

## Maths - KS3 ASSESSMENT DESCRIPTORS

	Discovering 'Learning'	Growing	Emerging	Developing	Secure	Mastered
NUMBER	<p>I can correctly choose to add or subtract in a problem and understand subtraction is the opposite of adding.</p> <p>I can mentally solve money and measure problems.</p> <p>I recognise odd and even numbers.</p> <p>I use simple fractions and recognise fractions that are the same.</p> <p>I can show an understanding of numbers to 1000.</p> <p>I can use basic decimals and recognise negative numbers.</p> <p>I can recall number facts up to 20.</p> <p>I can add and subtract numbers to 100 in my head.</p>	<p>I can add and subtract numbers to 1000 using written methods.</p> <p>I know my 2,3,4,5 and 10 times tables.</p> <p>I can solve whole number problems using times and divide.</p> <p>I can times and divide by 10 and 100.</p> <p>I use a large range of mental strategies.</p> <p>I know my times tables to 10, and division facts.</p> <p>I use written methods to add, take, times, and divide.</p> <p>I can add, subtract and order decimals to 3 decimal places. I can check the reasonableness of my answers</p>	<p>I use and describe proportions using fractions, decimals and percentages.</p> <p>I can times and divide decimals by 10, 100, &amp; 1000.</p> <p>I can order, add and subtract negative numbers.</p> <p>I can add, subtract, times and divide decimals to 2 decimal places.</p> <p>I can break down fractions and use simple ratio and proportions.</p>	<p>I can use fractions and percentages to find amounts – sometimes using a calculator.</p> <p>I use the correct written method to times and divide 3 digit numbers by 2 digit numbers.</p> <p>I can check solutions by estimation and reversing what I have done.</p> <p>I use order of operations.</p> <p>I can use co-ordinates in all quadrants of the Cartesian Plane.</p> <p>I understand that fractions, decimals and percentages can be used for the same problems.</p> <p>I can use ratios.</p>	<p>I can use fractions and percentages to solve problems involving proportion and change. I can use calculators to solve number problems of any size.</p> <p>I can find answers when problems have 'greater than' and 'less than' symbols.</p> <p>I can estimate and round off numbers in my head.</p> <p>I understand what happens when multiplying and dividing by numbers between 0 and 1.</p> <p>I can use calculators to solve number problems of any size.</p> <p>I can find answers when problems have 'greater than' and 'less than' symbols.</p>	<p>I can use rational and irrational numbers.</p> <p>I can use direct and indirect proportion.</p> <p>I try to find rules and connections between data using symbols.</p> <p>I can check the reasonableness of my answers</p> <p>I use and describe proportions using fractions, decimals and percentages.</p>
Handling Data	<p>I can sort objects by using more than one criteria.</p> <p>I can use simple tables, lists and graphs to show information I have collected.</p> <p>I can read information from simple tables and lists.</p> <p>I can make bar charts and pictograms.</p> <p>I can interpret information in bar charts and pictograms.</p>	<p>I can collect data and record this in a frequency table.</p> <p>I can use the mode and range to help understand data.</p> <p>I can collect data together into groups and can represent it in diagrams.</p> <p>I can construct simple line graphs.</p> <p>I can work out the average for a set of data.</p> <p>I can compare 2 sets of data, using average measurements.</p>	<p>I can interpret pie charts, and make conclusions.</p> <p>I can use the probability scale.</p> <p>I can estimate probabilities on the probability scale.</p> <p>I understand that different results can occur when doing experiments.</p> <p>I can collect and record continuous data, and make frequency tables.</p> <p>I can make 'pie charts'.</p> <p>I can look at 'scatter diagrams' and have an understanding of correlation (how data is connected).</p>	<p>I can use diagrams to show all outcomes of simple experiments.</p> <p>I understand that all mutually exclusive events add up to '1'</p> <p>I can conduct 'fair' experiments to minimise bias.</p> <p>I can make estimates for averages in grouped data.</p> <p>I can use all my knowledge to compare data and make conclusions.</p> <p>I can draw 'lines of best fit' on scatter diagrams.</p>	<p>I can estimate probabilities and compare these to experiments.</p> <p>I can construct cumulative frequency diagrams.</p> <p>I can estimate the interquartile range for data and make conclusions.</p> <p>I can calculate the probability of a compound event.</p>	<p>I can make and comment on 'histograms'.</p> <p>I can look at different methods of conducting surveys, and how different sample sizes may affect results.</p> <p>I can select an appropriate 'sample size' for a survey.</p> <p>I can recognise when and how to work with probabilities associated with 'independent mutually exclusive events'.</p>
ALGEBRA	<p>I am beginning to understand the = sign.</p> <p>I recognise a wider range of sequences (than odd and even).</p> <p>I am beginning to be able to represent numbers with letters.</p>	<p>I recognise and describe number patterns.</p> <p>I can use word formulae.</p> <p>I can use simple formulae.</p> <p>I can use and interpret co-ordinates in the first quadrant.</p>	<p>I can use co-ordinates in all quadrants of the Cartesian Plane.</p> <p>I can make formulas using symbols.</p>	<p>I can use 'trial and improvement' methods when using algebra.</p>	<p>I can use algebra to describe a number pattern and find any term.</p>	<p>I can solve equations involving whole numbers.</p> <p>I can graph equations, and describe features and trends on that graph.</p>

