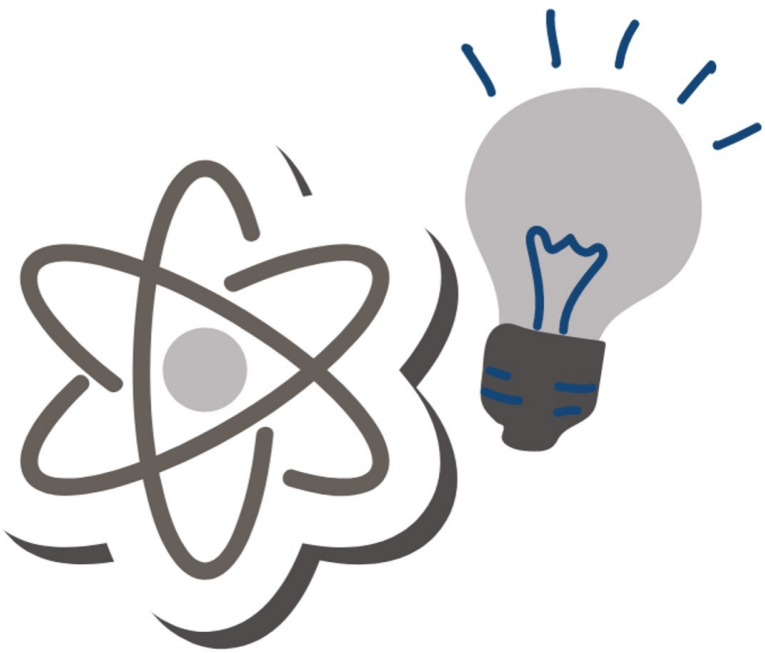
PROGRAMME COMPARISON

STRUCTURED MATHS APPROACH

A Structured Maths Scope & Sequence for Teachers in the Classroom



BY JORDAN PRIESTLEY

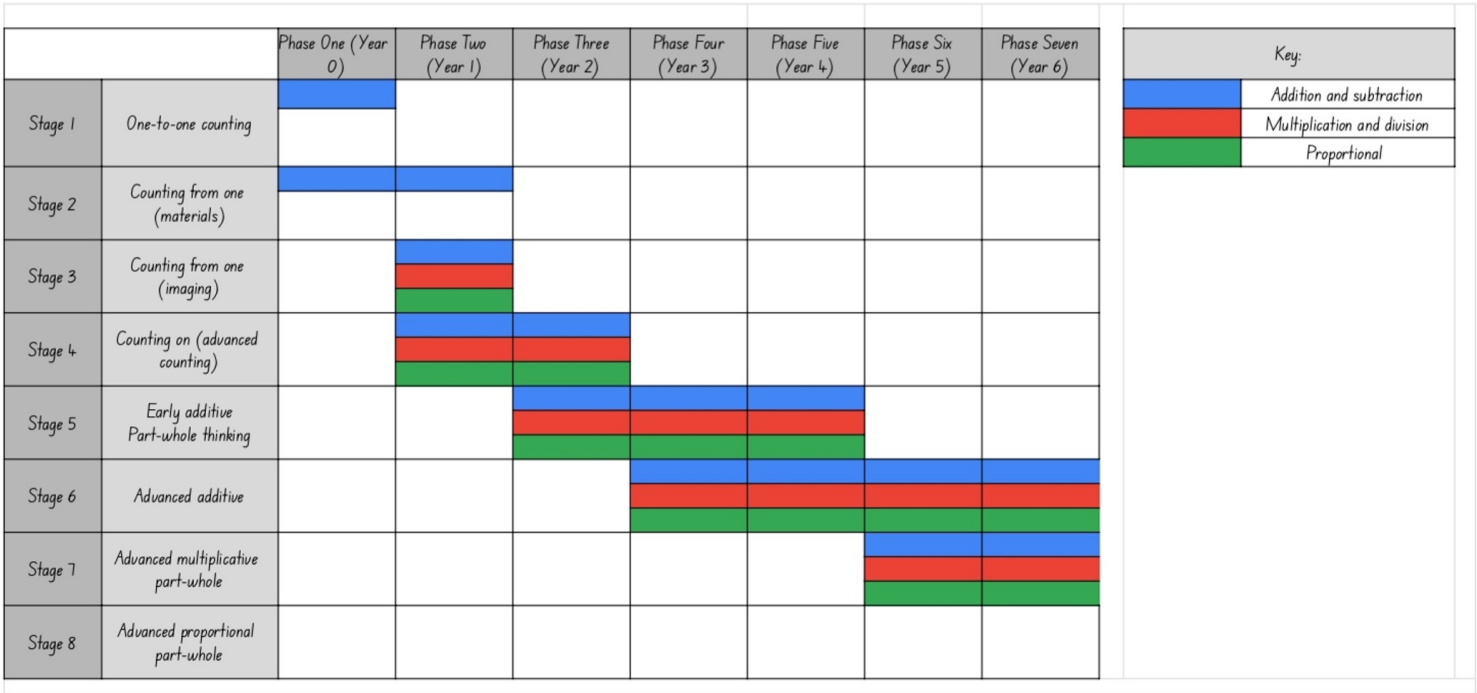
Comparisons between programmes

Structured Maths Approach is its own programme and design, meaning it is hard to match back to other programmes or ways of teaching maths currently. All programmes have their own ways of doing things, structure, sequence and own process of working through learning outcomes for students. This means it can be difficult to compare two programmes or approaches together. It is a common question I get asked around comparing Structured Maths Approach with other programmes out there so this comparison document was created to help you get a better picture of that.

In this comparison, you can see a comparison between Structured Maths Approach, The New Zealand Curriculum and Numeracy Project Framework stages below.

Structured Maths Approach vs Numeracy Project Framework

