Common Poisonous Plants that may be found at Forest School

Recently there has been an increase in the awareness that some plants and fungi, both cultivated and wild, may contain poisonous properties. It would be easy to overreact towards all plants, stressing the hazards to children in a way that would produce a generation of people who would fear and distrust all plant life. It would be similarly unacceptable to totally ignore the situation, and this information sheet is designed to advise leaders of the risks that children may encounter in Forest School.
The majority of plants are harmless, and far greater risks are posed to humans by other everyday substances and practices. The list of plants given below will allow you and your pupils to enjoy confidently the plant life in your Forest School (this is by no means exhaustible but gives the most common plants found, there are a number of publications that cover the subject more comprehensively – see back page).
On the very few occasions when children have been affected by poisonous plants it has been either the attraction of brightly coloured juicy berries, or curiosity which has led to the problem. For this reason children should be taught not to eat any fruits, seeds, berries or any part of any plant or fungi, unless they have been given permission by a responsible adult. Children should also be taught that the few plants that pose a possible hazard contain poisonous substances, as a defence mechanism against insect and micro organism attack and are incidentally poisonous to mammals and humans. Plant poisoning incidents in this country are extremely rare.
The amount of toxic substance in any plant varies from locality to locality, from season to season, and its effect depends upon the health and condition of the person concerned. The effect of a poisonous plant can be diarrhoea, abdominal pains and vomiting if eaten, and sometimes can be fatal, and some can affect the central nervous system. Some cause skin or eye reactions from contact, that increases when exposed to sunlight. For all the plants below we have indicated where they are harmful if eaten and where harmful if handled (see key). We advise avoid eating any plants unless you know it is edible, and to always wash hands after handling plants, particularly before eating.

Emergency First Aid
If you suspect that someone is suffering from eating a poisonous plant:
1 Do not try to make the person sick.
2 Take the person immediately to a doctor or hospital accident emergency department with a sample of the plant or fungi for identification purposes.
3 Note the time of eating and any symptoms. These may appear many hours later.

If you suspect skin or eye irritation by a plant:
1 Wash the affected area with clean water.
2 If in doubt, seek medical advice as above. Remember to take a sample of the plant with you.
In both cases do not forget to report the incident later on the appropriate accident form/book.

Key – E = poisonous if eaten, H = poisonous if handled

Bluebell - Endymion non-scriptus (E)
Woodland plant often carpeting ground with spectacular "blue bell" flowers Apr-June. Narrow linear bright-green leaves grow from white underground bulbils. Flowers hang down from near top of stem from which white fruits develop gradually turning brown as the black seed matures. Fairly common native plant.

Bracken - Pteridium aquilinum (E)
Bracken is a coarse vigorous growing fern, found almost everywhere except wet boggy ground and on limestone. If left unchecked it is capable of dominating the surrounding vegetation. In late spring fresh green shoots (called fronds) push up through the soil from a persistent perennial root system to produce large branched and spreading leaves forming a dense smothering canopy. Later on brown spores develop on the undersides of leaves. The plant eventually dies down as a tough stringy brown mass. Very common widespread and invasive native plant.
Tumours of the digestive system can result from eating young bracken fronds. When the spores are produced, if breathed in large quantities they can be carcinogenic.

Bulbs – Daffodils, Hyacinths and Narcissus (E/H)
If eaten these can be fatal but will cause irritation and vomiting/diarrhoea

Celandine and Buttercup (E)
Both these flowers are yellow, celandine is found on woodland floor in flower in early spring and buttercup flowers throughout spring and summer. All parts of the plants are poisonous to eat.

Deadly Nightshade – Atropa Bella-Donna (E/H)
The plant is a sub-shrub/climber often found in hedgerows and woodland margins, growing up to two metres with large ovate leaves. It is in flower from June to August (purple flowers with yellow stamens), and the fruits/berries ripen from August to October going from green to black . The flowers are hermaphrodite (have both male and female organs) and are pollinated by Insects.
The whole plant, and especially the root, is very poisonous. Even handling the plant has been known to cause problems if the person has cuts or grazes on the hand. The plant is particularly dangerous for children since the fruit looks attractive and has a sweet taste. The toxins are concentrated in the ripe fruit

Elder - Sambucus nigra (E – with raw berries)
Common deciduous shrub on waste ground and in hedgerows. Pointed oval leaves in opposite pairs. Small creamy-white flowers in summer setting small purple fruits hanging in bunches.
Symptoms of nausea, vomiting, stomach pains, diarrhoea, weakness and coma can arise from eating just a few raw berries. Likewise fruit juice from raw berries can give rise to same effect within minutes

Foxglove - Digitalis purpurea (E)
Common and widespread perennial plant of hedgerow and woodland clearing with large coarse hairy basal leaves from which, in its second year, a tall spike arises eventually becoming laden in June-Sept with tubular flowers, mostly pink-purple in colour but occasionally white. Frequently visited by bumble bees!

