

# Planning for a Year 3 and Year 4 mixed-age class using *Numicon*

## Introduction

In this document you will find guidance on planning for a Year 3 and Year 4 mixed-age class using *Numicon*. It contains:

- [Planning considerations for Year 3 and Year 4 mixed-age teaching.](#)
- [Year 3 and Year 4 mixed-age long-term planning guidance.](#)
- [Year 3 and Year 4 mixed-age long-term plan, with Year 3 focus \(MALTP3\).](#)
- [Year 3 and Year 4 mixed-age long-term plan, with Year 4 focus \(MALTP4\).](#)

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 3 and Year 4 mixed-age long term plans (MALTP3 and MALTP4) are supplied. If you need greater focus on Year 3 you can use MALTP3 and if you need greater focus on Year 4 you can use MALTP4.

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 3 and Year 4 mixed-age teaching

## Teaching without additional teaching support: some organizational possibilities

- **Start your teaching based on either the Year 3 objectives (MALTP3) or Year 4 objectives (MALTP4) for the whole class when teaching units with similar objectives.** Organizing the class into mixed-attainment groupings allows Year 4 children to recap and consolidate their own understanding of their previous learning whilst also supporting the Year 3 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 3 children are working independently you work with the Year 4 children on Year 4 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 3 NC objective teaching input.	Whole-class Year 3 NC objective teaching input. Extension questions for Year 4 within whole-class input.	Year 3 only guided group work. Year 4 work independently on task set on Day 4.	Whole-class Year 3 NC objective teaching input. Extension questions for Year 4 within whole-class input.	Year 4 only guided group work. Year 3 work independently on task set on Day 4.
Year 3 children	Mixed-age Year 3/4 groupings. Teacher circulates whole class – asks Year 4 extension questions during small-group discussions.	Collaborative work without teaching support.	Independent work without teaching support.	Teacher input with Year 3. Includes setting up a learning task that Year 3 will continue with independently on Day 5.	Mixed-age Year 3/4 groupings. Teacher circulates whole class – asks extension/support questions during small-group discussions.
Year 4 children		Teacher input with Year 4. Includes setting up a learning task that Year 4 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 3 objectives and Year 4 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 3 objective teaching input.	Year 3 teacher input with additional teaching support for Year 4 independent work.	Year 4 teacher input with additional teaching support for Year 3 independent work.	Year 3 teacher input with additional teaching support for Year 4 group work.	Year 4 teacher input with additional teaching support for Year 3 independent work.
Year 3	Additional teaching support for Year 3 group work.	Additional teaching support for Year 3 group work.	Teacher Year 3 input.	Additional teaching support for Year 3 independent work.	Teacher Year 3 input.
Year 4	Teacher Year 4 input and guided group work.	Teacher Year 4 input and guided group work.	Additional teaching support for Year 4 group work.	Teacher Year 4 input and guided group work.	Additional teaching support for Year 4 independent work.

## Year 3 and Year 4 mixed-age long-term planning guidance

- There are two versions of the Year 3 and Year 4 MALTP. Both will support the Year 4 children to be prepared for the Multiplication Tables Check (MTC).
- MALTP3 follows the Year 3 long-term plan recommended order. The Year 4 Activity Groups have then been matched on topic and key mathematical ideas.
- MALTP4 follows the Year 4 long-term plan recommended order with Year 3 activity groups matched on topic and key mathematical ideas.
- Use your judgement and consider the particular needs of your class when choosing which of the two plans to follow. For the matched year group 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 4 have been matched to Year 3 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 some instances, one year group will be introduced to new learning whilst the other year group will recap a unit of similar learning. There are also occasions where the activity groups do not have a matched unit because a topic is new to Year 4, for example, the Year 3 Numbers and the Number System Unit 3 - Keeping count and writing numbers down has been matched with Year 4 Numbers and the Number System Unit 4 - Introducing Negative Numbers. The key mathematical ideas in both these units link to counting, ordering, place value and mathematical thinking and reasoning. There are other examples which may initially seem to be a strange match, for example, Year 3 Calculating 8 - Adding and subtracting multiples of 10 and 100 and Year 4 Calculating 7 - Mental strategies for multiplying and dividing by 10 and 100, whilst the operations being explored are different both units require a developed understanding of place value. For all of the Year 3 units you will need to decide whether your Year 4 children need to revisit some of the Year 3 content before progressing to the new learning in the Year 4 units.