Here you can see which phases have different stage concepts appear in them. Some have an overlap between phases and stages due to the fluid nature of Structured Maths Approach. This is broken down into addition and subtraction, multiplication and division, and proportion (or fractions). Structured Maths Approach gives a firm knowledge and skill building up to a solid stage 5, early stage 6 for some concepts.



Structured Maths Approach vs Numeracy Project Framework Comparison

Designed and created by Jordan Priestley – Structured Maths Approach

		Phase One (Year 0)	Phase Two (Year 1)	Phase Three (Year 2)	Phase Four (Year 3)	Phase Five (Year 4)	Phase Six (Year 5)	Phase Seven (Year 6)
Stage 1	One-to-one counting							
Stage 2	Counting from one (materials)							
Stage 3	Counting from one (imaging)							
Stage 4	Counting on (advanced counting)							
Stage 5	Early additive Part-whole thinking							
Stage 6	Advanced additive							
Stage 7	Advanced multiplicative part-whole							
Stage 8	Advanced proportional part-whole							

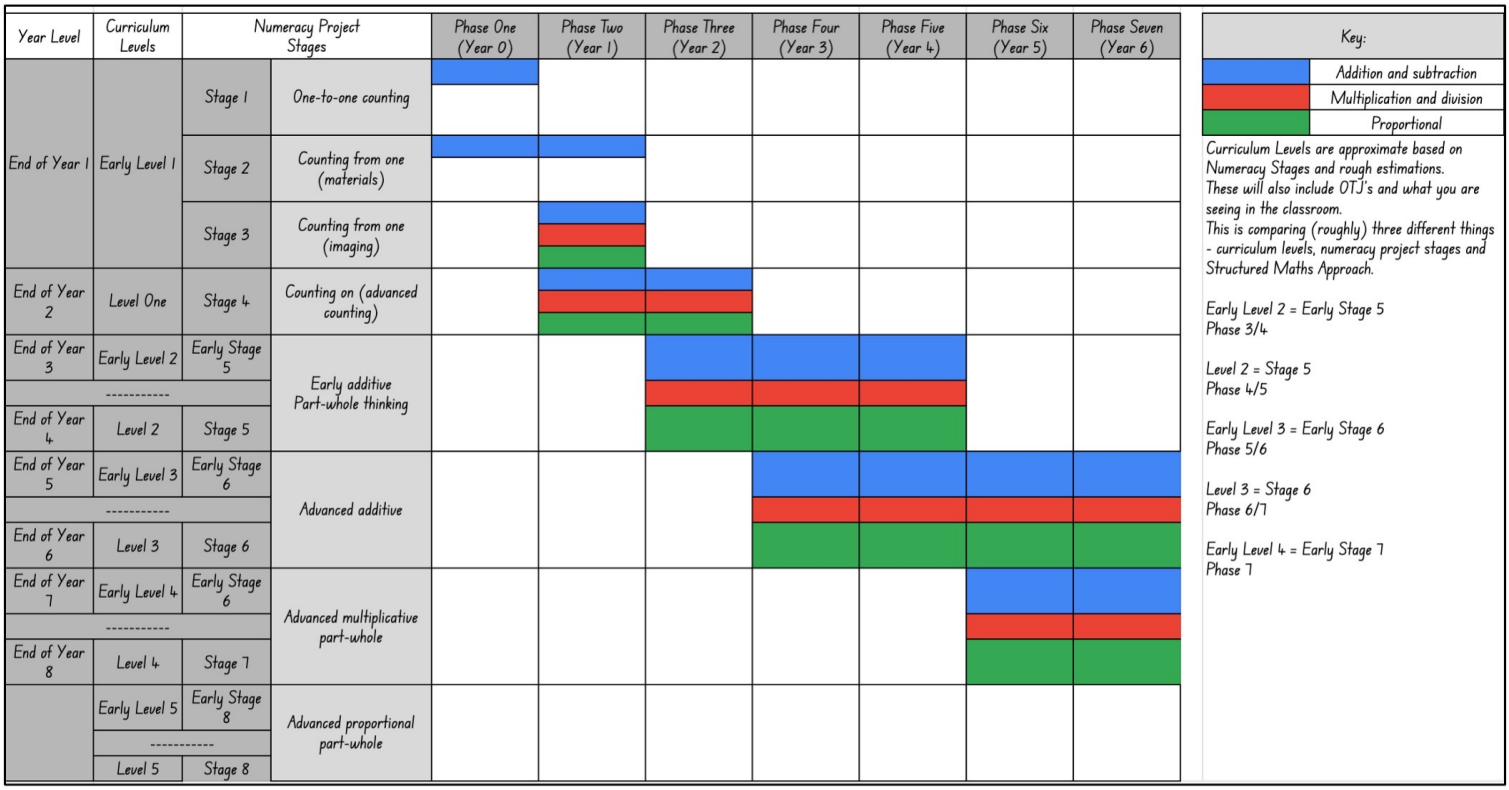
Key:
Addition and subtraction
Multiplication and division
Proportional

