

LEVEL 3

Unit 1 – Forest School Programmes and the Woodland Environment

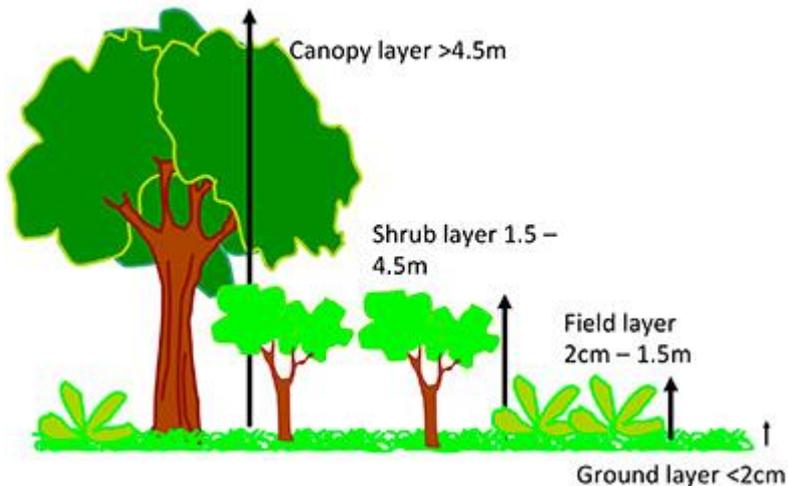
Forest School Programmes and the Woodland Environment Evidence Monitoring Form – Unit 1

ASSESSMENT CRITERIA On completion of this Unit you will have demonstrated the ability to:		Evidence: Please show where you have evidenced each element	Student	Assessor	IV	EV
1	Understand the structures of woodlands.					
1.1	Explain the vertical and horizontal ecological structures of British woodland					
1.2	Differentiate between broad leaved and coniferous woodland ecosystems					
2	Know how to identify a range of flora and fauna.					
2.1	Identify a range of woodland flora and fauna for own site, detailing identifying traits for each item					
3	Understand the importance of flora and fauna identification for the Forest School Programme leader.					
3.1	Explain the importance of flora and fauna identification for the Forest School leader					
4	Understand the management of woodlands as a sustainable learning environment.					
4.1	Explain the sustainability of current and historic woodland management techniques in own location					
4.2	Explain ways to involve learners in sustainable woodland management					



FSPWE 1.1 Explain the vertical and horizontal ecological structures of British woodland. Vertical Structure

Structure of a Woodland.



<https://www.biology-fieldwork.org/woodland/woodland-plants/>

Vertical Structure of the woods at St Joseph's Tea Room are made up as below

1. Canopy layer

Consists of Oak, Horse Chestnut, Ash, Sycamore



2. Shrub layer

Ivy, bracken

3. Field layer

There is a lot of ivy and nettles, some bluebells

4. Ground layer

Moss, Soil, Fungus,

You can see from this photo of the actual site that there is a definite clear area, although there is trees and foliage on three sides, that the land goes from soil to nettles to ivy to small the larger trees as we go further up the hill, not visible, and further still fallen trees



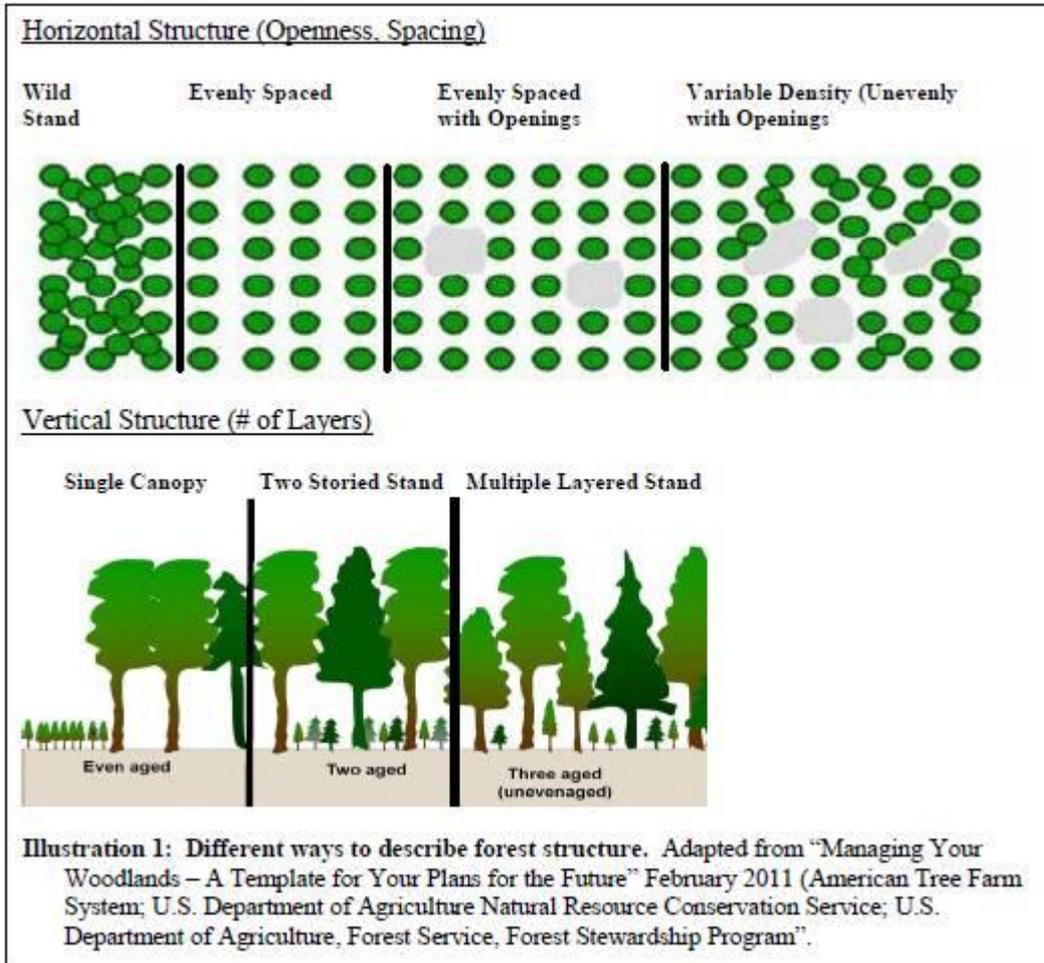
See Appendix 2 - Woodland Structure – I used this to help be understand the Layers

The Woodland has been pretty unkempt and left to its own devices, which is great everything is very natural and various levels of life and decay can be experienced

