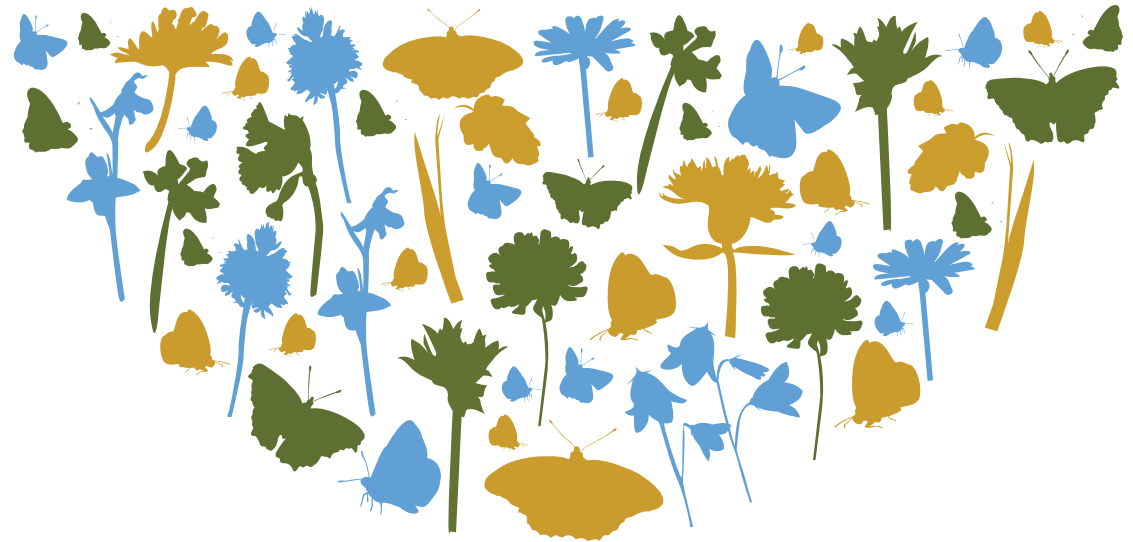


BigNature@Dorothy-Stringer.co.uk



# The Big Nature Centre

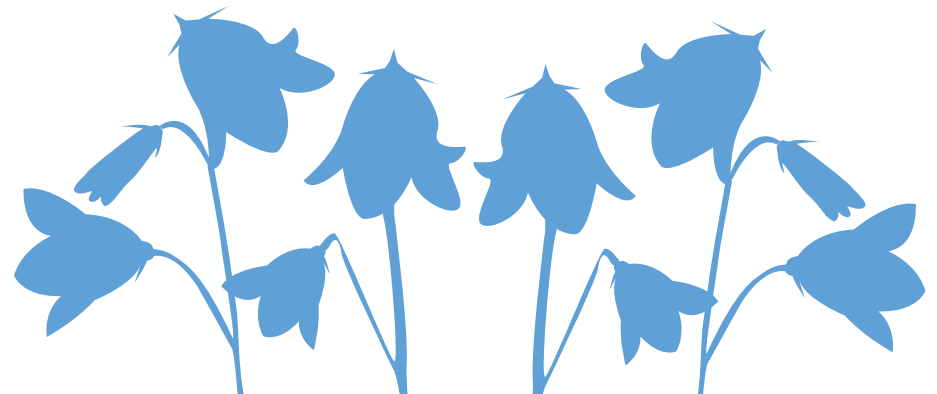




Pupils survey downland flora

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# Providing environmental education for the children of Brighton & Hove

Big Nature, working in partnership with Dorothy Stringer School, is delighted to offer a range of environmental education programmes for the children of Brighton & Hove. Learning outside the classroom offers a unique contribution to a child's education and gives many varied benefits to them, as well as their teachers. This includes developing a sense of place, as well as awe and wonder for the living things found in their local environment. By taking part in these experiences, children develop independent study skills and learn lessons that complement those taught within the more traditional confines of the classroom setting. At the same time, they also have fun and get some exercise in the fresh air.