Structured Maths Approach vs Curriculum Levels

Here you can see which phases have different year and curriculum levels when compared to numeracy project stages and also the phases of Structured Maths Approach.

Comparing three different areas is hard because although they are similar, they are still different and can give a range of outcomes. These are only a guide and must be used alongside your OTJ's, classroom observations, lessons and other formative assessment.

Because Structured Maths Approach builds on the layered scope and sequence, concepts can be seen across phases to show the progression over time.



Structured Maths Approach vs Year Level and Curriculum Level Comparison

Designed and created by Jordan Priestley – Structured Maths Approach

Year Level	Curriculum Levels	Numeracy Project Stages		Phase One (Year 0)	Phase Two (Year 1)	Phase Three (Year 2)	Phase Four (Year 3)	Phase Five (Year 4)	Phase Six (Year 5)	Phase Seven (Year 6)
End of Year 1	Early Level 1	Stage 1	One-to-one counting							
		Stage 2	Counting from one (materials)							
		Stage 3	Counting from one (imaging)							
End of Year 2	Level One	Stage 4	Counting on (advanced counting)							
End of Year 3	Early Level 2	Early Stage 5	Early additive Part-whole thinking							

End of Year 4	Level 2	Stage 5								
End of Year 5	Early Level 3	Early Stage 6	Advanced additive							

End of Year 6	Level 3	Stage 6								
End of Year 7	Early Level 4	Early Stage 6	Advanced multiplicative part-whole							

End of Year 8	Level 4	Stage 7								
	Early Level 5	Early Stage 8	Advanced proportional part-whole							

	Level 5	Stage 8								

Key:	
	Addition and subtraction
	Multiplication and division
	Proportional

Curriculum Levels are approximate based on Numeracy Stages and rough estimations.
These will also include OTJ's and what you are seeing in the classroom.
This is comparing (roughly) three different things - curriculum levels, numeracy project stages and Structured Maths Approach.

Early Level 2 = Early Stage 5
Phase 3/4

Level 2 = Stage 5
Phase 4/5

Early Level 3 = Early Stage 6
Phase 5/6

Level 3 = Stage 6
Phase 6/7

Early Level 4 = Early Stage 7
Phase 7

Structured Maths Approach vs New Zealand Curriculum:

Here you can see which phases correlate under which progress steps from the refresh. Some overlap between phases to build a strong foundation and some are only seen in one phase.

Each of the four aspects are broken down:

- Number Structure
- Operations: Addition and Subtraction
- Operations: Multiplication and Division
- Rational Numbers

	Number Structure								
	during the first 6 months	during the first	during the second	during the third year	during Year 4	during Year 5	during Year 6	during Year 7	during Year 8
	Recognise, read, write, order, partition up to 10.	Recognise, read, write, order, partition and regroup whole numbers up to 20.	Recognise, read, write, order, partition, recombine and represent whole numbers up to 100.	Recognise, read, write, order, partition, recombine and represent whole numbers up to 1,000.	Recognise, read, write, order, partition, recombine and represent whole numbers up to 10,000.	Recognise, read, write, order, partition, recombine and represent whole numbers up to 100,000.	Recognise, read, write, order, partition, recombine and represent whole numbers up to 1,000,000.	Identify, read, write, compare, and order whole numbers using powers of 10	Identify, read, write, compare, and order whole numbers and decimals using powers of 10
Phase One (Year 0)									
Phase Two (Year 1)									
Phase Three (Year 2)									
Phase Four (Year 3)									
Phase Five (Year 4)									
Phase Six (Year 5)									
Phase Seven (Year 6)									
Phase Eight (Year 7)									
Phase Nine (Year 8)									

