# Outdoor learning and the curriculum: reflections on planning for impact

**Caroline Barker, Jo Montgomery** and **Guy Underwood** tell how embedding outdoor learning and science capital into the curriculum does not happen by chance

Great Abington Primary School is a small rural school near Cambridge where we have developed an enriched curriculum offer that is designed around curiosity and challenge. We believe that learning outdoors is essential and this is intrinsic to our school culture and ethos. Six years ago, we began our journey to refocus our curriculum and to expand and embed outdoor learning opportunities and science capital into our teaching and learning. In primary science, we embraced the Primary Science Quality Mark (PSQM, see *Useful links*) development programme (achieving PSQM Gilt in 2020 and receiving reaccreditation in 2024). From developing our vision for what the curriculum might look like for our learners, putting steps in place, and reflecting on and evaluating the impact, embedding outdoor learning has been a key element of our journey.

Spending more time outside during the COVID-19 restrictions gave us the impetus to further develop our outdoor provision. We could already see the benefits but until this point had not considered the extent of professional development required to ensure that there was high-quality delivery in this area. As such, we invested time and funds to train staff as forest school practitioners, created a growing area, an outdoor classroom, mounds, and expanded forest school and outdoor learning provision. We are also developing a STEAM area, with opportunities for curriculum learning in real-life contexts, such as pulleys and gears.

▲ Children experimenting in the outdoor classroom

Our school values and personal qualities guide our use of outdoor learning opportunities:

**School values:**

- curiosity
- positivity
- community
- healthiness
- safety

**Personal qualities:**

- respect
- caring
- cooperation
- responsibility
- motivation
- resilience

## What are the benefits of outdoor learning?

Many organisations identify the benefits of outdoor learning, including improved physical and mental

health and wellbeing, improved connection with nature, inclusivity and, anecdotally, improved learning, social skills and confidence (see *Useful links*). At Great Abington, we observe that, through spending time in nature, our children appear engaged, connected and motivated. For us this is an antidote to overuse of digital technologies, enhances science learning and problem-solving skills and forms part of our broad and balanced provision. In addition, we see improvements in physical health, environmental awareness and social skills. However, these do not just happen and it is important that, as well as facilitating time outside, we provide structured curriculum-based learning in outdoor environments. The opportunities available to us have challenged teacher planning and led to context-rich lessons that embed knowledge and skills in all areas of the curriculum.

We explicitly plan for real-life contexts in the outdoor setting, such as building a shaduf irrigation tool linking to history, learning about animals and plants in their habitats, and making stronger links between observations and evolution and inheritance. Teachers have found that the children's subsequent writing is richer, more empathetic and creative, as they draw upon physical experiences in addition to their research.

When in the outdoors, those children who find indoor spaces challenging have a range of opportunities to learn core subject knowledge through practical applications. For example, through collaborative building of structures to span a gap, they use prepositional vocabulary and mathematical terms. Through providing carefully planned, sequenced and contextualised learning opportunities, we are creating inclusive spaces for all the children to engage and develop conceptual and procedural knowledge.

▲ Using a shaduf to raise water involves some cross-curricular learning

**Life skills.** Through this intentional approach, we are enabling the children and young people to develop key life skills. These need to be planned explicitly and embedded across the key stages. In addition to conceptual understanding, children develop the skills of:

- teamwork
- risk assessment and taking
- communication
- leadership

## How do we create opportunities on our site?

As with any change, a clear, communicated vision and stakeholder buy-in were essential prerequisites to our plan. Evaluating the site and the local area (within walking distance) through a lens of outdoor opportunities enabled staff and school governors to understand the possibilities. External expertise (from Learning through Landscapes) was used to ensure we got the most we could from our plans and that we harnessed the passions of people associated with the school community. Detailed, scaled plans were essential for liaison with planning, architects and contractors. Funding for our outdoor developments required tenacity, grant applications and collaborations with local businesses to ensure we had the budget to realise our ambitions. All of these are practical considerations to justify our approach but what they really informed was the ability to have a more positive impact on teaching and learning, particularly in science.

We have seen children develop leadership skills, demonstrating responsibility in many areas, such as year 6 (age 10–11) science ambassadors inspiring younger children through hands-on activities at lunch times, with equipment supplied by the Ogden Trust. Sustainability and biodiversity is a theme across the school, with litter picking, recycling, composting and soil improvement all contributing to the children's experience.

The children have the opportunity to sell the produce and plants they grow, which gives them a sense of purpose and involvement in something bigger, teaches business skills and raises funds to put back into the

school. They learn about food sources and food waste, and think about what they eat and where it comes from.

As well as the school site, we use Abington Woods, a local woodland area, extensively across the academic year. This enables our children to take their learning from the immediate school environment and apply it to their local community. Our PTFA funds twice-weekly access to the site, and, given we have five classes, this equates to a substantial offer across the primary years. You can see lots of our outdoor learning opportunities in our social media feed on *X* @GA_Primary.

