



NOVEL APPROACHES

Investigating Plants in Primary School Science

In September 2017, children from nine Devon primary schools met Carl Linnaeus, as part of a science drama workshop.

Funded by LSL and The Wildflower Society, the workshop is part of a research project in biological education. Project co-ordinator Bethan Stagg explains: "we are investigating a variety of novel approaches to engaging adults and children in botany, from identification keys on mobile phones, to plant-themed memory games. This is our second drama project and it has proved to be a highly effective medium for inspiring children and transforming attitudes to plants." The workshop was produced in collaboration with Theatre in Education company *Act On Info*, with actor Ben Jewell playing the character of Linnaeus.

The workshop was popular with teachers and children alike, with one Year 6 (10-11 years) teacher stating: "Since the changes to the National Curriculum in 2014, it has been difficult to find quality resources and ways into teaching about Linnaeus and his work. The workshop really engaged the children and brought the learning to life." The 90-minute workshop opened with Linnaeus visiting the school to recruit apostles for his expeditions, with children undertaking a series of challenges to gauge their suitability. One of these was a game in which children formed a human obstacle course of cobwebs, carnivorous plants and swamps, which classmates navigated to capture a rare plant. In a subsequent activity, pupils classified themselves according to their names, appearance and behaviour, followed by a similar activity based on a tray of live mosses, ferns and flowering plants.



LEFT:
Students navigate the expedition game
© Bethan Stagg

BELOW:
Linnaeus teaches children about his classification system for fern, moss and flowering plant specimens
© Bethan Stagg

Linnaeus introduced children to his life's work naming and classifying biological organisms, passing around unusual plants for children to touch and smell. One pupil declared: "I want to find out and see all of those new plants. I finally understood why my granddad loved them so much." Linnaeus went on to explain the purpose of scientific names, using a pineapple, apple, pine cone and pineapple weed (*Matricaria discoidea*) to illustrate his point. After an introduction to the binomial naming system, students created their own species names, using an identification key and Latin dictionary. One pupil felt like "an actual scientist naming your own plants".

Our evaluations revealed that there was a significant increase in children's knowledge and positive attitudes towards plants. The elements that particularly benefited learning were the first-hand experiences with live plants and the physical and participatory qualities of drama. The recurrent theme in interview feedback was that children felt enhanced interest or appreciation of plants as complex and diverse organisms. The drama project outcomes provide a strong argument for increasing the use of drama in primary science.

Bethan Stagg FLS