### Flexible planning for the Year 3 and Year 4 mixed-age class: consolidation and Multiplication Tables Check (MTC)

- Depending on how Term 3 falls, the MALTP4 plan completes all the units that develop an understanding of multiplication by the end of the Spring Term. For all children, but particularly those in Year 4, you may wish to build in additional consolidation and times table practise throughout the year to ensure they are fully prepared for the Multiplication Tables Check (MTC).

### **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 3 and Year 4 mixed-age long-term plan (MALTP3)

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.

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
<b>Getting Started</b>	Getting started with Number, Pattern and Calculating 3 <i>KMI: Counting, Place value, Grouping, Mathematical thinking and reasoning</i>	<b>Getting Started</b>	Getting started with Number, Pattern and Calculating 4 <i>KMI: Pattern, Adding, Subtracting, Multiplying, Dividing, Place value, Mathematical thinking and reasoning</i>
<b>Calculating 1</b>	Developing fluency with adding and subtracting facts to 10 <i>KMI: Adding, Subtracting, Pattern, Mathematical thinking and reasoning</i>	<b>Calculating 1</b>	Using adding and subtracting facts and understanding inverse relationships <i>KMI: Adding, Subtracting, Inverse, Pattern, Mathematical thinking and reasoning</i>
<b>Numbers and the Number System 1</b>	Finding how many by grouping in 10s and 100s <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 1</b>	Understanding place value in 4-digit numbers <i>KMI: Counting, Place value, Ordering, Mathematical thinking and reasoning</i>
<b>Calculating 2</b>	Developing fluency with adding and subtracting facts to 20 <i>KMI: Adding, Subtracting, Pattern, Mathematical thinking and reasoning</i>	<b>Calculating 2</b>	Strategies for bridging when adding and subtracting <i>KMI: Adding, Subtracting, Mathematical thinking and reasoning</i>
<b>Numbers and the Number System 2</b>	Exploring hundreds, tens and units with base-ten apparatus <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 2</b>	Ordering and comparing numbers to 1000 and beyond <i>KMI: Counting, Place value, Ordering, Mathematical thinking and reasoning</i>

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
<b>Pattern and Algebra 1</b>	Exploring the inverse relationship between adding and subtracting <i>KMI: Pattern, Inverse, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 2</b>	Exploring inverse relationships <i>KMI: Inverse, Adding, Subtracting, Multiplying, Dividing, Equivalence, Non-computational thinking, Mathematical thinking and reasoning</i>
<b>Numbers and the Number System 3</b>	Keeping count and writing numbers down <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 4</b>	Introducing negative numbers <i>KMI: Negative numbers, Ordering, Place value, Mathematical thinking and reasoning</i>
<b>Calculating 3</b>	Mental methods for adding single-digit numbers <i>KMI: Adding, Mathematical thinking and reasoning</i>	<b>Calculating 3</b>	Developing fluency with mental adding strategies <i>KMI: Adding, Pattern, Mathematical thinking and reasoning</i>
<b>Calculating 4</b>	Mental methods for subtracting single-digit numbers <i>KMI: Adding, Subtracting, Pattern, Mathematical thinking and reasoning</i>	<b>Calculating 4</b>	Developing fluency with mental subtracting strategies <i>KMI: Subtracting, Pattern, Mathematical thinking and reasoning</i>
<b>Pattern and Algebra 2</b>	Exploring steps of constant size through sequences of multiples <i>KMI: Pattern, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 1</b>	Exploring sequences and number patterns <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i>
<b>Geometry 1</b>	Investigating the parts and properties of polygons and polyhedra <i>KMI: Comparing parts and properties of shapes, Rotation, Classifying shapes</i>	<b>Geometry 1</b>	Classifying triangles and quadrilaterals <i>KMI: Describing parts and properties of shapes invariant under transformations, Classifying shapes, Equivalence</i>
<b>Calculating 5</b>	Revising multiplying as repeated adding <i>KMI: Multiplying, Mathematical thinking and reasoning</i>	<b>Calculating 5</b>	Developing fluency with multiplying facts to $12 \times 12$ <i>KMI: Multiplying, Pattern, Mathematical thinking and reasoning</i>

