4 animal skulls	NB. It is difficult to source European pine marten skulls. Replica skulls ~£ Deer skull ~£32.99 Badger £18.99 Fox £18.99
Tell-tale tracks	Match the track to the animal picture. Follow the key to show which animal belongs to which track.	Modelling clay/fimo clay wooden frames	Clay used ~£5 Wooden frames would hold the tracks in a solid block, small hands like to twist and tracks are easily broken
Dropping hints	Match the scat to the animal description using smell and detective work	Modelling clay/fimo 4 plastic sealable tubs Laminating sheets	The clay from Tracks and Trails should be enough to make the scat samples. Plastic tubs ~£8
Sounds like	Listen to the sound of the animal and match it to its letter in the booklet	MP3 player and speaker Cd of sounds and stereo	MP3 player and speakers – borrow this if available if not burn a cd of the sounds and a small portable stereo ~£40
Booklets	The booklets have a worksheet page for each activity.	Printer Pencils	Dependent on printer Box of 40
Homework assignment	Oak leaf (art) Acorn (answers)	Coloured paper	Dependant on number of children taking part

* It is better to source larger mammal equipment for activities as they can handle the rigors imposed by children.

4.1 Habitats

The second workshop in the series encourages the participants to assess the quality of their local area to determine habitat quality from wildlife's point of view. The participants are divided into groups and each group is handed a clipboard with two worksheets on it:

Worksheet 1 - Quality Habitats checklist

This activity gets the participants to think about their immediate environment or an area of open space that is easily assessable to them. A tick is given to a habitat feature if it is deemed good for wildlife and a cross is given to a feature that is seen as bad. An empty box is at the bottom of the document for those who find features not on the list. At the end of the activity the ticks and crosses are totalled and we then discuss a good and a bad point from each group

Worksheet 2 – Animal Estate Agents

There are 4 wild animals (depending on class size, more can be added i.e. hedgehog or badger if needed) on the top of the sheet. Each group is quietly assigned an animal which they have to keep secret from the rest of the class. Each group then becomes an estate agent where they have to identify where their animal will stay, what and where it can get food and water from, what are the dangers to that animal. A spokesperson from each group then tells the rest of the class where they stay, what they eat and where they can get fresh water from letting the other group guess which animal they are.

The final question asks what improvements could be done to the area they are in to improve it for wildlife. The feedback from this final question and the Animal Estates Agent can be used to inform the school of improvements the children would like to see in their own school grounds. This is very useful for those schools with Eco committees.

4.2 Habitats back-up

In the event of extremely bad weather this activity can be completed indoors. Six laminated photographs are given out to three groups. Each group has to rank them in order of best to worst habitats for wildlife and discuss why they choose their order. There are simple worksheets for each group to complete.

However experience has shown that the two previous worksheets, Quality Habitats Checklist and Animal Estate Agents can be successfully completed indoors as a group discussion.

4.3 Eco Musical Chairs

Equipment required – Enough chairs for each child, small laminated cards each with a picture of the following native wild animals: Red Squirrel, Badger, Pine marten, Fox, hedgehog and roe deer, music i.e. "Big Yellow Taxi"

Structure – Tell the Story

The Leader's role	– Home owner, wood cutter
The children's role	– Various animals in the woodland
The chairs	– The trees in the woodland

The story begins with the children sitting down on the chairs (trees – which are back to back in a line). The leader(s) assign each child a random animal and explains that they reside in the woodland and can move in a clockwise direction once the music plays. The animals are not alone in the woodland as the home owner has a house beside the wood. Depending on the number of children each time the music stops a tree(s) is/are removed following the narrative below for human actions

Suggested human actions that cause an impact to the woodland:

1. **Extensions being built to a home – remove 2-4 trees, highlight** the animals that have lost their home check to see how many animals are left in the woodland.
2. **Path constructed for shop access – remove 2 trees, highlight** the animals that have lost their home check to see how many animals are left in the woodland checking for extinctions.
3. **Road constructed for large car – remove 4 trees** - at this stage the wood is now fragmented and the animals can only move around their smaller wood, highlight the animals that have lost their home check to see how many animals are left in the woodland checking for extinctions.

How can we change this?

Discuss with the animals in the wood that we could keep going down this route of habitat removal, but we don't really want to do that as we like and need healthy woods. Ask how we could change our habits.

- We could cut down one tree and plant another - **Remove a chair and add a new one**
- We could add green bridges or rope bridges to help animals move safely - **Add a chair to the middle of the woods and ask an animal to come back to the wood**
- We could add tunnels under roads to help animals move safely - **Add another chair to the middle of the woods and ask an animal to come back to the wood.**
- **End**

Collect animal cards and thank participants.