

Planning for a Year 5 and Year 6 mixed-age class using *Numicon*

Introduction

In this document you will find guidance on planning for a Year 5 and Year 6 mixed-age class using *Numicon*. It contains:

- [Planning considerations for Year 5 and Year 6 mixed-age teaching.](#)
- [Year 5 and Year 6 mixed-age long-term planning guidance.](#)
- [Year 5 and Year 6 mixed-age long-term plan, with Year 5 focus \(MALTP5\).](#)
- [Year 5 and Year 6 mixed-age long-term plan, with Year 6 focus \(MALTP6\).](#)

How you teach a mixed-age class depends on factors such as whether you have any additional teaching support for the maths lesson, and whether you have flexibility to organize your own day and timetable. Key considerations that you may wish to think through when planning and teaching a mixed-age class using *Numicon* are provided in this guidance. The two Year 5 and Year 6 mixed-age long-term plans (MALTP6 and MALTP5) are supplied. If you need greater focus on Year 5 you can use MALTP5 and if you need greater focus on Year 6 you can use MALTP6.

We understand that each class is different, so use your professional judgement to adapt the plans. A flexible approach to each week and unit will help you to best meet the needs of your class.

Planning considerations for Year 5 and Year 6 mixed-age teaching

Teaching without additional teaching support: some organizational possibilities

- **Start your teaching based on either the Year 5 objectives (MALTP5) or Year 6 objectives (MALTP6) for the whole class when teaching units with similar objectives.** Organizing the class in mixed-attainment groupings allows Year 6 children to recap and consolidate their own understanding of their previous learning, whilst also supporting the Year 5 children in their understanding of new learning. As the lesson/week progresses, you may wish to incorporate more practice and consolidation time so that when Year 5 children are working independently, you work with the Year 6 children on Year 6 objectives using either guided group work, work with individuals or whole-class teaching.
- An example of a teaching week could look like this:

| Teaching sequence | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|--------------------------------|--|---|--|---|---|
| Input (new teaching objective) | Whole-class Year 5 NC objective teaching input. | Whole-class Year 5 NC objective teaching input. Extension questions for Year 6 within whole-class input. | Year 5 only guided group work. Year 4 work independently on task set on Day 4. | Whole-class Year 5 NC objective teaching input. Extension questions for Year 6 within whole-class input. | Year 6 only guided group work. Year 5 work independently on task set on Day 4. |
| Year 5 children | Mixed-age Year 5/6 groupings. Teacher circulates whole class – asks Year 6 extension questions during small-group discussions. | Collaborative work without teaching support. | Independent work without teaching support. | Teacher input with Year 5. Includes setting up a learning task that Year 5 will continue with independently on Day 5. | Mixed-age Year 5/6 groupings. Teacher circulates whole class – asks extension/support questions during small-group discussions. |
| Year 6 children | | Teacher input with Year 6. Includes setting up a learning task that Year 6 will continue with independently on Day 3. | Teacher guided input. | Independent work without teaching support. | |

- **Organize the maths lesson to allow for two entirely separate maths teaching inputs.** This organization allows you to split your class and your input into Year 5 objectives and Year 6 objectives. Careful consideration needs to be given to how to structure your day to allow for this, and to ensure that those children not involved are occupied with other work.
- **Make use of other group work times within the school day.** Make use of other group work times within the school day to create opportunities for guided maths time and extra maths input teaching time outside of the maths lesson.

Teaching with additional teaching support: some organizational possibilities

- If you have an additional adult in the classroom, the logistics of managing mixed-age teaching may be simpler.
- Best practice is to ensure that the teacher remains responsible for the learning and progress of every child in the class and spends *equal* teaching time with every child regardless of attainment or age group.
- An example of a teaching week could look like this:

| Teaching sequence | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-------------------|--|--|--|--|--|
| Input | Whole-class Year 5 objective teaching input. | Year 5 teacher input with additional teaching support for Year 6 independent work. | Year 6 teacher input with additional teaching support for Year 5 independent work. | Year 5 teacher input with additional teaching support for Year 6 group work. | Year 6 teacher input with additional teaching support for Year 5 independent work. |
| Year 5 | Additional teaching support for Year 5 group work. | Additional teaching support for Year 5 group work. | Teacher Year 5 input. | Additional teaching support for Year 5 independent work. | Teacher Year 5 input. |
| Year 6 | Teacher Year 6 input and guided group work. | Teacher Year 6 input and guided group work. | Additional teaching support for Year 6 group work. | Teacher Year 6 input and guided group work. | Additional teaching support for Year 6 independent work. |