	Operations: Additions and subtraction								
	during the first 6 months	during the first	during the second	during the third year	during Year 4	during Year 5	during Year 6	during Year 7	during Year 8
	Join and separate groups of up a total of 10	Join and separate groups of up a total of 20 and find the difference between groups by grouping and counting	Add and subtract numbers up to 100 without renaming	Add and subtract numbers up to at least 100	Add and subtract two and three digit numbers Add and subtract decimals to one decimal place.	Add and subtract whole numbers up to 10,000. Add and subtract whole numbers and decimals to two decimal places.	Add and subtract any whole numbers. Add and subtract whole numbers and decimals to two decimal places.	Use the order of operations Add and subtract decimals to three decimal places Explore adding and subtracting integers	Use the order of operations Add, subtract, and multiply decimals Add and subtract with integers
Phase One (Year 0)									
Phase Two (Year 1)									
Phase Three (Year 2)									
Phase Four (Year 3)									
Phase Five (Year 4)									
Phase Six (Year 5)									
Phase Seven (Year 6)									
Phase Eight (Year 7)									
Phase Nine (Year 8)									

	Operations: Multiplication and division								
	during the first 6 months	during the first	during the second	during the third year	during Year 4	during Year 5	during Year 6	during Year 7	during Year 8
	NA	Multiply and divide using equal grouping or counting.	Multiply and divide using equal grouping or skip counting.	Multiply a one or two digit number by a one-digit number, using skip counting or known facts. Divide whole numbers by a one-digit divisor with no remainders, using grouping.	Multiply a two-digit by one-digit number and two one-digit whole numbers. Divide up to a three-digit whole number by a one-digit divisor with no remainder.	Multiply a three-digit by one-digit number and two two-digit whole numbers. Divide up to a three-digit whole number by a one digit divisor with a remainder.	Multiply multi-digit whole numbers. Dividie up to a four digit whole number by a one-digit divisor wtih a remainder.	Multiply whole numbers Divide whole numbers by one- or two-digit divisors Use the order of operations Multiply and divide numbers by 10, 100, and 1,000	Multiply whole numbers Divide whole numbers Use the order of operations Multiply and divide numbers by powers of 10
Phase One (Year 0)									
Phase Two (Year 1)									
Phase Three (Year 2)									
Phase Four (Year 3)									
Phase Five (Year 4)									
Phase Six (Year 5)									
Phase Seven (Year 6)									
Phase Eight (Year 7)									
Phase Nine (Year 8)									

	Rational numbers								
	during the first 6 months	during the first	during the second	during the third year	during Year 4	during Year 5	during Year 6	during Year 7	during Year 8
	NA	Identify and represent halves and quarters as fractions of sets and regions, using equal parts of the whole. Find a half or quarter of a set using equal sharing and grouping.	Identify, read, write (using symbols and words), and represent halves, quarters, and eighths as fractions of sets and regions, using equal parts of the whole. Directly compare two fractions involving halves, quarters, and eighths. Find a half and quarter of a set by identifying groups and patterns and identify the whole set or shape when given a half or quarter.	Identify, read, write, and represent halves, thirds, quarters, fifths, sixths, and eighths as fractions of sets and regions, using equal parts of the whole and by positioning on a number line. Compare and order fractions involving halves, quarters, and eighths and identify when two fractions are equivalent. Find a unit fraction of a whole number. Identify the whole set or amount when given a unit fraction. Add and subtract unit fractions with the same denominator.	Identify, read, write, and represent tenths as fractions and decimals Compare and order tenths as fractions and decimals, and convert decimal tenths to fractions (e.g., 0.3 = 3). Convert between mixed numbers and improper fractions. Find a unit fraction of a whole number. Identify a unit fraction part of a whole set. Add and subtract fractions with the same denominators.	Identify, read, write, and represent tenths and hundredths as fractions and decimals. Compare and order tenths and hundredths as fractions and decimals, and convert decimal tenths and hundredths to fractions. Identify equivalent fractions. Convert between mixed numbers and improper fractions. Find a fraction of a whole number. Identify a whole set. Add and subtract fractions with the same denominators.	Identify, read, write, and represent fractions, decimals (to two places), and related percentages compare and order fractions, decimals (to two places), and percentages, and convert decimals and percentages to fractions. Identify equivalent fractions. Represent fractions in their simplest form. Convert between mixed numbers and improper fractions. Find a fraction or percentage of a whole number. Identify the whole set. Add and subtract fractions with the same or related denominators.	Identify, read, write, and represent fractions, decimals (to three places), and percentages Compare, order, and convert between fractions, decimals (to three places), and percentages Find equivalent fractions, simplify fractions, and convert between improper fractions and mixed numbers Add and subtract fractions with different denominators of up to a tenth, using equivalent fractions Add and subtract decimals to three decimal places, with an emphasis on estimating before calculating	Identify, read, write, and represent fractions, decimals, and percentages Compare, order, and convert between fractions, decimals, and percentages Find equivalent fractions, simplify fractions, and convert between improper fractions and mixed numbers find a percentage of a whole number, and find a whole amount, given a simple fraction or percentage Add and subtract fractions with different denominators, using equivalent fractions
Phase One (Year 0)									
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Phase Three (Year 2)									
Phase Four (Year 3)									
Phase Five (Year 4)									
Phase Six (Year 5)									
Phase Seven (Year 6)									
Phase Eight (Year 7)									
Phase Nine (Year 8)									