Using and Applying maths	<p>I can use mathematics in classroom activities.</p> <p>I can recognise simple patterns and relationships.</p> <p>I can discuss my work using mathematical language.</p> <p>I can use symbols and diagrams to represent work.</p> <p>I can explain why an answer is correct.</p> <p>I can use problem solving skills.</p> <p>I can organise work and check work.</p> <p>I can explain my thinking using mathematical language.</p> <p>I can interpret symbols and diagrams.</p> <p>I can show my understanding by finding examples.</p>	<p>I can use mathematics when problem solving and apply it.</p> <p>I can present information in a clear organised way.</p> <p>I can try my own ideas to find solutions.</p> <p>I can search for key words in a problem.</p> <p>I can understand the difference between explanation and experimental evidence.</p>	<p>I can check whether answers are sensible.</p> <p>I can use symbols, words and diagrams to discuss a problem</p> <p>I can draw conclusions from answers, and explain them</p> <p>I can break large problems into smaller problems.</p> <p>I can interpret, discuss, and use information presented in different ways.</p> <p>I can explain my diagrams, and can write why I used them.</p>	<p>I can give full answers to problems.</p> <p>I can refine my answers.</p> <p>I can give reasons for my choice of presentation.</p> <p>I can justify my solutions by showing an insight into the problem.</p> <p>I can understand the difference between explanation and experimental evidence.</p>	<p>I can use many mathematical techniques.</p> <p>I can look at my enquiry and follow different approaches.</p> <p>I consistently use correct symbols to convey meaning</p> <p>I look at my own answers, and comment on the process I have used, and make further progress.</p>	<p>I investigate mathematical problems and use mathematics to solve them.</p> <p>I give reasons why some procedures are followed when doing a problem, and others are rejected.</p> <p>I present convincing, reasoned answers using language and symbols.</p> <p>I use mathematics in familiar and unfamiliar problems.</p> <p>My reports include reasons, explanations of solutions using a number of different factors.</p>
Space, Shape and Measures	<p>I can describe properties of shapes.</p> <p>I can measure and order objects.</p> <p>I know mathematical names for flat and 3 dimensional shapes.</p> <p>I can use standard units to measure length and weight.</p> <p>I can group flat and 3 dimensional shapes using symmetry.</p> <p>I work out problems using metric units for length, weight and volume, as well as time.</p>	<p>I recognise faces and edges of 3 dimensional shapes.</p> <p>I can draw flat shapes with different properties and reflect them in a mirror line.</p> <p>I choose appropriate ways to accurately measure objects, and interpret the results.</p> <p>I can find the distance around shapes, and find the area of them by counting squares.</p> <p>I can make 3D models.</p>	<p>I can use words associated with angles, and measure angles to the nearest degree.</p> <p>I know facts such as 'angles around a point = 360 degrees' and 'angles in a triangle = 180 degrees'.</p> <p>I can find all lines of symmetry on flat shapes.</p> <p>I can convert between imperial and metric units of measurement and remember the metric to imperial conversions.</p> <p>I can estimate lengths, weights and volumes.</p> <p>I can use the formula for the area of a rectangle.</p> <p>I recognise flat and 3 dimensional shapes.</p> <p>I know the properties of 4 sided shapes and group them.</p>	<p>I can use Pythagoras' rules for right angled triangles.</p> <p>I can work out lengths and areas of flat shapes, and volumes of prisms.</p> <p>I can decrease the size of shapes using ratios and scales.</p> <p>I can move objects on paper by following particular rules e.g. rotation.</p> <p>I understand how answers can be inaccurate when numbers are rounded off.</p> <p>I understand rates of change such as speed.</p> <p>I can solve problems using properties of shapes and angles.</p> <p>I can use formulas to find perimeters and areas of circles, areas of flat shapes, and volumes of cuboids.</p> <p>I can enlarge shapes using ratios and scales.</p>	<p>I can enlarge a shape by a fractional or negative scale factor.</p> <p>I understand similarity.</p> <p>I can draw the locus of a moving object.</p> <p>I can find and understand upper and lower bounds.</p> <p>I can use compound measures like speed, distance, time.</p>	<p>I can use trigonometry and Pythagoras to find angles and side lengths of any triangle.</p> <p>I can calculate different parts and properties of shapes that are circular or round.</p> <p>I can use and prove congruence and mathematical similarity.</p> <p>I can distinguish between formulae for perimeter, area and volume by considering dimensions.</p>