

Materials for play: Why open-ended loose parts are important



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'Loose parts' are ordinary, everyday, open-ended materials that can be manipulated and used in various ways, moved, carried, shared, combined and taken apart in various configurations and designs. There are no specific directions accompanying the materials and many various outcomes are possible from their use. They have high affordance value in terms of what they can offer or provide to support children's play, exploration and cognitive development, and can be easily transformed with children's imagination. Examples are pebbles and leaves, ribbons, buttons, ropes, pot plants, figurines, chinks, papers, blocks and plastic pipes.

Loose parts are often provided in art areas, providing children with opportunities to extend their ideas through art, sculpture and collage. However, creative expression can be encouraged in all areas of the early childhood setting, for example, as children arrange rows of sticks outside. Loose parts can also be larger parts for making structures, such as tyres, moveable blocks, platforms, ladders, and straw bales, and also include natural elements such as water or sand.

What is heuristic play?

Heuristic play is exploratory play with materials and objects. Children handle, explore and make discoveries about the properties and features of objects, and develop ideas for how they might be used or combined and how they relate to each other. For example, children might explore a set of balls, pom poms and other spherical objects alongside a range of containers and tubes. Heuristic play is sometimes provided via a 'Treasure Basket' for infants who are able to sit but are not otherwise mobile.

Why should I use loose parts with children?

Materials are theorised to be highly important in the formation of neural networks in the brains of very young children because they stimulate the senses. The ability to focus, sustain attention and identify salient features are activated and practised when children are provided with stimulating open-ended materials. These early skills are the foundation of later learning. The principle of loose parts is also underpinned by beliefs about the competency, skill and creativity of children. They can cater for all of the interests, strengths and cultures of diverse children, and children can create environments that suit their current skills. In practical terms, using loose parts in your curriculum also encourages the reuse and recycling of objects.

The small body of empirical research that has been conducted on outcomes for children as a result of the use of loose parts suggests that, in relation to outdoor play at least, outcomes for children include an increase in:

- engagement in a greater variety of activities and versatile play, and particularly constructive play and dramatic play through affordances for designing dramatic play spaces
- more complex play narratives
- social interaction and play with peers

- complex verbal and nonverbal communications including negotiation skills
- diverse risk-taking behaviours

In addition, the use of loose parts and malleable environments is thought to:

Stimulate sensory perception, and enable children to develop their powers of discrimination using their senses. Discriminatory skills are needed for identifying similarities and differences and for categorising objects.

Stimulate discovery, both of the properties, possibilities and limitations of materials and also children's understanding of what they can think and do as learners. Moving, manipulating and combining materials into diverse things with multiple meanings, and applying understandings about the properties of materials and what can be done with them, encourages higher levels of critical thinking and stimulates increased flexibility in children.

Promote a range of cognitively complex play, including physical play, dramatic play, games with rules and construction play, and extend children's length of engagement in play, by injecting novelty into play environments.

Provoke creativity and imagination in terms of attributing objects with functions and meanings, such as turning a crate into a boat. Imagination underpins creative problem-solving and enables children to synthesise and apply knowledge as part of meaning-making and sense-making.

Allow children to develop their own ideas and inquiries, which enhances their autonomy, self-direction and self-knowledge and supports feelings of pride, self-efficacy, and self-esteem. Making choices from the many possibilities available to regulate play can encourage regulation skills and help children learn how to make good choices.

Develop language and vocabulary for new objects, experiences and play scenarios, and stimulate rich conversations and storytelling.

Develop early numeracy skills through providing a context for sorting, classifying, combining and separating objects, for mathematical skills such as counting, measuring and sequencing, and for risk-taking skills and problem-solving.

Provide a context for the development of both fine and gross motor skills

Promote social interactions and conversations. Open-ended play with other children involves communication, negotiation, cooperation, leadership, and decision-making.

What is the teacher's role?

Incorporating loose parts into your curriculum is not as simple as adding the parts to the children's learning space. It is important to consider what to provide and how to present it in order to connect with children's learning needs and interests, or loose parts may be ignored or used inappropriately. Be aware that it can take time for children to adjust to loose parts if this approach is new to them.

Tips for planning and organisation:

Select materials thoughtfully. Ensure materials are capable of arousing children's interest and attention. Research shows children attend to novel objects but are easily bored once an object has lost its novelty, and a lack of appropriate or interesting items can lead to lower interest, engagement, concentration and creative play with objects. However, some infants and toddlers may like to return to favourite items.

