

Little creatures

In the first part of a new series on Understanding the World, *Nicole Weinstein* looks at how to get up close with insects and other small animals from bees to worms in the nursery environment

Children are often fascinated by the detail and minutiae of life. Small creatures such as spiders, bees, worms, slugs, snails and other common species that children may come across on a daily basis are easy to study and intriguing to young children. Practitioners can support children's interest in learning about the real world by providing a good selection of plants to encourage life into the garden, by building bug hotels to encourage insects, and by taking them out on local nature walks. Indoors, butterfly gardens, ant farms and a fish tank for children to explore tadpoles are fascinating additions.

CLOSE OBSERVATION

The term 'minibeast' is commonly used as an umbrella term to cover all small creatures. However, according to Jenny McAllister MBE, consultant and in-service trainer for Mindstretchers, it's better to use the terminology 'insects, invertebrates and the relevant name of the species' in favour of bugs and minibeasts. After all, she adds, we want to extend children's vocabulary, and 'if they know the names of the dinosaurs then they can learn then names of their native insects'.

Practitioners should also use their listening and observation skills to find out what the children are actu-

ally interested in and to not automatically take them down the 'minibeast' route just because they are showing an interest in a particular small creature.

For example, when working in an early years setting, Ms McAllister witnessed a practitioner observing children digging in the mud to find worms. She explains, 'Her immediate assumption was a "child-led" theme on minibeasts. But on discussion and reflection, she realised that the children were primarily showing an interest in worms.'

To support the children's interest, they ended up investigating worms for seven weeks, covering all areas of the curriculum through scientific enquiry. First thing in the morning, the children would run into the garden and turn over everything looking for worms. From this daily experiment, the children soon worked out that worms like to live in damp, dark areas. They looked into what worms eat, found out all about composting, food waste and the importance of healthy eating. They made worm hotels, looking at patterns, and were always on the lookout for the biggest worm using their maths, conducting surveys and measuring. Stories were written, poems were read and they all learned a lot about worms.

PRACTITIONERS' ROLE

It is often easy to find real specimens for children to explore. Some are



A Recordable Magnifying Glass from TTS

simple organisms with basic anatomy and details to remember, making them easy to identify, and others are complex, so there is the 'full spectrum of ecology on hand', says Kate Hookham, senior trainer at Mindstretchers.

Some adults may be 'scared', but they should be careful to not pass their fears onto children. Ms Hookham explains, 'Either hide your fears or ask a colleague to work with children if handling live specimens.'

'Another common concern among staff is that they do not know enough about these animals. I am never concerned about this as it is good to demonstrate to children that we don't know everything and we can find out together. There are many sources of information in books, apps, DVDs and online.'

CORE PRACTICE

Here are some top tips from Mindstretchers on how to incorporate the exploration of living small creatures into the daily nursery environment – indoors and out:



TTS's Pooter Bug Collector prevents insects being harmed



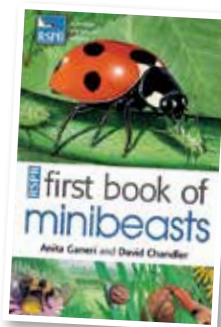
A visit to an aquarium (see case study, right)

- A good selection of plants including trees, flowers, fruits and vegetables will encourage life to the garden. Plant wildflowers and plants to encourage specific animals.
- Children can build bug hotels to encourage insects. Butterfly gardens and ant farms are good for indoor discovery, but to understand how insects fit into the natural world, children should be supported to observe them outside.
- Place natural hessian-backed carpet – hessian side down – in an urban space to attract slugs, woodlice and other animals that enjoy damp and dark habitats.
- Place straws or small tubes under window sills or in small cardboard boxes to attract lacewings and ladybirds.
- Insects are fragile. Don't use your hands if you can help it. Wear gloves to avoid contaminating the species. Use a pooter (see below) to collect specimens.
- Create a log pile in the corner of your site.
- Leave out sugar water in the summer to attract butterflies. Or leave out a coat hanger or an empty picture frame for a spider to make a web in.
- Use a magnifying glass or a camera to explore and document the microscopic world that these animals inhabit.
- Use a white sheet under a tree branch and shake it to see what comes out, or drag nets through long grass and see what you can catch.

