



Working In Tandem With The Seasons

Paddy Madden continues with the series on SESE tips for throughout the year

November



Recycled bird feeder



Birds on Velcro



Leaf mould

Strand Units covered this month:

Environmental awareness, Caring for the environment, science and the environment, plant and animal life, materials and change, stories from lives of people in the past (Alexander Fleming).

Acknowledgements: Books and websites referred to in text. All photographs except Birds on Velcro and Leafmould courtesy of Eamon O Murchu.



PADDY MADDEN lectures in SESE in Coláiste Mhuire, Marino Institute of Education. The monthly articles, "Working in tandem with the seasons", are based on the very successful course of the same name which was pioneered in Marino in 2009. This year the courses are taking place in the Blackrock Education Centre on one Monday every month until June and commenced on 27 September. The Centre will also produce 5 short videos every month based on the monthly sessions. They can be downloaded from www.blackrockec.ie

OUTDOORS

1 Make a log habitat The best location for a log habitat is under trees. Place a sheet of builders' polythene on the ground and cover it with a thick layer of bark mulch. (The plastic prevents the dreaded honey fungus from infesting living trees and shrubs). Place some logs on top. Plant some ferns around it. After a few months this area will become a favoured habitat of woodlice, centipedes, millipedes, beetles and birds.

2 Propagate native trees from cuttings See www.blackrockec.ie

3 Set up birdfeeders made from recycled 2 litre plastic bottles Fill these with unsalted peanuts. Move the location of these around the garden every few weeks so that the areas they are situated in don't become infected and cause bird diseases. If the school has a set of binoculars these feeders can be used for observation of our common garden birds. See www.birdwatchireland.ie for 18 projects on working with birds in school. See www.rspb.org.uk for bird sounds and short bird videos. Toy birds that make authentic sounds can be purchased off www.birdwatchireland.ie and www.ippc.ie Assess pupils' knowledge of birds by making a chart like the one illustrated using cut-out pictures of birds and Velcro tape.

4 Collect leaves to make leaf mould In two year's time these

can be used as a substitute for peat. Make the leaf mould container as follows: hammer 4 stakes into the ground 1m apart. Staple 4 metres of wire mesh to these stakes leaving the front open until all the leaves are gathered. When this happens staple the wire mesh at the front to a stake. If the leaves are dry wet them thoroughly. Stand on the leaves as well to compress them. Fungi will decompose them over the next 2 years.

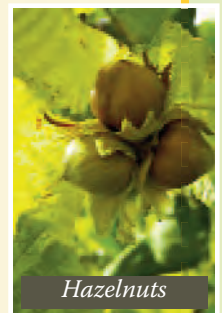
5 Make a hedgehog hibernaculum and place it in a quiet place under a hedgerow or in a mini-wood. First find a cardboard box c. 50cm x 40cm (lid) x 30cm. Make an entrance hole in the front c. 15cm square. Insert the box into a black polythene sack and insulate the top, back and sides with cushions of dry leaves. Create a tunnel facing south c. 30 cm long up to the entrance using 6 old bricks for the sides and top. Insert a plastic or copper pipe or old hose-pipe into a hole in the top for ventilation. Place shredded newspaper inside and cover this with either straw, dry leaves



Hedgehog hibernaculum

or both. Build 3 logs on either side and prevent them from rolling by inserting a stick or lath into the ground on either side. Cover the top with short branches and then cover logs and branches with dry leaves to create a dome-shape. See www.britishhedgehogs.org.uk/FAQS/hedgehog_homes.htm and www.appleby-lincolnshire.co.uk/Hedgehog

6 Plant fruit trees Autumn-fruiting raspberries such as "Autumn Bliss" are very suitable for a school garden. See www.gardenersworld.com Plant the canes in a sunny, sheltered spot using plenty of well-rotted compost in the holes. Three canes could be planted in a 60cm diameter pot using John Innes No. 3 compost. In February cut the canes down to ground level. Also plant thornless blackberries and native apple trees. The latter are available from www.irishseedsavers.ie



Hazelnuts

7 Plant mini-wood and native hedgerow

See www.blackrockec.ie

It is a good idea to use whips when planting either of the above. These are c. 60 cm to 120cm high and can be ordered online from www.futureforests.net

INDOORS

1 Explore the fascinating world of fungi. Fungi are plant-like organisms that cannot make their own food, so feed on dead or living plants and animals. (*The Usborne Science Encyclopedia*). They reproduce by releasing spores. These grow on gills under a mushroom's cap. To see them remove the stalk from a mushroom and place the cap on a sheet of white paper. Place an upturned glass over the cap and leave overnight. When the glass and cap are removed the pattern of spores can be seen. Spray with hair spray to preserve the pattern. See *Science Quest 6* (C) Fal-



Fungus

lon) for a fair test on conditions needed to grow fungi.

2 Study the effect yeast has on the decomposition of fruit by placing a slice of banana in a ziplock bag with no yeast and another slice covered in yeast in another bag. Observe using a chart for 5

days. (*Science Made Simple* – Frank Schaeffer Publications).

3 Compare different ways of preventing bread going mouldy by getting 4 jars with the same amount of bread in each.

Jar 1: Cover bread with water.

Jar 2: Cover bread with vinegar.

Jar 3: Cover bread with water in which a few spoons of salt have been dissolved.

Jar 4: Control.

Put lids on jars and observe what happens. (501 Science Experiments, Hinkler Books, 2007). Study Alexander Fleming and the discovery of penicillin. 🚩

Safety Note: Some people are allergic to moulds and fungi. Avoid inhaling same.