



# Core Activity

<b>Activity</b>	Observing block play
<b>Main Focus</b>	Spatial awareness

<b>Possibilities for additional maths learning</b>	<input checked="" type="checkbox"/> Counting	<input type="checkbox"/> Composition	<input type="checkbox"/> Cardinality
	<input type="checkbox"/> Subitise	<input type="checkbox"/> Comparison	<input type="checkbox"/> Measure
	<input checked="" type="checkbox"/> Shape	<input type="checkbox"/> Pattern	<input type="checkbox"/> Spatial awareness

## Activity Plan

<b>Resources</b>	<ul style="list-style-type: none"> <li>➤ A range of construction materials e.g. wooden blocks of various shapes and sizes, Duplo, junk modelling etc.</li> <li>➤ Focussed observation of children paying close attention to the Characteristics of Effective Learning</li> </ul>
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<b>Activity</b>	<p>Observe children in the construction/block play area with a particular focus on the characteristics of effective learning and emerging maths learning. What do you notice? How could you support and extend or challenge their play?</p> <p>Through block play, children learn what will work and what will not. This trial and error method helps children to develop and modify methods. Block play aids creative thinking, problem solving skills, spatial reasoning, fine and gross motor skills.</p> <p>Note children’s stage of construction/block play. NAEYC (National Association for the Education of Young Children) highlight how children go through various stages of block play. As they work through the learning of one stage they are ready to move on to the next stage of play. As skills advance, it is typical for children to combine several stages. The stages are developmental - each one building on the last - but children advance at their own rate regardless of their age.</p> <ul style="list-style-type: none"> <li>• Stage 1: Discovering blocks</li> <li>• Stage 2: Stacking blocks</li> <li>• Stage 3: Complex stacking</li> <li>• Stage 4: Making enclosures</li> <li>• Stage 5: Creating bridges or arches</li> </ul>
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- Stage 6: Combining enclosures and bridges
- Stage 7: Building with patterns and symmetry
- Stage 8: Building block structures that represent objects for pretend play

<https://www.naeyc.org/resources/blog/what-research-tells-us-about-block-play-and-stem-learning>

**Discovering blocks:** Children explore the properties of blocks by moving, touching, holding and feeling as opposed to building. Children carry the blocks from place to place. Toddlers are learning how to line up the blocks and then stack them.

**Stacking & making enclosures:** In this stage, children line up blocks horizontally and stack blocks vertically, building rows and towers. Children have a need to build rows and towers repeatedly so allow the time and resources for this. Children can haphazardly stack blocks until they fall and build and knock down structures built by themselves and others. Children begin to use simple two dimensional patterns, gradually moving to more complex patterns, some of them three dimensional.

**Bridging:** This is illustrated by children bridging or roofing the space between two upright blocks – the upright blocks need to be placed the correct distance apart to support the bridging block, or the bridging block needs to be long enough. Children can become confused at this stage if they place the upright blocks at either end of a base block and then the bridging block is not long enough when they have considered them all to be the same size. Children who are persistent at this stage will be successful quicker than those that go back to the previous stage of building towers. When a child has learned how to bridge they repeat it over and over again. Children will then use this skill to build bridges on top of bridges.

Explore mathematical concepts such as numbers and counting, size, properties of shape (curvy, straight, slopy, edges, corners, sides etc.), cause and effect, estimation, patterns, comparison, balance, storage and remember to note children’s developing characteristics of effective learning.

### Extension Opportunities

- Add props for filling, tipping and carrying e.g. handbags, small baskets, tipper trucks, cardboard boxes (shoe boxes and tissue boxes are a fantastic size!).
- Add enhancements such as a parking garage, cars, trucks, cardboard tubes, trains and tracks, construction vehicles, animals and small world figures to support the use of mathematical language through role play.
- Develop mathematical concepts and language by discussing the construction with the child and providing a commentary using more specific terms like curvy, corners and edges, as well as next to, between, in front of etc.