



## Greenbank Primary School Case Study

*“Our learning from Maths Mastery has encouraged us to develop our teaching in all areas. Now we ask children how they feel about their learning. Now they know that it’s OK to not understand, whereas before children wouldn’t tell us. Sometimes quieter children would be missed when they didn’t understand. Staff have been amazed at the pace at which children can learn so quickly and achieve so much.”*

Debra Wrigley, Headteacher

### Interviewees – quoted in italics

Debra Wrigley, Headteacher

Louise Kaemena, Deputy Headteacher

Lesley Plant, Assistant Headteacher, Maths Coordinator, Maths Master and Assistant Maths Hub Lead

### Background

Greenbank is a primary school located in Liverpool. It has 454 pupils, 26 teachers and 17 teaching assistants. 25% of its pupils qualify for pupil premium funding. In June 2015 it was considered to be “Good” by Ofsted.

### What has happened?

Greenbank sees itself as a forward-looking school and leaders have looked outside the city to find out what brings about the best outcomes for children. In 2015, having struggled for years to improve maths outcomes, the Leadership Team began looking at London Challenge schools, where they first saw Maths Mastery in action. Through that they heard about NW Maths Hub 3, so invited Lisa Bradshaw (Director of the St Helens Teaching School Alliance and NW Maths Hub 3) into school. They felt that *“She oozed confidence and enthusiasm that inspired you and there was a meeting of minds, so we decided to get involved with the hub.”* This started in a small way but the following year they were able to plan more strategically about what to develop, who to develop and how.

It was clear from the beginning that the Maths Hub offered much of what the school was looking for in terms of improving the quality of maths teaching and the engagement of pupils. From the outset all



school staff who went on training spoke positively about the quality of the experience. *“It’s all helped us to develop an open door policy so that we learn from one another.”*

Initially Maths Mastery (MM) could only train a year at a time, which suited Greenbank who decided to adopt a gradual, continuous approach for staff so as not to overwhelm them. It has not been an easy journey for staff but expertise in this area is now spreading more rapidly through the school. It has been a particular challenge to keep improving in Key Stage 2 when not all staff have been fully trained. However the principles and key elements of MM are used throughout the school and the subject knowledge of all staff has improved.

Staff have seen Maths Masters teaching in Greenbank and in other schools and there is now an expectation that their pupils will achieve outcomes above national levels, even in year groups where Mastery has not yet been completely rolled out.

*“Although not all teachers have been on Maths Hub training, development takes place within school as we have a Maths Master and some very experienced staff. All staff are developing their subject knowledge all the time. It’s about being able to impart that knowledge to as many people as possible so they can develop.”*

## **Is this what we thought would happen?**

The school leadership says no. *“It’s so much better than we had imagined. It’s developed so much. We just thought we were going to access some courses. We didn’t know that there would be opportunities for our staff to develop in the way they have. We learn from one another. The more you do it the more it just becomes the norm.*

*We’ve benefited so much from the collaboration. We identify in other schools good practice that our own staff can see and benefit from. Some of that isn’t directly from the Maths Hub but it’s been involvement with and learning from the Maths Hub that has given our staff the confidence to look outside.”*

Initially, the aim was to invest in Maths to improve pupil outcomes. Now the school has four SLEs, and not just in Maths. Contact with the Hub has also brought about a better understanding of the wider work of St Helens Teaching School Alliance.

## **What is causing this?**

Improvements that the school is now seeing in pupil outcomes in maths, they attribute to teachers having been trained in MM. In particular they are seeing a significant impact in Early Years and KS1, with an increasing number of pupils achieving a Greater Level of Development.

Maths Mastery provide lesson plans but teachers are recognised as professionals and are encouraged to adapt the plans for each class. Greenbank’s leadership feels that the beauty of the Maths Hub approach is that it creates a team of people in school working together. *“It’s no longer one person going on a course and coming back, with the likelihood that nothing will change. We’ve learned that it’s a whole school approach that has the most impact.”*

Increasingly the school is teaching in mixed ability groups. It has been hard but teachers are now seeing the advantages in this approach. Maths lessons used to begin with instruction on a new concept and some children could be lost within 5 minutes of the start of the lesson. Now they start with something they have done before. They have exploration and discussion to begin with and children are given more quality time to explore for themselves and discuss issues with one another, leading to more enjoyment and deeper understanding.

Greenbank was awarded the Gold Standard Quality Mark for Maths two years ago. Assessors visiting the school and interviewing pupils were impressed with their feedback. The school distributes questionnaires annually to children and teachers, asking for their views on maths. In the last few years many more children have been commenting on how much they enjoy maths and the main reasons for this is that they enjoy being able to talk to their friends about what they are learning using 'equipment' (concrete manipulatives) to help them understand what they are learning in maths. There is clearly a growth in confidence and independence in children's learning in relation to maths, and the school is beginning to see that overflow into every aspect of their learning and their behaviour. *"We've realised that we need to allow them to think for themselves and we've seen a massive difference."*

However, it has not been an easy journey for all staff. Some have found it a very difficult process. None of the teachers have maths degrees, very few have an A level in the subject and a number of staff did not themselves have a good experience of maths when they were at school. Part of the development plan therefore is to ensure that all staff are comfortable with the subject knowledge so that their pupils have a good learning experience. There is a similar challenge in working with parents, which the school tries to address by holding workshops so that they too develop a 'can do' attitude.

