WELCOME TO OUR GARDEN!

JAZ KALIRAI

Jaz reports on how teachers rose to the challenge of providing high-quality outdoor education by making use of what was once a piece of wasteland at St Peter's Junior School, Derby.

St Peter's Junior is a thriving, multi-ethnic church school outside Derby city centre. It is situated off a busy main road and surrounded by residential housing. It has two playgrounds and what was once a patch of scrubby grassland.

Providing high-quality outdoor education within the school grounds for 250 pupils was always going to be a challenge, but one we rose to magnificently! The pupils worked with creative practitioner Katy Doncaster and her husband Fraser to share ideas about how they wanted to use and develop their school garden. Meanwhile, we encouraged community ownership through parents adopting a piece of land, which has been turned into a fertile patch with a variety of flowers, fruit and vegetables.

A regular band of young enthusiasts make up the Gardening Club. They work hard to help maintain the beauty of the garden, which resulted in a series of awards, with praise from Ofsted in June 2013:

'The cultivated garden area in the grounds provides a wealth of opportunities for pupils to learn and develop spirituality and to contribute to the whole-school community, for instance by growing vegetables and taking responsibilities'.

The original wasteland has been transformed into an oasis used to enhance teaching and learning across the curriculum, throughout the school year (Figure 1). Here are some of the geography activities that we use the garden for (more can be found on our blog – see web panel).

History

Year 5 pupils collected fresh ingredients from the garden to create Tudor potage. Year 3 held a 'Battling Britons Day', setting up camp in the garden and cooking spelt bread on the campfire. As part of an Egyptians topic, year 4 pupils mummified a shop-bought chicken (named Tut-ankh-a-HEN!!), which was given a formal burial in the garden: the site is marked by a home-made pyramid.

Design Technology

Year 6 used a home-made apple press to make juice and apple crumble. They designed and made bird tables from scrap timber; and built a play house from reclaimed pallet timber, in-filled with 2-litre plastic bottles, which makes a great hideout!

Mathematics

Pictures of birds were hidden in the garden. Pupils had to find them, work out the co-ordinates on a scale map and write them down. Pupils have surveyed the garden with 50m-long measuring tapes and then drawn a plan to scale, adding in key features.

Art and Design

Natural sculptures have been created based on the work of Andrew Goldsworthy.

English

Pupils have studied *Alice in Wonderland* and then incorporated parts of the story into a living display.

Science

Pupils have studied minibeasts, tadpoles and water plants in the pond, grown plants from seed, and observed nesting birds via a webcam (see web panel).

Figure 1: The garden across the curriculum. Photos © St Peter's Junior School, Derby.

African keyhole garden

The pathway leading to the open part of the garden has been transformed into a haven of highly productive raised beds. Among these, our 'keyhole garden' combines work from two year groups. Year 4 used ideas from the 'Send A Cow' charity to work on an 'African keyhole garden' project with villages in Africa. This style of gardening makes the best use of available land and composting material. Subsequently, when we moved on to a Tudors topic, we integrated the cob building technique into our garden design.

The pupils were learning about different parts of Africa and how some areas receive very little rainfall. In helping construct the garden, they discovered how and why it required very little water to yield a large crop. Fruit was composted, seeds were sown, crops grew and were consumed.

During their studies of parts of Africa, year 5 cultivated a gourd and bean arch using crops, such as red and green Kuri squashes, from different parts of Africa. When the topic changed to the Americas, they spent the day in the garden discussing foods eaten in different parts of that continent, and made tortillas and re-fried beans from scratch. As year 6 studied Rainforests, they planted quinoa, cucurbits and sweetcorn as examples of South American crops.

Rivers

Year 5 created a model of a simple river system in the garden with Katy and Fraser. This brings to life the principal features of rivers and how they can shape the landscape. As part of the Americas topic, year 5 studied the Colorado River and its impact on the landscape: in particular, the formation of the Grand Canyon. They began by comparing the nearby River Dove to the Colorado River, then reviewed the water cycle, using maps to locate rivers around the world. Using maps, they compared the length of the main rivers in the UK (including the River Dove) and located the major rivers in the world (including the Colorado). Map work skills and the use of six-figure grid references were put to excellent use during this work.

Our river in the garden is constructed on a slight gradient, using a large piece of tarpaulin with a water butt at the top end (Figure 2). This allows the water to flow gently down the river system. Using this, pupils looked at the features of a river, from source and tributaries to delta and mouth. The pupils can clearly observe how water flows faster at the upper course, more gently through its middle and slower still through the lower course of the river.

Different types and grades of materials were used to illustrate how erosion, deposition and transport of sediment occur over the course of a river journey. The pupils were able to study how the size of particles affects where they are deposited. They drew detailed diagrams, which prompted much discussion about how important rivers are. The pupils loved the opportunity to play in the water, especially at the end of the activity, when we tipped-up the water butt and had a flood!

Climate and seasons

The garden is open throughout the year, and is a great way to explore natural seasonal changes. Our weather station, consisting of a thermometer, barometer, home-made weather vane, rain gauge and sundial, is used by all year groups. As they collect data from the station, it provides excellent opportunities to develop data-handling skills.

Year 6 pupils have attempted to forecast the weather by looking for patterns over a period of time, and making predictions using data collected. The weather station has also encouraged the pupils to use a range of weather apps and the BBC weather site. They are becoming increasingly familiar with the correct vocabulary relating to climate and weather.

During the last solar eclipse, we took part in the National Eclipse Weather Experiment, taking weather readings from 8am until 11am. These formed part of the data from 400 schools reported nationally that day. Our graph of temperature readings during the eclipse showed a noticeable drop in temperature. We took images of the eclipse using a home-made pinhole viewer.

Figure 2: Using the model of a simple river system in the garden, pupils can look at the features from source to mouth. Photo © St Peter's Junior School, Derby.

Map work and orienteering

Teachers ensure that mapping skills show progress across the years. The garden is ideal for map work and developing drawing skills, its layout provides excellent opportunities for differentiation. Year 3 pupils have looked at alpha-numeric co-ordinates while year 4 used four-figure grid references. Years 5 and 6 focused on six-figure grid references and made detailed use of OS maps of the local area. The school site has been mapped by the pupils using, and creating, differentiated maps. These maps have then been used for orienteering activities.

Conclusion

Our garden is an amazing piece of land, which provides pupils with the sort of experiences that might otherwise only be had through expensive school trips. Its impact on pupils has been reflected in their confidence when they have been away on field trips and residential visits. In our garden pupils experience the beauty of nature first hand, and develop a respect and reverence for the natural world. As Katy put it: 'We made a garden. We dug, explored, planted, got rained on, got too hot, got muddy. It didn't look like much at first, and we didn't really know what it was going to look like when we finished. We found out lots of things along the way. And we haven't finished... we've only just begun!'

The latest addition to the garden has been our own sandpit. Our next goal is to use the school grounds for an overnight camp with younger pupils.

We are very happy that the importance of all our hard work in the garden has been recognised by Ofsted and others. Visitors are always welcome!

Acknowledgement

With special thanks to Katy Doncaster, Fraser, and all the pupils, staff and parents of St Peter's Junior School.

WEB RESOURCES

St Peter's garden blog: *http://stpetersgarden.weebly.com/*
St Peter's pond: *http://www.daviddomoney.com/2014/05/23/cultivation-street-st-peters-school-garden-pond-by-the-students/*

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