	Number Structure								
	during the first 6 months	during the first	during the second	during the third year	during Year 4	during Year 5	during Year 6	during Year 7	during Year 8
	Recognise, read, write, order, partition up to 10.	Recognise, read, write, order, partition and regroup whole numbers up to 20.	Recognise, read, write, order, partition, recombine and represent whole numbers up to 100.	Recognise, read, write, order, partition, recombine and represent whole numbers up to 1,000.	Recognise, read, write, order, partition, recombine and represent whole numbers up to 10,000.	Recognise, read, write, order, partition, recombine and represent whole numbers up to 100,000.	Recognise, read, write, order, partition, recombine and represent whole numbers up to 1,000,000.	Identify, read, write, compare, and order whole numbers using powers of 10	Identify, read, write, compare, and order whole numbers and decimals using powers of 10
Phase One (Year 0)									
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Phase Three (Year 2)									
Phase Four (Year 3)									
Phase Five (Year 4)									
Phase Six (Year 5)									
Phase Seven (Year 6)									
Phase Eight (Year 7)									
Phase Nine (Year 8)									

	Operations: Additions and subtraction								
	during the first 6 months	during the first	during the second	during the third year	during Year 4	during Year 5	during Year 6	during Year 7	during Year 8
	Join and separate groups of up a total of 10	Join and separate groups of up a total of 20 and find the difference between groups by grouping and counting	Add and subtract numbers up to 100 without renaming	Add and subtract numbers up to at least 100	Add and subtract two and three digit numbers Add and subtract decimals to one decimal place.	Add and subtract whole numbers up to 10,000. Add and subtract whole numbers and decimals to two decimal places.	Add and subtract any whole numbers. Add and subtract whole numbers and decimals to two decimal places.	Use the order of operations Add and subtract decimals to three decimal places Explore adding and subtracting integers	Use the order of operations Add, subtract, and multiply decimals Add and subtract with integers
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Phase Five (Year 4)									
Phase Six (Year 5)									
Phase Seven (Year 6)									
Phase Eight (Year 7)									
Phase Nine (Year 8)									

	Operations: Multiplication and division								
	during the first 6 months	during the first	during the second	during the third year	during Year 4	during Year 5	during Year 6	during Year 7	during Year 8
	NA	Multiply and divide using equal grouping or counting.	Multiply and divide using equal grouping or skip counting.	Multiply a one or two digit number by a one-digit number, using skip counting or known facts. Divide whole numbers by a one-digit divisor with no remainders, using grouping.	Multiply a two-digit by one-digit number and two one-digit whole numbers. Divide up to a three-digit whole number by a one-digit divisor with no remainder.	Multiply a three-digit by one-digit number and two two-digit whole numbers. Divide up to a three-digit whole number by a one digit divisor with a remainder.	Multiply multi-digit whole numbers. Dividie up to a four digit whole number by a one-digit divisor wtih a remainder.	Multiply whole numbers Divide whole numbers by one- or two-digit divisors Use the order of operations Multiply and divide numbers by 10, 100, and 1,000	Multiply whole numbers Divide whole numbers Use the order of operations Multiply and divide numbers by powers of 10
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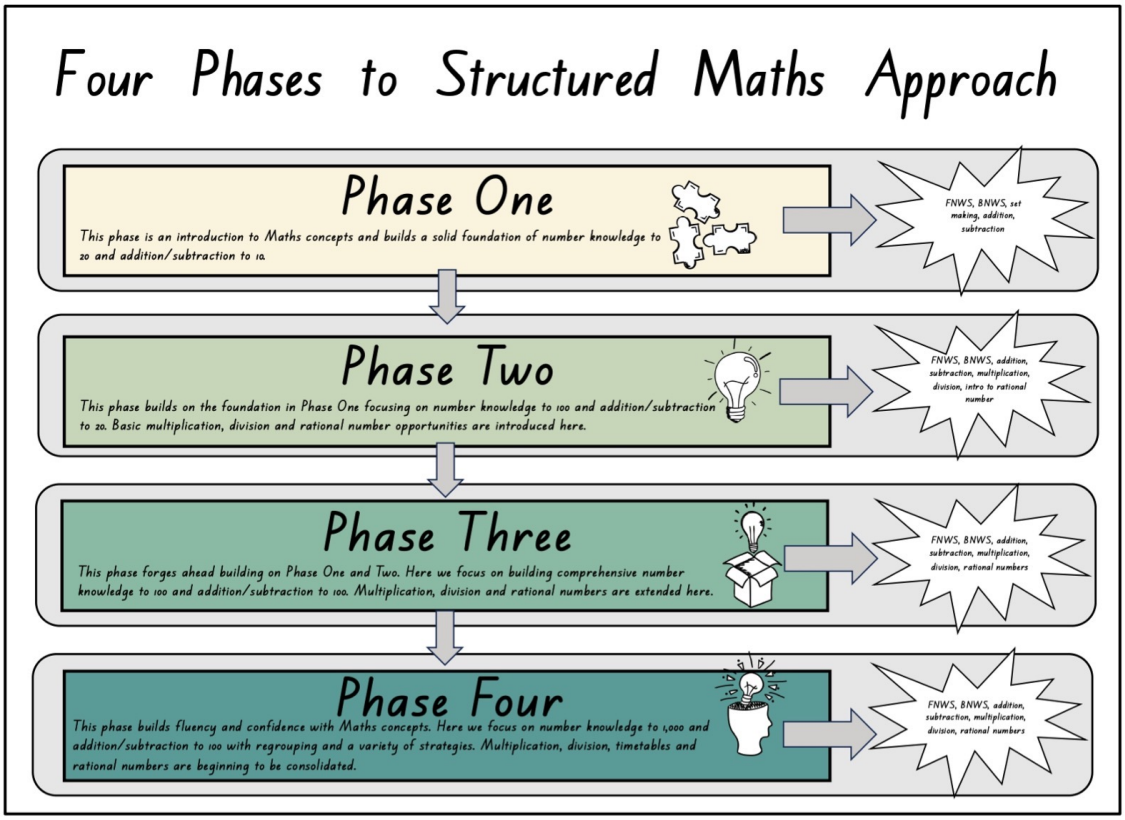
Phase Three (Year 2)									
Phase Four (Year 3)									
Phase Five (Year 4)									
Phase Six (Year 5)									
Phase Seven (Year 6)									
Phase Eight (Year 7)									
Phase Nine (Year 8)									

