

## MATHS CURRICULUM

The maths curriculum at Sutton Courtenay gives children strong foundations for mathematical curiosity and understanding through their lives. It enables them to see joy and excitement in spotting patterns and making connections. The curriculum provides coherence from Early Years to Year 6, particularly regarding the models and representations children use to develop their conceptual understanding and explain this to others. Challenge and depth are provided for all, with greater depth for rapid graspers and appropriate support for those who need it. Our maths curriculum is designed to meet the National Curriculum aims to balance fluency, reasoning and problem-solving skills. A strong thread of developing children's oracy to articulate their learning and thinking links maths to the wider curriculum.

Our curriculum is built around White Rose resources but adapted to meet the specific needs of our children. It draws on expertise and additional resources from the NCETM. Seven of our teachers are currently participating in the NCETM Hubs Embedding Mastery and Mastering Number (KS1 and KS2) projects. We work closely with maths teaching experts from the primary and senior schools within the Ridgeway Education Trust to plan, implement, assess and review our bespoke curriculum.

**The national curriculum for mathematics aims to ensure that all pupils:**

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately;
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language;
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

### **Teaching for Depth**

A pupil really understands a mathematical concept, idea or technique if they can:

- describe it in their own words;
- represent it in a variety of ways (e.g. using concrete materials, pictures and symbols);
- explain it to someone else;
- make up their own examples (and non-examples) of it;
- see connections between it and other facts or ideas;
- recognise it in new situations and contexts;
- make use of it in various ways, including in new situations.

## Teaching for Greater Depth

A pupil develops mastery with greater depth if they can

- solve problems of greater complexity (i.e. where the approach is not immediately obvious), demonstrating creativity and imagination;
- independently explore and investigate mathematical contexts and structures;
- communicate results clearly and systematically;
- generalise about the mathematics they are learning and explain their reasoning.

For example questions, tasks and activities that support teaching for depth and greater depth, see the [Primary Assessment Materials | NCETM](#)

## The Ready-to-Progress Criteria

The “ready to progress criteria” identify the most important conceptual knowledge and understanding that pupils need as they progress from year 1 to year 6. It is still a statutory requirement that the whole of the curriculum is taught. However, by meeting the ready-to-progress criteria, pupils will be able to more easily access many of the other elements of the curriculum.

