

Bringing gardens to life

Francis Smith outlines ways in which your early years practitioners can build the enthusiasm of under-fives for practical gardening – including nasty nematodes



Much of my work at Studio Cultivate, which I set up to get children excited about plants and their outdoor environments, is with under-fives. And over the past 15 months I have created a challenging EYFS gardening programme, which has enabled early years children to work with complex and abstract concepts – to my delight.

Last winter, I trialled Soil Detectives, a module focusing on soil as an amazing resource and habitat – not just dirt. I had some initial reservations, as much of the matter is either subterranean or microscopic. However, by means of anthropomorphising, modelling and practical gardening, the children swiftly engaged with the themes.

Soil making machine

We began by exploring the constituent parts of soil. We built the Soil Making Machine, a Heath Robinson stack of recycled transparent bottles, complete with ventilation holes and filters. The children played and experimented with clay, sand, natural debris (collected from around their garden) and water, developing a tactile understanding of their contrasting properties. These they put in our Soil Making Machine, observing as it all mixed and decomposed over the course of the module.

Nematode attack!

Next, we investigated the creatures that occupy soil, the most outlandish

of which are nematodes and waterbears. Root-eating nematodes (microscopic, worm-like creatures) can cause sickness or even death to host plants. Waterbears (equally tiny, six-legged creatures) prey on nematodes, keeping their population in check. The waterbears quickly became the heroes, defending the garden from nasty nematode attack.

I reinforced this narrative, using outlandish nematode and waterbear finger puppets, resulting in some exciting hunts for the nasty nematodes (hidden around the garden). The puppets provided the characters for a fun game, but also enabled the pupils to engage with the anatomy: the nematodes' sharp, stylet teeth and the waterbears' powerful, clawed paws and armoured back.

The hungry worm

Worms followed, and, to demonstrate how they interact with the soil, we built a hungry worm – a long, fabric tube with compartments at either end, which they fed with leaf litter from around the garden, helping it digest by rubbing its tummy. In no time, the Hungry Worm produced a large poo (worm cast) to squeals of excitement from

the children, who used the casts to feed their garden plants, thus learning about the importance of worms to their garden's health.

Sleeping seeds

A key subject in the Soil Detective Module was sleeping seeds.

Attributing to them the human state of being asleep and awake introduced the concepts of dormancy and germination. "How do we wake our sleeping seeds?" and "What will happen when they wake?" were key questions.

Using pots filled with warm, moist seed compost, the children created soil blankets for their sleeping sweet pea seeds. They monitored them, ensuring the warm, damp soil conditions were maintained. The sowings went on to cover the schools' trellis and wall spaces with bright, scented blooms.

'Layers of knowledge'

Both the module length and the lesson structure were key to the success of Soil Detectives. The eight weeks allowed time and a comfortable pace for the children to accumulate layers of knowledge, while recap sessions using key images encouraged them to continue their own narrative, linking the various characters and processes.

Several months later, as they observed their sweet peas fading and plants dying back, I had to explain that this was not the result of a nasty nematode attack! Next up is the life-cycle of annual and perennial plants. ■

- From his base at Studio Cultivate, Francis Smith, runs practical, outdoor lessons, teaching children how to grow and nurture plants, creating vibrant, productive garden spaces.

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