

Learning naturally – gardening with children

by Angela Michaelis

Archy, aged nearly four, puts his hand in the sensory surprise bag. He feels around, rubs what he finds between his fingers, then smells ... 'Basil!' he exclaims with satisfaction. Later, when his child care service is designing its new garden, Archy, like the other children, draws plans and discusses ideas.

Archy has been brought up in a gardening family and has benefited from all that a garden has to offer. He's been active, observed the natural world, investigated scientific concepts and been responsible for living things. He knows where food comes from, and that farming is both hard work and fun.

Any child care service can include these benefits for children in its program. Exactly how will depend not only on the children's age range and space available, but on the climate and location as well. The outdoor space for gardening activities does not have to be tidy, but should be attractive in the broadest sense – intriguing and inviting for both children and wildlife.

First experiences

From the moment we first take babies outdoors, allowing them to sense the fragrances, sounds and sights of the garden, we begin communicating the value of living things. Keeping babies inside where we think they will be 'safe' reduces their opportunities for learning about their world (Bower, 2009).



Instead, they need the support of enthusiastic adults who are prepared to share knowledge and experience, helping babies distinguish between things that are safe to pop in their mouth (herbs and edible flowers) and things to experience in other ways (beetles and stones).

Toddlers, of course, also need careful supervision as they explore with their mouths and hands, but a thoughtfully planned outdoor space enhances children's learning while addressing risks (Michaelis, 2009). You will eliminate one risk by avoiding the use of chemicals in your garden,

This article relates to:

FDCQA Principles:	3.1, 3.2, 3.5-3.7, 4.1 and 4.2
OSHCQA Principles:	5.1-5.4 and 6.1
QIAS Principles:	4.3-4.6, 5.3 and 6.1

and be rewarded by a greater variety of insect and bird life as well.

Activities and expectations

For young children involved in gardening, seeing results may be less important than experiencing the process. Remember this as you design play around some favourite activities.

- For digging, provide a dirt or mud patch in addition to a garden where you or older children have hopes of growing something
- For watering, provide small watering cans or buckets with a pouring lip. To avoid waste (and to avoid over watering the garden) fill a few buckets and explain, "that's all for today"
- Moving is one of the joys of being outdoors. Provide small-sized wheelbarrows and introduce road safety
- Getting dirty is part of it. Provide appropriate clothing for messy favourite activities
- Picking flowers can be hard on plants. Provide some hardy shrubs that handle pruning, like daisy bushes.

Older children are ready to learn about how things grow over time, but expect setbacks like unseasonal weather and visits from digging or chewing wildlife. Talk with children about these, as it is part of their learning about the natural environment and the limits to its management.

The edible garden

When children grow their own food, they learn about a fundamental principle: what sustains life on earth. Edible gardening promotes both respect for the environment and a child's own responsibility for good health. When children take part in growing fresh foods, they are more willing to try them. With so much unhealthy food marketed in other places, fresh food gets a chance in a service with an edible garden.

Start with simple projects, which also suit small spaces:

- Use a large tub for a single crop of leafy vegetables like lettuce
- Plant strawberries as a ground cover
- Mauve-flowering garlic chives make an attractive, aromatic edging plant
- A passionfruit vine can grow on a fence
- Beans can climb up a teepee.

Use the websites suggested at the end of this article to select suitable crops for your climate. Tomatoes planted in autumn in Queensland will provide spring fruit – in Tasmania you would be better growing peas in the same period.

From setup day to harvest day, involve children. Show them gardening books and seed catalogues to help choose what to grow. Let them get tired and dirty as they dig in compost. They will learn to cooperate as they carry water, and to measure and count as they make trenches and scatter seeds, using seed packets or laminated drawings to mark where the seedlings will emerge. As they write or draw to make a book about their garden, they will learn by reflecting on their experiences.

Best results

Good soil and enough sunshine are essential to produce a crop of food, so don't set yourself up for failure by trying to grow vegetables among the tangled roots and compacted soil of an old tree. Instead involve children and their families in understanding, planning and creating places for plants to grow well.