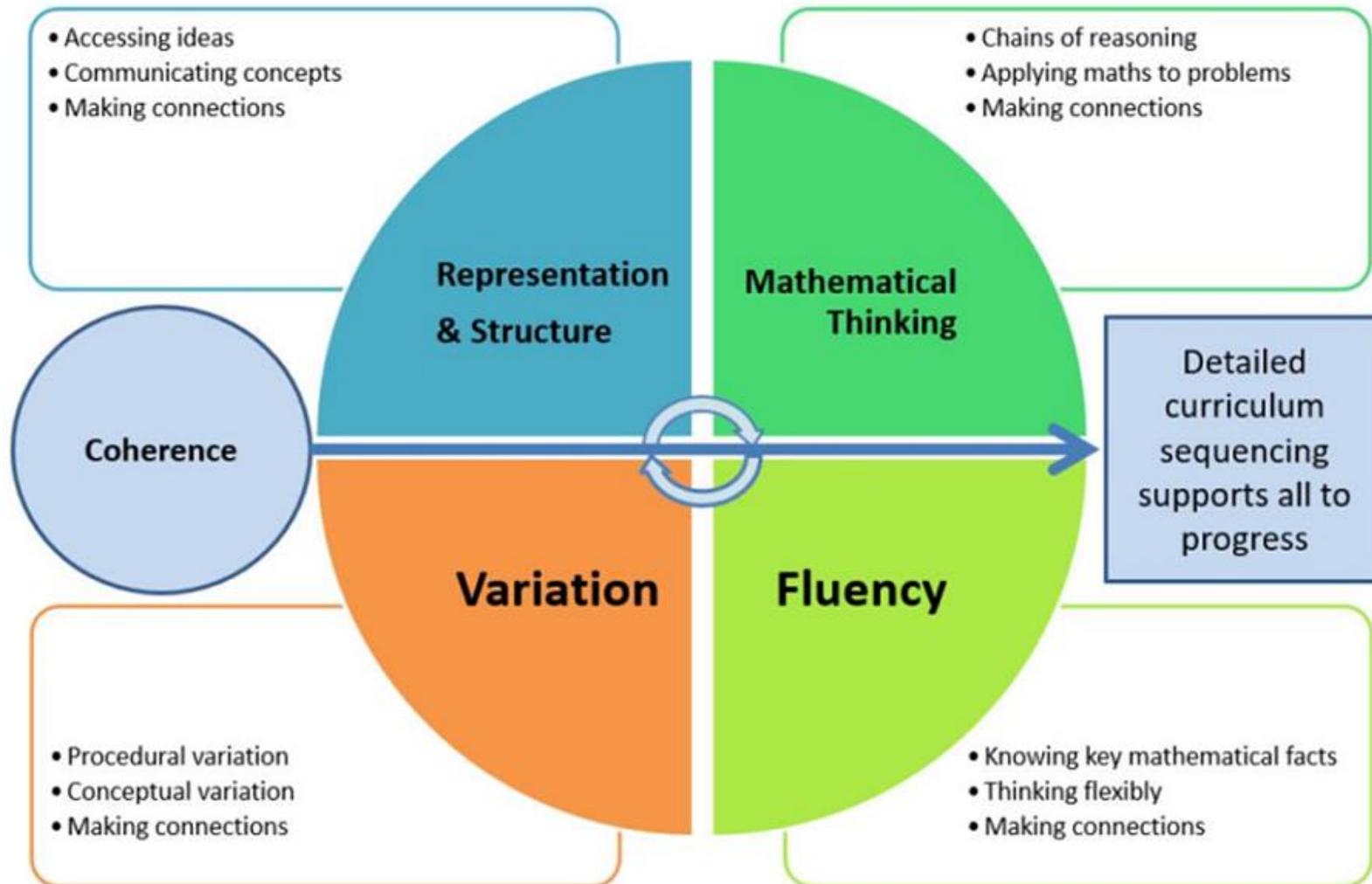
The ready-to-progress criteria are organised into 6 strands:

- NPV (Number and Place Value)
- NF (Number Facts)
- AS (Addition and Subtraction)
- MD (Multiplication and Division)
- F (Fractions)
- G (Geometry)

Detailed teaching and assessment guidance for the ready-to-progress criteria can be found here [Teaching mathematics in primary schools - GOV.UK \(www.gov.uk\)](#) (in the document called “Mathematics Guidance: Key Stages 1 and 2”) and here [Exemplification of ready-to-progress criteria | NCETM](#)

## Five Big Ideas

Our teaching approach is based on the NCETM principles for the teaching of maths mastery which are represented in the diagram below.



## Number Fact Fluency

Within the ready-to-progress criteria, it is recognised that number fact fluency is essential and requires sustained and extensive practice.

The school participates in NCETM Hubs' **Mastering Number** (KS1 and KS2) projects.

We use our own Number Fact assessment programme at three points throughout the year to identify and respond to gaps in fluency.

|                                | Year 1                              | Year 2                              | Year 3  | Year 4   | Year 5/6  |
|--------------------------------|-------------------------------------|-------------------------------------|---|--|---|
| Additive factual fluency       | Addition and subtraction within 10. | Addition and subtraction across 10. | Secure and maintain fluency in addition and subtraction within and across 10, through continued practice. |  |   |
| Multiplicative factual fluency |                                     |                                     | Recall the 10 and 5 multiplication tables, and corresponding division facts.                              | Recall the 3, 6 and 9 multiplication tables, and corresponding division facts. | Secure and maintain fluency in all multiplication tables, and corresponding division facts, through continued practice. |
|                                |                                     |                                     | Recall the 2, 4 and 8 multiplication tables, and corresponding division facts.                            | Recall the 7-multiplication table, and corresponding division facts.           |   |
|                                |                                     |                                     |   | Recall the 11 and 12 multiplication tables, and corresponding division facts.  |   |