	Rational numbers								
	during the first 6 months	during the first	during the second	during the third year	during Year 4	during Year 5	during Year 6	during Year 7	during Year 8
	NA	Identify and represent halves and quarters as fractions of sets and regions, using equal parts of the whole. Find a half or quarter of a set using equal sharing and grouping.	Identify, read, write (using symbols and words), and represent halves, quarters, and eighths as fractions of sets and regions, using equal parts of the whole. Directly compare two fractions involving halves, quarters, and eighths. Find a half and quarter of a set by identifying groups and patterns and identify the whole set or shape when given a half or quarter.	Identify, read, write, and represent halves, thirds, quarters, fifths, sixths, and eighths as fractions of sets and regions, using equal parts of the whole and by positioning on a number line. Compare and order fractions involving halves, quarters, and eighths and identify when two fractions are equivalent. Find a unit fraction of a whole number. Identify the whole set or amount when given a unit fraction. Add and subtract unit fractions with the same denominator.	Identify, read, write, and represent tenths as fractions and decimals Compare and order tenths as fractions and decimals, and convert decimal tenths to fractions (e.g., 0.3 = 3). Convert between mixed numbers and improper fractions. Find a unit fraction of a whole number. Identify a unit fraction part of a whole set. Add and subtract fractions with the same denominators.	Identify, read, write, and represent tenths and hundredths as fractions and decimals. Compare and order tenths and hundredths as fractions and decimals, and convert decimal tenths and hundredths to fractions. Identify equivalent fractions. Convert between mixed numbers and improper fractions. Find a fraction of a whole number. Identify a whole set. Add and subtract fractions with the same denominators.	Identify, read, write, and represent fractions, decimals (to two places), and related percentages compare and order fractions, decimals (to two places), and percentages, and convert decimals and percentages to fractions. Identify equivalent fractions. Represent fractions in their simplest form. Convert between mixed numbers and improper fractions. Find a fraction or percentage of a whole number. Identify the whole set. Add and subtract fractions with the same or related denominators.	Identify, read, write, and represent fractions, decimals (to three places), and percentages Compare, order, and convert between fractions, decimals (to three places), and percentages Find equivalent fractions, simplify fractions, and convert between improper fractions and mixed numbers Add and subtract fractions with different denominators of up to a tenth, using equivalent fractions Add and subtract decimals to three decimal places, with an emphasis on estimating before calculating	Identify, read, write, and represent fractions, decimals, and percentages Compare, order, and convert between fractions, decimals, and percentages Find equivalent fractions, simplify fractions, and convert between improper fractions and mixed numbers find a percentage of a whole number, and find a whole amount, given a simple fraction or percentage Add and subtract fractions with different denominators, using equivalent fractions
Phase One (Year 0)									
Phase Two (Year 1)									
Phase Three (Year 2)									
Phase Four (Year 3)									
Phase Five (Year 4)									
Phase Six (Year 5)									
Phase Seven (Year 6)									
Phase Eight (Year 7)									
Phase Nine (Year 8)									

The Four Phases breakdown to Structured Maths Approach

Here is the complete breakdown to Structured Maths Approach across the four phases and what each chunk will cover with their lessons.