Giant Hogweed – Heracleum Mantegazzianum (H)
This resembles common hogweed but is alot larger – grows up to 2/5 metres in height and has a stout spotted reddish stem. It has deeply incised leaves that grow up to 2 metres in width. It has white umbrella flowers like all the other umbellifers (cow parsley, hogweed etc), and flowers through from spring to mid summer.
Giant Hogweed is a phototoxic plant. Its sap can cause severe skin inflammations when the skin is exposed to sunlight or to UV-rays. Initially the skin colours red and starts itching. Then blisters form as in burns within 48 hours. People should be kept right away from it.

Hemlock – Conium Maculatum (E)
It is a plant which grows between 1.5–2.5 m tall, with a smooth green stem, usually spotted or streaked with red or purple on the lower half of the stem. The leaves are finely divided and lacy, overall triangular in shape. The flowers are small, white, clustered in umbels up to 10–15cm across. The plant is often mistaken for fennel, parsley or wild carrot although the characteristic stem hairs of the wild carrots are missing. The Conium root is fleshy, white and often unbranched and can be mistaken for parsnips. When crushed, the leaves and root emit a rank, unpleasant odour often compared to that of parsnips. The red spots on the stem are often referred to as the 'blood of socrates' he was put to death with hemlock (so Plato says!)
If eaten this can be fatal, attacking the central nervous system.

Holly – Ilex Aquifolum (E)
Red berries in the winter and white/green flowers in late autumn. Smooth often spikey evergreen leaves. The berries are poisonous

Horse Chestnut – Aesculus Hippocastanum (E)
This well known tree has palmately compound leaves, with 5-7 leaflets. The flowers are usually white with a small red spot; they are produced in spring in erect panicles with about 20-50 flowers on each panicle. Usually only 1-5 fruit develop on each panicle; the fruit is a green, softly spiky capsule containing one

(rarely two or three) conkers or horse-chestnuts. When young and not quite ripe the conkers, if eaten, can be poisonous.

Ivy - Hedera helix, alt - Common Ivy, Creeping Ivy (E – see below for handling)
Shade tolerant evergreen climber of trees walls and fences but can also form ground cover especially at base of trees and in hedge bottoms. Small dark green glossy leaves with lighter veins. Small yellow-green flowers appear Sept-Nov from which black berries develop persisting sometimes into Spring. Common native.
Toxicity – berries mainly the culprit, but because they have bitter taste and are not eaten in quantity only milder effects result. Symptoms range from burning sensation in mouth and throat, vomiting, breathing difficulty to convulsions and coma. Skin rash and blisters can form after contact with skin in sensitive people.

Laburnum – Laburnum Anagyroides (E)
This is a shrub/small tree that has escaped from gardens. They have yellow pea like flowers in pendulous bunches 10–30cm long in spring, which makes them very popular garden trees. The leaves are trifoliate, somewhat like a clover the leaflets typically 2–3 cm long. All parts of the plant are poisonous

Laurel, Rhododendrons and Azaleas (E)
Evergreen shrubby plants with large waxy green leaves and flowers come in a number of colours – rhodies are often purple whereas laurel can often be white.
All parts of the plants are highly toxic and can be fatal if eaten

Lily of the valley – Convallaria Majalis (E)
The stems grow to 15-30cm tall, with one or two leaves 10-25cm long, flowering stems have two leaves and a strip of 5-15 flowers on the stem apex. The flowers are white (rarely pink), bell-shaped, 5-10 mm diameter, and sweetly scented; flowering is in late spring, in mild winters in early March. The fruit is a small orange-red berry. All parts of the plant are highly poisonous.