Year 5 and Year 6 mixed-age long-term planning guidance

- There are two versions of the Year 5 and Year 6 MALTP. Both will support the Year 6 children to be prepared for the Year 6 SATs.
- MALTP5 broadly follows the Year 5 recommended order. However, the Activity Groups have been grouped based on the topic and key mathematical ideas. The Year 6 Activity Groups have then been matched to these.
- MALTP6 broadly follows the Year 6 recommended order with Year 5 activity groups matched on topic and key mathematical ideas.
- The order here is therefore different from both the Year 5 and Year 6 single year group long-term plans and you will need to be aware that children may need additional support with prerequisite skills.
- If you decide to move strands around, consider what learning needs to have happened first to ensure children can successfully progress to the new units. The progression of number, place value, multiplication, division and fractions should be very carefully considered.
- For each of the activity groups, we suggest that you decide which of the activities to complete, extend or combine. If you need to use additional time to enable children to achieve objectives, keep in mind the impact that this extra time will have on coverage of other activity groups over the year. However, as we are still in a time of curriculum recovery, we recommend that mastering understanding of the concepts is the core priority.

How does this plan differ from the single-year plans?

- Activity groups from Year 5 have been matched to Year 6 and vice versa to ensure that teaching is based on very similar ideas from both year groups, and to make your teaching more manageable.
- The order of some units has been changed to ensure that similar ideas are taught for both year groups. It is advisable to look at the single age group long-term plans (SALTP) to be aware that children may need additional support with prerequisite skills.
- In MALTP5 it has been necessary to split some Activity Groups for example, the Year 6 Numbers and the Number System Units 1 and 2. There are also some matched activity groups where the number of activity groups or activities does not match across the year groups. This is partly due to the Year 6 programme of study containing many investigation units to support the statutory testing window and to prepare the children for the next stage of their learning. In these instances, you will have to use your professional judgement whether to extend the Year 6 unit or to reduce the number of activities to support both year groups. You may choose to leave some of the Year 5 units until the Year 6 are working on their investigations as exemplified in MALTP6.
- In MALTP6 it has been necessary to split some Activity Groups for example, the Year 6 Numbers and the Number System Units 1 and 2. There are also some matched units where the number of activities does not match across the year groups. In these instances, you will have to use your professional judgement whether to extend or reduce the number of activities to support both year groups. On other occasions two units have been matched against one, e.g., Year 5 NNS3 and Year 6 NNS1 Activity 4 and Calc 8. This is to enable the Year 6 content to be covered before the statutory testing window whilst developing linked concepts.
- In both MALTP options you will need to decide whether your Year 6 children need to revisit some of the Year 5 content or focus on new learning and consolidation of the Year 6 units.

- The '**Getting Started**' unit is recommended for those classes who are new to Numicon. For this reason, we have suggested that you use the Year 5 unit for all your children. You will need to decide whether you cover the activities in a couple of lessons or as short activities over your first teaching week. If your children are not new to Numicon, you may decide to start at **Preparing for Formal Testing 1**.
- **Preparing for Formal Testing** is a strand that only features in Year 6. Unit 1 provides children with the opportunity to reflect on their own understanding and confidence across different mathematical topics and question types, whereas Unit 2 explores problem solving strategies. You could complete Unit 1 and Unit 2 with both your year groups. For the Year 5 children you could use some of the milestone assessment cards which can be found on Oxford Owl or alternatively you could create your own questions.

Flexible planning for the Year 5 and Year 6 mixed-age class: consolidation and SATs

- For Year 6 children, you might want to build in a week for consolidation and SATs revision into the last week of the Spring term. For Year 5 children, you could equally provide time for consolidation of key concepts or you could continue with the next activity group on the MALTP.

More online and in the printed Teaching Handbooks

You can find further information on the contents of each Activity Group, single year group planning documents, templates and more in the Numicon printed Teaching Handbooks and on [Numicon Online](#).

Year 5 and Year 6 mixed-age long-term plan (MALTP5)

Direct links to each set of activities are included in the planning charts below. After logging into your [Numicon Online](#) subscription, you can then click on any of the links in the planning charts to open those activities in the Online Teaching Handbooks.

Please note that KMI stands for Key Maths Ideas.