Horizontal Structure

The horizontal structure of the land we are using are

- 1 – the land is on a hill and from the entrance at road side to the end of the wood, a line that is very approximate to a south-east bearing raise in height of between 15 to 20 metres
- 2 – it goes from open grass, (lawn) to a lightly wooded area through to the outcrop
- 3 – There is water that collects below the rocks
- 4 – it has been left upkept, leaving ivy and nettles to thrive
- 5 – There is evidence of rabbits, possibly badgers, birds and lots of insect life
- 6 – There is some evidence of coppicing



Found the above illustration at <http://outreach.oregonstate.edu/programs/forestry/oregon-forest-management-planning/plan-writing-tools-and-guidance/oregon-uniform-plan-guidelines/p-3>

Below is a google map screen shot of the are ware now using, it is the land inside the red line

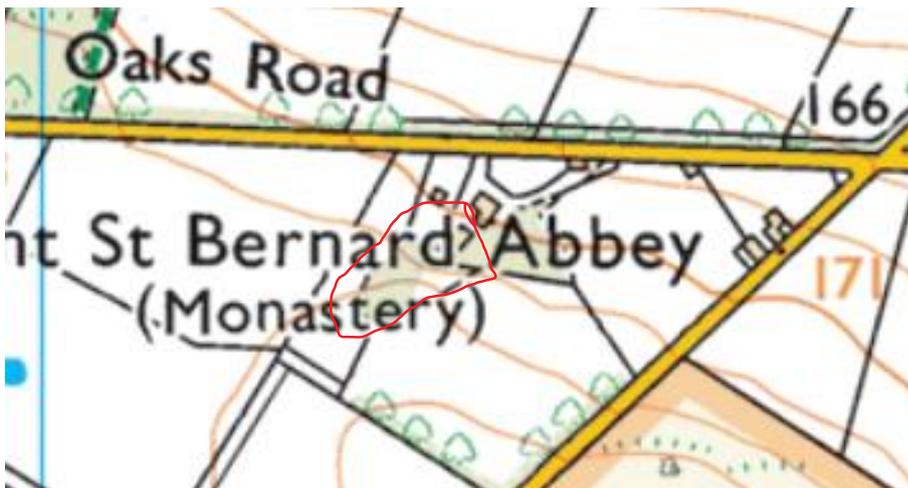
Inside the yellow line represents a clearing where we base our outdoor classroom

Inside the blue line, is sort of an out bounds are due to a couple of fallen trees and a volcanic rock formation or an outcrop and a small amount of water. The rock in Charnwood is mainly granite.



I would say the woods have a variable density with a multi Layard stand

The same are on an ordnance survey map also show the contours of the land although somewhat obscured by a name. it shows a rise of around 15 to 20 metres from the entrance to the property to end of the land that we use.



This next photos shows the rocky outcrop



And as you can see young trees, old trees and ground cover. It has been cordoned off by the owners of the land.

The out crop is made of igneous rocks, because of all the volcanic activity in the area.

'What are Igneous Rocks?

Igneous rocks are formed from the solidification of molten rock material. There are two basic types.

Intrusive igneous rocks crystallize below Earth's surface, and the slow cooling that occurs there allows large crystals to form. Examples of intrusive igneous rocks are diorite, gabbro, granite, pegmatite, and peridotite.'

<http://geology.com/rocks/igneous-rocks.shtml>

Geology

Many of the craggy rocks of Charnwood Forest are of volcanic origin and are very old, dating back through 600 million years to Precambrian times.

It was the site of the first ever recorded discovery of *Charnia masoni*, the earliest known large, complex fossilised species on record. It was discovered in 1957 by a local schoolboy named Roger Mason (thus *masoni*) who, with friends, was exploring a quarry near the Charnwood village of Woodhouse Eaves. The rocks of Charnwood Forest remain the only place in Western Europe where these Precambrian fossils have been found.

Along the western edge of Charnwood Forest the rocks are mainly Precambrian igneous Diorites. These formed from molten lava deep within the sedimentary rocks, cooling slowly to produce hard, blocky rock with large crystals. This is extensively quarried for roadstone around Groby, Markfield and Whitwick, and is known as granite (formerly also called Markfieldite).

The central area of the forest has older rocks still. These are sedimentary and are very variable in character, They were formed by material from volcanoes, settling in deep water, and it is in these beds that the fossils are found. Uplifting, tilting and erosion have produced the distinctive jagged outcrops found across the highest parts of Charnwood.

On the eastern side, a much more recent series of rocks are found. Again igneous Diorites, that formed deep underground, but these are Ordovician, from a mere 450 million years ago.

These are extensively quarried in the areas near Mountsorrel'

https://en.wikipedia.org/wiki/Charnwood_Forest

The interesting thing about writing the portfolio is the discovery of knowledge that you can equip yourself with to help young people learn.



FSPWE 1.2 Differentiate between broad leaved and coniferous woodland ecosystems.



An ecosystem is a functioning unit of living and non-living things. It is made up of biotic (living community) and abiotic (non living e.g. rock, water, sunlight)

Please use this page to gather some evidence that will give you a useful starting point in evidencing this learning outcome (you do not need to collect all of this information)

Layer	Characteristics	Broadleaved Woodland	Coniferous Plantation
		<p>Broadleaved are generally have flat leaves and seeds inside a fruit.</p> <p>The area at the tea room I would consider to be Broad leaf, I have yet to see a Coniferous tree in the wood.</p>	<p>Coniferous Trees are generally evergreen trees with pine cones and needles</p>
Canopy	Species	Oak, Ash, Chestnut, Sycamore	<p>None onsite – With reference to Kielder Forest</p> <p>Kielder is dominated by conifers. Sitka spruce (<i>Picea sitchensis</i>) covers 75% of the planted area; this species thrives in the damp conditions afforded by northern Britain. Other species include Norway spruce (<i>Picea abies</i>) and lodgepole pine (<i>Pinus contorta</i>), which cover 9% of the area each. The remainder is made up of Scots pine (<i>Pinus sylvestris</i>), larch (<i>Larix spp.</i>), Douglas-fir (<i>Pseudotsuga menziesii</i>),</p>
	Average age of trees	150	40 to 50
	Age range	Very young saplings to 200 years	Varied different patches had different sized trees with it being a managed forest
	Average distance between trees	4 to 5 metres	3 to 4 metres
Shrub	Tree seedling presence	Yes, many saplings from natural process	Managed areas
	Species	Ivy, Bracken, Holy, Brambles	
Herb	Species	Nettles, Dandelion, Hawthorn, Garlic, Goosegrass	

Ground	% Or Frequency of bare ground	I would estimate 80% ground coverage	
	Average number of species in 0.5m ²	3 to 7	
	Description of litter	Surprisingly vary little litter, it is though literally someone's back garden	Varied depending on how touristy the are is
Soil	Depth of soil	Various because of rock from just several cms to deep	
	Texture	Lots of roots, loose in some areas, well-trodden paths	Peatie
	pH	Neutral to Alkaline	Slightly acidic
	Invertebrates found during soil study	Woodlice, Worms, Centipedes, Spiders	Beetles – 37 families; cicalids – 5 families; hoverflies; beetles – 30 families; The deadwood invertebrates category comprises data from a number of insect group www.forestry.gov.uk

