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## **CASE STUDY - Kirkliston Primary School Edinburgh and SUMS Maths on the Sony PSP September 2010**

**Background** – SUMS Online have made available banks of five PSPs with the SUMS Online Maths content to Scottish schools to borrow for a term at a time. At the end of the loan period, teachers who have used the PSPs with pupils provide feedback on their and their pupils' experiences of using the SUMS Online Maths activities with these handheld devices. These are the experiences of Primary Six pupils in Kirkliston Primary School, Edinburgh.

**Deployment** - The PSPs were sometimes used during a maths lesson and other times of the day. The reason for this is that two pupils go to another class for maths and would have missed out. Either specific groups were targeted or there was a whole class rotation with each pupil getting approximately 10 minutes each. Initially the boys adapted to using the PSPs more readily than the girls but this soon evened out. The first pupils to use the handsets were lower achievers who enjoyed the swift response and the visualisation of the concepts. Initially it took a little while to explain the controls and demonstrate how to access the programmes.

**Experience** - The SUMS Online Maths software was fun and informative for the pupils. The visualisation was a benefit to visual learners especially in the shape and information handling sections. Pupils had to think and sometimes develop their own problem solving skills. The activities were also a means of developing active learning and providing brain breaks in other tasks. Those pupils who were accustomed to using this kind of tool were able to 'teach' those who did not have the same experience: sometimes those who were less academic were able to lead those who usually out-scored them thus boosting their self esteem. Pupils learned that there were different ways of learning and were encouraged to consider what they found difficult in maths and what would help them to address this issue which also helped support individual target setting.

**Record Keeping** - Time was given to pupils to become familiar with the orientation of the PSPs and then they were encouraged to keep their own records. A 1 – 5 star rating, with 1 being the lowest and five being the highest, was used to record the area the activity supported and how enjoyable it was. This proved to be a good way of tracking which games the pupils used and ensured they did not use the same ones all the time. Pupils also talked to each other and recommended games to their peers.

**Issues** - There were a few issues that arose namely: memory cards were easily removed and at one stage two disappeared but then reappeared; recharging of the PSPs needed to be done at the same time and a long multi-socket adapter was required (this issue will vary from institution to institution); some pupils thought they knew the equipment and therefore did not need to listen to the instructions specific to these handsets.

**In the future** – Using PSPs were a first for Kirkliston and initially there was a novelty value. If they were to be used all the time this might pall. However two sets of five or six PSPs in a school rotated in blocks would resolve this issue: one set to be used for group working and the other group working with the teacher. Kirkliston have indicated they would like to develop the maths side of the materials and look for ways to build on this and later on build on the language side. This would be done in two ways – teacher directed to support a unit of study and pupil choice to support an individual learning target. They would also look at setting up a system of tracking and recording what pupils were doing.

"I was really impressed at the way pupils responded to these materials. They were enthusiastic about the task and talked to each other about the various games. They seriously considered their personal learning needs and tried to choose a task to help support those needs. This has been a very worthwhile project and learning tool I would be very keen to use again."  
Teacher comment

"It's a really good project to do. Everyone really enjoyed it. I think others would enjoy using it as well. The games helped with lots of different areas of maths. It's a good way of learning. It gives you extra work but it's fun to do." Primary 7 girl

"It's amazing what a tiny little device can do. Everyone enjoyed it. I really liked it too. The games were good. I liked recording what I used and giving a star rating to the games." Primary 7