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|---|---|---|---|
| Getting Started | Getting started with apparatus and imagery <i>KMI: Pattern, Adding, Subtracting, Multiplying, Dividing, Place value, Mathematical thinking and reasoning</i> | Getting Started – Y5 unit | Getting started with apparatus and imagery <i>KMI: Pattern, Adding, Subtracting, Multiplying, Dividing, Place value, Mathematical thinking and reasoning</i> |
| Preparing for Formal Testing 1 – Y6 unit | Self-assessment and choosing imagery <i>KMI: Mathematical thinking and reasoning</i> | Preparing for Formal Testing 1 | Self-assessment and choosing imagery <i>KMI: Mathematical thinking and reasoning</i> |
| Preparing for Formal Testing 2 – Y6 unit | Problem solving strategies <i>KMI: Reasoning, Problem solving, Mathematical thinking and reasoning</i> | Preparing for Formal Testing 2 | Problem solving strategies <i>KMI: Reasoning, Problem solving, Mathematical thinking and reasoning</i> |
| Numbers and the Number System 1 | Working with numbers up to a million <i>KMI: Counting, Place value, Ordering, Mathematical thinking and reasoning</i> | Numbers and the Number System 1 Activities 1-3 | Working with numbers beyond a million <i>KMI: Place value, Ordering, Rounding, Mathematical thinking and reasoning</i> |
| Numbers and the Number System 2 | Exploring equivalence with fractions <i>KMI: Fractions, Equivalence, Mathematical thinking and reasoning</i> | Numbers and the Number System 2 | Fractions <i>KMI: Fractions, Equivalence, Mathematical thinking and reasoning</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|--|---|---|--|
| Numbers and the Number System 3 | Understanding decimals <i>KMI: Fractions, Equivalence, Multiplying (scaling structure), Place value, Mathematical thinking and reasoning</i> | Numbers and the Number System 1 Activity 4 | Working with decimals <i>KMI: Place value, Ordering, Rounding, Mathematical thinking and reasoning</i> |
| | Numbers and the Number System 6 | Comparing and ordering fractions <i>KMI: Fractions, Equivalence, Ordering, Mathematical thinking and reasoning</i> | Calculating 8 |
| Geometry 1 | | | 2D shapes and angles <i>KMI: Angle, Rotation, Statistics, Communicating</i> |
| Geometry 1 | Measuring angles <i>KMI: Angles, Rotation, Equivalence, Invariance, Ordering, Being logical</i> | Geometry 1 | |
| <p>For the next seven Y5 units you will need to decide whether your Y6 children need to revisit some of the Y5 content or focus on deepening their understanding of these three Y6 units. Alternatively, you may choose to leave some of the Y5 units until the Y6 children are working on the investigating tasks. See also the alternative Y6 Focus Y5/6 mixed-age plan.</p> | | | |
| Calculating 1 | Developing fluency with adding and subtracting calculations and understanding inverse relationships <i>KMI: Adding, Subtracting, Inverse, Pattern, Mathematical thinking and reasoning</i> | Calculating 1 Activities 4-5 | Adding and subtracting large numbers <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i> |
| Calculating 2 | Strategies for bridging when adding and subtracting mentally <i>KMI: Adding, Subtracting, Fractions, Bridging, Mathematical thinking and reasoning</i> | Calculating 1 Activities 4-5 | Adding and subtracting large numbers <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|--|--|-------------------------------------|---|
| Numbers and the Number System 4 | Estimating and rounding <i>KMI: Counting, Place value, Ordering, Mathematical thinking and reasoning</i> | Calculating 3 | Estimating, rounding and equivalence <i>KMI: Counting, Place value, Equivalence, Mathematical thinking and reasoning</i> |
| Calculating 3 | Further strategies for adding and subtracting <i>KMI: Adding, Subtracting, Place value, Pattern, Mathematical thinking and reasoning</i> | | |
| Numbers and the Number System 5 | Working with negative numbers <i>KMI: Negative numbers, Ordering, Mathematical thinking and reasoning</i> | Calculating 1 Activities 1-3 | Adding and subtracting negative numbers in context <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i> |
| Calculating 5 | Written methods of adding <i>KMI: Adding, Place value, Decimals, Mathematical thinking and reasoning</i> | Calculating 4 | Column methods for adding and subtracting <i>KMI: Adding, Subtracting, Place value, Equivalence, Mathematical thinking and reasoning</i> |
| Calculating 6 | Written methods of subtracting <i>KMI: Subtracting, Place value, Decimals, Mathematical thinking and reasoning</i> | | |
| Geometry 2 | Transformations <i>KMI: Transformation, Reflection, Equivalence, Invariance, Being logical</i> | Geometry 3 | Transformations in the four quadrants <i>KMI: Transformation, Translation, Reflection, Invariants, Communicating</i> |