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
<b>Calculating 6</b>	Exploring multiplying through arrays <i>KMI: Multiplying, Mathematical thinking and reasoning</i>	<b>Calculating 10</b>	Exploring the distributive property and developing written methods of multiplying <i>KMI: Multiplying, Distributive property, Mathematical thinking and reasoning</i>
<b>Calculating 7</b>	Introducing dividing as 'How many ... in ...?' <i>KMI: Dividing, Quotition structure, Inverse, Mathematical thinking and reasoning</i>	<b>Calculating 6</b>	Developing fluency with dividing facts to $12 \times 12$ <i>KMI: Dividing, Inverse, Mathematical thinking and reasoning</i>
<b>Geometry 2</b>	Identifying and comparing angles by size <i>KMI: Rotation, Translation, Ordering, Equivalence, Classifying shapes</i>	<b>Geometry 3</b>	Investigating angles in shapes <i>KMI: Describing parts and properties of shapes invariant under transformations, Classifying shapes, Equivalence</i>
<b>Geometry 3</b>	Sorting and classifying 2D and 3D shapes <i>KMI: Sorting, Reflection, Classifying shapes</i>	<b>Geometry 2</b>	Understanding reflective symmetry <i>KMI: Rotation, Reflection, Translation, Equivalence</i>
<b>Numbers and the Number System 4</b>	Partitioning 2- and 3-digit numbers with and without money <i>KMI: Counting, Place value, Decimals, Equivalence, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 6</b>	Introducing decimal fractions <i>KMI: Equivalence, Fractions, Multiplying, Place value, Mathematical thinking and reasoning</i>
<b>Numbers and the Number System 5</b>	Ordering and structuring numbers to 1000 <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 8</b>	Introducing decimal fractions with two places <i>KMI: Decimal fractions, Equivalence, Common fractions, Multiplying, Place value, Rounding, Mathematical thinking and reasoning</i>
<b>Calculating 8</b>	Adding and subtracting multiples of 10 and 100 <i>KMI: Adding, subtracting, Mathematical thinking and reasoning</i>	<b>Calculating 7</b>	Mental strategies for multiplying and dividing by 10 and 100 <i>KMI: Multiplying, Dividing, Pattern, Mathematical thinking and reasoning</i>



Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
<b>Calculating 9</b>	Patterns of similar adding and subtracting calculations <i>KMI: Adding, subtracting, Pattern, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 3</b>	Exploring 'equals' in balancing number sentences <i>KMI: Adding, Subtracting, Multiplying, Dividing, Equivalence, Inverse, Non-computational thinking, Mathematical thinking and reasoning</i>
<b>Pattern and Algebra 3</b>	Reading and creating scales with different intervals <i>KMI: Pattern, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 4</b>	Exploring multiples and factors <i>KMI: Adding, Subtracting, Multiplying, Dividing, pattern, Inverse, Mathematical thinking and reasoning</i>
<b>Numbers and the Number System 6</b>	Finding half way, rounding to the nearest 10 or 100 <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 3</b>	Estimating and rounding <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>
<b>Calculating 10</b>	Learning multiplying facts and looking for patterns <i>KMI: Multiplying, Mathematical thinking and reasoning</i>	<b>Calculating 12</b>	Developing fluency with the short written method of multiplying <i>KMI: Multiplying, Distributive property, Mathematical thinking and reasoning</i>
<b>Calculating 11</b>	Introducing the sharing structure of dividing <i>KMI: Dividing, Partitioning structure (sharing), Mathematical thinking and reasoning</i>	<b>Calculating 11</b>	Using multiplying facts to solve dividing problems <i>KMI: Dividing, Distributive property, Fractions, Mathematical thinking and reasoning</i>
<b>Pattern and Algebra 4</b>	Extending sequences and finding differences <i>KMI: Pattern, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 7</b>	Exploring general rules, reasoning and logic <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i>
<b>Calculating 12</b>	Partitioning strategies for adding and subtracting <i>KMI: Adding, subtracting, Pattern, Mathematical thinking and reasoning</i>	<b>Calculating 14</b>	Solving problems involving more than one step <i>KMI: Adding, Subtracting, Multiplying, Dividing, Mathematical thinking and reasoning</i>
<b>Measurement 3</b>	Measuring accurately and calculating with metres, centimetres and millimetres <i>KMI: Length and distance, Equivalence, Standard units</i>	<b>Measurement 3</b>	Understanding and using units of length and distance <i>KMI: Length and distance, Standard units</i>

