Can't see the wood for the trees? What Forest School can do for science

Figure 1 Children examine the natural willow fence added to enhance the Forest School site

Jack is a child who finds it difficult to function in a traditional classroom setting. Playtimes too are a challenge, as he finds it hard to manage social interaction with peers. You would not recognise him in Forest School; he is totally absorbed and able to work alongside others positively.

Jenny Hayward explores the impact Forest School can have for learners

Jack is by no means unusual: I can think of countless examples where Forest School has made a significant difference to individuals. Fundamentally, it presents an opportunity to see the whole child and in the current climate of assessment demands and social pressures it takes on an even greater significance. Working outside is very calming and provides valuable head-space time for both children and staff.

What is Forest School?

Originating in Scandinavia, Forest School is a form of child-centred outdoor education with an ethos of promoting children's independence and raising children's self-esteem. It also allows children to pursue their own interests and fosters curiosity in the natural world. The emphasis on child-led learning within a framework of tight boundaries and expectations allows the children to have the confidence to learn new skills and try things out for themselves.

I have been involved in delivering Forest School sessions for almost five years. It consistently receives a big thumbs-up in pupil surveys, where the children frequently say that they love it. Further, it complements our school curriculum and helps develop British values. Since Forest School is an *approach* to learning, schools tend to develop their own model: rather than a fixed approach there is flexibility to suit your own setting.

Forest School in practice

At my school, Highfield Infants in Bromley, Kent, all classes receive three four-week blocks of Forest School during a year. Only storms and high winds would prevent a session from going ahead and the concept that '*there is no such thing as bad weather, only the wrong clothes*' underpins the philosophy. This helps to build a sense of resilience and adventure among our children as they head off and face the elements on a rainy afternoon. The sessions take place on a narrow strip of otherwise unused land. From time to time we use a second smaller site to rest the main site. By doing this we are creating an awareness of environmental impact.

Recently we have established connections with a local tree surgeon, who provides us with woodchip and log sections. Over the years we have also enhanced the site by planting a natural willow fence (Figure 1). This was funded with the support of our Friends' Association, which has also

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Figure 2 Enjoying a hot chocolate at base camp while discussing the day's activities

allowed us to purchase waterproofs for the children. Through experience we have found it easier to supply clothing rather than relying on children bringing in their own. We have separate sets for early years and key stage 1.

Over time, routines have been developed to minimise disruption and avoid a trail of mud through the school. This has involved liaising closely with midday supervisors and, although it is not essential, it is great to have the support of parents during the sessions. An annual Forest School workshop for parents is held every October, which allows new parents to become familiar with the philosophy and enables them to offer an appropriate level of support in sessions. Information is also available on the school website and through newsletters.

Leading the sessions

Forest School needs to be delivered by qualified leaders and I benefited from some free training that was offered locally. Our other Forest School leader, Dawn, has a background in floristry with no formal training in education. Dawn runs the school gardening club and our family gardening sessions. She leads two of the three weekly Forest School sessions at Highfield and the class's teaching assistant provides additional support; we lead the third session jointly. For me it has been lovely to see Dawn's professional confidence grow and in the autumn term a member of the senior leadership team was 'blown away' by the quality of her session.

Science curriculum links

Forest School has strong cross-curricular links and, as science and forest lead, I feel it has a special relationship with science. When planning themes for the sessions, they often link with the science curriculum and those links are clear. The environment lends itself to exploring seasonal change, using and discovering properties of materials, plants, habitats, birds and animals and much more! However, it is important to be aware that Forest School is not an outdoor science lesson.

To appreciate this more fully we need to examine the structure of Forest School sessions. Discussions at 'base camp' (a circle of log seats) mark the beginning and end of each session. Through discussion, rules are recapped and we always consider *'What has changed since the class's last visit?'* Given the gap between the blocks of sessions, there are sometimes distinct comparisons to draw on. Contributions can seem a little random, for example *'that bucket was not there last time'*, but it is important to value all observations. Similarly, the end of the session is marked by hot chocolate and a sharing of experiences (Figure 2).

An optional task is always available, which is modelled in the introduction. In year 2 (ages 6–7) we use simple tools such as potato peelers and work on knot tying. Generally the children are outside for 90 minutes, so consequently there is plenty of scope for individual and small-group exploration. This provides a real-world context in which to develop working scientifically skills. I am consistently amazed by the children's investigations (Figure 3).

On a mild and damp November afternoon Jasmine thought it was a good time to make a 'mud bowl' because the ground was not too

Figure 3 These year 2 boys were using diggers to investigate the sounds the different logs made

Some views on Forest School

Key stage 1 children

Forest School lets you get close to nature.

I love making dens and making mud balls.

I like learning how to be around insects and give them respect and I like getting muddy.

You get to work with mud! You like learning new things, being outside helps me to remember things that we are learning.

I love Forest School because I enjoy rolling the tyres down the hill into the fence and also I like working with plants and the environment.

I love Forest School because Mrs Taylor teaches us all sorts of stick experiments.

Because it's a chance to learn about the outdoors.

This is one of the best things I do at school because you never know what stuff you'll find.

We learn about bugs through the microscope and look for and find signs of spring and summer.

I love Forest School because I like playing with mud, and having hot chocolate in winter. I love being outdoors as the teachers teach me how to make things out of sticks and branches. I like working in teams with my friends.I learn a lot about nature.

I like building things and I like the fire.

Teaching assistants

I feel it benefits children who have behaviour problems or learning difficulties; there's no pressure to rush or understand. They are just working at their own pace independently and peruse their own interests while learning. (Mrs O.)

I think it builds children's confidence in an outdoor setting. In particular it supports problem-solving, communication skills and imagination. It lets children be children, having lots of fun without too many rules or restrictions. Freedom! (Mrs H.)

Figure 4 The fire session provides a chance for children to experience the states of matter

cold. There was great excitement the other afternoon when some 'dinosaur bones' were excavated: '*What's your evidence?*' I asked and was told '*They just look really old*'.

The opportunities for child-led enquiry are limitless and the questions the children pose as a result of their own investigations and observations could never be planned for. So often the explanations and descriptions the children provide for their explorations are delivered with far greater confidence than in the classroom.

For me, it is magical to see the value of these enquiries. It is clear that this type of learning is just as relevant for the year 2 children (ages 6–7) as for early years' children (ages 3–5) and colleagues teaching key stage 2 (ages 7–11) report similar findings.

We have always taken photographs in Forest School but in the last year we have maximised this formative assessment opportunity through a key stage 1 version of our early years observation app. These help to support summative assessments. An additional outcome has been that staff in the classroom feel more confident to record less in books, as it provides evidence of practical tasks.

Each year the 'fire' session is a highlight of the school year for many of the children (Figure 4). It represents a rich observation opportunity and a chance for children to experience the states of matter. This is just one example of the capacity of Forest School to sow the seeds for the future development of scientific concepts.

Conclusion

Forest School should not be seen as a way to deliver science. Instead, it should be regarded as something that is uniquely positioned to support the development of enquiring minds and positive learning attitudes. Such attributes are key components in the effective development of children's scientific education.

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