| Pattern and Algebra 1 | Exploring sequences and number patterns <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i> | Pattern and Algebra 2 | Exploring number sequences and relationships <i>KMI: Generalizing, Pattern, Function, Mathematical thinking and reasoning</i> |
| Calculating 4 | Developing fluency with multiplying and dividing <i>KMI: Multiplying, Dividing, Pattern, Fractions, Decimals, Mathematical thinking and reasoning</i> | Calculating 2 | Multiplying and dividing <i>KMI: Multiplying, Dividing, Equivalence, Mathematical thinking and reasoning</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|--|--|-------------------------------------|---|
| Pattern and Algebra 3 | Properties of number <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i> | Pattern and Algebra 1 | Multiples, factors and primes <i>KMI: Equivalence, Factors, Multiples, Primes, Composite numbers, Non-computational thinking, Mathematical thinking and reasoning</i> |
| For the next three Y5 units you will need to decide whether your Y6 children need to revisit some of the Y5 content or focus on deepening their understanding of the Y6 unit Calculating 6. Alternatively, you may choose to leave some of the Y5 units until the Y6 children are working on the investigating tasks. See also the alternative Y6 Focus Y5/6 mixed-age plan. | | | |
| Calculating 7 | Multiplying and dividing by 10, 100 and 1000 <i>KMI: Multiplying, Dividing, Pattern, Place value, Decimals, Mathematical thinking and reasoning</i> | Calculating 6 | Exploring calculations: multi-step non-routine problems and order of operations <i>KMI: Adding, Subtracting, Multiplying, Dividing, Equivalence, Mathematical thinking and reasoning</i> |
| Calculating 8 | Using mental methods for multiplying and dividing <i>KMI: Multiplying, Dividing, Distributive property, Mathematical thinking and reasoning</i> | | |
| Calculating 9 | Division with remainders <i>KMI: Dividing, Pattern, Place value, Fractions, Decimals, Mathematical thinking and reasoning</i> | | |
| Calculating 12 | Written methods of multiplying <i>KMI: Multiplying, Distributive property, Mathematical thinking and reasoning</i> | Calculating 9 | Written column methods of multiplying <i>KMI: Dividing, Place value, Fractions, Equivalence, Mathematical thinking and reasoning</i> |
| Calculating 13 | Written methods of dividing <i>KMI: Dividing, Mathematical thinking and reasoning</i> | Calculating 10 | Introducing long written methods of dividing <i>KMI: Multiplying, Place value, Inverse, Decimals, Mathematical thinking and reasoning</i> |
| Measurement 3 | Calculating area and perimeter <i>KMI: Area, Length and distance, Being logical</i> | Measurement 2 | Areas of 2D shapes <i>KMI: Transformation, Rotation, Reflection, Area, Communicating</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|-------------------------------------|---|-------------------------------------|---|
| Measurement 5 | Working with area and perimeter <i>KMI: Area, Length and distance, Being logical</i> | Measurement 3 | 3D shapes – nets and surface area <i>KMI: Area, Communicating, Angle, Working in 2D and 3D</i> |
| Measurement 4 | Estimating volume and capacity <i>KMI: Volume and capacity, Working in 2D and 3D, Equivalence, Standard units</i> | Measurement 4 | Volume and scaling <i>KMI: Length, Area, Volume and capacity, Working in 2D and 3D, Scaling</i> |
| Geometry 3 | Exploring angles <i>KMI: Angles, Rotation, /Equivalence, Parts and properties, Classifying, Being logical</i> | Geometry 2 | Circles <i>KMI: Invariants, Statistics, Scaling</i> |
| Calculating 10 | Proportion and ratio <i>KMI: Fractions, Equivalence, Ratio, Multiplicative thinking, Mathematical thinking and reasoning</i> | Calculating 7 | Ratio and proportion <i>KMI: Fractions, Equivalence, Order, Ratio, Multiplicative thinking, Dimension, Mathematical thinking and reasoning</i> |
| Calculating 11 | Percentages <i>KMI: Percentages, Equivalence, Mathematical thinking and reasoning</i> | Calculating 5 | Percentages <i>KMI: Multiplicative thinking, Equivalence, Fractions, Ratio and proportion, Mathematical thinking and reasoning</i> |
| Measurement 2 | Interpreting charts and graphs <i>KMI: Collecting data, Organizing data, Representing data, Temperature, Time</i> | Measurement 1 | Statistics, charts and graphs <i>KMI: Statistics, Arithmetic mean, Speed</i> |
| Calculating 14 | Calculating fractions of amounts <i>KMI: Fractions, Dividing, Equivalence, Mathematical thinking and reasoning</i> | Calculating 11 | Adding and subtracting with fractions <i>KMI: Equivalence, Fractions, Adding, Subtracting, Mathematical thinking and reasoning</i> |
