

# Numicon teaching progression: Number, Pattern and Calculating 6 and Geometry, Measurement and Statistics 6

The Numicon teaching progression chart gives an overview of the expected coverage over the school year and the recommended order for teaching the activity groups. Statistics work has been included within the Geometry and Measurement activity groups through appropriate contexts.

Two new strands have been included to meet the needs of Year 6 – Preparing for Formal Testing and Investigating. The Preparing for Formal Testing strand contains two activity groups designed for use at the start of the year, to inform teaching and learning throughout, as well as three activity groups to prepare children for the specific demands of formal tests. The Investigating activity groups are included at the end of the progression, for use when children have completed their work on the other strands. These allow children to explore key mathematical concepts in real-world contexts and deepen their understanding.

See the long- and medium-term planning documents for Number, Pattern and Calculating 6 and Geometry, Measurement and Statistics 6 for references to assessment milestone statements; a powerful tool for measuring children's progress.

| Strand and activity group number | Activity group title  |
|----------------------------------|---|
| Preparing for Formal Testing 1   | Self-assessment and choosing imagery  |
| Preparing for Formal Testing 2   | Problem solving strategies  |
| Numbers and the Number System 1  | Working with numbers beyond a million and decimals                              |
| Calculating 1                    | Adding and subtracting negative numbers in context, and large numbers           |
| Calculating 2                    | Multiplying and dividing  |
| Measurement 1                    | Statistics, charts and graphs   |
| Pattern and Algebra 1            | Multiples, factors and primes   |
| Numbers and the Number System 2  | Fractions   |
| Calculating 3                    | Estimating, rounding and equivalence  |
| Calculating 4                    | Column methods for adding and subtracting                                       |
| Calculating 5                    | Percentages   |
| Geometry 1                       | 2D shapes and angles  |
| Calculating 6                    | Exploring calculations: multi-step non-routine problems and order of operations |
| Calculating 7                    | Ratio and proportion  |
| Measurement 2                    | Areas of 2D shapes  |
| Calculating 8                    | Converting fractions and decimals   |
| Pattern and Algebra 2            | Exploring number sequences and relationships                                    |
| Measurement 3                    | 3D shapes – nets and surface area   |
| Calculating 9                    | Written column methods of multiplying   |
| Calculating 10                   | Introducing long written methods of dividing                                    |

| Strand and activity group number | Activity group title |  |
|----------------------------------|----------------------|--|
| Measurement                      | 4                    | Volume and scaling                                     |
| Calculating                      | 11                   | Adding and subtracting with fractions                  |
| Calculating                      | 12                   | Multiplying and dividing fractions                     |
| Pattern and Algebra              | 3                    | Using algebra to solve problems                        |
| Geometry                         | 2                    | Circles  |
| Calculating                      | 13                   | Solving non-routine problems using all four operations |
| Geometry                         | 3                    | Transformations in the four quadrants                  |
| Pattern and Algebra              | 4                    | Using symbols and letters for variables and unknowns   |
| Preparing for Formal Testing     | 3                    | Fluency in calculating with whole numbers and decimals |
| Preparing for Formal Testing     | 4                    | Fluency in calculating with fractions and decimals     |
| Preparing for Formal Testing     | 5                    | Preparing to do maths in test conditions               |

### NPC and GMS Investigating activity groups

The investigating activities are independent and can be followed in any order. You may choose to use some or all of the topics with your class, according to their interests and the time available.

|                   |   |                          |
|-------------------|---|--------------------------|
| NPC Investigating | 1 | Making squares           |
| NPC Investigating | 2 | What did I do?           |
| NPC Investigating | 3 | How many ways?           |
| NPC Investigating | 4 | Decimal patterns         |
| NPC Investigating | 5 | Which is the best value? |
| NPC Investigating | 6 | An enterprise project    |
| GMS Investigating | 1 | Shape shifting           |
| GMS Investigating | 2 | Macro maths              |
| GMS Investigating | 3 | Interesting information  |