



National Education Nature Park

Inspired to make your school a bit greener?

This research has fed into the National Education Nature Park, a free programme empowering young people to make a positive difference to both their own and nature’s future. The Nature Park develops young people’s green and digital skills and positively impacts the wellbeing of children and young people. Every small change is tracked on an online map, highlighting the collective difference being made for nature.

All education settings in England can join – no previous experience or green space is required. To join, register at educationnaturepark.org.uk or scan the QR code below.



Supporting plant science in schools

The Hoe Valley project shows that a simple green intervention in a school context has both environmental and educational benefits.

“I believe it is vital for students to see the connections between the knowledge learned in science in the classroom and how that knowledge is acquired by working scientists. This project really ticked those boxes and brought alive the concept of research in the field of plant science to solve current real-life problems.”

Oliver Woolley, Assistant Head Teacher, Hoe Valley School

“I’m delighted that the project has sparked an interest in science and highlighted the importance of having new generations of scientists who understand how we could use plants to tackle environmental challenges.”

Dr Tijana Blanuša, RHS Principal Horticultural Scientist

To find out more about how the RHS can support growing and gardening at your school, scan the QR code below or visit schoolgardening.rhs.org.uk



All about hedges

Find out more about the environmental benefits they provide and their role in promoting biodiversity



All about hedges

Hedges are a popular feature of our urban and suburban landscapes. They establish the perimeters of our gardens, parks and playgrounds, offer privacy and shelter, and run alongside busy roads.

They also provide a number of environmental benefits: trapping airborne pollution, providing habitat for wildlife, capturing rainfall, reducing localised flooding risks, and contributing to cooling in summertime.

Their environmental benefits

RHS scientists have been investigating how these benefits differ between various hedge species. For example, hedges with larger and denser canopies and rough and hairy leaves tend to capture more airborne polluting particles. “Thirstier” plants with larger and denser canopies tend to reduce rainfall run-off most, especially in summer.

In a recent two-year project, funded by a Built Environment Fellowship from the Royal Commission for the Exhibition of 1851, we also investigated whether mixing hedge plants (e.g. evergreen with deciduous, or plants with different leaf characteristics) can improve the provision of environmental benefits.

Field experiments were carried out over four seasons, and showed there was indeed some benefit in mixing plants. For instance, introducing evergreen plants such as *Thuja* into a hawthorn hedge reduced rainfall run-off in autumn and winter.

In summer, however, deciduous hawthorn was better than the mixed planting, as it’s more active physiologically compared with conifers. This meant that it removed more



A male yellowhammer in a hedge.

water from the soil, which then had a greater capacity for storing further rainfall.

Hedges and biodiversity

What we as gardeners do in the green spaces available to us can make a huge difference to the environment and biodiversity. This includes outdoor spaces at school sites, which offer many opportunities for enhancing the environment and strengthening learning about sustainability.

Hedges are living boundaries. If you are thinking about replacing a fence or wall, why not plant a hedge instead? Imagine the difference we could make if all our schools were bordered by hedges.

For more information about the plant traits that help to deliver these benefits, scan the QR code below.



Hedges in schools

RHS scientists have been working with Year 10 pupils at Hoe Valley School in Surrey. In this project, two mixed hedges were planted near a busy road.

Pupils took measurements of soil moisture, air pollution particles deposited on leaves and temperatures around the hedges. Some pupils used an RHS educational app to learn how plants can mitigate flood risk, improve air quality and provide summertime cooling.



Pupils at Hoe Valley learn about leaf types.

As part of the project, we also measured whether engagement with science and horticultural research changed pupils’ views on what plants can do for the environment and how they themselves can become involved with looking after green spaces in their areas.

We found that the pupils who had prior experience of doing gardening themselves outside school had significantly stronger positive environmental attitudes than those who did not.

“The project has taught me that hedges provide valuable wildlife corridors and shelter and food for a wide range of creatures.”

Year 10 pupil, Hoe Valley School, Surrey.

However, those without prior gardening experience had a more pronounced positive attitude shift as a result of the RHS engagement activities.

This indicates that exposure to gardens and gardening is important for attitude formation among young people. It also suggests that engagement with horticulture in schools provides an important mechanism through which this exposure can occur.

The project with Hoe Valley School was funded by the Built Environment Fellowship from the Royal Commission for the Exhibition of 1851. This was awarded to RHS Principal Horticultural Scientist Dr Tijana Blanuša. To find out more about this research, email tijanablanusa@rhs.org.uk



New mixed planting at Hoe Valley School.