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
Measurement 1	Telling the time to the minute on the 12-hour clock <i>KMI: Duration, Telling the time, Equivalence</i>	Measurement 6	Understanding perimeter and area <i>KMI: Length and distance, Area, Scaling, Standard units</i>
Measurement 2	Exploring units of time <i>KMI: Duration, Telling the time, standard units, Ordering, Equivalence</i>	Measurement 1	Finding times and durations, and using 24-hour clock <i>KMI: Duration, Equivalence, Scaling</i>
Calculating 13	Using apparatus and imagery to introduce the written column method for adding <i>KMI: Adding, Mathematical thinking and reasoning</i>	Calculating 8	Developing fluency with the column method of adding <i>KMI: Adding, Place value, Mathematical thinking and reasoning</i>
Calculating 14	Using apparatus and imagery to support subtracting and introducing the written column method <i>KMI: Adding, subtracting, Place value, Pattern, Mathematical thinking and reasoning</i>	Calculating 9	Developing fluency with the column method of subtracting <i>KMI: Subtracting, Place value, Mathematical thinking and reasoning</i>
Calculating 15	Exploring ratio and scaling problems and introducing the short written methods of multiplying and dividing <i>KMI: Multiplying, Dividing, Mathematical thinking and reasoning</i>	Pattern and Algebra 5	Looking for growing patterns in problem solving <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i>
Measurement 4	Calculating with pounds and pence, and handling money <i>KMI: Money, Equivalence, Scaling</i>	Measurement 2	Calculating with money amounts <i>KMI: Money Equivalence</i>
Calculating 16	Making connections between dividing into equal parts and calculating with fractions <i>KMI: Fractions, Mathematical thinking and reasoning</i>	Calculating 13	Developing fluency with the short written method of dividing <i>KMI: Dividing, Place value, Mathematical thinking and reasoning</i>

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
Measurement 5	Measuring and calculating with grams and kilograms <i>KMI: Mass and weight, Equivalence, Standard units, Scaling</i>	Measurement 4	Understanding and using units of mass <i>KMI: Mass and weight, Equivalence, Standard units</i>
Measurement 6	Measuring and calculating with litres and millilitres <i>KMI: Capacity and volume, Equivalence, Standard units, Scaling</i>	Measurement 5	Understanding and using units of capacity and volume <i>KMI: Capacity and volume, Equivalence, Scaling, Standard units</i>
Numbers and the Number System 7	Understanding fractions of a whole and fractions as numbers <i>KMI: Fractions, Mathematical thinking and reasoning</i>	Numbers and the Number System 5	Fractions and recognizing part-whole relationships <i>KMI: Fractions, Equivalence, Mathematical thinking and reasoning</i>
Numbers and the Number System 8	Using fraction notation to describe parts of a discrete set <i>KMI: Fractions, Mathematical thinking and reasoning</i>	Numbers and the Number System 7	Exploring equivalence in fractions and introducing proportion <i>KMI: Fractions, Equivalence, Order, Mathematical thinking and reasoning</i>
Pattern and Algebra 5	Finding all possibilities and investigating a general statement <i>KMI: Pattern, Mathematical thinking and reasoning</i>	Pattern and Algebra 6	Solving problems and puzzles systematically <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i>
Geometry 4	Using grids and grid references <i>KMI: Translation, Direction and orientation in movement</i>	Geometry 4	Reading and plotting positions using coordinates <i>KMI: Translation, Equivalence</i>

## Year 3 and Year 4 mixed-age long-term plan (MALTP4)

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.

