

Scheme Of Work 2020 - 2021

Subject: Maths

Year Group: 7

Specification: KS3 Maths Progress

Pi

Active Learning Opportunities

Year 1

Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Q's & Stretch	GCSE Q Stem	Homework	Lit Num SMSC Codes
12hrs	Analysing & Displaying Data					
1	1.1 Mode, median and range	Find the mode of a set of data, numerical and non-numerical.	When might different people/groups need to use data collection?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
2	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) <i>Show me boards, Coaching, Independent Study, Student teachers etc</i>	Find the median of a set of data (odd and even number of values).	What is meant by analysis?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

3		Find the range of a set of data.	When is it useful to have data displayed in a two-way table?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
4	1.2 Displaying data	Read and draw pictograms, bar charts and bar-line charts.	Justification of most appropriate average to use	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
5	<p>Do Now: Numeracy Ninja</p> <p>Plenary: TEQ (Typical exam question)</p> <p>Show me boards, Coaching, Independent Study, Student teachers etc</p>	Read and construct tally charts and frequency tables.	Language use when comparing data	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

6		Find the mode and range from a chart or table.		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
7	1.3 Grouping data	Read and construct grouped tally charts and frequency tables.	How do you decide on appropriate intervals?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
8	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	Read and construct grouped bar charts for discrete and continuous data.	Analysis questioning	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

9		Find the modal class from a bar chart or frequency table.	What trends are evident? How could this help people/groups with decisions?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
10	1.4 Averages and comparing data	Calculate the mode, median, mean and range of a set of values.	What trends are evident? How could this help people/groups with decisions?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
11	<p>Do Now: Numeracy Ninja</p> <p>Plenary: TEQ (Typical exam question)</p> <p>Show me boards, Coaching, Independent Study, Student teachers etc</p>	Compare two sets of data using an average and the range.	What information do we need to make direct comparisons between pie charts? Can we always compare?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

12	1.5 Line graphs and more bar charts	Read and draw a line graph.	What trends are evident? How could this help people/groups with decisions? When would you use this type of graph	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
13	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) <i>Show me boards, Coaching, Independent Study, Student teachers etc</i>	Read and draw a dual bar chart.	What trends are evident? How could this help people/groups with decisions? When would you use this type of graph	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
14		Read and draw a compound bar chart.		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

15	1.6 Spreadsheets	Enter data into a spreadsheet program.		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
16	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) <i>Show me boards, Coaching, Independent Study, Student teachers etc</i>	Use a spreadsheet to calculate the mode, median, mean and range.	Use Excel to create a graph.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
17		Use a spreadsheet to draw bar charts, dual bar charts, compound bar charts, grouped bar charts and line graphs.		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 1	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Q's & Stretch	GCSE Q Stem	Homework	Lit Num SMSC Codes
12hrs	1 Number Skills					
18	2.1 Mental maths	Know and use the priority of operations and laws of arithmetic.	Do they understand BODMAS? MS: No need for BO	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
19	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	Recall multiplication facts up to 10×10	Can they recall any times table fact they are questioned on? Start 1,2,5,10 Then 4,8,9 Finally 3,6,7	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

20		Multiply and divide by 10, 100, 1000	Can pupils use this in simple numeric questioning? Can they develop understanding by using this in worded questions?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
21	2.2 Addition and subtraction	Round whole numbers to the nearest 10, 100, 1000	Start with 10s and work your way up. Use minimally different questions to check they can work between the different rules.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
22	<p>Do Now: Numeracy Ninja</p> <p>Plenary: TEQ (Typical exam question)</p> <p>Show me boards, Coaching, Independent Study, Student teachers etc</p>	Check answers using estimation.	Round answers to 1 (sig fig) then calculate the estimate. Do they work to 1 (sig fig)?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

23		Add and subtract whole numbers using written methods.	Can the use the column method for this? Do they successfully borrow from the other column when needed?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
24	2.3 Multiplication	Multiply whole numbers using a written method.	Multiply 76 X 89 using coloumn method	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
25	2.4 Division	Divide whole numbers using a written method.	Use of the bus stop method is key. Can they divide 3 digits by1 and 2 digit dividers? Can they extend this process into decimals?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

