

Important: Activities with children must always be risk assessed, including for allergies or choking. Children must always have adequate supervision. Resources and materials must always be appropriate for children's age and stage of development.

Possibilities for maths learning	☒ Number & counting	☐ Composition	☐ Cardinality
	☐ Subitise	☒ Comparison	☒ Measure
	☒ Shape	☒ Pattern	☒ Spatial awareness

Resources	➤ A range of outdoor construction and loose parts materials, e.g. crates, boxes, tyres, cable drums, guttering, buckets, wheels, planks, logs, wooden blocks, hoops, tunnels, netting, cones and mats ➤ A space for children to construct freely and without obstruction.
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Activity Outline	Find a location in your outdoor area that has plenty of space for children to create large scale constructions. Once you have decided on an appropriate area, begin to arrange your materials in an accessible manner. Ensure that children can access the materials independently, and that they are encouraged to maintain the area, e.g. ensuring that resources are placed at children's height level and that staff encourage children to return any materials that are not in use. Introduce the children to the construction materials by modelling their use. You could introduce two sets of materials at one time to ensure that children understand how to use them effectively, e.g. start with crates and planks and support children to safely balance a plank between two crates. Ensure that these are positioned at an appropriate height level for the children. Once children become more familiar with each of the resources you can begin to encourage them to make more challenging obstacle courses, e.g. adding some tyres or stepping stones or perhaps you could add a cargo net to encourage children to crawl on their front under the net. During this activity, encourage mathematical development by: • Pose questions relating to length, e.g. "how long will the plank need to be to cross the gap?" or "how tall will your climbing frame be?" • Pose questions relating to number and counting by encouraging children to consider how many objects they might need for each part of the course, e.g. "how many crates do we need to balance a plank?" • Count out loud the number of objects, remembering to confirm the cardinal number, e.g. "1...2...3...that's three tyres altogether"
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	• Use positional and directional language as children build and climb, e.g. forwards, backwards, up, down, right, left, next to, under, over, through, on top • For visual representations of time, introduce sand timers or stop watches and time children's course attempts or challenge them to complete the course in a certain time. Practitioners can use language related to time e.g. "can you complete the course before the 2-minute timer finishes?" or "how many seconds will it take you to complete the course?"
Extension Opportunities	✓ Leave the open-ended materials out to enable children to experiment with and create their own obstacle courses ✓ Time each other – how long does it take to get round the obstacle course. Can children beat their previous time.