

## Case study 8 - Kindergarten Nursery

Kindergarten Day Nursery operates from a semi-detached house with gardens to the front, side and rear. Children use a number of rooms on the ground floor with a separate room for babies. Outdoor play is a particular feature of the nursery with children encouraged to experiment and solve problems in their play, often using their whole bodies. Many children make exceptional progress in mathematics with a number of children identified as being particularly talented. Using large equipment to help children explore shape and space allows children who have poor verbal skills or who are younger demonstrate their mathematical understanding.



**Can I fit in here too?**



**I can jump off this!**

Risk assessment forms an important part of allowing children to solve problems when building with large wooden blocks, crates and planks. This includes helping children assess the risks themselves. Three-year-olds are able to test out whether a plank between two wooden blocks will tip when they walk on it, how high they can build the blocks and for it still to be safe to jump from them, whether it is safe to balance on them and how long they can make a structure. They work together to come up with solutions. Through this they develop a real understanding of space, shape and quantity.



**I built this road. I can balance on the bridge.**

They are also encouraged to estimate whether steep slopes mean balls roll faster than on low ones and whether different sized balls make a difference.



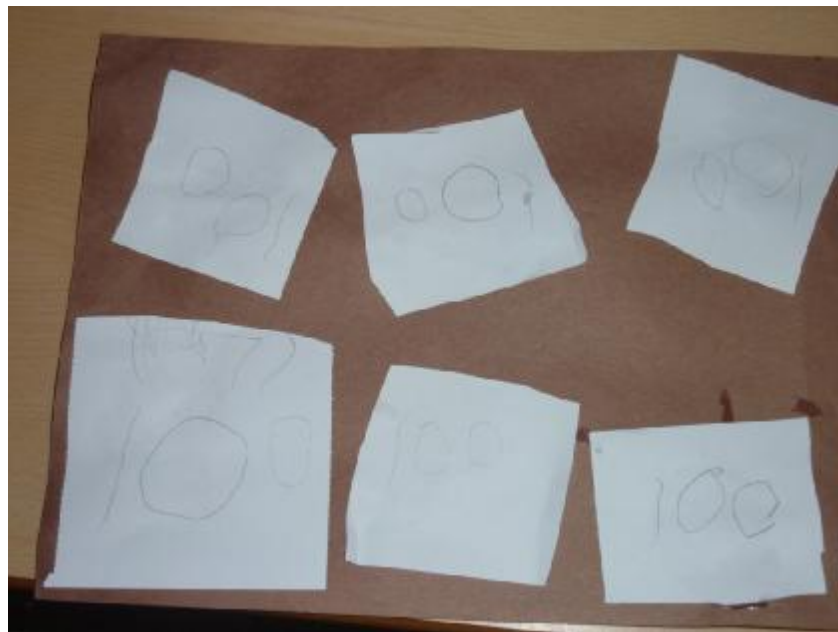
**Mine goes fastest.**

Having a strong mathematical focus in outdoor play encourages boys in particular to engage well with maths. This extends to number recognition – I can jump onto the number 3 tile from here; counting – this is four blocks high that is too many; simple calculation - I need one more; and mark making – we have measured the boat and here is the number.



**We measured the boat and here is the number.**

Several boys are starting to show a real talent for maths and an interest in numbers and written numerals that is beyond their age including big numbers.



**I have written 6 100s, that is 600.**