Maths IREACT- Learning Journey

Topic	MATHS KS3 ELEMENT	YG	Baseline Position Step								
			1	2	3	4	5	6	7	8	9
Basic Number	Add and subtract 1 and 2-digit numbers and explain my working	7	�								
	Add and subtract 3-digit numbers and explain my working	7		▪							
	Remember and recall multiplication tables to 12 and explain the associated division facts	7			▪						
	Multiply and divide whole numbers by 10, 100 and 1000 and explain the effect	7			▪						
	Multiply and divide whole numbers by numbers like 20, 300 etc and explain the effect	7				▪					
	Multiply whole numbers by 2 or 3 -digit whole numbers and explain my working	7					▪				
	Multiply and divide decimals by 10, 100 and 1000 and explain the effect	7					▪				
	Divide by 2-digit whole numbers where there is no remainder and explain my working	7						▪			
	Multiply and divide by numbers of any size which give remainders and I can write the remainder as a decimal or a fraction	7							▪		
	Apply addition, subtraction, multiplication and division to solve and analyse complex problems	7								▪	
	Apply addition, subtraction, multiplication and division to investigate and analyse functional maths problems	7									▪
Rounding, Estimation and BIDMAS	Read, write and explain how to order whole numbers to 100	7	▪								
	Explain how to estimate the length of everyday objects	7		▪							
	Explain how to round whole numbers to the nearest 10, 100 and 1000 and decimals to the nearest whole number	7			▪						
	Explain how to round decimal numbers to any amount of decimal places	7				▪					
	Explain and apply BIDMAS in simple questions	7				▪					
	Apply my knowledge of rounding to estimate answers to calculations and check the reasonableness of these answers by analysing the problem	7					▪				
	Explain and apply BIDMAS in questions including division, powers and roots	7					▪				
	Explain how to round numbers to any amount of significant figures	7						▪			
	Determine upper/ lower bound of any number	7							▪		
	Apply my knowledge of upper/ lower bounds to find the rounding error of a simple calculation	7								▪	
	Take apart and evaluate a problem to find the rounding error of a complex calculation	7									▪

Topic	Skill	Yr	1	2	3	4	5	6	7	8	9	10
Perimeter and Area	Explain what the word perimeter means and calculate the perimeter of simple shapes drawn on squared paper	7	▓									
	Explain what the word area means and find areas of simple shapes by counting squares and part squares	7	▓									
	Remember the formula for finding the area of a rectangle and apply it to find the area of rectangles	7		▓								
	Remember the formula for finding the area of a rectangle and apply it to find the area of compound shapes made from rectangles	7			▓							
	Explain how to find the perimeter of rectangles and shapes made from rectangles	7				▓						
	Remember and apply the formula for the circumference of a circle	7					▓					
	Remember and apply the formulae for the area of a triangle, parallelogram and trapezium	7					▓					
	Remember and apply the formula for the area of a circle	7					▓					
	Remember and apply the formula for the circumference of a circle and leave my answer in terms of pi	7						▓				
	Apply and analyse a compound shape made from triangles or quadrilaterals to find it's perimeter	7						▓				
	Explain how to calculate the surface area of a 3D shape using nets	7						▓				
	Apply my knowledge of circumference to calculate perimeters of a semi-circle	7							▓			
	Remember and apply the formula for finding the area of a sector	7							▓			
	Remember the formula for calculating the length of an arc and apply it calculate the lengths of circular arcs	7								▓		
	Remember and apply the formula for finding the surface area of a sphere	7								▓		
	Remember and apply formulas for finding the surface area of a cone and cylinder	7									▓	
	Take apart and evaluate problems involving surface area	7										▓
Decimals and Negatives	Explain place value in decimal notation	7	▓									
	Explain negative numbers in context such as temperature	7		▓								
	Explain the order negative numbers on a number line	7		▓								
	Explain how to add and subtract decimals (including where the decimal places vary)	7			▓							
	Explain how to add and subtract with negative numbers	7			▓							
	Explain how to add and subtract with negative numbers and remember the rules where signs are combined	7			▓							
	Explain the order of decimals up to 3 decimal places					▓						
	Explain how to multiply and divide with decimals	7				▓						

Topic	Skill	Year	1	2	3	4	5	6	7	8	9	10	11
	Explain how to multiply and divide positive and negative integers and remember the rules where signs are combined	7						▓					
	Apply and analyse all calculations involving negatives and decimals	7							▓				
	Take apart and evaluate problems involving negative numbers and decimals in a range of different contexts	7								▓			
Fractions	Explain and use fractions to describe parts of a shape	7	▓										
Fractions	Remember and apply the rule that to add or subtract fractions the denominator must be the same	7		▓									
Fractions	Create simplified fractions and recognise when fractions are equivalent	7			▓								
Fractions	Create improper fractions from mixed numbers and vice versa	7			▓								
Fractions	Explain and apply rules used to calculate fractions of a quantity	7			▓								
Fractions	Explain how to express smaller whole numbers as fractions of larger ones	7				▓							
Fractions	Remember and apply the rules for multiplying and dividing fractions	7					▓						
Fractions	Apply knowledge of equivalent fractions to compare, add and subtract fractions where the denominator is not the same	7						▓					
Fractions	Take apart and evaluate any fraction problems in different contexts	7								▓			
Fractions	Create a fraction from a recurring decimal	7										▓	
Fractions	Apply and analyse any recurring decimal and fully explain how it can be changed into a fraction	7											▓
Percentages	Remember that a % is out of 100	7	▓										
Percentages	Remember equivalence between simple fractions, decimals and percentages (1/2, 1/4, 1/10, 3/4)	7		▓									
Percentages	Explain the equivalence between simple fractions, decimals and percentages (1/2, 1/4, 1/10, 3/4)	7			▓								
Percentages	Explain and demonstrate how to calculate percentages of a quantity without a calculator (e.g. 50%, 10%, and 5%)	7				▓							
Percentages	Explain and demonstrate how to calculate percentages of a quantity using a calculator	7					▓						
Percentages	Explain the equivalence between any fraction, decimal and % and convert between these	7						▓					
Percentages	Apply my knowledge of percentages to solve problems involving simple interest	7							▓				
Percentages	Apply and analyse problems involving percentage increase and decrease	7								▓			
Percentages	Apply and analyse problems involving compound interest	7											▓