Science is a big part of our community; we have a research campus on our doorstep and are surrounded by scientific companies, research institutes and the nearby University of Cambridge. We invite parents and the community to share their expertise to support science teaching and learning, and we think that it is important to also show the children that science is everywhere in our everyday lives. As well as in traditional scientific roles, there are also STEM skills and expertise involved in a wide range of jobs, ranging from floristry and hairdressing to plumbing and mechanics. As a result, the children have the opportunity to see how the science they are learning is applied in the local area and through the roles of people in the local community. For us, this offers a really strong rationale for supporting the children in their perception of science, scientists and generally building science capital.

We are also involved with a number of projects in our community, including a partnership to develop a local 'pump track' (a mountain bike/BMX track) adjacent to our school site. At present we are involved in the River Granta Chalk Stream Project, helping to maintain and clear the banks of the river Granta, which passes through the village.

To support our ongoing monitoring and evaluation of developments, we have two lead science governors, regularly invite advisers into school and speak at local and national events. Although challenging to timetable, given our size and capacity, this review process helps sustain and enhance our provision.

Engaging the local community has been integral to our outdoor learning journey. Surveying parents to identify scientific skills enabled us to target and recruit experts for specific projects. More widely, the community have volunteered and been trained for forest school sessions, enabling a richer experience for the children with smaller ratios. On our site, we have lunchtime volunteers from the local allotment association as well as grandparents.

**Collaboration is key.** This approach gives children meaningful, real-world contexts (EEF *Improving Primary Science* recommendation 4) in which to learn, experience and understand environmental issues. It also provides opportunities for members of the local community to come and help with the growing areas, bringing expertise into the school. This communication and collaboration also extends to school leadership and governors.

## Adaptations

In order to make this all run smoothly, we have made some adaptations around the school. The children are practised in transitions and expectations for moving between the classroom and the outdoor setting, as well as having access to suitable clothing. Every day there are opportunities for children across the site or

Exploring forces in a real-life context!

through forest school sessions, so the outdoor clothing is another part of their uniform. We have also added some structures to the school site, including an outdoor classroom amphitheatre, wellington boot racks and mud scrapers. The children are great at not bringing the mud inside! We use CLEAPSS guidance to ensure we are working safely outdoors.

## Staff development

As well as members of the school staff being forest school trained (level 3), there is a lot of shared learning and 'in the moment' teaching decisions, such as if it's windy, seize the opportunity to go outside and explore forces and air resistance! This depends on secure subject knowledge, curriculum understanding and the confidence from the school leadership that this enhances and does not detract from learning opportunities.

The science leader worked alongside the curriculum lead and head teacher to embed outdoor learning within medium-term planning documentation. We are clear that we do not force outdoor learning across the science curriculum, applying a common-sense approach around relevancy.

**Professional development.** Establishing clear expectations of professional development and support is essential to help drive change and ensure continuity and progression throughout key stages. Staff are proud to share their science learning documents with school governors and external stakeholders. These focus on our school 'Science principles in action' and 'Scientific enquiry' , which link the leadership agenda and school ethos to our day-to-day teaching.

## Top tips for schools to develop their practice

- To really have the biggest impact, a project to promote and embed outdoor learning needs support from the head teacher, senior leadership, governors and staff. At Great Abington Primary School we have the perfect combination: the Head is motivated and passionate, staff are enthusiastic, governors are supportive and the wider community are involved.
- Have a vision – and stick to it!
- Seek funding – there are opportunities out there – and also seek advice.
- Make it meaningful, well planned and closely linked with the curriculum.
- Don't try to do everything at once. Pick one idea that is right for your context, and do one thing well!

**USEFUL LINKS**

Learning through landscapes: https://ltl.org.uk/news/5-key-benefits-of-outdoor-learning

Forest Research: www.forestresearch.gov.uk/research/forest-schools-impact-on-young-children-in-england-and-wales

Primary Science Quality Mark: www.herts.ac.uk/for-business/skills/psqm

Education Endowment Foundation, Improving Primary Science: https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/primary-science-ks1-ks2

CLEAPSS: https://primary.cleapss.org.uk

Ogden Trust resources: www.ogdentrust.com/resources

**Caroline Barker**
*Science and English lead and year 6 teacher, Great Abington Primary School near Cambridge.*

**Jo Montgomery**
*Scientist, teacher, trainer, science education consultant and PSQM hub leader and Expert Advisory Group member. Member of the ASE Teacher Developers' Group.*
@DrJoScience
www.drjosciencesolutions.co.uk
drjo@drjosciencesolutions.co.uk

**Guy Underwood**
*Head Teacher, Great Abington Primary School.*
@GA_Primary