

Primary Teachers

Specialist Knowledge for the Teaching of Mathematics programme

Multiplicative Reasoning

Maths Hub Network Collaboration Projects 22/23

NCP22-26

Outline

This programme is designed to support primary teachers who would like to develop their specialist knowledge for teaching maths, thus enabling them to further understand, teach and support pupils in maths in the classroom. The programme is suitable for all teachers and will be particularly relevant for teachers that have moved phases and teachers that have not recently received maths-specific training.

Details

What is involved?

The model for this programme is four PD days with in-school work between these days plus a short introductory session. Schools are encouraged to engage two participants in a group, where possible, to maximise learning and impact. We are likely to be running this programme online to allow access across the hub region, unless all participants are in the same locality.

Participants will be supported to:

- Make carefully considered changes to their practice
- Observe and analyse the impact of these changes on learners (in particular, focus learners)
- Reflect on the implications
- Share thinking and findings

What are the benefits?

Participants will:

- ✓ Actively explore the research question 'How can we support learners to develop a relational understanding of multiplication, division, and fractions?'
- ✓ Enhance their maths subject knowledge with an emphasis on key structures
- ✓ Understand key elements of multiplicative reasoning and how understanding can be supported, including attending to language, structures, and representations
- ✓ Review their practice, as a result of the sessions, and make specific adaptations to have an impact on pupil outcomes.

The wider context

Multiplicative reasoning is essential to understanding the number system and underpins several key aspects of work in number, including rational number, ratio and proportion and percentages. This programme will consider what is effective in the learning and teaching of mathematics, with a focus on multiplicative reasoning, specifically:

- Unitising and multiplication as repeated addition
- Structures of multiplication
- Structures of division
- Understanding fractions within multiplicative reasoning

Expectations of participants and their schools

Schools must be able to commit to the full programme. This involves a total of one short introductory session and four full days as well as classroom and school-based activity. The days and school-based activity include interaction as a group working on maths together; reading articles; collaborative planning of teaching sessions in trios; teaching of planned sessions with groups of focus learners; videoing learning; and sharing reflections. Participants should also be supported by their school leadership to explore outcomes from the project with other colleagues in their school. Head teachers and subject leaders are invited to a presentation session on the final day where participants will share the impact of their work and learning in the group.

Workshop details

Workshops will be online and led by Louise Freir and Ruth Trundley

Workshop 1: Friday January 6th 15:30-16:30 Introduction

Workshop 2: Thursday 19th January 09:00-15:30

Workshop 3: Friday 10th March 09:00-15:30

Workshop 4: Thursday 27th April 09:00-15:30

Workshop 5: Thursday 18th May 09:00 – 15:30

Link to registration form [here](#).

Fully funded by the Maths Hubs Programme so is free to participating schools.