Dorothy Stringer School is located on the 28 hectare Surrenden campus in the heart of our city and is able to offer experiences more commonly found in a rural setting. The grounds have a series of contrasting habitats which can offer a wide range of opportunities for study, including:

- The uniquely landscaped Liz Williams Butterfly Haven boasting an abundance of chalk grassland wildflowers and insects.
- An urban woodland, traditionally managed to illustrate human impacts on local natural environments.
- An educational pond designed specifically for children to safely investigate aquatic habitats.
- The Aung San Suu Kyi Peace Garden sympathetically planted to encourage urban wildlife.

The Brian Foster Environment Centre acts as a base for indoor investigations, linked to the surrounding habitats and demonstrates how an existing building can be retro-fitted to incorporate sustainable technologies.





The scarpe slope of the South Downs, just 6 kilometres from Dorothy Stringer School

There is no substitute for working outdoors; through this approach we aim to share the responsibilities of increasing the bio-literacy, bio-numeracy and bio-empathy, providing environmental education for all who visit us. This is because, in the words of Sir David Attenborough:

“No one will protect what they don’t care about; and no one will care about what they have never experienced.”

The activities described in this brochure aim to help children develop their personal learning and thinking skills in teamwork, effective participation, creative thinking and reflective learning, as well as appreciate the economic and social issues surrounding the human impact on our local and global environment.

Although these course examples are precisely planned we also offer bespoke courses.

For more information about content, booking and prices please contact us at: **[BigNature@Dorothy-Stringer.co.uk](mailto:BigNature@Dorothy-Stringer.co.uk)**.

Common Bird’s-foot Trefoil (*Lotus corniculatus*) - Pastures, grassy places and roadsides. Ubiquitous.\*



# Discovering the wildlife on your doorstep

Key Stage 1

Ages 5-7 Years 1 and 2

**Curriculum Links Sc2:** 1c; 2a,b,e,g; 3a,c; 4b; 5a,b,c.

This day course is designed to develop caring attitudes in children through engagement with different kinds of plants and animals in our local environment. The children will use **evidence** obtained to help them develop a **vocabulary** that describes ways in which our environment affects the diverse plants and animals found here. They will learn to **sort** and **classify** living things by **identifying observable similarities** and **differences**, as well as to distinguish the differences between various environments.

Common Knapweed (*Centaurea nigra*) - Grassland, field edges, roadsides, waste land etc. Ubiquitous

## Example activities:

- Children are introduced to the requirements of different animals by exploring an “advent calendar” tree. They find that behind each door is a different animal species, living in a different part of the tree.
- Outside, the children navigate the school nature reserve, searching for “advent doors”. Developing their observational skills they learn about the habitat needs of the different animals.
- Children learn how to identify, draw and label a number of plant species from a range of different habitats, thus making them aware of where and how they grow.
- Using pitfall traps children explore the variety of invertebrates living on both the grassland and woodland floor. Through a range of games they sort and classify these animals using observable similarities and differences.
- Throughout the day children discover how we can look after different habitats to enhance the conditions for the plants and animals that live there.



# Identification, classification and interpretation

Key Stage 2

Ages 7-11 Years 3, 4, 5 and 6

**Curriculum Links Sc2:** 1a; 2c,g,e,h, 4a,b,c, 5b,c.

This day course further develops the understanding that living things are grouped according to a **classification system** and that there are a variety of ways to do this, by recognising similar **characteristics** in **similar species**. The children will also learn to identify commonly occurring **local invertebrates** and **collect field data** in the form of **species abundances** and **distributions**. These data act as **evidence** to illustrate particular **species** require precise **resources** supplied by specific **habitats**.