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
<b>Getting Started</b>	Getting started with Number, Pattern and Calculating 3 <i>KMI: Counting, Place value, Grouping, Mathematical thinking and reasoning</i>	<b>Getting Started</b>	Getting started with Number, Pattern and Calculating 4 <i>KMI: Pattern, Adding, Subtracting, Multiplying, Dividing, Place value, Mathematical thinking and reasoning</i>
<b>Calculating 1</b>	Developing fluency with adding and subtracting facts to 10 <i>KMI: Adding, Subtracting, Pattern, Mathematical thinking and reasoning</i>	<b>Calculating 1</b>	Using adding and subtracting facts and understanding inverse relationships <i>KMI: Adding, Subtracting, Inverse, Pattern, Mathematical thinking and reasoning</i>
<b>Numbers and the Number System 1</b>	Finding how many by grouping in 10s and 100s <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 1</b>	Understanding place value in 4-digit numbers <i>KMI: Counting, Place value, Ordering, Mathematical thinking and reasoning</i>
<b>Pattern and Algebra 2</b>	Exploring steps of constant size through sequences of multiples <i>KMI: Pattern, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 1</b>	Exploring sequences and number patterns <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i>
<b>Numbers and the Number System 2</b>	Exploring hundreds, tens and units with base-ten apparatus <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 2</b>	Ordering and comparing numbers to 1000 and beyond <i>KMI: Counting, Place value, Ordering, Mathematical thinking and reasoning</i>

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
<b>Calculating 2</b>	Developing fluency with adding and subtracting facts to 20 <i>KMI: Adding, Subtracting, Pattern, Mathematical thinking and reasoning</i>	<b>Calculating 2</b>	Strategies for bridging when adding and subtracting <i>KMI: Adding, Subtracting, Mathematical thinking and reasoning</i>
<b>Numbers and the Number System 6</b>	Finding half way, rounding to the nearest 10 or 100 <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 3</b>	Estimating and rounding <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>
<b>Geometry 1</b>	Investigating the parts and properties of polygons and polyhedra <i>KMI: Comparing parts and properties of shapes, Rotation, Classifying shapes</i>	<b>Geometry 1</b>	Classifying triangles and quadrilaterals <i>KMI: Describing parts and properties of shapes invariant under transformations, Classifying shapes, Equivalence</i>
<b>Calculating 3</b>	Mental methods for adding single-digit numbers <i>KMI: Adding, Mathematical thinking and reasoning</i>	<b>Calculating 3</b>	Developing fluency with mental adding strategies <i>KMI: Adding, Pattern, Mathematical thinking and reasoning</i>
<b>Calculating 4</b>	Mental methods for subtracting single-digit numbers <i>KMI: Adding, Subtracting, Pattern, Mathematical thinking and reasoning</i>	<b>Calculating 4</b>	Developing fluency with mental subtracting strategies <i>KMI: Subtracting, Pattern, Mathematical thinking and reasoning</i>
<b>Calculating 5</b>	Revising multiplying as repeated adding <i>KMI: Multiplying, Mathematical thinking and reasoning</i>	<b>Calculating 5</b>	Developing fluency with multiplying facts to $12 \times 12$ <i>KMI: Multiplying, Pattern, Mathematical thinking and reasoning</i>
<b>Calculating 7</b>	Introducing dividing as 'How many ... in ...?' <i>KMI: Dividing, Quotition structure, Inverse, Mathematical thinking and reasoning</i>	<b>Calculating 6</b>	Developing fluency with dividing facts to $12 \times 12$ <i>KMI: Dividing, Inverse, Mathematical thinking and reasoning</i>

