Year 5 Maths Overview

Term 1

Block 1 **Place Value (inc Negative numbers)** (6 Weeks)	Multiplication and related division facts	Block 2 **Addition and Subtraction** (3 Weeks)	Multiplication and related division facts	Block 3 **Multiplication and Division** (4 Weeks)	Multiplication and related division facts Fractions
Wider Curriculum					

Term 2

Block 4 **Fractions** (5 Weeks)	Perimeter	Block 5 **Perimeter & Area** (2 Weeks)	Fraction/Decimal equivalence Conversions FDP	Block 6 **Decimals & Percentages** (6 Weeks)	Multiplication and related division facts	Block 7 **Four operations application**	Shape Multiplication and related division facts
Wider Curriculum							

Term 3

Block 8 **Shape Position & Direction** (6 Weeks)	Conversion	Block 9 **Converting Units** (2 Weeks)	Volume	Block 10 **Volume** (2 Weeks)	Revisit based on AfL	Block 11 **AfL (from assessment)**	Revisit based on AfL
Wider Curriculum							

NB. There will be an assessment week within each term as well.
Declarative knowledge – highlight is new knowledge that year

Year 5: Block 1 (Place Value)	
Declarative Knowledge	
Place Value Objectives (Small Steps) 1) Roman Numerals to 1000 2) Numbers up to 10,000 & 100,000 3) Round to the nearest 10, 100, 1,000 4) Round within 100,000 5) Read and write numbers up to 1,000,000 inc Numbers up to 1,000,000 6) Partition numbers to 1,000,000 7) Number line to 1,000,000 8) Round within 1,000,000 9) Compare and order numbers to 100,000 & 1,000,000 10) 10,000 or 100,000 more or less **Place Value Objectives (Small Steps) (1 week)** 1) Understanding and reading negative numbers in context 2) Compare and order negative numbers 3) Count through zero in 1s and multiples 4) Find the difference 5) Reasoning and problem solving within place value (1 week)	Links to Wider Curriculum

Year 5: Block 2 (Addition and Subtraction)

Declarative Knowledge

Mental Strategies drip fed across sessions

A factor is a number that divides exactly into a given number without a remainder
A factor pair is a pair of whole numbers multiplied together to form another number called their product
A multiple is a number that can be divided by another number without a remainder
A common multiple is a multiple that is shared by two or more numbers
A common factor is a number which is a factor of two or more numbers

Addition and Subtraction Objectives

1) Add whole numbers with more than 4 digits (inc rounding to check & compare 2 or more calculations)
2) Subtract whole numbers with more than 4 digits (inc rounding to check & compare 2 or more calculations)
3) Inverse operations (addition and subtraction)
4) Find missing numbers
5) Reasoning and problem solving within addition and subtraction (inc multi-step) (1 week)

Links to Wider Curriculum

Year 5: Block 3 (Multiplication and Division)

Declarative Knowledge

A prime number is a number greater than 1 that only has two factors, 1 and itself. E.g. 2,3,5,7,11,13,17,19
A square number is the product of a number multiplied by itself e.g 1, 4, 9, 16, 25, 36
A cube number is the product of a number multiplied by itself twice e.g. 1, 8, 27, 64, 125

I know that a numerator shows how many parts of the whole are needed
I know that a denominator is how many equal parts are in the whole
A unit fraction is a fraction where the numerator is 1
A non-unit fraction is a fraction where the numerator is greater than 1
Equivalent fractions are 2 or more fractions that are all equal even though they have different numerators and denominators
A mixed number is a combination of a whole number and a fraction
An improper fraction is where the numerator is greater or equal to the denominator

Multiplication and Division Objectives

1) Multiples, common multiples, Factors, common factors
2) Multiply and divide by 10, 100 and 1,000
3) Multiples of 10, 100 and 1,000
4) Multiply a 4-digit number by a 1-digit number
5) Multiply a 2-digit number by a 2 digit number
6) Multiply a 3-digit and 4-digit number by a 2 digit number
7) Short division (inc 3 and 4 digit numbers by 1-digit number)
8) Divide with remainders
9) Reasoning and problem solving within multiplication and division (inc. efficient method) (1 week)

Links to Wider Curriculum

Year 5: Block 4 (Fractions)

Declarative Knowledge

I know that area is the amount of space inside a 2D shape.
I know that the perimeter is the total distance around the outside of a 2D shape.
A polygon is flat 2D shape with straight lines and that is fully closed.
A compound shape is any shape made up of two or more shapes.
A rectilinear shape is a shape made up of two or more rectangles.