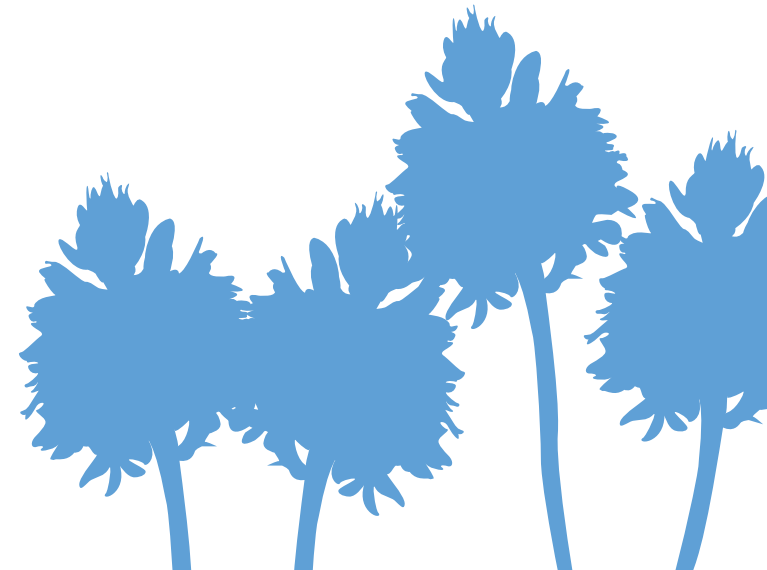




## Example activities:

- Children learn how to construct a dichotomous key using leaves or twigs gathered from native trees found in the school nature reserve. From the observed characteristics of these specimens they produce a poster, which can be taken home.
- Children use beating trays to explore the variety of invertebrates found in our urban woodland.
- Alternatively, sweep-nets can be used to make a comparison between invertebrates found in the different grassland types of the Liz Williams Butterfly Haven.
- Each child will be given the opportunity to draw a bar chart of their results or construct a key based on the characteristics identified in drawings they have made of their animals.
- Using their data, children interpret the distribution and abundance of the animals they have discovered.

Pyramidal Orchid (*Anacamptis pyramidalis*) - Calcareous grassland. Common on the downs, rare elsewhere\*





