

## **To diminish the difference in achievement from Early Years to KS2 in Mathematics between disadvantaged and other pupils nationally.**

### **Overview**

The purpose of the SSIF maths programme was to diminish the difference in achievement from Early Years to KS2 in mathematics between disadvantaged and other pupils nationally. This project sought to:

- Provide intensive CPD for non-specialist maths teachers to increase subject knowledge and pedagogy in maths teaching.
- Raise achievement for transition in maths (Early Years to KS1 / KS1-KS2 / KS2 - KS3)
- Accelerate and sustain pupil understanding of maths, in particular reasoning and problem solving.
- Provide strategies to increase access to the maths curriculum through developing maths vocabulary.
- Support leaders to identify strengths and maths needs in their school and how to lead colleagues through change.
- Support practitioners to engage with research based practice identifying successful strategies for Derby City schools to build sustainable improvements in maths achievement (Early Years to KS2)

The project aimed to deliver the following;

- Leadership clarity around mathematics provision in applicant schools
- Upskill teachers of maths who are not maths specialist to implement strategies to raise achievement for disadvantaged pupils.
- Upskill teaching assistants to coach others to strengthen outcomes relating to the specific needs their cohort of disadvantaged pupils.
- Develop pedagogy for mastery maths to ensure that clearly specified objectives are pursued until achieved thereby diminishing the difference of disadvantaged pupils and other pupils nationally.
- Deliver improvements in attainment and achievement in mathematical reasoning and problem solving at KS2.

**Good practice to share with others interested in running school improvement projects to ensure projects deliver the intended outcome.**

The delivery of two large scale school improvement programmes across Derby has revealed a number of common lessons which may be helpful when planning future programmes:

**1. Collaboration between teaching school alliances, local multi-academy trusts and the local authority.**

By working collaboratively in a strategic manner the connectivity which can be achieved is far more likely to improve outcomes for our pupils than working independently. The scope of the maths programme was so large that joint capacity, skills and expertise were required to ensure success. This collaboration is now embedded within ways of working.

**2. Integration with established school improvement structures e.g. maths hub and local partnerships is required to ensure sustainability and implementation of evidenced based practice which is in line with latest research.**

The maths programme added capacity to the maths hub by growing leaders and has provided clear intelligence for their work groups and engagement with NCTEM. The SSIF programme embedded this approach from a senior leadership level within the TSAs and has built strong partnerships with the city-wide primary strategy group and school improvement working group.

**3. Identify the common issue which will make the biggest difference; the most appropriate priority must be chosen at the right time.**

This was undertaken with the support of the local authority to ensure all evidence was taken into account and that a long term strategy could be communicated across all schools and to a range of appropriate audiences.

**4. Knowledge of schools and their context including staffing, their skill level and the barriers to improvement.**

Use of a range of pupil-level data sources to identify the nature and magnitude of challenges and problems was the starting point, however, understanding of school level context is essential to ensure engagement and effective implementation.

**5. Build leadership capacity to lead the development at all levels.**

Establish leadership commitment to addressing the common issue; all staff must buy in to the chosen approach. Time was taken prior to the launch of the programme to ensure that TSAs, trusts, the LA and schools shared a clear vision for the programme. Having worked with schools across the city in SSIF 1, there was a shared understanding of the leadership capacity in schools such that the programme leadership was clearly tailored to these needs.

**6. Build a learning community within schools and beyond to create momentum around the issue.**

The maths programme leader group was a major strength of the programme. It created and maintained a clear focus on the vision for the programme and was responsive to the leadership needs of schools. A particular success was in focussing maths leads of their use of assessment and data to impact on the outcomes of disadvantaged pupils.

**7. Develop a range of CPLD to meet the needs of all adults at the right level.**

From the outset, the maths programme included the needs of all adults working in the classroom, including leaders, teachers and teaching assistants. The need to involve parents emerged with a specific focus on the role of maths anxiety on the performance of pupils. Effective partnership working made it possible to address these needs with the expert involvement of colleagues from Derby University.

**8. Consider the needs of all adults involved with children, including parents**

The maths programme developed a targeted and multi-stranded, package of implementation strategies which were clearly linked to school needs. Initial audit and support with maths action planning ensured that the most appropriate elements were chosen by the schools to meet their needs and impact on their outcomes. Regular LLE support and challenge ensured impact.