Lords and Ladies/Cuckoo Plant – Arum Maculatum (E)
The purple spotted leaves appear in the spring (April-May) followed by the flower borne on a poker shaped brown/purple spike called a *spadix*. The spadix is partially enclosed in a pale green leaf-like hood. The flowers are hidden from sight, clustered at the base of the spadix. . Above the male flowers is a ring of hairs forming an insect trap. Insects, especially are trapped beneath the ring of hairs and are dusted with pollen by the male flowers before escaping and carrying the pollen to the spadices of other plants, where they pollinate the female flowers.
In autumn a cluster of bright red berries remain after the leaves have withered away. These attractive orange berries are extremely poisonous. The berries contain oxalates of which have needle-shaped crystals which irritate the skin, mouth, tongue, and throat, and result in swelling of throat, difficulty breathing, burning pain, and upset stomach.. It is one of the most common causes of accidental plant poisoning based on attendance at hospital A & E departments. All parts of the plant are poisonous[

Mistletoe – Nerium Oleander (E)
Mistletoe is readily recognized by its smooth-edged oval evergreen leaves borne in pairs along the woody stem, and waxy white berries in dense clusters of 2 to 6. The berries if eaten can be fatal.

Privet – Ligiustrum Vulgar (E)
A small woody shrub with small oval green waxy leaves . The flowers are small and fragrant and borne in tight bunches with a white appearance. They have four curled-back petals and two high stamens with yellow or red anthers. The fruits, borne in clusters, are small purple to black drupes. The fruits of some species are poisonous to humans.

Rowan - Sorbus aucuparia (E)
A small shrub tree with compound leaves with serated edge. It has white umbil flowers in May and bears red berries in early autumn/late summer.

The berries, if eaten raw, can cause indigestion leading to kidney damage due to parasorbic acid but when heated, ie cooked, breaks down becoming harmless sorbic acid and they do make tasty jelly and jams!

Snowberry – Symphoricarpos Albus (E)
Snowberry is an introduced, deciduous shrub, 1-3 m high. It spreads by suckers and forms large thickets in the woodlands and shrubberies, in which it has been planted for game cover.
The small, pink, bell-shaped, 5-petalled flowers are hairy inside and only 5-6mm across. They are arranged in spikes of 3-7 at the tips of branches and open from June to September.
The white, globe-shaped berries 10-15 mm across, mature in autumn. The berries are poisonous if eaten.

Spindle - Euonymus europaeus (E)
Deciduous small tree or stiff shrub frequently found in woodland often on chalk and limestone, especially in south. Smooth grey bark, green square-sectioned stems. elongated pointed leaves typically turning red in autumn. Small flowers in May-June with greenish-white petals, fruits are deep-pink fleshy lobes covering bright orange seed. Native plant and all parts are poisonous.

White Bryony - Bryonia dioica (E)
Climbing perennial plant with long trailing stems and coiling tendrils which attach to adjacent plants, especially in hedges. Distinctive pale green leaves with three to five pointed lobes. Small clusters of separate male and female greenish-white flowers appear in May-Sept followed by small red berries. Large root system with same characteristic smell as rest of plant when cut. Occasional native plant, mainly southern.

Yew – Taxus Baccatta (E)
It is in leaf all year with glossy dark green and soft needles, in flower from March to April, and the seeds ripen from September to November. The flowers are dioecious (individual flowers are either male or female, but only one sex is to be found on any one plant so both male and female plants must be grown if seed is required) and are pollinated by Wind.
All parts of the plant, except the flesh of the fruit, are highly poisonous, having a paralyzing affect on the heart

Fungi
There are a number of fungi which grow in this country that are poisonous, the most significant of which are listed below. Children should be taught never to eat or touch any fungal growth they find at any time and to wash hands after touching if they do! If you want to touch and ingest get expert advice. A number of poisonings have occurred in recent years by people drying and eating fungi in order to hallucinate.
Clitocybe (Clitocybe Species); Common Ink Cap (Coprinus Atramentarius); Death Cap (Amanita Phalloides); Destroying Angel (Amanita Phalloides); Devil's Boletus (Boletus Satanas) Dung Roundhead (Stropharia Semiglobata); Ergot (Claviceps Purpurea); Fairy Cake Hebeloma (Hebeloma Crustuliniforme); False Morel (Gyromitra Esculenta); Fly Agaric (Amanita Muscaria) Grey Mottle Gill (Panaeolus Sphinctrinus); Inocybe (Inocybe Species); Liberty Cap (Psilocybe Semilanceata); Livid Entoloma (Entoloma Lividum); Magic Mushrooms (Gymnopilus, Panaeolus, Psilocybe Species); Mower's Mushrooms (Paneolina Foenisecii); Panther Cap (Amanita Pantherina) Sickener (Russula Emetica); Sulphur Tuft (Hypholoma Fasciculae); Yellow-Staining Mushroom (Argaricus Xanthodermus)

References
Poisonous Plants and Fungi: An Illustrated Guide. Cooper, M.R., Johnson, A.W. & Dauncey, E.A. 2003. . TSO, London. 185pp. £14.95 Available from http://www.tsoshop.co.uk

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