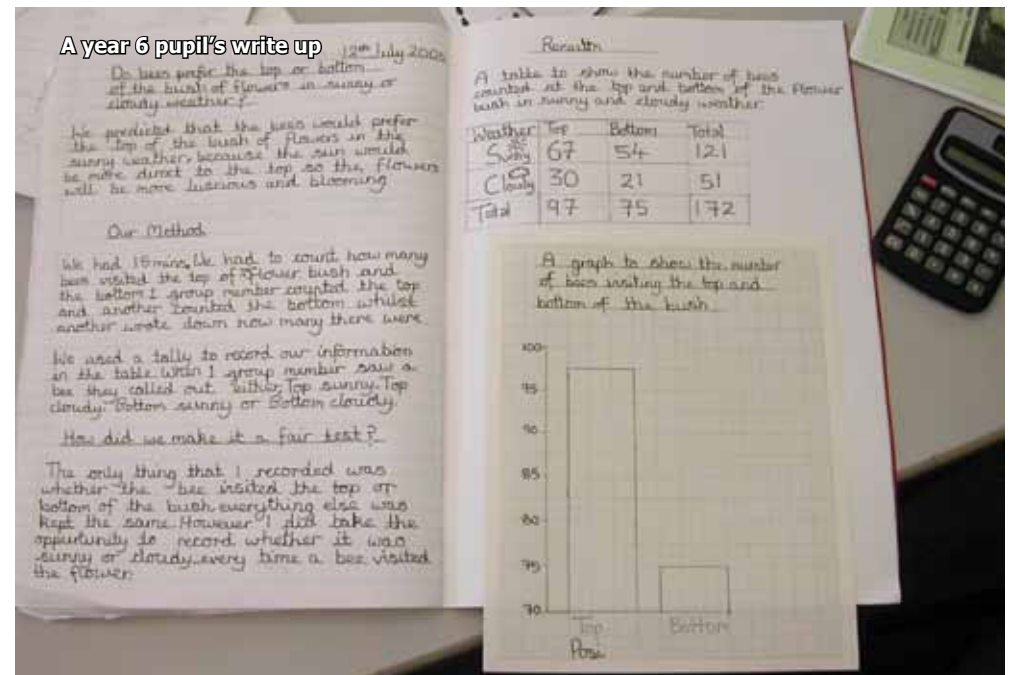
Encounters with *Segestria florentina*



Pitfall analysis



Reproductive biology - the Green Shieldbug *Palomena prasina*







Tree beating



A bee survey project



Tree identification



Engagement with nature in the Butterfly Haven



# Ecological techniques, feeding relationships and adaptation

Key Stage 3

Ages 11-14 Years 7, 8 and 9

**Curriculum Links:** 1.1b, 1.2b, 1.3a, 1.4a, 2.1a,c, 2.2a,b, 3.3d, 3.3e, 3.4, 4d,e,g.

Children consider the idea of **sampling** to **understand**, **assess** and **monitor** particular **habitats**. For example: what size **quadrat** should be used to **survey** the **vegetation** within grassland? If you want to **compare** the invertebrates living on trees and bushes, within a grassland sward or on the ground, what **techniques** could be used? How do you **investigate** the life in a pond, **collect** night flying insects or survey small mammals? All of these techniques can be explored whilst gaining experience of **measuring abiotic factors** such as **light intensity**, **temperature**, **soil temperature**, **pH** and **wind speed**. By integrating these approaches to ecological field work, children can independently study aspects of **feeding relationships** and **adaptation**.

Clustered Bellflower (*Campanula glomerata*) - chalk grassland, confined to and locally frequent on the Downs\*