Phase 1 (Year 0 or New Entrants)			
Chunk 1 Numbers 1–10	Chunk 2 Add and subtract to 5	Chunk 3 Numbers 11–20	Chunk 4 Add and subtract to 10

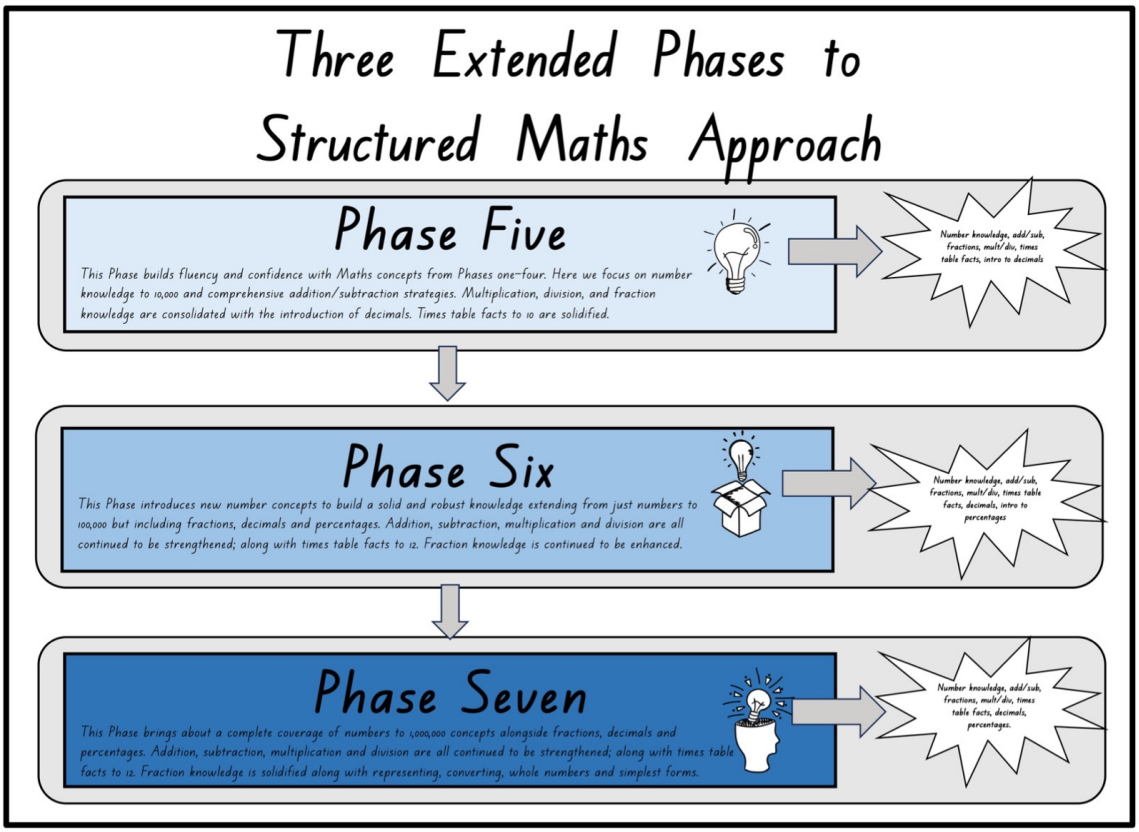
Phase 2 (Year 1)			
Chunk 1 Numbers 1–100	Chunk 2 Add and subtract to 20	Chunk 3 Add and subtract to 20 Rational Numbers	Chunk 4 Multiplication and division Rational Numbers

Phase 3 (Year 2)			
Chunk 1 Numbers 1–1,000	Chunk 2 Add and subtract to 100	Chunk 3 Add and subtract to 100 Rational Numbers	Chunk 4 Multiplication and division Rational Numbers

Phase 4 (Year 3)			
Chunk 1 Numbers 1–10,000	Chunk 2 Add and subtract to 1,000	Chunk 3 Add and subtract to 1,000 Multiplication and division	Chunk 4 Add and subtract to 1,000 Multiplication and division Rational Numbers

The Three Extended Phases of Structured Maths Approach breakdown

Here is the complete breakdown to the extended Structured Maths Approach across the last three additional phases and what each chunk will cover within their lessons. This has been an add-on to the initial Structured Maths Approach plan due to high teacher demand and the need for a continuation for students in higher year groups.