You can improve the soil you have with lots of compost, but on many sites, you will want to make raised beds. Use ready-made corrugated iron containers, or construct your own from timber. For edible gardens in particular, avoid pine treated with arsenic – instead use hardwoods, looking for recycled timber where possible.

Beds do not need to be more than 40cm high. At that height, beds have an obvious border to discourage children from walking on them, but are still accessible to see and touch. Deeper beds require more soil to fill them. Ideally your bed or container is only a child's arm width across.



Worm farms and compost bins

When bacteria and other organisms change material over time, children see a concept in action: nature at work as recycler. For your service, composting your waste also sees practical benefits: reducing waste and providing nutrition for your soil.

Worms like it dark, and many children like worms. A worm farm can be set up to recycle lunch scraps in a car park or on a verandah, or even in an indoor area with a washable floor. It will generate concentrated fertiliser for gardens and pot plants in the form of worm castings and liquid.

A worm tower introduces children to worms outdoors. A piece of PVC pipe is buried upright in the garden, and fitted with a removable lid to keep it dark. Children can lift the lid to add vegetable scraps, and see worms at work. To make a garden sculpture, decorate the worm tower before installing it.

A compost bin recycles old vegetable matter and prunings in medium to large gardens, and can be used for food scraps as well. Remember that it needs turning regularly to aerate it: a physical effort not suited to small children.

Minimal outdoor space

Those with no outside space can still offer children the chance to learn about growing things. Make the most of gardens the community offers by taking children out to nearby parks. However small the area, children will find new smells, sights and textures to explore, and, if you give them bags or baskets, will collect new craft or



discussion materials to take back indoors. If you can, arrange a visit to a botanic garden; some offer educational programs for children. For inspiration on employing shapes and textures, often in small spaces, visit a Chinese garden.

Being indoors need not stop children from growing things. Some easy indoor gardening experiences might include:

- A garden in an aquarium
- Growing carrot tops or bean sprouts on wet cotton wool, or in eggshells filled with soil on a window sill
- Caring for low-light indoor plants
- Potting vegetable seedlings into plastic containers to take home.

Top safety tips for gardening with children:

- Avoid toxic chemicals. Label all sprays, even organic ones, and store out of reach of children
- Provide child-sized tools and lock the shed
- Choose suitable clothing: washable clothes, hats and closed footwear. When using potting mix, wear gloves and a disposable face mask
- Watch water: birdbaths should be out of reach and stable, ponds should be meshed, buckets should be left empty
- Encourage observation of living creatures but talk about what is and is not safe to touch
- Assess risk and fence garden areas when necessary.

Conclusion

When educators introduce children to plants and gardens, they foster a respect for the environment, helping them learn about natural materials and their own health and wellbeing. For many children, this may be their best chance to learn about the concepts that underlie all life on earth ■

This article relates to EYLF Learning:

- Outcome 2: Children are connected to and contribute to the world
- Outcome 4: Children have a strong sense of wellbeing

References and further reading

- Alexander, S. (2006). *Kitchen garden cooking with kids*. Camberwell, Victoria: Lantern.
- Bower, L. (2009). *Everyday learning together in the garden*. Watson, ACT: Early Childhood Australia.
- Michaelis, A. (2009). Creating a child-friendly garden. *Putting Children First*, 31, 21 – 23.
- Starbuch, S., Olthof, M., & Middern, K. (2002). *Hollyhocks and honeybees. Garden projects for young children*. St Paul, MN: Redleaf Press.
- Warden, C. (2007). *Nurture through nature*. Perthshire, UK: Mindstretchers.

Useful websites

- Huggies Australia: www.huggies.com.au
- Kidslife: www.kidslife.com.au
- Better Health Channel: www.betterhealth.vic.gov.au
- Gardenate. www.gardenate.com
- Gardening Australia: www.abc.net.au/gardening/factsheets
- Cityfood Growers: www.cityfoodgrowers.com.au