26	<p>Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc</p>	Check answers using inverse operations.	If $2 \times 4 = 8$ can they understand that $8 \div 4 = 2$ and $8 \div 2 = 4$ this should be expanded up to higher values and pupil should be able to work backward and forward to clarify their understanding	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
27	2.5 Finance: Time and money	Round decimals to the nearest whole number.	Can they round the price of an object to the nearest pound?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
28	<p>Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc</p>	Interpret a calculator display.	asic understanding is key Can they understand what to do to convert between fractions and decimals on a calculator?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

29		Solve problems involving time and money using a calculator.	Basic number problems should be a start but can they handle worded questions that draw out a fuller understanding?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
30	2.6 Negative numbers	Order positive and negative numbers.	Do they understand that -2 is bigger than -5?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
31	<p>Do Now: Numeracy Ninja</p> <p>Plenary: TEQ (Typical exam question)</p> <p>Show me boards, Coaching, Independent Study, Student teachers etc</p>	Add and subtract positive and negative numbers.	Can they work out a bank balance using ins and outs from a bank account?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

32		Begin to multiply with negative numbers.	Do they understand all four rules of +ve and -ve numbers and can they work between them? EXT: Can they multiply 3 or 4 times, with negatives, to get the correct value?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
33	2.7 Factors, multiples and primes	Identifying and understanding factors, multiples and prime numbers.	Can they understand the difference between a factor and a multiple? Can they correctly colour a number grid? See wall in CR room.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
34	2.8 Square and triangle numbers	Recognise and use square numbers, square roots and triangle numbers.	Square roots should be taught as inverse to squares.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 2	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Q's & Stretch	GCSE Q Stem	Homework	Lit Num SMSC Codes
12hrs	Expressions, functions & formulae					
35	3.1 Functions	Find outputs of simple functions written in words and using symbols.	Create an equation from reading a worded statement. Create a worded statement from an equation.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9
36	<p>Do Now: Numeracy Ninja</p> <p>Plenary: TEQ (Typical exam question)</p> <p>Show me boards, Coaching, Independent Study, Student teachers etc</p>	Describe simple functions in words.	Understand shopping skills e.g. six bags of apples with 5 in each bag is equal to....	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7, M1, C3, C5, C6, Sp2 Sp9

37	3.2 Simplifying expressions 1	Simplify simple algebraic expressions by collecting like terms.	Start with symbolic nature of fruit or objects. Build up to collecting letters with no powers.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
38	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	Use arithmetic operations with algebra.	Show ability to use all four operations and apply them to an algebraic expression.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
39	3.3 Simplifying expressions 2	Use brackets with numbers and letters.	Solve $3(2x+3)$ Move on to $x(2-x)$	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

40	<p>Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc</p>	Simplify more complicated expressions by collecting like terms.	Start with symbolic nature of fruit or objects. Build up to collecting letters including values including powers	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
41	3.4 Writing expressions	Write expressions from word descriptions using addition, subtraction and multiplication.	Create an expression from reading a worded statement. Create a worded statement from an expression.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
42	<p>Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc</p>	Write expressions to represent function machines.	Transfer a given function into an expression including more than one function, can they do more than two?	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

43	3.5 STEM: Substituting into formulae	Substitute positive integers into simple formulae written in words.	Using known formula to create a cross curricular impact. E.g. $f=ma$ or $v=sd$	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
44	Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc	Substitute integers into formulae written in letter symbols.	Start with $Y=2X$ then add more unknowns. Ext can they apply these rules with all elements of BODMAS	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
45	3.6 Writing formulae	Identify variables and use letter symbols.	Create formulae from written statements then solve.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

46	<p>Do Now: Numeracy Ninja Plenary: TEQ (Typical exam question) Show me boards, Coaching, Independent Study, Student teachers etc</p>	Write simple formulae using letter symbols.	<p>Pens are sold in packs of 6 and rulers are sold in boxes of 10.</p> <p>A teacher buys p packs of pens and r boxes of rulers. Write an expression for the total number of pens and rulers bought.</p>	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
47		Identify formulae and functions.	Understand how to formulate the unknowns to create the correct formulae.	TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9
48		Identify the unknowns in a formula and a function.		TEQ - Show understanding of worded questions and how marking schemes test working practices	Monopolise your homework Sheet 3	So2, So6, So7 , M1, C3, C5, C6 , Sp2 Sp9