Softwood Conifers are the world's main source of commercial timber. Their use has many advantages:

- Except in very cold areas, they grow quickly and can be harvested every 40 - 50 years
- Many trees of the same type grow together
- Frozen ground in winter makes access easier for machinery and transport
- The softwood has many different uses - paper, construction & furniture etc

It can be harvested like a crop using modern machinery and the new method of clearcutting

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ospreys												
Goshawks												
Red squirrels												
Roe deer												
Salmon												
Water voles												
Badgers												
Bats												
Otters												
Frogs												
Adders												
Orchids												
Meadow flowers												
Bog flowers												
Autumn leaves												
Fungi												
Woodland flowers												

The sheer variety of habitats in Kielder Water & Forest Park, from woodland to marshy grasslands and bogs, create homes for a whole host of wildlife and is impressive and unique in the UK. Explorers can expect to encounter badgers, roe deer, otters, red squirrels, shrews, seven species of bat, many woodland birds and, especially in spring, birds of prey including ospreys.

Please expand on the information you have gathered, highlighting the differences that you have found



Please see some of the above research

My thoughts . . .

Mammals seem to be more prevalent in Coniferous Plantation

Coniferous woods seem to be managed and grown as a crop

Broadleaf woods nowadays seem to be left to there over devices

Coniferous woods I have discovered are a natural northern European occurrence and have evolved to cope with harsh wither environments

Only the Scots Pine is native to the UK

Not as many native Broadleaf trees are native to the

FSPWE 2 Know how to identify a range of flora and fauna.

FSPWE 2.1 Identify a range of woodland flora and fauna for own site, detailing identifying traits for each item.



You will be thinking of including approximately 5 of each of the following; Trees, Plants, Insects, Mammals, Birds and Fungi

Name	Diagram/Photo/Picture	Description	Uses
EXAMPLE Hazel		<i>Corylus avellana</i> Common. Deciduous shrub or small tree. Height 6m. Max age 70-80 years. Does not grow well on acidic soils. Catkins are very distinctive in Feb/March	Wattle Hurdle making Stakes and Binders for hedge laying Walking sticks Thatching
Oak		<p>Overview: English oak is a large deciduous tree up to 20-40m tall. In England, the English oak has assumed the status of a national emblem. As common oaks mature they form a broad and spreading crown with sturdy branches beneath. Their open canopy enables light to penetrate through to the woodland floor, allowing bluebells and primroses to grow below. Their smooth and silvery brown bark becomes rugged and deeply fissured with age. Oak tree growth is particularly rapid in youth but gradually slows at around 120 years. Oaks even shorten with age in order to extend their lifespan.</p> <p>Leaves: around 10cm long with 4-5 deep lobes with smooth edges. Leaf-burst occurs mid-May and the leaves have almost no stem and grow in bunches.</p> <p>Flowers: are long yellow hanging catkins which distribute pollen into the air.</p> <p>Fruits: its fruit, commonly known as acorns, are 2–</p>	<p>Today oak wood is still commonly used for furniture making and flooring, timber frame buildings, and for veneer production. Barrels in which wines, sherry, and spirits such as brandy, Irish whiskey, Scotch whisky and Bourbon whiskey are aged are made from European and American oak.</p> <p>www.woodlandtrust.org.uk</p>

		<p>2.5cm long, borne on lengthy stalks and held tightly by cupules (the cup-shaped base of the acorn). As it ripens, the green acorn takes on a more autumnal, browner colour, loosens from the cupule and falls to the canopy below.</p> <p>Most acorns will never get the chance to germinate, they are rich food source, eaten by many wild creatures including jays, mice and squirrels. Acorns need to germinate and root quickly to prevent drying out or becoming victims of the harvest. Following successful germination, a new sapling will appear the following spring.</p> <p>www.woodlandtrust.org.uk</p>	
Sycamore		<p>Overview: can grow to 35m and can live for 400 years. The bark is dark pink-grey and smooth when young, but becomes cracked and develops small plates with age. Twigs are pink-brown and hairless.</p> <p>Leaves: palmate leaves measure 7-16cm and have five lobes. Leaf stalks of younger trees are characteristically red.</p> <p>Flowers: small, green-yellow and hang in spikes, or 'racemes'.</p> <p>Fruits: after pollination by wind and insects, female flowers develop into distinctive winged fruits known as samaras.</p> <p>Look out for: leaf veins are hairy on the underside</p>	<p>Sycamore timber is hard and strong, pale cream and with a fine grain. It is used for making furniture and kitchenware as the wood does not taint or stain the food.</p> <p>Trees are planted in parks and large gardens for ornamental purposes. Mature trees are extremely tolerant of wind, so are often planted in coastal and exposed areas, as a wind break. They are also tolerant of pollution and are therefore planted in towns and cities.</p> <p>www.woodlandtrust.org.uk</p>

		www.woodlandtrust.org.uk	
Horse Chestnut		<p>Overview: mature horse chestnut trees grow to a height of around 40m, and can live for up to 300 years. The bark is smooth and pinky grey when young, which darkens and develops scaly plates with age. Twigs are hairless and stout, buds are oval, dark red, shiny and sticky.</p> <p>Leaves: the palmate leaves comprise 5-7 pointed, toothed leaflets spreading from a central stem.</p> <p>Flowers: appearing in May - individual flowers have 4-5 fringed petals, which are white with a pink flush at the base.</p> <p>Fruits: once pollinated by insects, each flower develops into a glossy red-brown conker inside a spiky green husk, which falls in autumn.</p> <p>Look out for: conkers (seeds) are surrounded by a spiky green case. Distinctive large leaves have serrated leaflets.</p> <p>www.woodlandtrust.org.uk</p>	<p>The most famous use of horse chestnut is in the game of conkers. The first record of the game is from the Isle of Wight in 1848.</p> <p>Horse chestnut timber is a pale creamy white to light brown with a smooth, soft, fine texture. It's not very strong and is therefore not used commercially, but its soft texture makes it ideal for carving.</p> <p>Other uses of the conkers include horse medicines, as additives in shampoos and as a starch substitute. Chemicals extracted from conkers can be used to treat strains and bruises.</p> <p>www.woodlandtrust.org.uk</p>
Ash		<p>Overview: when fully grown, ash trees can reach a height of 35m. Tall and graceful, they often grow together, forming a domed canopy. The bark is pale brown to grey, which fissures as the tree ages. Easily identified in winter by smooth twigs that have distinctively black, velvety</p>	<p>People have used ash timber for years. It is one of the toughest hardwoods and absorbs shocks without splintering. It is used for making tools and sport handles, including hammers, axes, spades, hockey sticks and oars. An attractive wood, it is also used for furniture. Ash</p>