| Calculating 15 | Calculating with fractions <i>KMI: Fractions, Equivalence, Adding, Subtracting, Multiplying, Dividing, Mathematical thinking and reasoning</i> | Calculating 12 | Multiplying and dividing fractions <i>KMI: Multiplying, Dividing, Equivalence, Fractions, Mathematical thinking and reasoning</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|---|--|---------------------------------------|--|
| Pattern and Algebra 2 | Using inverse relationships to solve problems <i>KMI: Inverse, Adding, Subtracting, Multiplying, Dividing, Pattern, Mathematical thinking and reasoning</i> | Pattern and Algebra 3 | Using algebra to solve problems <i>KMI: Reasoning, Problem solving, Algebra, Equivalence, Arithmetic operations, Patterns in using the four operations, Mathematical thinking and reasoning</i> |
| Numbers and the Number System 7 | Solving problems with fractions, decimals and percentages <i>KMI: Fractions, Percentages, Equivalence, Ordering, Mathematical thinking and reasoning</i> | Calculating I3 | Solving non-routine problems using all four operations <i>KMI: Adding, Subtracting, Multiplying, Dividing, Equivalence, Mathematical thinking and reasoning</i> |
| Pattern and Algebra 5 | Using equivalence to solve problems <i>KMI: Equivalence, Factors, Non-computational thinking, Mathematical thinking and reasoning</i> | Pattern and Algebra 4 | Using symbols and letters for variables and unknowns <i>KMI: Generalizing, Pattern, Algebra, Functions, Inverse, Equivalence, Mathematical thinking and reasoning</i> |
| The number of units that follow are not balanced due to the themed organisation of the Y5 units. You may have content for Y5 that you wish to revisit or alternatively, depending on where you are in the school year, you may decide to reduce some of the Y6 investigation units. | | | |
| Pattern and Algebra 4 | Looking for patterns and generalizing <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i> | Preparing for Formal Testing 3 | Fluency in calculating with whole numbers and decimals <i>KMI: Fluency, Adding, Subtracting, Multiplying, Dividing, Equivalence, Algebra, Non-computational thinking, Negative numbers, Mathematical thinking and reasoning</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|--|---|--|---|
| Calculating 16 | Solving problems involving several steps <i>KMI: Adding, Subtracting, Multiplying, Dividing, Equivalence, Mathematical thinking and reasoning</i> | Preparing for Formal Testing 4 | Fluency in calculating with fractions and decimals <i>KMI: Fluency, Adding, Subtracting, Multiplying, Dividing, Equivalence, Algebra, Non-computational thinking, Fractions, Decimals, Negative numbers, Mathematical thinking and reasoning</i> |
| Pattern and Algebra 6 | Logic and reasoning <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i> | Preparing for Formal Testing 5 | Preparing to do maths in test conditions <i>KMI: Reasoning, Problem solving, Mathematical thinking and reasoning</i> |
| Measurement 6 | Scale drawing <i>KMI: Scaling, Equivalence, Ratio, Being logical</i> | NPC Investigating 1 | Making squares <i>KMI: Inverse, Place value, Mathematical thinking and reasoning</i> |
| Measurement 7 | Solving problems involving time, money and measures <i>KMI: Volume and capacity, Mass, Standard units, Equivalence, Time, Money, Being logical</i> | NPC Investigating 2 | What did I do? <i>KMI: Fractions, Decimals, Equivalence, Place value, Factors and multiples, Pattern, Mathematical thinking and reasoning</i> |
| Measurement 1 | Metric and imperial units <i>KMI: Equivalence, Length and distance, Volume and capacity, Mass, Standard units, Ratio</i> | NPC Investigating 3 | How many ways? <i>KMI: Fractions, Mathematical thinking and reasoning</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|-------------------------------------|-------------------------|-------------------------------------|---|
| | | NPC Investigating 4 | Decimal patterns <i>KMI: Fractions, Decimal fractions, Place value, Equivalence, Pattern, Mathematical thinking and reasoning</i> |
| | | NPC Investigating 5 | Which is the best value? <i>KMI: Adding, Subtracting, Multiplicative thinking, Equivalence, Mathematical thinking and reasoning</i> |
| | | NPC Investigating 6 | An enterprise project <i>KMI: Adding, Subtracting, Dividing, Multiplicative thinking, Equivalence, Mathematical thinking and reasoning</i> |
| | | NPC Investigating 1 | Shape shifting <i>KMI: Area, Angle, Reflection, Rotation, Communicating</i> |
| | | NPC Investigating 2 | Macro maths <i>KMI: Scaling, Length and distance, Volume and capacity, Statistics, Communicating</i> |
| | | NPC Investigating 3 | Interesting information <i>KMI: Angle, Statistics, Volume and capacity, Scaling, Communicating</i> |

