Cross-curricular

Debbie Myers, head teacher of the Junior Department at La Sagesse School in Newcastle upon Tyne, explains how she implemented a cross-curricular programme to increase pupils' abilities in both science and literacy.

Role-play in the willow village

Teachers at La Sagesse School recognise that inspirational teaching raises the aspirations of young people. Following in this tradition, my aims as the new head of La Sagesse Junior Department were to raise the profile of science and writing by using time-honoured tales and picture books as starting points for investigations. Aware of the fact that it would be a costly undertaking, we designed and submitted a proposal to construct a Roman apothecary garden and fairytale willow village to fulfil these aims. We were successful in achieving a place in the finals of 2008's Rolls-Royce Science Prize, which secured us £5,000 worth of funding to enable development of the project.

We were able to utilise the apothecary garden and willow village in the overall scheme of the cross-curricular programme. The willow village enabled a series of 'tribal' role-play sessions based upon Lord of the Rings and Lord of the Flies texts. Children were divided into three tribes at random and each tribe created their own code of conduct. Through this activity and regular communal meetings to explore problems and resolutions, the pupils learned important negotiation skills to enable their tribe to thrive.

In the apothecary garden, children in Key Stage 2 received introductory lessons in Latin to develop their role-play as Romano-British apothecaries. They did this in conjunction with a workshop at Segedunum Museum in which they identified plants and created medicinal pastes from them. An emphasis upon the development of speaking and listening skills also enabled children to consider the organisation of text when writing up interviews and debates, factual reports, biographies of ancient herbalists, newspaper articles and letters to scientists.
A wizard story-telling chair carved from a tree trunk and four picnic tables was installed in the outdoor classroom, while the Foundation and Key Stage 1 corridor was transformed into a 'Fairytale Forest' for role-play and story-telling. The focus for these age groups was an exploration of planting and growing based upon on the traditional tale of "Jack and the Beanstalk". The children in Reception and Year 1 kept journals to investigate growth conditions of beans while children in Year 2 practiced their measuring skills.

We also attempted to put a healthy twist on the programme by including bits that would encourage children to make wiser eating choices. The older pupils in Year 2 used the Veggie

World book series, including ‘How are You Peeling?’, as a starting point for creating a puppet show to persuade the younger Year 1 children to eat more vegetables. These plays were then developed into colourful books in a twist on the ‘good versus evil’ theme with stories of healthy versus corrupted vegetables.

Meanwhile in Year 5, pupils listened to the story of the ‘Tin Forest’ by Helen Ward and Wayne Anderson. The story is about a barren metal scrap yard that is ultimately transformed into a thriving ecosystem when a toucan drops a single seed from its beak onto the ground of the scrap yard. After hearing the story, children reviewed their knowledge of seed dispersal mechanisms by watching a PowerPoint presentation and re-examining the seed on display. Using springs, feathers, balloons, velcro, honey and multicoloured sugar strands they proceeded to construct a variety of seedcases to demonstrate each mechanism of dispersal. We tested the performance of the seeds and they all did extremely well. The children then designed their own PowerPoint presentations on the life-cycles of plants based upon their investigations and constructions.

Pupils wearing masks

At the end of the entire project teachers undertook an audit of all learning environments to evaluate how successful we had been in promoting science through other curricular areas using displays, role-play areas and recorded work. Our observations showed that the project had successfully embedded science throughout the school as children were given opportunities to communicate their scientific observations using role-play, creative writing and factual writing. Children had also been encouraged to describe and quantify their scientific observations by counting, comparing, ordering, measuring and recording changes over time, tabulating data to identify patterns and emerging trends, producing and interpreting graphs, and gathering and presenting evidence using PowerPoint. By the end of the project, the children had significantly improved their reading, writing, speaking and listening skills – all the essentials for becoming literate and successful individuals.