		<p>leaf buds arranged opposite each other.</p> <p>Leaves: pinnately compound, typically comprising 3-6 opposite pairs of light green, oval leaflets with long tips, up to 40cm long. There is an additional singular 'terminal' leaflet at the end. The leaves can move in the direction of sunlight, and sometimes the whole crown of the tree may lean in the direction of the sun. Another characteristic of ash leaves is that they fall when they are still green.</p> <p>Flowers: ash is dioecious, meaning that male and female flowers typically grow on different trees, although a single tree can also have male and female flowers on different branches. Both male and female flowers are purple and appear before the leaves in spring, growing in spiked clusters at the tips of twigs.</p> <p>Fruits: once the female flowers have been pollinated by wind, they develop into conspicuous winged fruits, or 'keys', in late summer and autumn. They fall from the tree in winter and early spring, and are dispersed by birds and mammals.</p> <p>Look out for: the black buds and clusters of seeds are key features.</p> <p>www.woodlandtrust.org.uk</p>	<p>coppices well, which traditionally provided wood for firewood and charcoal.</p> <p>www.woodlandtrust.org.uk</p>
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<p>Holly</p>		<p>Overview: mature trees can grow up to 15m and live for 300 years. The bark is smooth and thin with numerous small, brown 'warts', and the stems are dark brown.</p> <p>Leaves: dark green, glossy and oval. Younger plants have spiky leaves, but the leaves of older trees are much more likely to be smooth. Leaves in the upper parts of the tree are also likely to be smooth.</p> <p>Flowers: holly is dioecious, meaning that male and female flowers occur on different trees. Flowers are white with four petals.</p> <p>Fruits: once pollinated by insects, female flowers develop into scarlet berries, which can remain on the tree throughout winter.</p> <p>Look out for: it is easily identified by its bright red berries and shiny, leathery leaves that usually have spiny prickles on the edges.</p> <p>www.woodlandtrust.org.uk</p>	<p>Holly wood is the whitest of all woods, and is heavy, hard and fine grained. It can be stained and polished and is used to make furniture or in engraving work. It is commonly used to make walking sticks. Holly wood also makes good firewood and burns with a strong heat.</p> <p>Holly branches are still used to decorate homes and make wreaths at Christmas.</p> <p>www.woodlandtrust.org.uk</p>
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Name	Diagram/Photo/Picture	Description	Uses
Nettles		<p>Urtica dioica is a dioecious, herbaceous, perennial plant, 1 to 2 m (3 to 7 ft) tall in the summer and dying down to the ground in winter. It has widely spreading rhizomes and stolons, which are bright yellow, as are the roots. The soft, green leaves are 3 to 15 cm (1 to 6 in) long and are borne oppositely on an erect, wiry, green stem. The leaves have a strongly serrated margin, a cordate base, and an acuminate tip with a terminal leaf tooth longer than adjacent laterals. It bears small, greenish or brownish, numerous flowers in dense axillary inflorescences. The leaves and stems are very hairy with nonstinging hairs, and in most subspecies, also bear many stinging hairs (trichomes), whose tips come off when touched, transforming the hair into a needle that can inject several chemicals: acetylcholine, histamine, 5-HT (serotonin), moroidin, leukotrienes and possibly formic acid.</p> <p>This mixture of chemical compounds causes a painful sting or paresthesia from which the species derives one of its common names, stinging nettle, as well as the colloquial names burn nettle, burn weed, and burn hazel.</p>	<p>1. Nettles support our butterflies Red Admirals and Painted Ladies, Peacocks, Small Tortoiseshells and Commas are particularly fond of nettles. With butterflies on the decline generally, the plants provide an important food source for these pretty insects. They in turn help to pollenate our garden flowers and crops. With bees struggling too, we need to support these creatures as best we can, so think twice before removing nettles from the flowerbed.</p> <p>2. Nettle clothes, anyone?</p> <p>It might seem odd and terribly itchy, but the fibres in the nettle plant can and are often spun to make clothing. It's no new phenomenon either; nettle fabric was used to make German uniforms in World War I.</p> <p>Similar to hemp and flax in texture, scientists at De Montfort University in Leicester have used nettle fabric to make dresses in the past. It was often used to make tablecloths and bed sheets in Scotland and in Russia the juice from the plant has traditionally been used to create a green dye. A yellow dye comes from the roots.</p> <p>3. More tea vicar?</p> <p>As many of you will know, nettle tea as a popular use for these potentially painful leaves, however boiling them nullifies their penchant for prickles.</p> <p>As well as the popular nettle tea, the leaves have traditionally been</p>

