Lode Heath School

Mathematics Department

Year 8 Higher
Spring Term

Assignment Title	Unit 5: Fractions, decimals and percentages	Date set	Spring 1

Summary of Unit 5	Key Words
Change between fractions and recurring decimals. Calculate percentage increase and decrease, percentage change and reverse percentages. Calculate repeated percentage changes.	Fraction, decimal, percentage, numerator, denominator, equivalent, cancel, simplify, improper, mixed, express, compare ascending, descending, round, decimal place, sum, product, estimate, hundreds, tens, units, tenths, hundredths, place value.

Prior Knowledge:

1. Write 27% as a decimal

2. Write $\frac{3}{8}$ as a decimal

3. Find 35% of 64

LEARNING JOURNEY

	Task Description
3 - 5	**5.1 Recurring decimals** Recognise fractional equivalents to important recurring decimals. Recognise which denominators of simple fractions produce recurring decimals. Change a recurring decimal into a fraction.
3 – 6	**5.2 Using percentages.** Calculate percentages. Work out an original quantity before a percentage increase or decrease
4 – 5	**5.3 Percentage change** Calculate percentage change.
5 - 6	**5.4 FINANCE: Repeated percentage change** Calculate the effect of repeated percentage changes.

Assignment Title	Unit 6: Scale drawings and	Date set	Spring 1

	measures		

Summary of Unit 6	**Key Words**
Use scales and ratio in plans and maps. Use bearings to draw scale drawings. Identify similarity and congruence and then solve problems about them.	Scale, ratio, bearings, similar, congruent.

Prior Knowledge

1. Describe how to draw and measure reflex angle.

2. Use a scale of 1cm = 1m to draw a rectangle 3m x 5m

3. Name 3 different types of triangle.

4. How many quadrilaterals can you name?

LEARNING JOURNEY

	Task Description
	6.1 Maps and scales Use scales in maps and plans. Use and interpret maps.
	6.2 Bearings Measure and use bearings. Draw diagrams to scale using bearings.
	6.3 Scales and ratio Draw diagrams to scale. Use and interpret scale drawings.
	6.4 Congruent and similar shapes Identify congruent and similar shapes. Use congruence to solve problems in triangles and quadrilaterals.
	6.5 Solving geometry problems Use similarity to solve problems in 2D shapes.

Assignment Title	**Unit 7: Probability**	**Date set**	**Spring 2**

Summary of Unit 7	Key Words
Be able to calculate probability relating to independent and mutually exclusive events. Know the difference between theoretical and experimental probabilities. Use tree diagrams to calculate repeated events.	Independent, theoretical, mutually exclusive, experimental, bias, impossible, likely, unlikely, even chance, outcomes, certain.

Prior Knowledge:

1. Mark on the probability scale the likelihood of these events happening:

a) Rolling a 6 on a dice
b) b) you will win the lottery
c) c) you will do exercise in the next week
d) d) It will rain at least once in the next month

LEARNING JOURNEY

	Task Description
	7.1 Comparing probabilities *(GCSE Statistics)* Calculate and compare probabilities. Decide if a game is fair.
	7.2 Mutually exclusive events *(GCSE Statistics)* Identify mutually exclusive outcomes and events. Find the probabilities of mutually exclusive outcomes and events. Find the probability of an event not happening.
	7.3 Estimating probability *(GCSE Statistics)* Calculate the relative frequency of a value. Use relative frequency to make estimates. Use relative frequency to estimate the probability of an event. Use estimated probability to calculate expected frequencies.
	7.4 Experimental probability *(GCSE Statistics)* Carry out a probability experiment. Estimate probability using data from an experiment. Work out the expected results when an experiment is repeated.
	7.5 Probability diagrams *(GCSE Statistics)* List all the possible outcomes of one or two events in sample space diagrams or Venn diagrams. Calculate probabilities of repeated events.
	7.6 Tree diagrams *(GCSE Statistics)* Use tree diagrams to find the probabilities of two or more events.

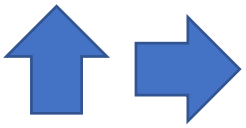
Assignment Title	Unit 8: Transformations	Date set	Spring 2

Summary of Unit 8	Key Words
Transform shapes. Identify and describe transformations. Describe effect of enlargement on area and volume.	Image, object, reflection, mirror line, enlarge, coordinate, congruent, angle, similar, rotation, translation, vector, scale factor, plane, perimeter, area, volume.

Prior Knowledge:

1) What is a line of symmetry? How many lines of symmetry has an isosceles triangle got?

2) What is the angle of rotation of this arrow?



LEARNING JOURNEY

	Task Description
	8.1 Reflection and translation Describe and carry out translations. Describe and carry out reflections.
	8.2 Rotation Describe and carry out rotations.
	8.3 Enlargement Enlarge a shape. Describe an enlargement.
	8.4 More enlargement Enlarge a shape using negative scale factors. Enlarge a shape using fractional scale factors.
	8.5 STEM: Combining transformations Transform 2D shapes using a combination of reflection, rotation, enlargement and translation.
	8.6 2D shapes and 3D solids Identify planes of reflection symmetry in 3D solids. Find the perimeter and area of 2D shapes after enlargement. Find the volume of 3D solids after enlargements.