

Developing Mathematical Fluency in Early Years Foundation Stage Case Study

Study 3 - Ashurst Primary School, St Helens

“This programme has changed the way I teach maths. We can see the cohort moving on together. We often have mixed ability partners, the lower ability getting so much from the higher ability but the higher ability getting so much from helping someone. It’s such a powerful thing for all of them. “

Interviewee – quoted in italics

Jill O’Brien, Early Years Lead, Reception Teacher and Special Educational Needs Coordinator

Background

Ashurst Primary School, St Helens, has 230 pupils, of whom 33% qualify for Pupil Premium. There are 8 teachers and 10.5 full time equivalent Teaching Assistants.

Jill O’Brien has worked at Ashurst since 2011, has taught the reception class for the past five years and is now a member of the Senior Leadership Team. In 2018 the school, a member of St Helens Teaching School Alliance, was considering how to improve the mathematical fluency of Early Years pupils, many of whom join the school significantly below the levels of competence expected for their age. For example, there is a very broad spectrum of achievement and need in the nursery where, even towards the end of the summer term, there are some children who do not speak at all and some who can already count.

Ashurst’s headteacher was impressed by an introductory session arranged by NW Maths Hub 3 to explain the programme “Developing Mathematical Fluency in EYFS”. So, in February 2019, Jill joined the programme and was so excited by what she learned that she immediately began introducing it to her reception class.

“We changed how we were teaching half way through the year and now the children are so secure in what they know. It’s amazing that there’s something specifically for Early Years, not just a token. It’s so Early Years driven – it’s been fantastic to be a part of it. The way the children speak about maths - their passion - is coming through. Because they’ve got the basics in place they will go on with a solid foundation. That early understanding is embedded. It has changed the way they see maths.”

When she began the programme, Jill wasn't sure what to expect. She had heard that it involved a focus on a different number each week, but was unclear what this might mean, so she went with an open mind.

"Once I started the training I realised that no child would be left behind with it because it was so accessible. I was really excited after just one day."

The Programme

The programme covers money, shape and number at the same time. There is an emphasis on mathematical drawing and mathematical discussion, with the pupils being given challenges and asked to justify their answers. They want to explain what they have done, to prove that their answers are correct. Jill feels that in the past children's books were full of pre-prepared things, but now they are much more creative.

"They love discovering things rather than being told. Their learning has gone so much deeper. They tell me when I deliberately make a mistake and they want to prove it. From a teacher point of view it has allowed me to facilitate the learning rather than leading it all the time. They pull all their elements of learning together. They feel confident and happy that they are right. They know that when they aren't correct it makes them learn even more."

Jill was particularly pleased that the programme's approach was flexible and adjustable to what children need. So, if her pupils have found something difficult, she has added a 'maths morning' to the timetable.

"They love that. For example, we had a whole morning working on pizzas – shapes, number, fractions, spending. We had the flexibility to do that in a way that our children needed and would respond to. It was based around problem solving, so it brought absolutely everything into it."

Soon after Jill began the programme, the reception's Teaching Assistant (TA) also attended the Maths Hub training. She too was enthused by the approach and has introduced number based games such as hopscotch with the children. They share an outdoor space with the nursery, an area that is now used to develop mathematical thinking in play which is led by the TA.

Outcomes and Next Steps

"The children are utterly engaged in maths – they thrive on it. They love every minute. They are using the knowledge in their play and it puts them in such a good position to carry on their mathematical journey."

Interestingly, Jill feels that this new approach to maths has also had an effect on other areas of the curriculum. For example, when they are listening to a story, pupils are keen to piece things together and think about possibilities for the story's development. They are showing deeper learning throughout the curriculum. Staff have been amazed to watch how they carry on confidently using number and shape in their continuous provision time.

Ashurst's EYFS staff are excited about the prospect of introducing the programme to nursery and reception classes in September 2019, the first opportunity for them to use it for a full year. Jill will be leading in-house training for them as part of the school development plan to ensure that the necessary skills are embedded right from the start.

"This has changed the way I teach. Now I feel a lot more relaxed and I'm not trying to do too much. I'm giving the children exactly what they need and their response to the sessions tells me what they need the next day. They make up their own games and that's such a joy, thinking the knowledge is in there – it's done."

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