Year 5 and Year 6 mixed-age long-term plan (MALTP6)

Direct links to each set of activities are included in the planning charts below. After logging into your [Numicon Online](#) subscription, you can then click on any of the links in the planning charts to open those activities in the Online Teaching Handbooks.

Please note that KMI stands for Key Maths Ideas.

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|---|---|---|---|
| Getting Started | Getting started with apparatus and imagery <i>KMI: Pattern, Adding, Subtracting, Multiplying, Dividing, Place value, Mathematical thinking and reasoning</i> | Getting Started – Y5 unit | Getting started with apparatus and imagery <i>KMI: Pattern, Adding, Subtracting, Multiplying, Dividing, Place value, Mathematical thinking and reasoning</i> |
| Preparing for Formal Testing 1 – Y6 unit | Self-assessment and choosing imagery <i>KMI: Mathematical thinking and reasoning</i> | Preparing for Formal Testing 1 | Self-assessment and choosing imagery <i>KMI: Mathematical thinking and reasoning</i> |
| Preparing for Formal Testing 2 – Y6 unit | Problem solving strategies <i>KMI: Reasoning, Problem solving, Mathematical thinking and reasoning</i> | Preparing for Formal Testing 2 | Problem solving strategies <i>KMI: Reasoning, Problem solving, Mathematical thinking and reasoning</i> |
| Numbers and the Number System 1 | Working with numbers up to a million <i>KMI: Counting, Place value, Ordering, Mathematical thinking and reasoning</i> | Numbers and the Number System 1 Activities 1-3 | Working with numbers beyond a million <i>KMI: Place value, Ordering, Rounding, Mathematical thinking and reasoning</i> |
| Numbers and the Number System 2 | Exploring equivalence with fractions <i>KMI: Fractions, Equivalence, Mathematical thinking and reasoning</i> | Numbers and the Number System 2 | Fractions <i>KMI: Fractions, Equivalence, Mathematical thinking and reasoning</i> |
| Numbers and the Number System 3 | Understanding decimals <i>KMI: Fractions, Equivalence, Multiplying (scaling structure), Place value, Mathematical thinking and reasoning</i> | Numbers and the Number System 1 Activity 4 | Working with decimals <i>KMI: Place value, Ordering, Rounding, Mathematical thinking and reasoning</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|--|---|-------------------------------------|--|
| Numbers and the Number System 3 | Understanding decimals <i>KMI: Fractions, Equivalence, Multiplying (scaling structure), Place value, Mathematical thinking and reasoning</i> | Calculating 8 | Converting fractions and decimals <i>KMI: Equivalence, Fractions, Place value, Decimals, Multiplicative thinking, Mathematical thinking and reasoning</i> |
| Geometry 1 | Measuring angles <i>KMI: Angles, Rotation, Equivalence, Invariance, Ordering, Being logical</i> | Geometry 1 | 2D shapes and angles <i>KMI: Angle, Rotation, Statistics, Communicating</i> |
| Calculating 2 | Strategies for bridging when adding and subtracting mentally <i>KMI: Adding, Subtracting, Fractions, Bridging, Mathematical thinking and reasoning</i> | Calculating 1 Activities 4-5 | Adding and subtracting large numbers <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i> |
| Numbers and the Number System 4 | Estimating and rounding <i>KMI: Counting, Place value, Ordering, Mathematical thinking and reasoning</i> | Calculating 3 | Estimating, rounding and equivalence <i>KMI: Counting, Place value, Equivalence, Mathematical thinking and reasoning</i> |
| Calculating 3 | Further strategies for adding and subtracting <i>KMI: Adding, Subtracting, Place value, Pattern, Mathematical thinking and reasoning</i> | Calculating 4 | Column methods for adding and subtracting <i>KMI: Adding, Subtracting, Place value, Equivalence, Mathematical thinking and reasoning</i> |
| Numbers and the Number System 5 | Working with negative numbers <i>KMI: Negative numbers, Ordering, Mathematical thinking and reasoning</i> | Calculating 1 Activities 1-3 | Adding and subtracting negative numbers in context <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i> |
| Geometry 2 | Transformations <i>KMI: Transformation, Reflection, Equivalence, Invariance, Being logical</i> | Geometry 3 | Transformations in the four quadrants <i>KMI: Transformation, Translation, Reflection, Invariants, Communicating</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|-------------------------------------|--|-------------------------------------|---|
