Lode Heath School

Mathematics Department

Year 7 Foundation
Autumn Term

Assignment Title	Unit 1: Analysing and Displaying Data	Date set	Autumn 1

Summary of Unit 1	Key Words
Interpret and construct tables, charts and diagrams. Interpret, analyse and compare the distributions of data sets.	Mean, median, survey, represent, interpret, data, statistics, label, tally, frequency, pictogram, bar-chart, graph, pie chart, integer, angle, degree, interpret, data, statistics, mode, modal class, range, frequency, table, order, distribution.

Prior Knowledge:

1) List some graphs you have heard of?

2) Why do you use graphs?

3) Calculate without a calculator:
   a) 6 + 3 + 7 + 5 + 5
   b) 35 ÷ 7

4) What is a quarter of 8?

LEARNING JOURNEY

	Task Description
	1.1 Mode, median and range *(GCSE Statistics)* Find the mode of a set of data, numerical and non-numerical. Find the median of a set of data (odd and even number of values). Find the range of a set of data.
	1.2 Displaying data *(GCSE Statistics)* Read and draw pictograms, bar charts and bar-line charts. Read and construct tally charts and frequency tables. Find the mode and range from a chart or table.
	1.3 Grouping data *(GCSE Statistics)* Read and construct grouped tally charts and frequency tables. Read and construct grouped bar charts for discrete and continuous data. Find the modal class from a bar chart or frequency table.
	1.4 Averages and comparing data *(GCSE Statistics)* Calculate the mode, median, mean and range of a set of values. Compare two sets of data using an average and the range.
	1.5 Line graphs and more bar charts *(GCSE Statistics)* Read and draw a line graph. Read and draw a dual bar chart. Read and draw a compound bar chart.

Assignment Title	Unit 2: Number skills	Date set	Autumn 1

Summary of Unit 2	Key Words
Be able to add, subtract, multiply and divide with whole positive or negative numbers. Be able to recognise and use factors, multiples, prime, square and triangle numbers.	Add, subtract, multiply, divide, negative, positive, estimate, round, whole, inverse, time, money, finance, calculator, factors, multiples, square, prime, triangle.

Prior Knowledge:

1) Write in words:

   a) 429 b) 5308

2) Without a calculator:

   a) 27 + 25 b) 45 – 14 c) 32 + 251

3) Without a calculator:

   a) 4 x 9 b) 8 x 5 c) 7 x 6

LEARNING JOURNEY

	Task Description
	2.1 Mental maths Know and use the priority of operations and laws of arithmetic. Recall multiplication facts up to 10 × 10 Multiply and divide by 10, 100, 1000
	2.2 Addition and subtraction Round whole numbers to the nearest 10, 100, 1000 Check answers using estimation. Add and subtract whole numbers using written methods.
	2.3 Multiplication Multiply whole numbers using a written method.
	2.4 Division Divide whole numbers using a written method. Check answers using inverse operations.
	2.5 Finance: Time and money Round decimals to the nearest whole number. Interpret a calculator display. Solve problems involving time and money using a calculator.
	2.6 Negative numbers Order positive and negative numbers. Add and subtract positive and negative numbers. Begin to multiply with negative numbers.
	2.7 Factors, multiples and primes Identifying and understanding factors, multiples and prime numbers.
	2.8 Square and triangle numbers Recognise and use square numbers, square roots and triangle numbers.

Assignment Title	Unit 3: Expressions, functions and formulae	Date set	Autumn 2

Summary of Unit 3	Key Words
Substitute numbers into expressions and formulae. Simplify and manipulate algebraic expressions. Use function machines. Understand and use vocabulary for expressions, equations, formulae, terms and factors.	Algebra, unknown, symbol, variable, equals, brackets, evaluate, simplify, substitute, solve, term, expression, equation, formula.

Prior Knowledge:

1) If x = 5, what does x + 5 equal?

2) Simplify the expressions below:

   a) 5x + 4x _____

   b) 10y – 6y _____

3) What is the output of the function machine?

   a) 6 → [x3] →

LEARNING JOURNEY

	Task Description
	3.1 Functions Find outputs of simple functions written in words and using symbols. Describe simple functions in words.
	3.2 Simplifying expressions 1 Simplify simple algebraic expressions by collecting like terms. Use arithmetic operations with algebra.
	3.3 Simplifying expressions 2 Use brackets with numbers and letters. Simplify more complicated expressions by collecting like terms.
	3.4 Writing expressions Write expressions from word descriptions using addition, subtraction and multiplication. Write expressions to represent function machines.
	3.5 STEM: Substituting into formulae ***(GCSE Statistics)*** Substitute positive integers into simple formulae written in words. Substitute integers into formulae written in letter symbols.
	3.6 Writing formulae ***(GCSE Statistics)*** Identify variables and use letter symbols. Write simple formulae using letter symbols. Identify formulae and functions. Identify the unknowns in a formula and a function.