



## STEWARDSHIP BEGINS AT SCHOOL

*IN ENGLAND, A SUPERLATIVE EXAMPLE  
OF AN ECOLOGICAL SCHOOLYARD.*

By Sharon Gamson Danks

Visitors to Cowick First School, in the urban heart of Exeter in southwest England, are welcomed to the school grounds by the happy chatter of young schoolchildren as well as the soft calls of songbirds, the clucking of chickens and an occasional splash in the schoolyard pond. In the spring, the grounds bloom with a wide variety of flowers and lush vegetation, and the scent of fresh herbs fills the kitchen garden. In the summer and fall, berries of many shapes and colors stain little fingers and mouths with their delicious juices, tomatoes ripen on their vines and crisp apples fill the children's harvest baskets and the school's kitchen. Winter brings animal tracks in the fresh snow, a Christmas tree sustainably harvested from the students' past plantings and bird feeders thoughtfully stocked with winter treats for visiting feathered friends. The passage of time and the flow of the seasons can be easily

Originally published by *Landscape Architecture Magazine*, Vol. 93, No. 6, June 2003, pp. 42-48. Photos and text ©Sharon Gamson Danks, 2003-2015.

read and understood by children and adults alike on school grounds such as this one that are in tune with the ecology of the local landscape.

Many schools around the world are designing their grounds to embody the ecological principles they wish to teach their students. Over the past five years, I have had the opportunity to visit more than 120 of these K–12 schools in five countries and have observed and documented the ways that they use their schoolyard landscapes to teach ecological concepts. The strongest programs appear to be the ones that have created multi-faceted landscapes, richly layered with interwoven ecological systems developed over many years, and firmly rooted in the schools' curricula. Cowick First School is among the very best examples of this approach to well-rounded, hands-on ecological education. Its work has stood the test of time over almost two decades and its well-



integrated curriculum has grown stronger with each passing year.

Cowick First School enrolls approximately 250 students from five to eight years old. In the mid-1980s, the school started to transform its conventionally designed school grounds into an exceptional collection of enjoyable, educational resources for its students, suitable for both academic work and informal play. One of its main goals was to be able to teach part of each academic subject outside on the school grounds. Zoe Rhydderch-Evans, the school's head teacher at the project's inception, wanted the schoolyard landscape to inspire the students to continually ask questions about the way things worked, to have a sense of wonder about their surroundings and to connect the city-dwelling children at the school more closely with nature.

In order to accomplish these goals, the school worked with a local landscape architect to design a master plan for the grounds that allowed administrators and teachers to "think big" but start small. The informal master plan guided the development of the grounds in the early years of the project and has been modified as needed over time. Building the schoolyard's ecological systems over the last 18 years has allowed the school to "grow" the budget, maintenance plans and curriculum along with the physical site improvements, and helped the project to stay manageable, productive,

educational and fun. Every subject in the curriculum is now taught, in part, outside using the school grounds. The continuing school ground improvement and stewardship program is now spearheaded by the present head teacher, a few key school administrators and group of dynamic teachers led by teachers Lesley Mold and Steven Smith.

Although Cowick First School is located in an urban environment, the schoolyard landscape has taken on a distinctly rural look and feel. Since a large portion of the site was originally covered by an asphalt parking lot, one of the first tasks was to remove the pavement. The main play area now consists of a large, central, multi-use field surrounded on three sides by well-designed outdoor "rooms" with ecology- and play-related themes.

The ecology-related features of the renovated school grounds fit in well with the school's written "eco-code" posted in the front lobby, and with its broader goals of connecting the children to nature and teaching them about sustainable resource use. The ecology-related projects undertaken on the school grounds fall into the following broad categories of wildlife habitat enhancement, small scale food production, creative play with natural materials and sustainable resource and material use.

## WILDLIFE HABITAT ENHANCEMENT

Cowick First School's grounds help local wildlife thrive through the use of many different types of fruit-, flower- and berry-producing trees and shrubs. There are also several parts of the grounds specifically designed to foster wildlife. The school has a collection of bird feeders that are used in the winter as well as strategically placed log piles to promote populations of "minibeasts" for the students to study.