**9. Evaluate & respond throughout the project to ensure impact.**

It is important to evaluate the impact of the activity throughout the programme and, where necessary, amend the approach and support to ensure it will deliver the maximum impact. The school confidence and skill level with mastery meant that highly bespoke mastery sessions had to be delivered in schools with time being devoted to modelling and coaching as well as subject knowledge and pedagogy.

**10. Plan for sustainability & succession planning from the start of the programme planning.**

An important element of the SSIF maths programme to ensure sustainability was to strengthen the strategic collaboration between those providers of maths support in the city, in particular the maths hub. At the outset, the SSIF leadership team outlined a clear and logically sequenced implementation plan which was clearly time framed, identified specific activities and colleagues involved and was communicated to all participating schools.

- The programme launch created a shared understanding of the implementation process and provided details of appropriate support and expectations through the programme.
- Shared understanding of the context the chosen priority improvement and up-front training were provided.

- The progress of schools was regularly monitored against KPIs, including pupil progress.
- Schools were offered a range of support through evidence based programmes and bespoke follow-on support was provided to meet the emerging needs of schools, including addressing barriers to progress not originally considered at the planning stage e.g. Maths anxiety amongst pupils, staff and parents.
- Links with the SSIF 1 reading programme were developed through an approach to maths vocabulary; this created a barrier to achievement in maths especially in the problem solving and reasoning tasks.
- Coaching for maths leads was provided by the lead LLE's regular school visits and through NPQSL for several school maths leaders. A key factor in the successful implementation of the SSIF programme was the regular, robust monitoring in place and the willingness to adapt the implementation plan in light of the evidence provided.
- Tight SSIF leadership structures were put in place to include an initial maths audit, maths action plan to focus on the progress of disadvantaged pupils and regular school visits to observe practice and provide coaching and an accountability framework for the school maths leads.

**Sustainability measures taken by projects to ensure improvement are sustained beyond the funding period.**

1. The SSIF maths leader group raised the profile of disadvantaged pupils amongst all staff and developed data analysis skills amongst maths leads and embedded a focus on the progress of these pupils which will sustain progress into 2019/20.
2. System leaders were embedded in the process of school improvement from the design phase onwards.
3. During the spring term 2019, SSIF schools were required to provide a sustainability plan to ensure the improved practice achieved as a result of SSIF input will be maintained and built upon in the next and future school years. This has included bespoke support in maths as well as support for the maths subject leads to plan to sustain progress. The SSIF delivery team are confident that ownership of these action plans by the schools will secure continued improvement and commitment to raising attainment for disadvantaged readers within their wider school improvements.
4. The SSIF Maths leader group will continue into 2019/20 and will be offered to all primary schools in the city. This group has the support of SSIF schools and its continuance was requested by them. From the SSIF schools, maths leaders have grown such that they are able to contribute to the leadership capacity of this group and there is some potential to recruit maths SLEs and PD leads from the group. Derby has an established primary strategy group which comprises a wide range of stakeholders, including head teachers, trusts, teaching schools, the research school, LA,

PVI providers. Leaders of the SSIF programme were members of this group, thereby ensuring coherence with city wide provision. This ensured that plans for PSG provision complimented those of SSIF, thereby ensuring schools were provided with a clear strategic vision for school improvement in the city. Subsequent PSG programmes were, therefore, able to complement the SSIF offer whilst communicating to schools the overall focus on maths and disadvantaged pupils as the city priority for 2018/19.

5. Evaluation findings have been shared with all Derby schools through city structures including PSG, the primary school improvement group, head teacher strategic leadership meeting (HSLM) which is attended by all city heads and CEOs and Derby City LA. Derby City LA school improvement advisers are empowered to impact across LA schools through HSLM. An evaluation report was produced to share intent, implementation and impact of the programme in line with expectations of the 2019 Ofsted framework so as to inform school planning for 2019/20.
6. Through SSIF Maths and PSG Maths, a strong working relationship has been established between Landau Forte TSA and East Midlands West Maths Hub. Sustainability of the SSIF maths programme into 2019/20 is linked to engagement with maths hub activity. The maths hub will provide leadership capacity to support the maths leader group in from summer term 2019. Through 2018/19 Landau Forte TSA has liaised with East Midlands West Maths Hub and NCTEM to ensure schools are engaged with appropriate support to continue to improve outcomes in maths for disadvantaged pupils. SSIF schools have been offered the maths work groups for 2019/20, linking them to maths hub programmes which are matched to their stage of development (mastery readiness; teaching for mastery; sustaining mastery).