**Developing teachers’ mathematics subject knowledge in early years settings and primary schools to improve the attainment of all pupils**

**Mathematical Topics**

**Common themes identified by at least two different schools on Day 1:**

Fractions/decimals/percentages
Problem solving
Place value
Time

Algebra
Word problems
Application of calculation strategies
Subtraction

**Common themes identified on day 7:**

In order of preference:

* mental maths
* assessment (planning and progression)
* problem solving
* challenging SEN children
* challenging the gifted
* division (not chunking)
* word problems (especially money)
* ratio
* subtraction
* multiplication
* place value

**Topics covered and sample links from website :**

[**http://nrich.maths.org/haringey**](http://nrich.maths.org/haringey)

Day 1 Low threshold high ceiling tasks

[Low Threshold High Ceiling Tasks Feature](http://nrich.maths.org/8769) http://nrich.maths.org/8769

Structure, design and presentation of tasks

Day 2 Number sense and place value

 [Number Sense and Place Value Feature](http://nrich.maths.org/10712) http://nrich.maths.org/10712

Day 3 Recording mathematics

 [Recording Mathmatics Feature](Recording%20Mathmatics%20Feature) http://nrich.maths.org/9623

[Private Talk Public Conversation](https://nrich.maths.org/content/id/10757/Privatetalkpublicconverse%20ASKEW.pdf) article by Mike Askew [http://nrich.maths.org/content/id/10757/Privatetalkpublicconverse ASKEW.pdf](http://nrich.maths.org/content/id/10757/Privatetalkpublicconverse%20ASKEW.pdf) (and you can see Mike talking here: <http://www.educationscotland.gov.uk/video/m/video_tcm4571623.asp>)

Day 4 Fractions

 [Understanding Fractions Feature](http://nrich.maths.org/10496) http://nrich.maths.org/10496

Day 5 Embedding the three aims, reasoning, fluency and problem solving, in the National Curriculum

[EmbeddingThreeAims.ppt](https://nrich.maths.org/content/id/10757/EmbeddingThreeAims.ppt) http://nrich.maths.org/content/id/10757/EmbeddingThreeAims.ppt

Day 6 Problem solving in the context of geometry

[Teachers' Resources section of Poly Plug Rectangles](http://nrich.maths.org/7511/note) http://nrich.maths.org/7511/note

[OpeningOutCoordinates.ppt](http://nrich.maths.org/content/id/10757/OpeningOutCoordinates.ppt) http://nrich.maths.org/content/id/10757/OpeningOutCoordinates.ppt

 [Problem Solving Feature](http://nrich.maths.org/10334) http://nrich.maths.org/10334

Day 7 Algebra

 [Algebra in the New Curriculum Feature](http://nrich.maths.org/10941) http://nrich.maths.org/10941

Day 8 Mathematical reasoning in the context of calculation

 [Reasoning Feature](http://nrich.maths.org/11018) http://nrich.maths.org/11018

Day 9 The use of calculators

[http://www.tes.co.uk/article.aspx?storycode=331380](https://www.tes.co.uk/article.aspx?storycode=331380" \t "_blank)

[Secret Number](http://nrich.maths.org/5651) http://nrich.maths.org/5651
[Forgot the Numbers](http://nrich.maths.org/1015) http://nrich.maths.org/1015

Day 10 Problem solving unpacked

 [Problem Solving Feature](http://nrich.maths.org/10334) http://nrich.maths.org/10334

*Updated June 2015*