

EYFS - Developing Mathematical Fluency Programme

Work Group Information Sheet

NCP 19-08



Overview

This project aims to ensure EYFS practitioners use the principles and pedagogies of EY best practice to ensure that all children are provided with access to deep mathematical learning across the environment, appreciating and understanding how pedagogy used in EYFS aligns with effective teaching for mastery.

Planning approaches will be developed so that teachers understand how to plan for progression ensuring that core concepts are revisited in varied ways so that children develop deep conceptual understanding.

Who is this for?

EYFS practitioners including- EYFS leads, teachers, teaching assistants supporting in the Reception setting.

What is involved?

Core training - 2 days for teachers

Time for classroom experimentation

TA training – 1 day

TRG (teacher research groups) session x 1

Classroom and planning support session (half day school visit from SLE)

Intended Outcomes

- To be able to plan effective provision utilising the progression within at least one key area of EY mathematics eg Cardinality, Composition, Change, Comparison (however most SHOULD be able to utilise more than just one area)
- To use the principles and pedagogies of EY best practice to ensure that all children are provided with access to deep mathematical learning across the environment
- To appreciate and understand how the pedagogy used in EYFS aligns with effective teaching for mastery to ensure a smooth transition into Y1
- Teachers will understand how to frame learning in an EYFS environment so that deep mathematical thinking is promoted and children learn important core concepts.
- Planning approaches will be developed so that teachers understand how to plan for progression ensuring that core concepts are revisited in varied ways so that children develop deep conceptual understanding.

- Teachers will understand how to plan for small steps in learning – acceleration will be avoided.
- Schools will re-evaluate their policies relevant to the teaching of mathematics in EYFS so that they are in line with a mastery approach – depth will be emphasised over acceleration.
- Assessment of mathematical attainment will still align with statutory ELGs, however interpretation of these will be more precise so that any push for teachers to accelerate learning beyond what is necessary will be quashed.
- Pupils will leave EYFS with a deeper understanding of core concepts. They will be ready to access Y1 where schools are adopting a teaching for mastery approach.

Expectations of participants and their schools

Core training day 1

This day provides an in-depth opportunity for participants to explore the key principles behind developing deep mathematical understanding in EYFS. This includes the following key ideas:

- Mindset – seeing mathematics as the ‘science of patterns’ and what the implications are for developing positive mindsets within learners themselves.
- The importance of providing mathematical experiences that are close to real life
- The different uses of numbers (cardinal, ordinal, nominal, measures – rote counting and rational counting)
- Fostering self-regulation from an early age – what it looks like to encourage mathematical thinking
- Multiple representations of concepts (Jerome Bruner’s ‘Enactive’, ‘Iconic’ and ‘Symbolic’ representations)
- The idea of introducing concepts in an informal play based way in line with Dienes six-stage theory
- ‘Low floor / high ceiling’ type investigations

Planning using a ‘number a week’ approach and 8 core ideas in mathematics (problem solving, sets, pattern, counting and comparison, number operations, number and composition, measures and geometry)

Time for classroom experimentation

During this period of time participants will be using planning support materials that have been devised from previous waves of this project to support their teaching. They will be trialling techniques and ideas discussed in the first training day straight away and will be required to complete a reflective log during this time. There will also be an NCETM online forum setup to enable the sharing of ideas and resources and to facilitate professional dialogue.

TA training

This day is a slimmed down version of the core training day provided for class teachers. The day includes looking at the same principles with a greater focus on more practical ‘in the moment’ role of the teacher guidance, rather than planning support. In particular, it is emphasised that children need plenty of processing time when exploring mathematical problems and adults should be careful not to intervene too quickly.

TRG session x 1

This session provides participants with an opportunity to visit one of the lead SLE’s schools and see what the provision is like. There will be opportunity to see activities in the classroom followed by reflective discussion. Participants will be asked to consider how what they saw compares with what they have been doing and to reflect on what changes they might make in the future.

Classroom and planning support session (half day school visit from SLE)

This involves one of the project SLE visiting the participant's school to work alongside them. The half day should involve some time working alongside the participant in the classroom, co-delivering an activity and coaching. There should also be some time allowed for support with planning. Participant schools may have specific issues they wish to address in the half-day and these will be discussed via e-mail prior to the visit.

During this visit the SLE will also ask the participants to answer some probing questions about what changes they have made as a result of the project and what sort of impact it has had. Answers to these will be collected and used as part of the impact tracking data.

Final core training day – embedding practice

For this final day, participants will re-visit some of the key principles that were discussed on the first day. Time will be given to reflecting on practice and what the next steps are. This includes some demonstration of EYFS activities with time for discussion as well as time for participants to share what has worked well and what hasn't, learning from each other. There will also be time to reflect on the structure of the project so that participants from each wave can influence/improve how the project is run. For example, the planning support materials from previous waves have been developed and improved based on the input from previous participants.

As part of this we will also be looking to develop new SLE to support EYFS maths work in the future. In this way, the project should develop leadership capacity across the North West to support larger numbers of schools with mathematics provision in EYFS.

Funding

This Work Group is free to participants.

Who is leading the Work Group?

Lisa Bradshaw- NW Maths Hub 3 lead and Gill Hood, WG lead

If you're interested, what next?

Please contact: Paula Foster paula.foster@three-saints.org.uk to register an interest

Lisa.bradshaw@three-saints.org.uk to find out more about the programme

Recruitment for Wave 7 will begin in Spring 2020- further information to follow