

What I need to know: Y5 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 Y5 you will learn more about; number and place value; the basic operations of addition, subtraction, multiplication and division; fractions and decimals; measurement, shape, position and direction; statistics.

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
How to read, write, order and compare numbers to 1 000 000, determining the value of digits	<input type="radio"/>	<input type="radio"/>
How to count forwards or backwards in steps of powers of 10 for numbers up to 1 000 000	<input type="radio"/>	<input type="radio"/>
About negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	<input type="radio"/>	<input type="radio"/>
How to round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	<input type="radio"/>	<input type="radio"/>
How to solve number problems and practical problems that involve number and place value	<input type="radio"/>	<input type="radio"/>
How to read Roman numerals to 1000 (M) and recognise dates written in Roman numerals	<input type="radio"/>	<input type="radio"/>
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, partition, estimate		
Resources I can use to help me		
Place value flip chart, place value slide card, Dienes maths set (base 10), abacus		

2. What I will know about addition and subtraction	Start	End
Add whole numbers with more than 4 digits, including using formal written methods (columnar addition)	<input type="radio"/>	<input type="radio"/>
Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction)	<input type="radio"/>	<input type="radio"/>
Add and subtract increasingly large numbers mentally	<input type="radio"/>	<input type="radio"/>
Use rounding to check calculations and determine levels of accuracy	<input type="radio"/>	<input type="radio"/>
How to use appropriate methods to solve multi-step problems	<input type="radio"/>	<input type="radio"/>
3. What I will know about multiplication and division	Start	End
All factor pairs of a number, and common factors of two numbers	<input type="radio"/>	<input type="radio"/>
Prime numbers up to 100	<input type="radio"/>	<input type="radio"/>
How to multiply up to 4 digit numbers by a one digit number using a formal written method	<input type="radio"/>	<input type="radio"/>
Multiply numbers up to 4 digits by a two-digit number using a formal written method, including long multiplication for two-digit numbers	<input type="radio"/>	<input type="radio"/>
Multiply and divide numbers mentally drawing upon known facts	<input type="radio"/>	<input type="radio"/>
Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	<input type="radio"/>	<input type="radio"/>
Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	<input type="radio"/>	<input type="radio"/>
Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³).	<input type="radio"/>	<input type="radio"/>
Solve problems involving multiplication and division including using my knowledge of factors and multiples, squares and cubes	<input type="radio"/>	<input type="radio"/>
Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	<input type="radio"/>	<input type="radio"/>
Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple ratios	<input type="radio"/>	<input type="radio"/>
Vocabulary I need to know...		
prime number, factor, prime factor, composite number, inverse, multiple, exchange, divide, quotient, divisor, integer, commutative		
Resources I can use to help me		
Multi-link, abacus, place value flip chart, place value slide card, Dienes maths set (base 10), times table square		

4. What I will know about fractions and decimals	Start	End
Compare and order fractions whose denominators are all multiples of the same number	<input type="radio"/>	<input type="radio"/>
Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	<input type="radio"/>	<input type="radio"/>
Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number	<input type="radio"/>	<input type="radio"/>
Add and subtract fractions with the same denominator and denominators that are multiples of the same number	<input type="radio"/>	<input type="radio"/>
Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	<input type="radio"/>	<input type="radio"/>
Read and write decimal numbers as fractions	<input type="radio"/>	<input type="radio"/>
Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	<input type="radio"/>	<input type="radio"/>
Round decimals with two decimal places to the nearest whole number and to one decimal place	<input type="radio"/>	<input type="radio"/>
Read, write, order and compare numbers with up to three decimal places	<input type="radio"/>	<input type="radio"/>
Solve problems involving number up to three decimal places	<input type="radio"/>	<input type="radio"/>
Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal	<input type="radio"/>	<input type="radio"/>
Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	<input type="radio"/>	<input type="radio"/>
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		

5. What I will know about measurement	Start	End
Convert between different units of metric measure	<input type="radio"/>	<input type="radio"/>
Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	<input type="radio"/>	<input type="radio"/>
Measure and calculate the perimeter of compound shapes in centimetres and metres	<input type="radio"/>	<input type="radio"/>
Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes	<input type="radio"/>	<input type="radio"/>
Estimate volume and capacity	<input type="radio"/>	<input type="radio"/>
Solve problems involving converting between units of time	<input type="radio"/>	<input type="radio"/>
Use all four operations to solve problems involving measure using decimal notation, including scaling	<input type="radio"/>	<input type="radio"/>
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		

6. What I will know about shape, position and direction	Start	End
Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	<input type="radio"/>	<input type="radio"/>
Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	<input type="radio"/>	<input type="radio"/>
Draw given angles, and measure them in degrees (°)	<input type="radio"/>	<input type="radio"/>
Identify angles at a point and one whole turn (total 360°)	<input type="radio"/>	<input type="radio"/>
Identify angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°)	<input type="radio"/>	<input type="radio"/>
Identify other multiples of 90°	<input type="radio"/>	<input type="radio"/>
Use the properties of rectangles to deduce related facts and find missing lengths and angles	<input type="radio"/>	<input type="radio"/>
Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	<input type="radio"/>	<input type="radio"/>
Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	<input type="radio"/>	<input type="radio"/>
Vocabulary I need to know...		
2D, 3D, rectangle, square, quadrilateral, cubes, cuboids, 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		

7. What I will know about statistics	Start	End
Solve comparison, sum and difference problems using information presented in a line graph	<input type="radio"/>	<input type="radio"/>
Complete, read and interpret information in tables, including timetables	<input type="radio"/>	<input type="radio"/>
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		
Resources I can use to help me		
Ruler, squared paper		