| Pattern and Algebra 1 | Exploring sequences and number patterns <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i> | Pattern and Algebra 2 | Exploring number sequences and relationships <i>KMI: Generalizing, Pattern, Function, Mathematical thinking and reasoning</i> |
| Calculating 4 | Developing fluency with multiplying and dividing <i>KMI: Multiplying, Dividing, Pattern, Fractions, Decimals, Mathematical thinking and reasoning</i> | Calculating 2 | Multiplying and dividing <i>KMI: Multiplying, Dividing, Equivalence, Mathematical thinking and reasoning</i> |
| Pattern and Algebra 3 | Properties of number <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i> | Pattern and Algebra 1 | Multiples, factors and primes <i>KMI: Equivalence, Factors, Multiples, Primes, Composite numbers, Non-computational thinking, Mathematical thinking and reasoning</i> |
| Calculating 8 | Using mental methods for multiplying and dividing <i>KMI: Multiplying, Dividing, Distributive property, Mathematical thinking and reasoning</i> | Calculating 6 | Exploring calculations: multi-step non-routine problems and order of operations <i>KMI: Adding, Subtracting, Multiplying, Dividing, Equivalence, Mathematical thinking and reasoning</i> |
| Calculating 12 | Written methods of multiplying <i>KMI: Multiplying, Distributive property, Mathematical thinking and reasoning</i> | Calculating 9 | Written column methods of multiplying <i>KMI: Dividing, Place value, Fractions, Equivalence, Mathematical thinking and reasoning</i> |
| Calculating 13 | Written methods of dividing <i>KMI: Dividing, Mathematical thinking and reasoning</i> | Calculating 10 | Introducing long written methods of dividing <i>KMI: Multiplying, Place value, Inverse, Decimals, Mathematical thinking and reasoning</i> |
| Measurement 3 | Calculating area and perimeter <i>KMI: Area, Length and distance, Being logical</i> | Measurement 2 | Areas of 2D shapes <i>KMI: Transformation, Rotation, Reflection, Area, Communicating</i> |
| Measurement 5 | Working with area and perimeter <i>KMI: Area, Length and distance, Being logical</i> | Measurement 3 | 3D shapes – nets and surface area <i>KMI: Area, Communicating, Angle, Working in 2D and 3D</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|-------------------------------------|---|-------------------------------------|---|
| Measurement 4 | Estimating volume and capacity <i>KMI: Volume and capacity, Working in 2D and 3D, Equivalence, Standard units</i> | Measurement 4 | Volume and scaling <i>KMI: Length, Area, Volume and capacity, Working in 2D and 3D, Scaling</i> |
| Geometry 3 | Exploring angles <i>KMI: Angles, Rotation, /Equivalence, Parts and properties, Classifying, Being logical</i> | Geometry 2 | Circles <i>KMI: Invariants, Statistics, Scaling</i> |
| Calculating 10 | Proportion and ratio <i>KMI: Fractions, Equivalence, Ratio, Multiplicative thinking, Mathematical thinking and reasoning</i> | Calculating 7 | Ratio and proportion <i>KMI: Fractions, Equivalence, Order, Ratio, Multiplicative thinking, Dimension, Mathematical thinking and reasoning</i> |
| Calculating 11 | Percentages <i>KMI: Percentages, Equivalence, Mathematical thinking and reasoning</i> | Calculating 5 | Percentages <i>KMI: Multiplicative thinking, Equivalence, Fractions, Ratio and proportion, Mathematical thinking and reasoning</i> |
| Measurement 2 | Interpreting charts and graphs <i>KMI: Collecting data, Organizing data, Representing data, Temperature, Time</i> | Measurement 1 | Statistics, charts and graphs <i>KMI: Statistics, Arithmetic mean, Speed</i> |
| Calculating 14 | Calculating fractions of amounts <i>KMI: Fractions, Dividing, Equivalence, Mathematical thinking and reasoning</i> | Calculating 11 | Adding and subtracting with fractions <i>KMI: Equivalence, Fractions, Adding, Subtracting, Mathematical thinking and reasoning</i> |
| Calculating 15 | Calculating with fractions <i>KMI: Fractions, Equivalence, Adding, Subtracting, Multiplying, Dividing, Mathematical thinking and reasoning</i> | Calculating 12 | Multiplying and dividing fractions <i>KMI: Multiplying, Dividing, Equivalence, Fractions, Mathematical thinking and reasoning</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|--|---|---------------------------------------|---|
| Pattern and Algebra 2 | Using inverse relationships to solve problems <i>KMI: Inverse, Adding, Subtracting, Multiplying, Dividing, Pattern, Mathematical thinking and reasoning</i> | Pattern and Algebra 3 | Using algebra to solve problems <i>KMI: Reasoning, Problem solving, Algebra, Equivalence, Arithmetic operations, Patterns in using the four operations, Mathematical thinking and reasoning</i> |
