Dandelions across the curriculum

Science and Plants for Schools, *Osmosis* 17, Spring 2000
http://www-saps.plantsci.cam.ac.uk/osmos/os17.htm

How do dandelions grow in different habitats?… Can we measure their growth to give us useful information about these habitats? Can we then link these measurements to science teaching about plants, and to other aspects of the National Curriculum - in numeracy, literacy and IT?

Dandelions are widespread and are likely to be present in most grassy patches in school grounds. They are probably an under-rated resource for teaching in the National Curriculum, and beyond into post-16 Biology. These ideas used with KS2 pupils gave plenty of scope for discussion as well as extending into different activities across the curriculum.

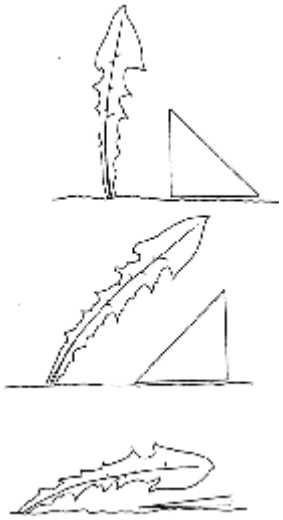
Some fairly simple observations were made 7 to 10 year olds in their school grounds. They suggested that there was a difference in the way dandelions grow in long grass (which is cut twice a year) and in grass that is mown on a regular basis (like a lawn). The pupils decided to investigate two different features of dandelions. The first measurement was the length of the leaves in each of the habitats and the second was the angle of the dandelion leaf in relation to the ground. They did think of more measurements they could make, but in the time available they decided to limit their activities to just these two.

For measurements of length, they chose the longest leaf of each plant. In the short grass, pupils had to make sure the leaf being measured was complete (and not chopped off by the mower). Measurements of the angle were made using different homemade 'angle measurers' to represent three different angles - almost upright (a right angle), about 45° (or half a right angle) and nearly flat (almost on the ground). (See the illustrations at the end of this article.) The right angle was made by folding a piece of paper to make a square, then this was folded again to make the half right angle. While they were making their measurements, they noted other features of the plants and the 'environment' – whether they were in the 'wild' or cut area, in the shade or perhaps near a building.

One of the schools doing this took the idea a stage further. The pupils sowed some dandelion seeds so that each had their own plant. As they grew, the pupils measured them to get some idea about how fast they grew. Then, each time the groundsman mowed the grass (frequently cut area), the pupils also cut some of their own plants, so that they could watch to see how these coped, compared with the other plants they had grown. This approach generated a lot of discussion about how plants 'fight back' and survive in their surroundings.

Curriculum links that followed easily from these activities ranged from numeracy, through science to art and IT. For specific requirements there were opportunities for making measurements (including angles), organising the collection of data, perhaps doing a tally chart or finding an average value, a fair test, using data handling skills in other areas of the curriculum and so on. There was plenty of involvement by pupils and it was good to find an activity which encouraged interest in plants. Pupils could attempt to draw leaves and the seeds (though dandelion flowers are really quite difficult). The results could be processed by IT.

Judy Vincent is grateful to the Gatsby Technical Education Project for a fellowship which enabled her to develop some of the ideas used in this work. She would also like to give due recognition to 'Action for Biology in Education' (ABE) for some of the ideas developed here.



Homemade angle measurers with dandelion leaves

Dandelion (*Taraxacum officinale*)

(artwork by Christine Grey-Wilson)

Judy Vincent (Hartest Primary School, Suffolk)