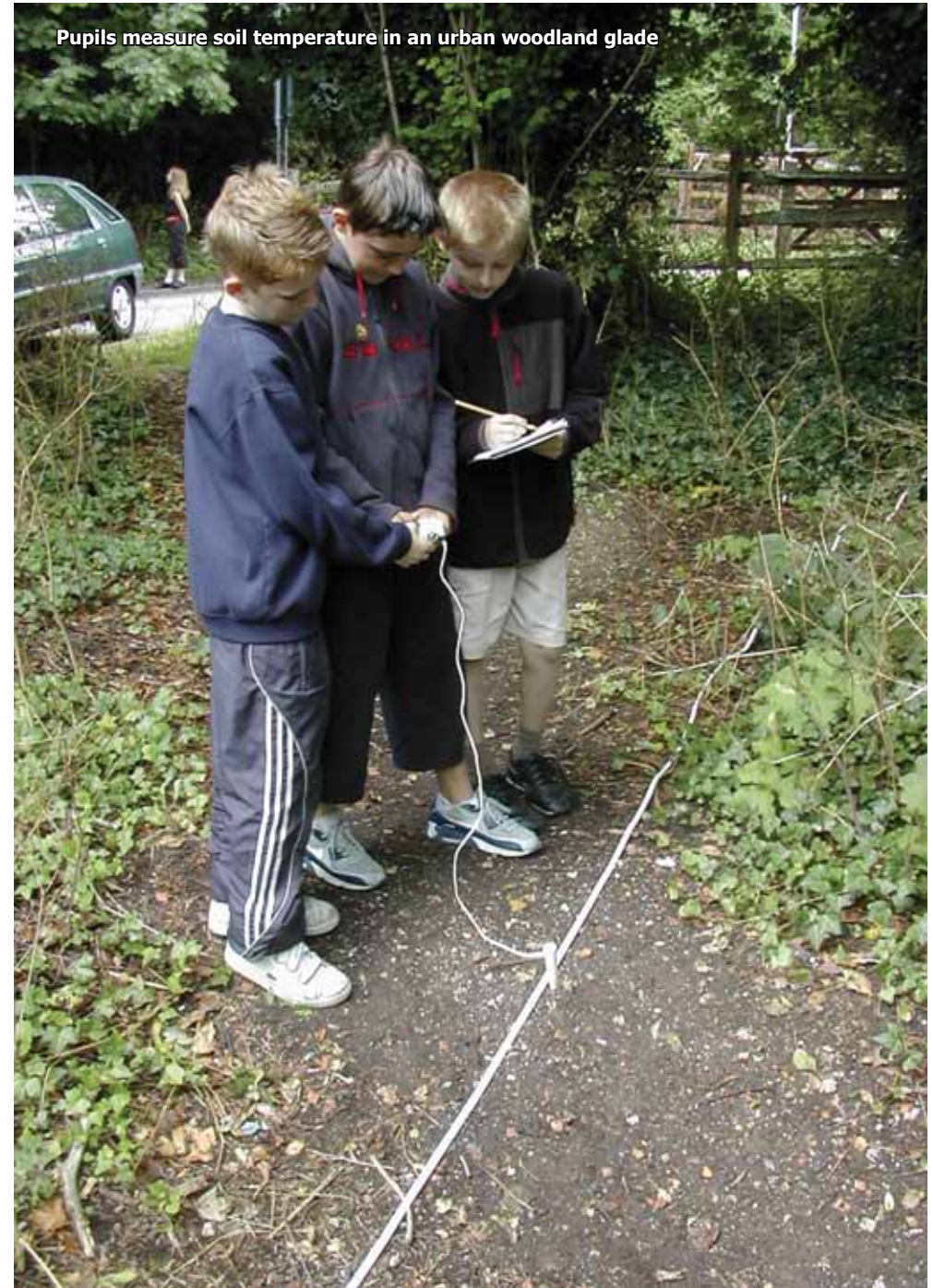


## Developing independent study skills

### Example activities:

- Children record the number of wild flower species in different sized quadrats to identify the optimum sized quadrat for investigations.
- Children discover how to sample for invertebrates in a range of different habitats using techniques such as sweep-netting, tree beating, pitfall trapping and pond dipping.
- The abundances of birds, bees or butterflies are explored by children using standard transects.
- A range of equipment is provided for children to use to measure abiotic factors such as light intensity, temperature, soil temperature, pH and windspeed.
- Labelled drawings are used to consider the adaptations that help invertebrates to survive in their native environment.
- Food chains, food webs and pyramids of numbers are constructed using data collected from the pond, using standard sampling techniques.

In an optional second day, children can use the skills described above to undertake an independent research project, grounded in the philosophy of, "How Science Works". Such work can lead to interpretation and conclusions drawn from the children's own data and evaluations based on their experiences of developing their own methodologies.



# Forest schools

The philosophy of Forest Schools is to provide an inspirational process that offers children, young people and adults, regular opportunities to achieve and develop confidence and self-esteem through hands on learning experiences in the Dorothy Stringer woodland environment. We have found that individuals of all ages and abilities respond positively to this approach but it's particularly helpful for children with a range of learning difficulties, allowing them to explore the natural world in a productive and liberating way, often helping them to participate in mainstream schooling in a more inclusive manner.

We intend to offer bespoke Forest Schools sessions from September 2013, for more information about content, bookings and prices please contact us at: [BigNature@Dorothy-Stringer.co.uk](mailto:BigNature@Dorothy-Stringer.co.uk)

Bee Orchid (*Ophrys apifera*) - Short grassland and roadsides. Frequent on the Downs, rare elsewhere\*







Natural fire tools



Concentration - an essential skill to develop for those who loose focus easily



Breathing control - an important exercise for the dyspraxic child



Fire - smiles all around



## Contact us:

Visit [www.bignature.co.uk](http://www.bignature.co.uk)

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## Thanks to:

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## Source:

\* Records (1966-78) of the Sussex Flora Society