RESOURCES

As well as being equipped for all weather with warm waterproof clothing for children and adults, here are some essential resources to include in your discovery of small creatures:

- A pooter – this is a scientific piece of equipment that enables us to collect insects without touching them. The apparatus is simple, using tubes and a sucking motion. Small paint brushes can also be used for lifting and moving the insects without hurting them. Try the Pooter Bug Collectors, 5pk, £9.99, from www.tts-group.co.uk.
- Small tubs – these are good temporary homes to enable children to look without the risk of injury to the animal, particularly if working with toddlers who can have quite a strong grip/pinch. Try the Self-attached Lid Pots, 30pk, £3.49, from www.cosydirect.com.
- Magnifying glasses and boxes with magnifying lens lids to provide children with the opportunity to look at creatures in more detail. The Magnifying Bulk Set of 30 pocket magnifiers, £19.99, or the Group Exploration Magnifier Station, £99.95, are available from www.cosydirect.com. Or try the Jumbo Magnifiers, £20.99 for 6; the Ultimate Bug Viewer, £8.99; the Net and Viewer Pack of 5, £20.99, all from www.hope-education.co.uk. Or use the Phone/Tablet Magnifier, £7.99, from www.cosydirect.com to clip onto an iPad.
- To identify small creatures, use the Minibeast ID Bag, £39.99, from



www.reflectionsonlearning.co.uk and document findings on the Waterproof Notebooks, 3pk, £5.30, from www.cosydirect.com.

- Use ID cards to identify creatures or visit websites such as the BBC's Nature Wildlife (www.bbc.co.uk/nature/wildlife) and The Wildlife Trusts' www.mywildlife.org.uk to download resources. Minibeasts Showerproof Bunting, £24.95, is good for outdoor reference, along with the Shed Door I Spy Minibeast Poster, £17.99, both from www.cosydirect.com.
- The Worm Farm, £65.99, from www.cosydirect.com, will enable you to see worms at work; or collect and study insects in the Illuminated Minibeast Centre, £21.99, from www.hope-education.co.uk.
- Books to support learning include *The Little Book of Living Things*, £7.19, from www.reflectionsonlearning.co.uk; and *RSPB First Book of Minibeasts*, £4.99, from www.hope-education.co.uk.
- Digital resources to discover minibeasts include Easi-Scope Wireless Microscope, £69.95, and the Recordable Magnifying Glasses, £16.99 each, from www.tts-group.co.uk.
- Use Mindstretchers' Talking Tubs, £5 (<http://shop.mindstretchers.co.uk/product-p/p13-b.htm>) and Floorbooks, £21.60, to document learning. For information on how to use them, visit www.mindstretchers.co.uk ■

CASE STUDY: HARRINGTON NURSERY SCHOOL



Tom Russell, NQT at Harrington Nursery School in Derbyshire, has just built a bug hotel with the children, following

their interest in the wildlife in the garden. 'Children were initially interested in the noises that the birds were making,' he explains, 'so we explored this further by visiting a local reservoir and the RSPB bird sanctuary in Nottingham.

'As we were walking around the reserve, they were lifting logs and picking up bark and they noticed strange bugs that they brought back to the nursery to observe. They then spent three weeks digging for worms, and the levels of engagement and

language that they were using to articulate what they were seeing was phenomenal. After this, the bug hotel was born.

'I sourced pallets from local tradesmen and I picked up pieces of slate, tiles, moss, bark, twigs, and the children used these to personalise it. We also added plants like lavender to make it sensory; ornamental grass on the side; upturned plant pots and hooks hanging from the sides to attach magnifying pots and glasses.

'The structure is positioned at the children's level. We are trying to encourage them to look really closely and to notice slight change and small differences. So far, they have found six of the 21 different species of ladybird in our garden, along with

centipedes, worms, flies, money spider and harvest spiders. We've planted buddleia and the children have learnt about what the plants need to grow, how they grow best and how when the flowers come they will attract the butterflies.

'Indoors we have ordered the caterpillars for a butterfly project. We also have live tadpoles in the setting and a fish tank with fantail fish, which the children have chosen from the local aquarium. We follow the Reggio approach and we believe that if children can see change happen themselves, it's easier for them to make sense of it.'