		<p>wikipedia.org</p>	<p>used to make soup. They are used to coat a Cornish cheese known as Yarg, while in Northumberland the leaves are ground and sprinkled amongst the cheese during production by one cheese-maker.</p> <p>Meanwhile, horse breeders have long fed nettles to horses to help provide a sleek coat, and in Sweden nettles are grown by farmers, dried out (causing them to lose their sting) and fed to dairy cattle as it increases milk production.</p> <p>Nettle pesto, wine and beer are all commonly produced foods and drinks.</p> <p>4. What's in a name?</p> <p>The Latin for the Nettle plant is 'dioica'. It means 'two houses' and is a reference to the fact that the male and female flowers are carried on separate plants.</p> <p>It has been suggested that the term 'nettle' is derived from the Old English for needle – a reference to the stinging leaves.</p> <p>5. A deadly sting</p> <p>The British nettle carries its stinging barbs on the stem and the underside of the leaf for protection from those animals that might eat or uproot it.</p> <p>Native British nettles inject a cocktail of formic acid, histamine, acetylcholine and serotonin, and that is what causes the bobbly swelling and itchy skin we suffer when we brush up against it.</p> <p>However, that is nothing compared to the effects some more exotic nettles have at their disposal.</p> <p>On the island of Timor in south-east Asia, one species of nettle causes lockjaw and a painful burning sensation, both of which can last for days or weeks.</p> <p>Elsewhere, a native species on the Indonesian island of Java produces</p>
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		<p>similar, but more potent results that can last for months and have even caused the death of some of victims.</p> <p>6. Natural archaeologists</p> <p>Nettles will grow just about anywhere, but they prefer rich soils and benefiting from the waste humans produce. In this way, the presence of large collections of nettles in the wild can sometimes indicate where settlements once existed. The site may not longer be visible on the surface, but the nutrients in the rich soil still provide the perfect conditions for the nettles.</p> <p>7. Nettles as medicine</p> <p>Nettles have traditionally been used for medicinal purposes by many cultures.</p> <p>Native Americans used the fresh leaves to treat aches and pains. European herbalists used the leaves in a similar fashion to treat gout and arthritis. Also, with the plant dried out to neutralize the acid in the sting, the leaves become a natural anti-histamine and have can help with asthma.</p> <p>Some of these uses are now being scientifically tested, with some surprising results. Nettles are now sometimes prescribed for certain allergies and arthritic conditions as well as some diseases of the prostate.</p> <p>8. Nettles help struggling football team</p> <p>In December 2002, Howard Wilkinson was managing Sunderland in the English Premier League. They were doing terribly in the league – deep in the relegation zone – and faced a home game</p>
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			<p>against Liverpool, who were themselves in poor form but still overwhelming favourites for the game.</p> <p>In 2003 the following appeared in the Sunday Times newspaper, wirtten by Louise Taylor:</p> <p>“Mick McCarthy will be hard pressed to devise team talks as imaginative as Howard Wilkinson's. Before Sunderland played Liverpool last December, McCarthy's predecessor arrived in the home dressing room carrying a bag of nettles. First Wilkinson demonstrated that squeezing the plants slowly in his palm stung painfully. Then he grasped the nettles swiftly and firmly, before explaining that this approach hurt less.</p> <p>The point was to warn his players that Liverpool would aim to lull Sunderland into complacency before stinging them on the counter-attack; a tactic that could be negated by curtailing such breaks at source. On that occasion a 2-1 victory - only one of two in 20 premiership games during Wilkinson's reign - resulted."</p> <p>9. The gardener’s friend</p> <p>While many green fingered folk see the nettle as nothing more than a weed, they can actually provide gardeners with a vital tool to protect their plants.</p> <p>Ladybirds call the nettles home as they grow and develop, protecting and sustaining the young bugs from predators. In turn, when the ladybird reach maturity, the venture further into the garden, searching for the aphids they love to eat, helping to stop them munching through the gardener’s precious plants.</p>
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			<p>10. Nettles keep fruit fresh</p> <p>The leaves of nettle plants can, when used to pack fruit, help to keep it fresh and ripe, stifling and stopping mould from forming. Nettles are good at protecting fellow plants in general, warding fungal infections and diseases off other nearby plants.</p> <p>Their high nitrogen content can be used in compost, fuelling the bacteria to help them break down material more effectively and quickly.</p> <p>www.countryfile.com</p>
Bluebells		<p>Bluebells are perennial bulbous herbs with flowering stems to about 50cm tall. They spend most of the year as bulbs underground and emerge to flower from April onwards.</p> <p>Leaves: around 7mm to 25mm wide and 45cm long. Strap-shaped with a pointed tip. They are smooth and hairless with a succulent appearance.</p> <p>Flowers: up to 20 sweetly-scented flowers are borne on a flower stalk which droops or nods to one side. Flowers are bell-shaped and can be blue, white or rarely pink. Each flower has 6 petals with recurved (up-turned) tips. Anthers have white-cream coloured pollen.</p> <p>www.woodlandtrust.org.uk</p>	<p>Ornamental: bluebells are widely planted as garden plants for their spring flowering.</p> <p>Indicator plant: bluebell is an ancient woodland indicator species in the UK.</p> <p>Material: gummy bluebell sap was used to bind pages into the spines of books. Bronze Age people used bluebell to set feathers upon arrows, known as fletching. Bluebell bulbs were crushed to provide starch for the ruffs of Elizabethan collars and sleeves.</p> <p>Medicinal: though little used in modern medicine, the bulb has diuretic and styptic properties.</p> <p>Folklore: according to folklore, one who hears a bluebell ring will soon die! Legend also says that a field of bluebells is intricately woven with fairy enchantments.</p> <p>www.woodlandtrust.org.uk</p>

<p>Bramble</p>		<p>Overview: bramble has long, thorny and arching stems and can grow up to 2m or more high. It has a very wide ecological tolerance and can grow almost anywhere, but tends to reach maximum growth and diversity on acidic soils. This species spreads by bird-dispersed seeds and by tip-rooting stems.</p> <p>Leaves: alternate and palmately compound. Each leaf is divided into 3 or 5 serrated, shortly stalked, oval leaflets. Leaves are dark green on top and pale beneath. Leaf stalks and mid-ribs are prickly.</p> <p>Flowers: clusters of white or pink flowers appear from late spring to early summer. They are 2-3cm in diameter with five petals and many stamens.</p> <p>Fruit: the fruit, known as a blackberry, is 1-2cm in length and ripens from green through red, to deep purple and finally black when ripe in late July. The fruit of the bramble is not a true berry - botanically it is termed an aggregate fruit made up of twenty to fifty single-seeded drupelets.</p> <p>www.woodlandtrust.org.uk</p>	<p>Bramble is both loved and hated for its thorns and powers of entanglement as well as its delicious fruit and it is deeply embedded in our tradition and folklore.</p> <p>The pastime of blackberry picking (blackberrying) goes back thousands of years and is still popular in both town and country. Ripe juicy blackberries have a high vitamin C content and can be eaten raw or cooked. They are traditionally used in pies, crumbles (usually paired with apples), wines, jams, jellies and vinegar. Strong ale brewed from blackberries, malt and hops was popular in the 18th and 19th centuries.</p> <p>Bramble has widely been used in traditional medicine. Its leaves are used in the preparation of herbal teas and the root bark and leaves are used medicinally, being strongly astringent with diuretic, healing and detoxifying properties. Gerard's Herbal gives a remedy made from blackberry leaves 'for fastening the teeth back in'. Blackberries are known to have health benefits for women due to their high levels of phytoestrogens.</p> <p>Blackberry fruits yield a blue dye and a fibre from the stems have been used to make string. Blackberry bushes can prevent soil erosion on infertile, disturbed sites and the ancient Britons used thorny stems as a boundary or barrier in the way modern people use barbed wire.</p> <p>www.woodlandtrust.org.uk</p>
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<p>Bracken</p>		<p>Bracken, <i>Pteridium aquilinum</i>, is a large fern commonly found in woodland and heathland. It can provide good habitat for ground nesting birds. It can tolerate a wide range of conditions and is found all over the world.</p> <p>Due to its ability to rapidly colonise areas, bracken can outcompete other plants. This is a problem on some sites where it needs to be managed. One reason it is important to restore ancient woodland sites gradually is to prevent bracken from dominating.</p> <p>www.woodlandtrust.org.uk</p>	<p>I have used this to cover shelters</p>
<p>Meadow foxtail</p>	 <p>www.woodlandtrust.org.uk</p>	<p>Meadow foxtail grass gets its name from its long cylindrical flower head that looks like a fox's tail.</p> <p>Leaves: the leaves are approximately 5 millimetres wide and hairless.</p> <p>Flowers: the flower head is a long cylinder at the top of a stalk. It has short silky hairs giving a bushy effect. Flowers appear from April to June.</p> <p>Not to be confused with: Timothy grass (<i>Phleum pratense</i>) which is a coarser grass that flowers later in the year.</p> <p>Where and when to find meadow foxtail</p> <p>When: the grass is visible all year round and flowers from April – June.</p> <p>Where: it is typically found across meadows and other grassy areas that are moderately fertile and moist. It can be found</p>	<p>commonly used in agriculture as a hay crop.</p> <p>www.woodlandtrust.org.uk</p>