Fractions Objectives

1) Find and recognise fractions equivalent to a unit fraction and non-unit fraction
2) Convert improper fractions to mixed numbers
3) Convert mixed numbers to improper fractions
4) Compare and order fractions less than 1
5) Compare and order fractions greater than 1
6) Add and subtract fractions with the same denominator
7) Add and subtract fractions within 1
8) Add and subtract fractions with total greater than 1
9) Add to and subtract from a mixed number
10) Subtract from a mixed number breaking the whole
11) Add and subtract two mixed numbers

12) Multiply a unit fraction and non-unit fraction by an integer
13) Multiply a mixed number by an integer
14) Calculate a fraction of an amount
15) Reasoning and problem solving within fractions (inc. fractions as operators) (1 week)

Links to Wider Curriculum

Year 5: Block 5 (Perimeter & Area)

Declarative Knowledge

I know that $^{1}/_{10}$ is the same as 0.1
I know that 1/100 is equal to 0.01
I know that 1/1000 is equal to 0.001
I know that 1/2 is equal to 0.5
I know that 1/4 is equal to 0.25
I know that ¾ is equal to 0.75

Per cent means out of 100

Perimeter & Length Objectives

1) Perimeter of rectangles
2) Perimeter of rectilinear shapes
3) Perimeter of polygons

Area Objectives

1) Area of rectangles
2) Area of compound shapes
3) Estimate area

6) Reasoning and problem solving within perimeter and area (1 week)

Links to Wider Curriculum

Year 5: Block 6 (Decimals & Percentages)

Declarative Knowledge

Mental addition and subtraction with decimals
Counting up in decimals and fractions

Decimal Objectives

1) Decimals up to 2D.P (1 lesson)
2) Equivalent fractions and decimals (tenths and hundredths)
3) Thousandths as fractions (1 lesson)
4) Thousandths as decimals (1 lesson)
5) Order and compare any decimals up to 3DP
6) Round to nearest whole number and 1DP
7) Understanding percentages
8) Percentages as fractions
9) Percentages as decimals
10) Equivalent fractions, decimals and percentages
11) Complements to 1
12) Add and subtract decimals across 1
13) Adding and subtracting decimals up to 3DP
14) Multiply and divide decimals by 10, 100 and 1,000

15) Reasoning and problem solving within decimals and percentages (inc efficient strategies and missing values) (1 week)

Links to Wider Curriculum

Year 5: Block 7 (Four Operations Revisit)

Declarative Knowledge

I know that angles are created when two straight lines meet at a point or intersect.
I know that an acute angle is less than 90^0.
I know that a right angle is 90^0.
I know that an obtuse angle is an angle more than 90^0 but less than 180^0.
I know that a reflex angle is any angle larger than 180^0.
I know that angles around a point add up to 360^0.

A regular polygon has equal sides and vertices.
An irregular polygon does not have equal sides and vertices.
A polygon is a flat 2D shape, with straight sides that is fully closed.
A 3D shape has 3 dimensions e.g. height, width and depth.
I know the properties of a range of 3D shapes (names, vertices, edges and faces)
A prism is a solid shape that is bound by all of its sides by flat faces.
A prism has identical bases at the top and bottom which is what it is named after.
A pyramid has one flat polygon face and all other faces are triangles that meet at a point.

Four Operations Revisit Objectives	Links to Wider Curriculum
Either; Re-teaching following assessment analysis Or; Opportunity to apply within broader curriculum	

Year 5: Block 8 (Shape, Position & Direction)

Declarative Knowledge
(During Shape)
Translation is moving a shape up, down, left or right (it does not change size)
Symmetry is when something is the same on both sides. A central line can be drawn on it to show the sides are the same.
Reflection is when a shape is flipped on a mirror line – it does not change size.

Conversions
Mass is the measure of an amount of matter in a substance or object.
Mass can be measured is grams or kilograms.
I know that 1000 grams are equal to 1 kilogram.
I know that there are 10mm in 1cm.
I know that there are 100cm in 1m.

Shape Objectives

1) Understand and use degrees
2) Classify angles
3) Estimate angles
4) Measure angles up to 180
5) Drawing lines and angles accurately.
6) Calculating angles around a point.
7) Calculating angles on a straight line
8) Lengths and angles in shapes
9) Regular and irregular polygons
10) 3D shapes

Position & Direction Objectives

1) Read and plot coordinates
2) Translations
3) Translation with coordinates
4) Lines of symmetry
5) Reflection in horizontal and vertical lines

6) Reasoning and problem solving within shape (1 week)

Links to Wider Curriculum

Year 5: Block 9 (Converting Units)

Declarative Knowledge

Capacity is the total amount of fluid that can be contained in a container.
Capacity can be measured is millilitres or litres.
I know that 1000 millilitres is equal to 1 litre.

Converting Objectives

1) Converting kilograms and kilometres
2) Converting millimetres and millilitres
3) Understanding metric units
4) Understanding imperial units
5) Converting units of time.
6) Understanding timetables.
7) Reasoning and problem solving within converting 1 week)

Links to Wider Curriculum

Year 5: Block 10 – (Volume)	
Declarative Knowledge *Revisit based on AfL*	
Volume Objectives 1) Cubic Centimetres 2) Compare volume 3) Estimate volume 4) Estimate capacity 5) Reasoning and problem solving within volume (1 week)	Links to Wider Curriculum

Year 5: Block 11 – Based on assessment	
Declarative Knowledge *Revisit based on AfL*	
Either; Re-teaching following assessment analysis Or; Opportunity to apply within broader curriculum	Links to Wider Curriculum

Maths Objectives to be covered in the wider curriculum

The below objectives need to be taught or revisited at some point in the year through the Year 5 broader curriculum.

Teach

Revisit

- Measuring lengths (DT)
- Equivalent lengths KM and M (geography height of physical/human features, distances between countries etc)
- Identifying/Comparing angles (DT project)
- Money (enterprise project/DT)
- Recognising tenths and hundredths/compare and order decimals (science, PE measuring time in a race etc.)
- Properties of shape (art)