The first of these wildlife habitat improvements was created in the mid-1980s when the school developed a "look and see" wildlife area and a small nearby pond. Today, the wildlife area is a special place where the children can follow a meandering path through a protected patch of forest trees and plants and look for all of the creatures that live there. In this place, the children are told that the creatures come first, since it is their home. Children are expected to tread lightly, speak softly and open their eyes and ears to what is around them. This is the only area of the school grounds off-limits for unrestricted play, so the students are only allowed in during class time. Newts, hedgehogs, mice, voles and slowworms (similar to snakes) are often sighted, along with thrushes, sparrows, blackbirds, blue tits, sea birds, bullfinches and other birds. A myriad of "minibeasts" such as spiders, butterflies, toads and insects also abound and are good food sources for other larger creatures onsite. A rustic log bird blind has been built in one portion of the "look and see" area to allow the students to hide inside and watch the wildlife around them without being noticed by the creatures



*A signpost with many long, pointed arms, greets visitors upon arrival and directs them to locations around the school's perimeter. A butterfly garden is planted at the base.*

they are observing. The area is also set apart from the rest of the grounds by simple, innovative “gates” that require the students to climb over them to gain entry to the habitat zone. This slows students down if they have been running and ensures that they enter one at a time in a controlled manner.

A two-foot deep pond adjoins the wildlife area and is divided from it by a dense blackberry thicket. Although water safety and liability are important issues in England, as in the United States, the pond is unfenced so students and wildlife can have full access to it at all times. The blackberry bushes behind the pond act as an informal fence along one side and a small vegetated hill with a student-drawn sign alerts visitors to the water’s edge. The school has not had any safety or liability problems with this small patch of open water since it was created more than 15 years ago. The pond is used extensively for academic work such as scientific studies and artistic drawing lessons, and the students enjoy it during informal play times when they hunt for frogs, tadpoles, dragonflies and other pond life.

Two years ago, the school added additional wildlife-enhancing features to its grounds. The first is a “Devon bank,” or hedge, created using native plants from the region. It is now a haven for insects and wildlife and provides additional resources for rich curriculum studies. A small butterfly garden was also added in 2001 at the foot of the directional signpost (see photograph on previous page).



### KITCHEN GARDEN, MINIFARM AND ORCHARD

Students at Cowick First School have nurtured a kitchen garden and minifarm on their grounds for the past 15 years. Both features are now fully integrated with the school’s curriculum. The minifarm currently has several chickens, guinea pigs and rabbits in spacious outdoor enclosures. The five- and six-year-old students in Grade 1 are the primary caregivers for the animals, rain or shine, all year-round, as a lesson in responsibility as well as animal husbandry. The children rotate these care-giving duties and frequently get to take home the eggs when it is their turn to care for the chickens. Animal manure from the minifarm is composted and used to enrich the soil around the grounds. The animals are also integrated into the curriculum and used to discuss concepts such as lifecycles and the importance of nutrition to an animal’s growth and development.

The school’s kitchen garden grows a variety of herbs and vegetables that students use for classroom cooking lessons; it is maintained by the six- and seven-year-olds in Grade 2. Some of the plants they regularly grow include carrots, tomatoes, peas, basil, parsley, thyme and oregano. Edible plants are also spread throughout the grounds and include many of the children’s favorites such as raspberries, blackberries, strawberries, black currants, gooseberries and other fruit bearing bushes. The fruit garden also includes a Victoria plum tree and a graceful old apple tree that predates the school and provides many bushels of apples each year. Cowick students and staff hold a harvest festival each fall to celebrate the edible bounty from their grounds.



*The kitchen garden (above) is used to grow a variety of herbs and vegetables students can use for classroom cooking lessons. The garden is maintained by the six- and seven-year-olds. The minifarm (top right) has chickens, guinea pigs and rabbits in spacious outdoor enclosures.*



*Loose, natural materials like these tree rounds add creative play opportunities during recess for very little cost.*

## CREATIVE PLAY WITH NATURAL MATERIALS

Unlike most contemporary schoolyards, the elements that foster creative play at Cowick First School are generally made from materials other than metal and plastic. Wooden play equipment, grassy mounds and other features made from unfinished logs and boulders help to connect children to the natural environment.

Living plants have also been used to create play spaces on Cowick's grounds. An enticing collection of living willow play elements (see "Green Mansions," *Landscape Architecture Magazine*, June 2002) and artwork adds seasonal variety to the play environment. A seven-year-old willow dome (built using *Salix viminalis* whips) is a centerpiece of the play yard and acts as an informal meeting area, small outdoor classroom space and a shady, quiet environment for students to sit away from the active play field.