		<p>along roadsides and bordering hedgerows. It is unlikely to be found in wetland areas and from very dry and free draining areas.</p> <p>Value to wildlife</p> <p>The Essex Skipper butterfly's caterpillar uses Meadow foxtail as a food source. As part of meadows it provides an important habitat for several different invertebrate species.</p> <p>www.woodlandtrust.org.uk</p>	
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There are a lot of nettles on both the sites that I use so I will be taking advantage

WIKI - Nettle soup is a traditional soup prepared from stinging nettles. Nettle soup is eaten mainly during spring and early summer, when young nettle buds are collected. Today, nettle soup is mostly eaten in Scandinavia, Iran, Ireland and Eastern Europe, but historically consumption of nettles was more widespread. Nettle stew was eaten by inhabitants of Britain in the Bronze Age, 3000 years ago

Nettle Soup Recipe from www.jonsbushcraft.com

A simple, quick and enjoyable soup packed with goodness! Nettles are at their best during the spring and early Summer time before they go to seed. When the Nettles go to seed chop them back and they will re-grow with new tender shoots which you can now harvest again.

Pick the nettle tops, this is the most tender part with no tough/ fibrous material. I personally wouldn't pick the nettles with flowering or seed bearing parts, there must be some reason why people never use these in soup...

-Recipe Serves 4 -

Ingredients:

1 bag full of nettle tops

4 medium potatoes

Garlic Cloves

1 Onion

2 Stock cubes (i use 1 Chicken & 1 Veg)

Water



Method

1. Finely chop Garlic. Roughly dice potatoes and Onion. Fry off in the pan with a small amount of oil.
2. Dissolve stock cubes in some boiling water, around 300ml (will top up water later)
3. Add stock to pan, then cram in all the nettle tops. (They may not all fit in to start with but will soon wilt down)
4. Add more boiling water to final level. (Don't make the soup too watery)
5. Bring to the boil then simmer for 20 - 30mins
6. Blend until creamy smooth
7. Season to taste.

Enjoy...

Behold the greenest
soup you've ever seen...



Name	Diagram/Photo/Picture	Description	Uses
<p>Orange Tip Butterfly</p>	 <p>Female www.woodlandtrust.org.uk</p>	<p>Appearance</p> <p>Caterpillars: pale orange at first, becoming blue-green with a white line down each side, they are very difficult to spot. They hatch on the developing seed pods of cuckooflower and garlic mustard. On hatching they eat their own egg shell. They are cannibalistic so will also eat any other orange tip eggs they find.</p> <p>Adults: the upper sides of the wings are white. Males have orange-tipped forewings and females have small black tips and both have a black spot. Females are sometimes mistaken for a green-veined white or small white butterfly. The wing underside has a mottled green pattern.</p> <p>Wingspan: 4-5cm.</p> <p>Food plants</p> <p>Caterpillars: mainly cuckooflower and garlic mustard but also other species like hedge mustard.</p> <p>Adults: obtain nectar from different flowers.</p> <p>www.woodlandtrust.org.uk</p>	
<p>Woodlice</p>		<p>The woodlouse has a shell-like exoskeleton, which it must progressively shed as it grows. The moult takes place in two stages; the back half is lost first, followed two or three days later by the front. This method of moulting is different from</p>	

		<p>that of most arthropods, which shed their cuticle in a single process.</p> <p>A female woodlouse will keep fertilised eggs in a marsupium on the underside of her body until they hatch into offspring that look like small white woodlice curled up in balls. The mother then appears to "give birth" to her offspring. Females are also capable of reproducing asexually.</p> <p>Despite being crustaceans like lobsters or crabs, woodlice are said to have an unpleasant taste similar to "strong urine".</p> <p>https://en.wikipedia.org</p>	
Worms		<p>Redhead worm</p> <p>Scientific name</p> <p>Lumbricus rubellus</p> <p>Habitat</p> <p>Widespread species found in most habitats. Lives in the topsoil and leaf litter.</p> <p>Diet</p> <p>Thought to feed on decaying leaf litter fragments</p> <p>Size</p> <p>Typical size of adult is 6.5cm</p> <p>Characteristics</p> <p>The upper surface of the body, from the first segment to the saddle, is entirely dark in colour (reddish brown)</p> <p>Sometimes flattens its tail into a paddle shape</p> <p>www.opalexplornature.org</p>	

<p>Garden Spiders</p>	 <p>www.rspb.org.uk</p> <p>Bit of a disappointment after all that research to find my spider was just a common garden spider . . .</p>	<p>spider</p> <p>Araneus diadematus</p> <p>Garden spiders vary in colour from pale yellowy-brown to very dark brown, but they all have a characteristic white cross-shaped group of spots on their abdomen. They are widespread and common throughout the UK, except in some areas of northern Scotland.</p> <p>These spiders spin orb webs to catch their prey – flying insects. Orb webs are the most advanced spider webs, built by laying spirals of silk around radial threads. They sit in the centre of their web rushing out and wrapping any caught insect in sticky silk.</p> <p>After mating, the female builds a silken cocoon in which she lays her eggs. She protects this egg sac until she dies in late autumn. The spiderlings hatch the following May.</p> <p>What does it eat?</p> <p>Flying insects such as butterflies, wasps and flies.</p> <p>When will I see it?</p> <p>From May until November, although more obvious in late summer and autumn.</p> <p>Where will I see it?</p> <p>On bushes and vegetation throughout the garden.</p> <p>www.rspb.org.uk</p>	
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Hoverfly



www.microscopy-uk.org.uk

Although these brightly-coloured insects look like bees or wasps, they are in fact true flies and do not sting. Hoverflies are excellent examples of Batesian mimicry (named after H W Bates who first described it in 1862). They generally mimic bees and wasps – insects that sting and also taste unpleasant, so are avoided by predators. Drone-flies mimic honey bees, *Volucella bombylans* (pictured) has several different forms mimicking bumblebees, while others species are very convincing wasp mimics.

There are about 250 different hoverfly species in Britain. You can generally see plenty of adults on flowers throughout spring, summer and autumn. Hoverfly larvae are varied too – some even resemble small slugs. They all have different feeding habits. For example they may eat plants, feed on rotting wood and fungi, attack bulbs or parasitise other insects.

