What I need to know: Y6 Maths

We aim to be the school of choice for our community.
Through living our Christian values, everyone at WCEJS has the opportunity to flourish.
We nurture the curiosity to learn, the courage to lead and the compassion to care.
Building solid foundations (Matthew 7: 24-27)

Name: Class:

In Y6 you will learn more about: number and place value; the operations of addition, subtraction, multiplication and division; fractions and decimals; measurement, shape, position and direction; statistics; algebra; ratio and proportion.

Skills I may use…	
Remember: name, identify, describe	**Analyse**: investigate, infer, select, clarify
Understand: predict, recall, interpret	**Create**: plan, design, construct
Apply: use, show, relate, demonstrate	**Evaluate**: compare, assess, judge

1. What I will know about number and place value	Start	End
Read, write, order and compare numbers to 10 000 000, determining the value of each digit	◯	◯
Round any number to a required degree of accuracy	◯	◯
Use negative numbers in context and calculate intervals across zero	◯	◯
Solve number and practical problems that involve number and place value	◯	◯
Vocabulary I need to know…		
How well do you know the following words? 1. I have heard the word, but I don't know what it means 2. I understand what the word means 3. I can explain what the word means and give other examples		
decimal place, decimal point, place value, ones, tens, hundreds, thousands, million, tenths, hundredths, numeral, rounding,		
Resources I can use to help me		
Place value flip chart, place value slide card, Dienes maths set (base 10), abacus		

2. What I need to know about basic operations: addition, subtraction, multiplication and division	Start	End
Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	◯	◯
Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division	◯	◯
Interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context	◯	◯
Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context	◯	◯
Perform mental calculations, including mixed operations and large numbers	◯	◯

Identify common factors, common multiples and prime numbers	◯	◯
Use my knowledge of the order of operations to carry out calculations involving the four operations	◯	◯
Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why	◯	◯
Solve problems involving addition, subtraction, multiplication and division	◯	◯
Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	◯	◯
Vocabulary I need to know…		
prime number, factor, prime factor, composite number		
Resources I can use to help me		
Multi-link, Abacus		

3. What I will know about fractions & decimals	Start	End
Use common factors to simplify fractions; use common multiples to express fractions in the same denomination	◯	◯
Compare and order fractions, including fractions > 1	◯	◯
Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	◯	◯
Multiply simple pairs of proper fractions, writing the answer in its simplest form	◯	◯
Divide proper fractions by whole numbers	◯	◯
Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction	◯	◯
Identify the value of each digit in numbers given to three decimal places	◯	◯
Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	◯	◯
Multiply one-digit numbers with up to two decimal places by whole numbers	◯	◯
Use written division methods in cases where the answer has up to two decimal places	◯	◯
Solve problems which require answers to be rounded to specified degrees of accuracy	◯	◯
Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	◯	◯
Vocabulary I need to know…		
Fraction, decimal, decimal point, numerator, denominator, mixed fraction, simplify, compare, order, equivalent, convert, proper fraction, improper fraction, common fraction, tenths, hundredths, thousandths		
Resources I can use to help me		
Fraction wall, times table square, squared paper, decimal slides, multi-link		

4. What I will know about measurement	Start	End
Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	◯	◯
Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, using decimal notation to up to three decimal places	◯	◯
Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a larger unit of measure to a smaller unit, using decimal notation up to three decimal places	◯	◯
Convert between miles and kilometres	◯	◯
Recognise that shapes with the same areas can have different perimeters and vice versa	◯	◯
Recognise when it is possible to use formulae for area and volume of shapes	◯	◯
Calculate the area of parallelograms and triangles	◯	◯
Calculate, estimate and compare volume of cubes and cuboids	◯	◯
Vocabulary I need to know…		
Convert, metric, imperial, ounces, pounds, stones, tons, milligrams, grams, kilograms, tonnes, inch, yard, mile, millimetre, centimetre, metre, kilometre, seconds, minutes, hours, days, weeks, fortnight, months, years, decades, century, area, volume, compound, angle, degrees, polygon, reflection, translation		
Resources I can use to help me		
Rulers, measuring tapes, measuring cylinders, scales, protractor		

5. What I will know about shape, position & direction	Start	End
Draw 2-D shapes using given dimensions and angles	◯	◯
Recognise, describe and build simple 3-D shapes, including making nets	◯	◯
Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	◯	◯
Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	◯	◯
Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	◯	◯
Describe positions on the full coordinate grid (all four quadrants)	◯	◯
Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	◯	◯
Vocabulary I need to know…		
2D, 3D, rectangle, square, quadrilateral, cubes, cuboids, circle, radius, diameter, circumference, arc, perpendicular, parallel, prism, acute, obtuse, reflex, right angle, degrees, protractor, polygon, regular & irregular, translation, reflection		
Resources I can use to help me		
Protractor, physical 2D and 3D shapes / objects, squared paper		

6. What I will know about statistics	Start	End
Interpret and construct pie charts and use these to solve problems	◯	◯
Interpret and construct line graphs and use these to solve problems	◯	◯
Calculate and interpret the mean as an average	◯	◯
Vocabulary I need to know…		
Chart, graph, data, information, line graph, interpret, frequency chart, tally chart, continuous data, x-axis, y-axis, plot, vertical, horizontal, interpret, pie chart, bar chart, line graph, frequency, mean, mode, median, axis, coordinate		
Resources I can use to help me		
Rulers, protractors, squared paper		

7. What I will know about algebra	Start	End
Use simple formulae	◯	◯
Generate and describe linear number sequences	◯	◯
Express missing number problems algebraically	◯	◯
Find pairs of numbers that satisfy an equation with two unknowns	◯	◯
Enumerate possibilities of combinations of two variables (e.g. n=2a+b)		
Vocabulary I need to know…		
Equation, nth term, formula		
Resources I can use to help me		
Bar modelling, multi-link		

8. What I will know about ratio and proportion	Start	End
Solve problems (e.g. scaling recipes) involving the relative sizes of two quantities where missing values can be found by using multiplication and division facts	◯	◯
Solve problems involving the calculation of percentages and the use of percentages for comparison	◯	◯
Solve problems involving similar shapes where the scale factor is known or can be found	◯	◯
Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	◯	◯
Vocabulary I need to know…		
Percentage, fraction, proportion, scale, factor, quantity		
Resources I can use to help me		
Multi-link, bar modelling		