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
<b>Pattern and Algebra 1</b>	Exploring the inverse relationship between adding and subtracting <i>KMI: Pattern, Inverse, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 2</b>	Exploring inverse relationships <i>KMI: Inverse, Adding, Subtracting, Multiplying, Dividing, Equivalence, Non-computational thinking, Mathematical thinking and reasoning</i>
<b>Calculating 8</b>	Adding and subtracting multiples of 10 and 100 <i>KMI: Adding, subtracting, Mathematical thinking and reasoning</i>	<b>Calculating 7</b>	Mental strategies for multiplying and dividing by 10 and 100 <i>KMI: Multiplying, Dividing, Pattern, Mathematical thinking and reasoning</i>
<b>Geometry 3</b>	Sorting and classifying 2D and 3D shapes <i>KMI: Sorting, Reflection, Classifying shapes</i>	<b>Geometry 2</b>	Understanding reflective symmetry <i>KMI: Rotation, Reflection, Translation, Equivalence</i>
<b>Numbers and the Number System 3</b>	Keeping count and writing numbers down <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 4</b>	Introducing negative numbers <i>KMI: Negative numbers, Ordering, Place value, Mathematical thinking and reasoning</i>
<b>Numbers and the Number System 7</b>	Understanding fractions of a whole and fractions as numbers <i>KMI: Fractions, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 5</b>	Fractions and recognizing part-whole relationships <i>KMI: Fractions, Equivalence, Mathematical thinking and reasoning</i>
<b>Calculating 13</b>	Using apparatus and imagery to introduce the written column method for adding <i>KMI: Adding, Mathematical thinking and reasoning</i>	<b>Calculating 8</b>	Developing fluency with the column method of adding <i>KMI: Adding, Place value, Mathematical thinking and reasoning</i>
<b>Calculating 14</b>	Using apparatus and imagery to support subtracting and introducing the written column method <i>KMI: Adding, subtracting, Place value, Pattern, Mathematical thinking and reasoning</i>	<b>Calculating 9</b>	Developing fluency with the column method of subtracting <i>KMI: Subtracting, Place value, Mathematical thinking and reasoning</i>

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
<b>Geometry 2</b>	Identifying and comparing angles by size <i>KMI: Rotation, Translation, Ordering, Equivalence, Classifying shapes</i>	<b>Geometry 3</b>	Investigating angles in shapes <i>KMI: Describing parts and properties of shapes invariant under transformations, Classifying shapes, Equivalence</i>
<b>Numbers and the Number System 4</b>	Partitioning 2- and 3-digit numbers with and without money <i>KMI: Counting, Place value, Decimals, Equivalence, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 6</b>	Introducing decimal fractions <i>KMI: Equivalence, Fractions, Multiplying, Place value, Mathematical thinking and reasoning</i>
<b>Calculating 9</b>	Patterns of similar adding and subtracting calculations <i>KMI: Adding, subtracting, Pattern, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 3</b>	Exploring 'equals' in balancing number sentences <i>KMI: Adding, Subtracting, Multiplying, Dividing, Equivalence, Inverse, Non-computational thinking, Mathematical thinking and reasoning</i>
<b>Calculating 6</b>	Exploring multiplying through arrays <i>KMI: Multiplying, Mathematical thinking and reasoning</i>	<b>Calculating 10</b>	Exploring the distributive property and developing written methods of multiplying <i>KMI: Multiplying, Distributive property, Mathematical thinking and reasoning</i>
<b>Calculating 11</b>	Introducing the sharing structure of dividing <i>KMI: Dividing, Partitioning structure (sharing), Mathematical thinking and reasoning</i>	<b>Calculating 11</b>	Using multiplying facts to solve dividing problems <i>KMI: Dividing, Distributive property, Fractions, Mathematical thinking and reasoning</i>
<b>Pattern and Algebra 3</b>	Reading and creating scales with different intervals <i>KMI: Pattern, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 4</b>	Exploring multiples and factors <i>KMI: Adding, Subtracting, Multiplying, Dividing, pattern, Inverse, Mathematical thinking and reasoning</i>