Y2 and Y6 teachers in particular may be reluctant to change because they feel they have been successful with their current teaching methods. In that respect it has been helpful to work with other schools on the change process because teachers are encouraging about how much difference a new approach has made to their practice. Despite the challenges, Greenbank has seen a marked change in attitudes as more sceptical colleagues have become increasingly confident in Mastery and are now very positive about it when they meet with teachers from other schools.

The school sees it as vital that both teaching assistants and teachers work and learn together and there are opportunities for them to do this through the Maths Hub. Because of the quality and effectiveness of the programmes, staff now look forward to the next piece of training, they want to know more. *"Our learning from Maths Mastery has encouraged us to develop our teaching in all areas. Now we ask children how they feel about their learning. Now they know that it's OK to not understand, whereas before children wouldn't tell us. Sometimes quieter children would be missed when they didn't understand. Staff have been amazed at the pace at which children can learn so quickly and achieve so much."*

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Lisa Bradshaw – NW3 Maths Hub Lead  
[lisa.bradshaw@three-saints.org.uk](mailto:lisa.bradshaw@three-saints.org.uk) | 07446 463250

Sarah Makin – NW3 Maths Hub Administrator  
[sarah.makin@three-saints.org.uk](mailto:sarah.makin@three-saints.org.uk) | 07446 446418



## What next?

The school recognises that there are still plenty of opportunities for its staff to learn more from involvement with the Hub. However, because of the expertise the school has developed, they are seen by the Hub as a resource to be used to train and support other schools, particularly in the Liverpool area.

The Headteacher feels that local schools are increasingly looking across the country for best practice across the curriculum. Many had previously been unaware of the work of the Maths Hub, so Greenbank is building on its links with Liverpool schools and its growing reputation in the area in order to develop the work of the Hub locally.

*“The whole reputation of the school has changed, even across the city. People will come to us and want to observe our teaching which would never have happened before. Our role in the Maths Hub is to develop its partnership with Liverpool schools. Budgets are being cut but this work is attractive to Headteachers because quality professional development makes a difference and it’s subsidised by the Department for Education. Central government is investing in the Hub and we know that it’s money well spent and it’s an investment. Maths Hub NW3 is linked with St Helens Teaching School Alliance so training is interwoven with the work of the TSA, which is hugely beneficial.*

*The message to Liverpool schools is that, by connecting with us and the Maths Hub, they are connecting with strong school-based leadership as well improving standards. This spills over into the rest of what we do. It’s not purely about improving Maths, it’s about developing the learning environment.”*

Examples of Greenbank’s developing role include:

- The Headteacher speaking about the Hub to other Headteachers at a meeting of her network.
- A Y6 teacher leading INSET at a local secondary school, explaining how maths is taught at Greenbank, because the secondary had remarked on the mathematical competence of pupils arriving in Y7 and they wanted to build on good practice.
- The Hub has a programme that covers transition, bringing primary and secondary teachers together. As Greenbank’s role develops, one target is to work with local secondary schools as well as primaries.

Despite their enthusiasm to take on this role, the school’s leadership is very keen not to overstretch itself. The starting point for involvement was to improve outcomes for their own pupils and that remains a priority. This latest development in the journey was not part of the original plan. Nevertheless, physically bringing Maths Hub provision into Liverpool by using local venues will mean that people do not have to travel far and more schools will be exposed to the programmes. Greenbank feels that they will benefit, as well as other schools in the city.

**“Why does the Maths Hub work? Because it’s driven by the excellent people who lead it. There have been no negatives about the things we have been involved in. There is a very small team of people who are tried and tested and who deliver high quality programmes, so they work.”**

**Debra Wrigley, Headteacher**

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# Appendix

## Greenbank Primary School Maths Data

### EYFS - Percentage of pupils achieving a Good Level of Development

	Greenbank	National
2018	75	71.5
2017	75	70.7
2016	69	69.3

- Since 2014 there has been a noticeable increase in the percentage of pupils achieving a Good Level of Development.

### KS1 - Percentage of pupils achieving the Expected and Higher Standard

	Greenbank 2018	Greenbank 2017	Greenbank 2016	National 2018	National 2017	National 2016
Maths EXP	88.3	76.7	73	76	75	73
Maths GD	33.3	20	7	22	21	18

- In maths (2018) a higher percentage of Greenbank pupils achieved the Expected and Higher Standard compared to all pupils nationally.
- Overall there is a 3 year upward trend in maths with significant increases in the numbers of pupils achieving the Higher Standard. (Expected from 73% in 2016 to 88.3% in 2018, Higher Standard from 7% in 2016 to 33.3% in 2018).

### KS2 - Percentage of pupils achieving the Expected and Higher Standard

	Greenbank 2017	Greenbank 2016	National 2017	National 2016
Maths EXP	84	72	75	70
Maths GD	33	18	23	17
Maths Average Scaled score	107	103	104	103

- From 2016 to 2017 there was a significant increase in the percentage of Greenbank pupils achieving the Expected and Higher Standard at KS2