More well known and welcome in the garden are those that eat aphids and other pests eg *Syrphus* spp. Rat-tailed maggots, larvae of the dronefly *Eristalis tenax*, are found in polluted pools and extend their tail breathing tubes to the surface to breathe.

What does it eat?

Adults eat drink nectar and eat pollen and honeydew. Some species feed on dead insects. The larvae of different species eat

		<p>different things. Some eat aphids.</p> <p>When will I see it?</p> <p>Between March and November, depending on the species.</p> <p>Where will I see it?</p> <p>Hovering near and resting on flowers. Many seem prone to entering conservatories and greenhouses.</p> <p>www.rspb.org.uk</p>	
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Name	Diagram/Photo/Picture	Description	Uses
<p>Although I have seen no real evidence of mammals at St Joseph's apart from a grey squirrel and Moles. I am assuming the habitat may be home to Rabbits because the woods border onto grasslands</p> <p>Mice, Rats, Weasels</p> <p>Big possibility of deer both Muntjac & Roe</p> <p>Foxes – with the tea room being nearby with bins and food – I would wager foxes are around</p> <p>Hedgehogs</p> <p>No evidence of Badgers at all</p> <p>As well as having a big wander in the wood, I did sit quietly on my own today (17th July 2017) listening and waiting to no avail</p> <p>I am also hoping we have a few bats, but I do not think I have been to the woods at the right time – perhaps when we start doing sleep overs</p>			
<p>Grey Squirrel</p>	 <p>bbc.co.uk</p>	<p>Grey squirrel</p> <p>Grey squirrels are notorious for displacing red squirrels in European woodlands. They out-compete the native reds for food, feeding more at ground level and being able to digest acorns, which the reds can't. They also carry a deadly pox virus which does not affect them. Grey squirrels were introduced to the UK from the USA in the late 19th or early 20th century. They're now widespread throughout England south of Cumbria and Wales, and common in local pockets in Scotland. They are absent from the rest of mainland Europe, except for small localised populations in Italy.</p>	

		bbc.co.uk	
Moles	 <p>bbc.co.uk</p>	<p>Mole</p> <p>Moles are industrious diggers and can create 20m of tunnel per day. They leave characteristic mounds of earth on the surface as they excavate their tunnels. Large chambers within the tunnel system are lined with dry grass and used for nesting during periods of rest. Moles feed mainly on earthworms, but they also eat a variety of other invertebrates, as well as snakes and lizards. They inhabit deciduous woodland, grassland and farmland - wherever the soil is deep enough for tunnelling.</p> <p>bbc.co.uk</p>	
Muntjac	 <p>bbc.co.uk</p> <p>Now I haven't seen one of these in my woods, however I have seen one crossing the road out near Hicks Lodge</p>	<p>Muntjac deer</p> <p>Muntjac deer don't have a fixed breeding season, unlike many other deer. Instead, they reproduce continually throughout the year. This small and exotic looking deer can be surprisingly hard to spot, although a loud barking call could indicate one is nearby. Woodlands are their preferred habitat, but they are increasingly found in gardens and even walking down streets. Native to south-</p>	

		<p>east China and Taiwan, muntjac deer were introduced to parks in the UK in the early 20th century and escapees have since established wild populations.</p> <p>bbc.co.uk</p>	
Fox	 <p>bbc.co.uk</p>	<p>Red fox</p> <p>Red foxes have overtaken grey wolves as the most widespread canines in the wild. Distributed throughout the northern hemisphere, red foxes are highly adaptable and occupy territories in deserts and tundra as well as urban areas. They live in family groups in dens and eat most things including small mammals, fruit, carrion and the contents of dustbins. As well as having excellent vision, smell and touch these bushy-tailed true foxes can produce 28 different calls.</p> <p>bbc.co.uk</p>	
Rabbit	 <p>bbc.co.uk</p>	<p>Rabbit</p> <p>Rabbits came originally from south west Europe and north west Africa. Deliberate introduction to many countries has been so successful that rabbits are often considered as pests, owing to the vast ecological and agricultural damage they can cause. Yet they remain an economically important mammal species for food, fur and so on. The grass and plants they graze at</p>	

		<p>dawn and dusk are of such poor nutritional value that rabbits eat their faeces to squeeze every last bit of remaining nourishment. Thumping their back legs sends a warning to others that one of their numerous predators is about.</p> <p>bbc.co.uk</p>	
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Name	Diagram/Photo/Picture	Description	Uses
<p>Pigeons</p>	 <p>bbc.co.uk</p>	<p>Old World pigeons</p> <p>Old World pigeons are natives of Europe, Asia and Africa, as the common name would suggest. However, some species - particularly the domestic pigeon - have been introduced elsewhere. There are 35 species of Old World pigeon. All are seed eaters that have thick and muscular gizzards for grinding up their food, with the assistance of some grit. Berries and the occasional insect are also part of their diet, and the feral rock dove of our towns and cities is not averse to the occasional bit of discarded fast food.</p> <p>bbc.co.uk</p>	
	<p>Now I haven't seen our resident owl yet, but one of our volunteers has seen it and another volunteer has heard it</p>  <p>www.woodlandtrust.org.uk</p>	<p>The classic woodland owl and a true nocturnal hunter, more often heard than seen.</p> <p>Common name: tawny owl, brown owl, howlet</p> <p>Scientific name: <i>Strix aluco</i></p> <p>Family: Strigidae</p> <p>Appearance</p> <p>Head: is a rounded shape. The tawny owl has large black eyes with a brown stripe between them, the face is encircled with a ring of dark feathers.</p> <p>Wings: are pale brown in colour with mottled brown</p>	

		<p>edges. It has a wingspan of 99cm.</p> <p>Body: is mainly brown, but the front has a reddish-brown hue and the underneath is cream coloured. The body, like the head, is rounded and it is roughly the same size as a pigeon.</p> <p>Where to spot</p> <p>The tawny owl is a nocturnal bird but can be seen all year round. It is fairly widespread and can be seen in woods, forests and also in towns.</p> <p>Feeding</p> <p>It hunts between dusk and dawn. It eats small mammals, rodents, birds, frogs, fish, worms, insects and beetles.</p> <p>Breeding</p> <p>The tawny owl first breeds at one year old and lays two to five eggs which it raises between April and June. It nests in tree holes or sometimes uses the old nests of other birds.</p> <p>Facts</p> <p>The call heard at night is a mix of the females sharp high pitched 'ke-wick' call being answered by the males wavering 'hoo-hoo' - from which derives the well know idea of tu-whit-tu woo</p> <p>Young owls can climb back into the nest should they fall out</p> <p>Typical lifespan is four years.</p> <p>www.woodlandtrust.org.uk</p>	
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<p>Robin</p>	 <p>bbc.co.uk</p>	<p>Robin</p> <p>Robins are one of the only UK birds to be heard singing in the garden on Christmas day. This is because they hold their territories all year round, warning off intruders with song. Males may hold the same territory throughout their lives, and will even attack a bundle of red feathers or their own reflection if they mistake it for another individual.</p> <p>Their melodious voices, along with their cheeky attitudes, have endeared robin red breasts to the British public, and in 1960 they were crowned the UK's national bird.</p> <p>bbc.co.uk</p>	
<p>I have also seen finches and tits but have not yet been able to identify exactly which kind of bird they are</p>			
<p>I have seen some kind of a hawk/buzzard/kite hunting across the grasslands around the woods</p>			

