



Number Stacks Maths Intervention Project: Reach, Impact & Legacy

Project lead/Service Centre

James Aylott (Owner & Creator of Number Stacks)

Brief synopsis

Number Stacks is a maths intervention program, developed in Essex, that focuses on teaching Key Maths Skills of Number & Calculation using hands on place-value counters to represent the numbers. All teaching is done via video tutorials, meaning the intervention is simple to set up and deliver with minimal staff training necessary. Funding was provided by the Year of Numbers to supply all interested primary and secondary schools with the physical equipment and online materials required to deliver the Number Stacks intervention, therefore supporting children who struggle with maths to develop their understanding and build their confidence in such an important subject.

Reach

Just over 200 schools registered interest and each received a Full School Set of resources. This set consisted of 7 physical resource kits and 12 months of online access, meaning over 1400 resource kits were distributed across the county. Schools were asked to submit sample progress data after a term of use and while the average number of pupils for which data was received was 6 per school (giving a total of 1200 pupils) we know from informal feedback that the actual number of pupils who used the resources for support was far higher than this. Data collected indicates that over 30,000 intervention sessions were delivered across the county over an average of 12 weeks for the initial sample period.

Impact

The first 100 school to join the project were provided with the Sandwell Early Numeracy Test (a standardised assessment tool) to measure the 'Number Age' of a small sample of pupils both before and after accessing the Number Stacks program. From a sample of 160 pupil results that were received, the average progress in Number Age was 9 months over an average time-period of 11 weeks. This means children progressed at over 3 times the expected rate!

Some examples of the feedback forms received from schools is included with this report and some highlights of the informal comments are copied below:

'Number Stacks has been a positive experience for all children that have participated so far. Given that it targets key gaps in their understanding, children are learning and practising relevant skills all of the time. This compliments what is on the curriculum for their year groups and it has been noticed that their confidence with new learning in class is also developing. There are children included in this feedback who are now eager to work independently in class because their understanding of fundamental areas of maths have improved in a significant way.'

Legacy

A collection of mathematical manipulatives and place value cards are arranged on a light-colored wooden surface. The items include:

- Place Value Cards:** A vertical stack of five cards showing "Hundreds 100", "Tens 10", "Ones 1", "Tenths 0.1", and "Hundredths 0.01".
- Number Blocks:** A single red block labeled "Number Blocks" with a graphic of two blocks.
- Base Ten Blocks:** Numerous small circular disks in blue, green, yellow, purple, pink, and red, each labeled with numbers like 100, 10, or 1. There are also larger white rectangular blocks labeled "100" and "10".
- Counters:** Small grey and silver beads or counters scattered near the center.
- Dice:** Two white dice with black pips.
- Other Items:** A red pencil, a white marker, and several blank grids for recording work. One grid is a simple rectangle, another is a 2x6 grid, and a third is a 3x3 grid.