| Numbers and the Number System 7 | Solving problems with fractions, decimals and percentages <i>KMI: Fractions, Percentages, Equivalence, Ordering, Mathematical thinking and reasoning</i> | Calculating I3 | Solving non-routine problems using all four operations <i>KMI: Adding, Subtracting, Multiplying, Dividing, Equivalence, Mathematical thinking and reasoning</i> |
| Pattern and Algebra 5 | Using equivalence to solve problems <i>KMI: Equivalence, Factors, Non-computational thinking, Mathematical thinking and reasoning</i> | Pattern and Algebra 4 | Using symbols and letters for variables and unknowns <i>KMI: Generalizing, Pattern, Algebra, Functions, Inverse, Equivalence, Mathematical thinking and reasoning</i> |
| Calculating I | Developing fluency with adding and subtracting calculations and understanding inverse relationships <i>KMI: Adding, Subtracting, Inverse, Pattern, Mathematical thinking and reasoning</i> | Preparing for Formal Testing 3 | Fluency in calculating with whole numbers and decimals <i>KMI: Fluency, Adding, Subtracting, Multiplying, Dividing, Equivalence, Algebra, Non-computational thinking, Negative numbers, Mathematical thinking and reasoning</i> |
| Numbers and the Number System 6 | Comparing and ordering fractions <i>KMI: Fractions, Equivalence, Ordering, Mathematical thinking and reasoning</i> | Preparing for Formal Testing 4 | Fluency in calculating with fractions and decimals <i>KMI: Fluency, Adding, Subtracting, Multiplying, Dividing, Equivalence, Algebra, Non-computational thinking, Fractions, Decimals, Negative numbers, Mathematical thinking and reasoning</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|-------------------------------------|--|---------------------------------------|--|
| Calculating 5 | Written methods of adding <i>KMI: Adding, Place value, Decimals, Mathematical thinking and reasoning</i> | Preparing for Formal Testing 5 | Preparing to do maths in test conditions <i>KMI: Reasoning, Problem solving, Mathematical thinking and reasoning</i> |
| Calculating 6 | Written methods of subtracting <i>KMI: Subtracting, Place value, Decimals, Mathematical thinking and reasoning</i> | NPC Investigating 1 | Making squares <i>KMI: Inverse, Place value, Mathematical thinking and reasoning</i> |
| Calculating 7 | Multiplying and dividing by 10, 100 and 1000 <i>KMI: Multiplying, Dividing, Pattern, Place value, Decimals, Mathematical thinking and reasoning</i> | NPC Investigating 2 | What did I do? <i>KMI: Fractions, Decimals, Equivalence, Place value, Factors and multiples, Pattern, Mathematical thinking and reasoning</i> |
| Calculating 9 | Division with remainders <i>KMI: Dividing, Pattern, Place value, Fractions, Decimals, Mathematical thinking and reasoning</i> | NPC Investigating 3 | How many ways? <i>KMI: Fractions, Mathematical thinking and reasoning</i> |
| Pattern and Algebra 4 | Looking for patterns and generalizing <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i> | NPC Investigating 4 | Decimal patterns <i>KMI: Fractions, Decimal fractions, Place value, Equivalence, Pattern, Mathematical thinking and reasoning</i> |
| Calculating 16 | Solving problems involving several steps <i>KMI: Adding, Subtracting, Multiplying, Dividing, Equivalence, Mathematical thinking and reasoning</i> | NPC Investigating 5 | Which is the best value? <i>KMI: Adding, Subtracting, Multiplicative thinking, Equivalence, Mathematical thinking and reasoning</i> |
| Pattern and Algebra 6 | Logic and reasoning <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i> | NPC Investigating 6 | An enterprise project <i>KMI: Adding, Subtracting, Dividing, Multiplicative thinking, Equivalence, Mathematical thinking and reasoning</i> |

| Y5 Strand and activity group number | Y5 Activity group title | Y6 Strand and activity group number | Y6 Activity group title |
|--|---|--|---|
| Measurement 1 | Metric and imperial units <i>KMI: Equivalence, Length and distance, Volume and capacity, Mass, Standard units, Ratio</i> | GMS Investigating 1 | Shape shifting <i>KMI: Area, Angle, Reflection, Rotation, Communicating</i> |
| Measurement 6 | Scale drawing <i>KMI: Scaling, Equivalence, Ratio, Being logical</i> | GMS Investigating 2 | Macro maths <i>KMI: Scaling, Length and distance, Volume and capacity, Statistics, Communicating</i> |
| Measurement 7 | Solving problems involving time, money and measures <i>KMI: Volume and capacity, Mass, Standard units, Equivalence, Time, Money, Being logical</i> | GMS Investigating 3 | Interesting information <i>KMI: Angle, Statistics, Volume and capacity, Scaling, Communicating</i> |