Name	Diagram/Photo/Picture	Description	Uses
<p>Dryad's Saddle</p>	 <p>www.amanita-photolibrary.co.uk</p>	<p>Polyporus squamosus Dryad's Saddle. Often found relatively high up growing out of the side of the tree in summer.</p> <p>www.amanita-photolibrary.co.uk</p>	
<p>King Alfred's cakes</p>	 <p>www.amanita-photolibrary.co.uk</p>	<p>Daldinia concentrica King Alfred's cakes. Hard round black balls about 5-10cm across growing on Ash trees. Show concentric layers if broken open.</p> <p>www.amanita-photolibrary.co.uk</p>	<p>Great for taking a spark and lighting fires</p>
<p>Chicken Of The Woods</p> <p>Has to be harvested earlier then later</p> <p>Consideration for what type of tree it is growing before consuming</p>	 <p>www.wildfooduk.com</p>	<p>Sulphur Surprise – Chicken of the Woods</p> <p>www.wildfooduk.com</p>	<p>Great in stews and casseroles as a chicken substitute or even fried and used for satays. Eaten mainly in Germany and North America where they sometimes blanch and freeze it although when I have tried this it tends to become very woody, it is best eaten when young and fresh.</p> <p>www.wildfooduk.com</p>

<p>Fairy Ring</p> <p>I have one of these in my garden – may be an idea to make on at the site from wooden and ceramic mushrooms</p>	 <p>https://en.wikipedia.org</p>	<p>There are about 60 mushroom species which can grow in the fairy ring pattern. The best known is the edible Scotch bonnet (Marasmius oreades), commonly known as the fairy ring champignon.</p> <p>https://en.wikipedia.org</p>	<p>Lots of Legends Surround Fairy Rings, not all are good, however in my woods near the fairy houses we are going to have a child made fairy circle where it's a bit like the village green and the fairies dance and play there, Still humans are not able to enter the centre . . .</p>
<p>Beefsteak Fungus</p>	 <p>www.wildfooduk.com</p>	<p>Beefsteak fungus or ox tongue fungus is aptly named. The brackets themselves look very much like ox tongue when growing as you can see above. Then when cut, not only does it have the marbling effect of an expensive bit of good Wagyu beef but it will actually bleed a thin red liquid!</p> <p>This mushroom grows from live trees, normally Oak and has no really similar lookalikes. Anything that looks remotely like this will normally be a hard, dry bracket whereas the beefsteak fungus is always malleable and moist.</p> <p>www.wildfooduk.com</p>	

FSPWE 3 Understand the importance of flora and fauna identification for the Forest School Programme leader.

FSPWE 3.1 Explain the importance of flora and fauna identification for the Forest School leader



I think first and foremost it is about sharing knowledge with young people and families, enabling them to have a curiosity about the world and to ask questions and discover.

On a more practical note – when you are asked what a particular flora or fauna it would be good to have an answer, however if I don't know I usually attempt to get a photo with the young person so we can identify it, perhaps at home and talk about it later

It is also about managing risk – for example it would be useful to know if you have Wild Boar running around your woods . . .

It's useful to know and share information such as Yew and Holly sticks are not good to cook marshmallows on, which fungi shouldn't be touched, which plants shouldn't be picked

FSPWE 4 Understand the management of woodlands as a sustainable learning environment.

FSPWE 4.1 Explain the sustainability of current and historic woodland management techniques in own location.



Current woodland management techniques

I have discovered that woodlands today are left to manage themselves

This has given rise to more wildlife and wild flowers – a positive attribute

Coppicing of Broadleaf trees ensures new growth

Appendix 3 & 4 are very informative about Woodland management techniques

While Appendix 5 looks at invasive species – none of which I have discovered on our land

Managing a woodland

The future of woodlands relies on effective management, just as a garden needs constant maintenance and care to thrive. Trees must be thinned to grow well and invasive species like bramble have to be managed so that they don't dominate other plants.

Woodlands that have a reason to be managed, perhaps for timber, firewood, access or green woodworking, are more likely to be receive love and attention long into the future, and indeed those woodlands that we have today have survived precisely because they have had an economic value to the local community- 'the wood that pays is the wood that stays'

<http://smallwoods.org.uk>

However – after consideration – I believe we need to manage our ivy and nettles nearer to our outdoor classroom

We have decided also to maintain pathways but also keep several areas un-touched

Liaise with woodland owner around what can and cannot be done and speak with his 'expert' on woodlands and

On reflection

Our wood needs minimum managing perhaps thinning out and coppicing

On learning that Pine does not coppice I can see why the likes of Kielder are managed in such away over, I think is a 45 to 50 year cycle as a crop

Historic woodland management techniques

In the past with woodlands being used as raw materials, coppicing a system of removing the tree but leaving the root in place to encourage new growth and natural regeneration has been used

Coppicing works with many trees, some faster than others, except for pine.

Segregated woodlands were also a common way of growing the raw materials, with each section being in a different state of growth each with its own flora and fauna

Woodlands have been managed thousands of years but with the growth of other materials such as plastic, the need for wood has declined and woodlands have a new purpose around conservation, recreation or both.

Managing for Biodiversity

Biodiversity is a term which simply means 'the variety of life'. In order to ensure high biodiversity within a woodland, the woodland manager aims to provide a whole range of habitats and microhabitats. This is done by encouraging high plant diversity, managing the structure of the wood to provide a variety of microhabitats and retaining 'waste' products such as rotting wood. Management will need to take into account physical characteristics of individual woods such as topography, soil type, rainfall and aspect.

Found a really good website that will help us with the biodiversity of our woodland at

http://www.countrysideinfo.co.uk/woodland_manage/conserva_manage.htm

lots of tips and rationale for managing a woodland



All things considered Learners will be able to get involved with wood land management by

- Understanding and appreciating the Flora and Fauna
- Understanding biodiversity
- Helping to maintain the site
- Making environments
- Fostering ownership
- Using Skills new and old

In practical terms, this would be

- Family Woodland Management Days
- Demonstrations and talks with Experts
- Bat Box Building Days
- Bug Hotel Building Days