Intentionally present loose parts as provocations or invitations to interact with the materials. Aim for provocations that inspire children's exploration and discovery, question-asking, theory-testing and deep thinking and that promote either individual or group investigations.

Make loose parts visible and accessible for children, to give children choice about what to use, how and when. Provide dedicated spaces for using the materials by using trays, mats or rugs (carpets can dampen noise).

Provide enough resources to allow for complex play and reduce frustration and conflict, but not so many that it becomes overwhelming or overstimulating. Heuristic play approaches recommend collections of 50 items of five or six types (such as pine cones or ribbons) for a group of six children. Infants using treasure baskets can manage around 80-100 diverse items and a greater variety of objects is more stimulating for infants' brain development.

Use a reflective, responsive and intentional approach, for example, observing children's explorations and selecting loose parts to expand them. Think through what children might do with the materials (try out materials yourself to see how they behave) and consider how to encourage children to engage for more than a few minutes. Experiment with different ways of setting out materials and see how children respond. Different arrangements will shape how children perceive and attach meaning to the materials, and children will play differently with the same materials presented on a tabletop, on the floor, inside and outside.

Regularly replenish, change and add to loose parts. Consider having a designated person responsible for maintaining loose parts collections. Encourage families to help you acquire and replenish loose parts, which also models sustainability values. Send out a written note with a list of suggested items to collect. Keep loose play parts in quality condition and present them attractively.

Ensure safety by checking items are safe, and by being physically present and attentive when children are using items.

Your role during play:

Children and teachers can use materials together for the greatest influence on learning. With older children, teachers might have [intention](#) for the materials and invite children to focus their attention on particular features, or wonder about meanings and significance together with children, or help children relate actions and properties to previous or future events. With infants and toddlers, teachers' interactions may be distracting, so consider a more unobtrusive presence.

Give children plenty of time to explore the properties of loose parts and experiment with different possibilities, which leads to more complex play.

Observe children and be intentionally focused on the child (with eyes and mind), to discover their current learning interest, level and needs. Try to identify children's ideas, theories and interests in using loose parts, and look for patterns of action and behaviour (schemas), especially with infants and toddlers.

Model appropriate play for children who are not showing initiative in using the materials. You might discreetly offer children alternative materials, such as a smaller ball if they are struggling to fit a larger ball down a tube. Encourage place-making such as making houses, dens, shops, with paths, furniture such as seats, and smaller items. Encourage children to add to these over a period of time.

Allow children to develop their own ideas, support their observations, discussions, explorations and meaning-making, and respond to requests for support. Offer children opportunities to move loose parts around the play areas and be supportive when they invent new uses for loose parts.

Reorganise materials when they become muddled to make it easier to see what is available and to suggest new play ideas, and encourage children to help sort objects back into their containers at the end of play to encourage early mathematical concepts as well as language development. Ask questions like 'Can you find the blue/big shells?' and 'Can you make sure the tins are empty?'

How might I inquire into the use of loose parts at my setting?

If you are already using loose parts with children, find out what learning is happening by examining portfolios and observing children at play. Find out which collections of loose parts, or which areas in which loose parts are available, are preferred by children by talking to children or asking them to take photographs. Consider how teachers interact with children in regard to loose parts and what impact this has on their learning. Question your assumptions and ask yourself how you could investigate what children are gaining from your current loose parts provision.

You might investigate your practice further by making intentional changes to your loose parts provision. Choose one or two small and specific areas to investigate more deeply. What hunches do you have about what is going on? For example, do you have a hunch that children are not using loose parts because they do not connect well to children's current inquiries? Do you think there might be a connection between teachers' lack of engagement with the materials and children's lack of interest? Use your hunch to determine what action to take in order to help you to investigate it. When you are ready to experiment, take systematic and targeted action focused by goals for your teaching practice as well as for children's learning. Keep in focus the intended outcomes you have for children's learning rather than focusing on specific loose parts or activities with them. Monitor the impact of your changes by focusing observation on your intended goals by, for example, creating an observation tool that lists the elements important to your inquiry.

Further reading

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PREPARED FOR THE EDUCATION HUB BY



Dr Vicki Hargraves

Vicki is a teacher, mother, writer, and researcher. She recently completed her PhD using philosophy to explore creative approaches to understanding early childhood education. She is inspired by the wealth of educational research that is available and is passionate about making this available and useful for teachers.