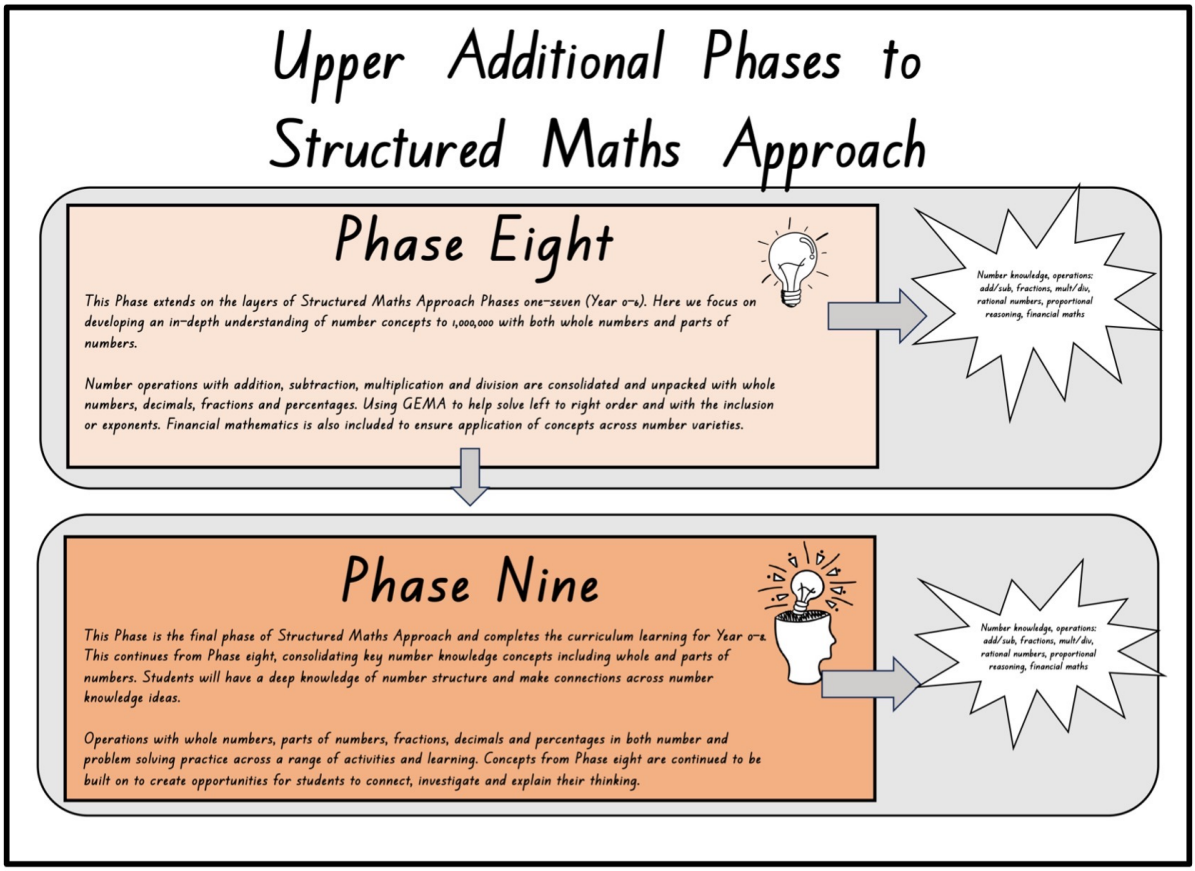
Phase 5 (Year 4)			
Chunk 1 Numbers 1–10,000	Chunk 2 Addition and subtraction	Chunk 3 Multiplication and division	Chunk 4 Rational Numbers (fractions)

Phase 6 (Year 5)			
Chunk 1 Numbers 1–100,000 Rational Numbers (fractions)	Chunk 2 Number Addition and subtraction	Chunk 3 Multiplication and division	Chunk 4 Rational Numbers (fractions)

Phase 7 (Year 6)			
Chunk 1 Numbers 1–1,000,000 Rational Numbers (fractions)	Chunk 2 Number Addition and subtraction	Chunk 3 Multiplication and division	Chunk 4 Rational Numbers (fractions)

The Upper Additional Phases Structured Maths Approach

Here is the complete breakdown to the upper additional Structured Maths Approach across the last two additional phases and what each chunk will cover within their lessons. This has been a final add-on to the initial Structured Maths Approach plan due to high teacher demand and the need for a continuation for students in higher year groups.



Phase 8 (Year 7)			
Chunk 1 Number concepts	Chunk 2 Addition, subtraction, multiplication and division	Chunk 3 Rational Numbers (fractions)	Chunk 4 Rational Numbers (fractions)

Phase 9 (Year 8)			
Chunk 1 Number concepts	Chunk 2 Addition, subtraction, multiplication and division	Chunk 3 Rational Numbers (fractions)	Chunk 4 Rational Numbers (fractions)