

SKTM – Early Years Teachers: Pattern, Shape, Space and Measures

Maths Hubs Network
Collaborative Projects
2021/22

NCP21-25



Outline

This project is designed to support Early Years teachers in developing specialist knowledge for teaching mathematics, thus enabling them to understand, teach and support pupils with their mathematics across the provision.

There are two types of SKTM Early Years pathways:

- Pathway One: Number Patterns and Structures
- Pathway Two: Pattern, Shape, Space and Measure.

Both pathways are in line with the new Early Years statutory framework and will support understanding and delivery of the changes.

Details

What is involved?

Each pathway has three core elements, three associated pedagogy sessions, and tasks to support the transition from theory to practice. There is also a final core unit that aims to review quality provision. The intention is that each pathway is the equivalent of a four-day programme.

This pathway focuses on three key aspects of early mathematics:

- Pattern
- Spatial Reasoning
- Measures

The new Early Years mathematics Educational Programme recognises the importance of these areas for later mathematical achievement.

It will also explore three effective pedagogies that help children learn through play, guided learning or direct teaching:

- Stories and Rhymes
- Interactions and Sustained Shared Thinking
- The Learning Environment

These experiences in the Reception year form a firm foundation for pupils to transition into KS1 and this pathway will also make links to the Year 1 'Ready to Progress' criteria from the DfE Mathematics Guidance.

Who can take part?

These programmes are designed for individuals who would like to develop their specialist knowledge for teaching maths to three to five years olds.

This may be particularly relevant for NQTs, teachers that have moved phases, or teachers that have not received maths-specific training.

What are the benefits?

Participants will:

- ✓ develop enhanced maths subject knowledge with a particular emphasis on developmental progression in the Early Years to ensure sequences of learning are cohesive
- ✓ consider the learning opportunities and pedagogical approaches across the wider provision – reviewing and enhancing the opportunities to promote mathematical learning across the provision.

What is the cost?

The SKTM – Early Years Teachers project is fully funded by the Maths Hubs Programme so is free to participating schools.

Covid-19 Recovery

Many positive lessons were learnt from online collaboration during Maths Hubs activity in 2020/21. These will be built upon in 2021/22.

As the impact of the pandemic hopefully recedes, the result for Maths Hubs work will be a blend of face-to-face activities and frequent online collaboration.



The wider context

'Early Years settings and schools should invest in developing practitioners' own understanding of mathematics, their understanding of how children typically learn, and how this relates to effective pedagogy.' – EEF KS1 Guidance Report. It has long been recognised that maths teaching is enhanced when the teachers are confident about the subject matter. Seabourne's work over the period of 2004-06 found that Subject Knowledge Enhancement (SKE) courses led to 'improvements in subject knowledge, attitude, understanding and confidence'. Gibson, O'Toole, Dennison & Oliver's (2013) report on SKE courses across all subjects in which SKE is offered finds that levels of subject knowledge and confidence in the subject are dramatically enhanced on completion of SKE courses. Maths Hubs work with a range of partners to ensure there is effective professional development of new teachers of maths in primary and secondary schools (and other maths classroom practitioners), so that they have the specialist knowledge required to support the learning of maths. This project is offered to impact on developing the subject knowledge and pedagogical knowledge for all practitioners teaching and supporting the learning of maths.

Expectations of participants and their schools

Participants and their schools must be able to commit to the full academic year's programme. This is likely to involve some face-to-face activity alongside online collaboration. As well as attending the sessions, participants will be expected to complete three school-based action research cycles to reflect on their Early Years pedagogy. It is asked that school leaders support their staff to complete this work.

About the Hub

Who will lead the programme?

Martin Tillbrook and Caroline Vissani

Where and When? Venue for face-to-face sessions to be confirmed

Launch (online): Tuesday 9th November 2021 – 15:45-16:45

Research Session (online): Wednesday 17th November 2021 – 15:45-16:45

Day 1 (face-to-face): Friday 19th November 2021 – all day

Reflection session (online): Monday 24th January 2022 - 15:45-16:45

Day 2 (face-to-face): Friday 4th February 2022 – all day

Reflection session (online): Tuesday 26th April 2022 – 15:45-16:45

Day 3 (face-to-face): Wednesday 4th May 2022 – all day

Reflection session (online): Wednesday 8th June 2022 – 15:45-16:45

Day 4 (face-to-face): Thursday 16th June 2022 – all day

More information

Please visit our website for more information about East Midlands South Maths Hub and our Work Groups within the National programme

www.emsmathshub.org.uk