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
<b>Calculating 10</b>	Learning multiplying facts and looking for patterns <i>KMI: Multiplying, Mathematical thinking and reasoning</i>	<b>Calculating 12</b>	Developing fluency with the short written method of multiplying <i>KMI: Multiplying, Distributive property, Mathematical thinking and reasoning</i>
<b>Calculating 16</b>	Making connections between dividing into equal parts and calculating with fractions <i>KMI: Fractions, Mathematical thinking and reasoning</i>	<b>Calculating 13</b>	Developing fluency with the short written method of dividing <i>KMI: Dividing, Place value, Mathematical thinking and reasoning</i>
<b>Calculating 12</b>	Partitioning strategies for adding and subtracting <i>KMI: Adding, subtracting, Pattern, Mathematical thinking and reasoning</i>	<b>Calculating 14</b>	Solving problems involving more than one step <i>KMI: Adding, Subtracting, Multiplying, Dividing, Mathematical thinking and reasoning</i>
<b>Measurement 2</b>	Exploring units of time <i>KMI: Duration, Telling the time, standard units, Ordering, Equivalence</i>	<b>Measurement 1</b>	Finding times and durations, and using 24-hour clock <i>KMI: Duration, Equivalence, Scaling</i>
<b>Calculating 15</b>	Exploring ratio and scaling problems and introducing the short written methods of multiplying and dividing <i>KMI: Multiplying, Dividing, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 5</b>	Looking for growing patterns in problem solving <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i>
<b>Geometry 4</b>	Using grids and grid references <i>KMI: Translation, Direction and orientation in movement</i>	<b>Geometry 4</b>	Reading and plotting positions using coordinates <i>KMI: Translation, Equivalence</i>



<b>Y3 Strand and activity group number</b>	<b>Y3 Activity group title</b>	<b>Y4 Strand and activity group number</b>	<b>Y4 Activity group title</b>
<b>Numbers and the Number System 8</b>	Using fraction notation to describe parts of a discrete set <i>KMI: Fractions, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 7</b>	Exploring equivalence in fractions and introducing proportion <i>KMI: Fractions, Equivalence, Order, Mathematical thinking and reasoning</i>
<b>Numbers and the Number System 5</b>	Ordering and structuring numbers to 1000 <i>KMI: Counting, Place value, Mathematical thinking and reasoning</i>	<b>Numbers and the Number System 8</b>	Introducing decimal fractions with two places <i>KMI: Decimal fractions, Equivalence, Common fractions, Multiplying, Place value, Rounding, Mathematical thinking and reasoning</i>
<b>Measurement 4</b>	Calculating with pounds and pence, and handling money <i>KMI: Money, Equivalence, Scaling</i>	<b>Measurement 2</b>	Calculating with money amounts <i>KMI: Money Equivalence</i>
<b>Measurement 3</b>	Measuring accurately and calculating with metres, centimetres and millimetres <i>KMI: Length and distance, Equivalence, Standard units</i>	<b>Measurement 3</b>	Understanding and using units of length and distance <i>KMI: Length and distance, Standard units</i>
<b>Measurement 5</b>	Measuring and calculating with grams and kilograms <i>KMI: Mass and weight, Equivalence, Standard units, Scaling</i>	<b>Measurement 4</b>	Understanding and using units of mass <i>KMI: Mass and weight, Equivalence, Standard units</i>
<b>Measurement 6</b>	Measuring and calculating with litres and millilitres <i>KMI: Capacity and volume, Equivalence, Standard units, Scaling</i>	<b>Measurement 5</b>	Understanding and using units of capacity and volume <i>KMI: Capacity and volume, Equivalence, Scaling, Standard units</i>

Y3 Strand and activity group number	Y3 Activity group title	Y4 Strand and activity group number	Y4 Activity group title
<b>Pattern and Algebra 5</b>	Finding all possibilities and investigating a general statement <i>KMI: Pattern, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 6</b>	Solving problems and puzzles systematically <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i>
<b>Measurement 1</b>	Telling the time to the minute on the 12-hour clock <i>KMI: Duration, Telling the time, Equivalence</i>	<b>Measurement 6</b>	Understanding perimeter and area <i>KMI: Length and distance, Area, Scaling, Standard units</i>
<b>Pattern and Algebra 4</b>	Extending sequences and finding differences <i>KMI: Pattern, Mathematical thinking and reasoning</i>	<b>Pattern and Algebra 7</b>	Exploring general rules, reasoning and logic <i>KMI: Generalizing, Pattern, Mathematical thinking and reasoning</i>