

**Year 2 Class Teacher's experience of using Stern equipment
Summer Term 2008**

Profile: Year 2 Class

Number of pupils: 22 - twelve boys and ten girls

Age: 6-7 years

Part-time LSA: part of mornings only

Five children were identified as needing some support through small group work in language (literacy) and maths. Two children with late summer births were included in both language and maths small group work.

Three times weekly activities using a variety of maths equipment, number cards, objects, number lines, dice/dominoes, bead strings.

All exhibited surface difficulties in maths. These included:

- *Conservation of number*
- *1:1 correspondence*
- *L/R directionality*
- *Spatial ability*
- *Sequencing*
- *Memory*
- *Visual and auditory recall*

One child, child A (not a summer birth) had family difficulties with maths which included two brothers and a sister diagnosed with dyscalculia. One brother, at end of year 6, achieved a level 1 in maths SATS and had received individual support for four years throughout key stage 2. He was included in a variety of catch up programmes although he had achieved a level 5 in literacy. The mother also had maths difficulties in as much as she was unable to identify numerical patterns.

We began to use the Stern Structural Arithmetic equipment after discovering Maths Extra and the work of Vikki Horner. We implemented the use of the programme in the classroom after input and demonstration from VH. I was immediately struck by how my LSA might use this method when working with the children as she was not mathematically trained and felt unable to meet the needs, or identify the developing needs of the children for this subject. The ease of delivery is but one of the strong points of this system. We began with the 10-Box three times a week as I felt this gave a clear image of the number combinations to 10. without this being in place it seemed inappropriate to move the children on to bonds to 20, subtraction and multiplication.

The children approached the tasks with enthusiasm and were always highly motivated to take part in the activities. The LSA found the delivery using the imagery and explanations in the Handbooks easy to use, she clearly understood what next steps were necessary and as she worked part of the time in key stage 2, felt the equipment and the system would work well for some children who were in the older year groups.

Children began to act spontaneously as models for their peers in whole class activities. This was a measure of how confident they felt with number. The groups were quick to develop an affinity with the equipment and would independently discuss what they had learnt outside the sessions. They would ask when they would be using the equipment again and were keen to get started and remain focused on tasks once they had started. They expressed regret when the sessions were over! As soon as the children were presented with the 10-Box and the Number Track, they would focus quickly so that they would be certain to be chosen to build the number track or to find partners for the number blocks to enable them to show off their increasing knowledge to their peers.

Child A with dyscalculia had previously lacked any confidence with number, had had difficulties using maths materials or her own fingers to make 10 and had to always start at 1 when adding two numbers together so addition proved problematic. She had no recall of number bonds and could not refer to previously taught sessions or use any strategies to help solve problems in this area. Subtraction was a non starter. Her lack of confidence was demonstrated by disengagement in all maths related tasks, not focussing when group teaching was taking place. She would fiddle with her shoes, her face was always hidden by her hair and her eyes would be looking anywhere but at the practitioner. She was unable to make eye contact. She made herself 'invisible' so as not to be chosen to answer any questions. She would not volunteer anything.

Child B has a summer birth (end of August) and was very disruptive, sought peer approbation by engaging in attention seeking practices, he lost focus very quickly and needed tasks further differentiated by repeatedly breaking down into small steps and verbal repetition of task. After half a term of using Stern, both were competent in number bonds to 10 and began to translate this with numbers to 20 and beyond.

Both are now operating well in Year 3 with the year 3 curriculum.

Child B's inability to retain strategies had led to both his parents and the year 3 teacher expressing concerns over his maturity and ability to access the year 3 curriculum and during the end of the previous term there were discussions about him repeating year 2.

At present, his year 3 teacher has identified that he is now making good progress with number. By the end of the summer term child A became eager to share her knowledge of number facts and the maths strategies she had internalised within whole group sessions, she was now quick to put up her hand to show what she knew, even to the point of being able to identify that it was easy for her, which was lovely!

One of the measurable developments from using the Stern programme is the spontaneous way children will offer their opinion, would say how easy it was, or by making 'I can do' statements.

All the children in the group are now operating within age related levels.

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