In 1990 the school installed a series of wooden play and exercise structures in the schoolyard. The earth that was left over from digging the foundations for this play area was then used to create tall, grassy mounds nearby for the students to play on. The students love to climb up the hills and run or roll down them. The mounds are also used as part of the curriculum to teach concepts such as slope and gradient. The one drawback to having these fairly steep hills is that they are so popular it is hard to keep the grass growing on them due to the constant pounding of small feet.

Unfinished wooden logs are also used in a variety of

places around the grounds to encourage creative play. My favorite example is their simple but brilliant "chatterbox," a small four-sided cube structure with room for up to four students to "chatter" inside, and several more to perch on the roof. Teachers supervise the students through the open panels on two sides of the box, but it is enclosed enough to foster imaginative play and quiet, small group conversations.

Large rocks, donated by a local quarry to help the school teach geology, were installed on the school site about 10 years ago. The boulders selected represent all of the rock types naturally found in the region. One boulder now touchingly doubles as a memorial to a former student who passed away: A simple mosaic of a sunny face has been added to the rock with mirrors in the place of the eyes, so observers of the memorial can "see the sky reflected in Gemma Hill's eyes."

## TEACHING SUSTAINABLE RESOURCE USE

The ecological lessons of sustainable material use, reuse and recycling can also be found on the grounds. Like many schools, Cowick First School has a comprehensive recycling program that collects bottles, cans and paper, as well as a clothing collection bin used to collect items to donate to charity. They also have compost bins used to process animal droppings from the minifarm, left over food from student lunches and fruit wastes from their daily snacks. When it is mature, the compost is used to enrich the



*The "chatterbox" provides a framework for imaginative play and social space for conversation.*

soil in the kitchen garden and in other areas of the grounds.

A stunning, recycled mosaic mural that graces a large wall at the edge of an asphalt play area depicts children happily playing outside. The 100-foot long mural is composed of broken pieces of ceramic dishes, tiles and other items students helped collect to assist artist Elaine Goodwin with the mural. (See photograph on page 1 and detail below.)



Each year for the past 14 years, the students have planted at least one pine tree and then harvested one for display in their front lobby during the winter holiday season. This small-scale demonstration of sustainable forestry sends a strong message to students about the importance of well-managed forests and teaches them larger lessons about sustainable resource use.

Sustainability themes extend inside the school buildings as well, where students monitor their energy and water use on conveniently placed meters in the front hall. The school also has low-flow sinks in the students' bathrooms and a rain barrel on a downspout outside to teach—and practice—water conservation. These features help the students understand that they can make a difference in the school's overall impact on the surrounding environment.

## STEWARDSHIP OF THE GROUNDS

Cowick's grounds are extensive and richly varied, giving it diversity and uniqueness that make it very appealing as a teaching and play environment. As can be expected, the grounds require a good deal of annual maintenance by knowledgeable and caring hands. What is somewhat unusual here is that the stewardship of the grounds does not seem to impose a burden on the school: The features of the site have been added slowly over a long period of time, allowing the school to adjust to each addition and to integrate its continued maintenance into the curriculum and

other programs. In addition, an after-school club called "Ground Force" helps keep the rest of the site in order.

Ground Force is attended by approximately 12 seven- and eight-year-olds and meets twice a week after school. Some of the school's teachers and administrators also meet regularly to assist with heavier tasks than the students can accomplish, and occasional "tidy up" days invite parents to participate in schoolyard improvements. The school's groundskeeper helps by cutting the large lawn and does annual major tree trimming tasks. With all of these different stewardship components in place, annual maintenance costs are generally kept quite low, and do not usually exceed \$1,000 per year for new materials.

Over the years, the school has received several awards for its work, including two prestigious "Eco-Flags" from the Europe-wide Eco-School organization, indicating its success at fostering ecology on school grounds. The school has also been the subject of a video documentary created by Learning through Landscapes, England's national green schoolyard organization.

Like most successful ecological schoolyards around the world, the landscape at Cowick School will never be "finished." It is still growing and will continue to be a living project that future classes of students and their teachers can add to as they enjoy it in the years to come.

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*Environmental planner Sharon Gamson Danks is CEO of Green Schoolyards America and principal of Bay Tree Design in Berkeley, California. She is author of Asphalt to Ecosystems: Design Ideas for Schoolyard Transformation and co-founder of the International School Grounds Alliance. Her work transforms school grounds into vibrant public spaces that reflect and enhance local ecology, nurture children as they learn and play, and engage the community.*

*For more information, please visit Green Schoolyards America at [www.greenschoolyardsamerica.org](http://www.greenschoolyardsamerica.org).*

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