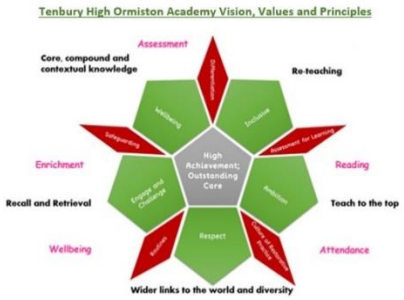
TENBURY HIGH
ORMISTON ACADEMY



Curriculum Overview for Mathematics
Year 7

Half Term 3: Area

Declarative Knowledge:

- Understand the difference between perimeter and area.
- Identify units that describe length and units that describe area.
- Recall how to calculate the area of rectangles
- Recall the formula for area of a triangle
- Recall the formula for area of a trapezium

Procedural Knowledge:

- Calculate the area of rectangles by counting squares.
- See the link between repeated addition and multiplication.
- Use the formula for the area of a rectangle to find areas.
- Calculate areas when lengths are given in mixed units.
- Calculate missing side lengths of rectangles and squares
- Calculate the area of compound shapes made with rectangles
- Find missing lengths of rectangles split in two parts
- Use and apply the formula to calculate the area of triangles
- Use and apply the formula to calculate the area of trapezium

Conditional Knowledge:

- Draw rectangles with a given area
- Solve problems with compound rectangular shapes.
- Calculate the area of a rectangle when given the perimeter
- Calculate the perimeter of a rectangle given the area
- Use the area of a rectangle to calculate the area of a triangle
- Know which formula to use for area of a complex compound shape including

Modelling reading of questions by the class teacher – reading like a Mathematician and BUG
Two key words at the start of each lesson defined
Expectation of Mathematical vocabulary used in lessons

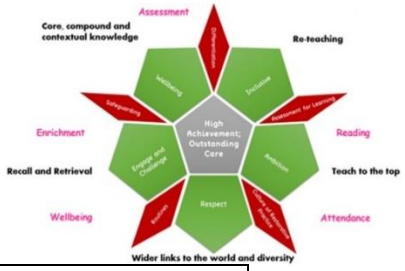
Perimeter, area, volume, capacity, surface area, square, rectangle, parallelogram, triangle, trapezium (trapezia), polygon, square millimetre, square centimetre, square metre, square kilometre, formula, formulae, length, height, width, base

Notation
Abbreviations of units in the metric system: km, m, cm, mm, mm^2, cm^2, m^2, km^2

End of unit exam completed in lesson time at the end of the unit.
There will be a feedback lesson at the end of the unit, which includes relearning tasks.

End of Term 2 exam during the formal assessment window will include content from this unit, alongside Term 1 units.

Dr Frost Maths – practising skills using DrFrost.org (a unique username and password will be provided by the school)



squares, rectangles, triangles and trapeziums.		
Half Term 3: Data and Averages **Declarative Knowledge:** • Know the data handling cycle • Become familiar with key vocabulary around data handling • Recall key vocabulary and use it to describe a data set • Recall frequency tables and extract key information • Know the key features of a pictogram • Know the key features of a bar chart • Know the key features of a pie chart • Know the key features of a frequency tables • Know the measures of central tendency **Procedural Knowledge:** • To be able to interpret tables of data and create a table from a list of data. • Create pictograms using a unit key • Interpret a bar chart to (a) compare segments, (b) find missing amounts, and (c) find averages • Interpret a composite bar chart (horizontal and vertical) to (a) compare segments and (b) find missing amounts • To draw bar models from (a) sorted data and (b) unsorted data • Read and interpret a pie chart • Use proportion to work out the angle on a pie chart • Draw a pie chart using the proportional method • Finding the mode of categorical data sets • Finding the mode of quantitative data sets • Finding the mode from graphs • Finding the mode from tables		Modelling reading of questions by the class teacher – reading like a Mathematician and BUG Two key words at the start of each lesson defined Expectation of Mathematical vocabulary used in lessons
		Data, quantitative, qualitative, variables, dependent variables, independent variables, frequency, categorical, discreet, continuous, primary, secondary, column, row, key, table, axis, tally, bar chart, pictogram, pie chart, line graph, outlier, averages, mean, median, mode, bi-modal, range, midpoint, middle, spread, total, relevance, purpose, usefulness.
		End of unit exam completed in lesson time at the end of the unit. There will be a feedback lesson at the end of the unit, which includes relearning tasks. End of Term 2 exam during the formal assessment window will include content from this unit, alongside Term 1 units.
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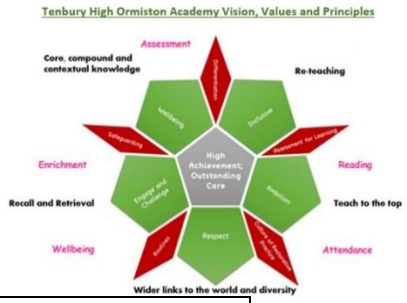
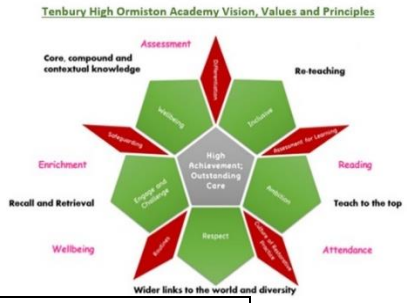


• Be able to sort quantitative data into order • Find the median of an odd data set • Find the midpoint of two numbers • Finding the median of an even data set • Be able to add quantitative data together • Identify what to divide the sum by • Find the mean when it is an integer • Find the mean when it is not an integer • Identify the largest and smallest numbers in a data set • Find the range • Calculate the range of data • Identify outliers **Conditional Knowledge:** • Be aware of when a bar chart is an appropriate chart • Be able to critique uses of bar models and suggest corrections • Finding missing data given the mode • Finding missing data given the median • Finding missing numbers given the mean • Find missing numbers from a range of data • Compare data sets through graphs • Calculate the interquartile range		
Half Term 4: Fractions, Decimals, Percentages **Declarative Knowledge:** • Draw diagrams of fractions • Position fractions on a number line • Recognise percentages are out of 100 **Procedural Knowledge:** • Find equivalent fractions • Simplify fractions • Find the complement of a fraction – calculate how much needs to be added to sum to 1		Modelling reading of questions by the class teacher – reading like a Mathematician and BUG Two key words at the start of each lesson defined Expectation of Mathematical vocabulary used in lessons
		Fractions, decimals, percentages, convert, improper fraction, proper fraction, numerator, denominator, percentage, decimal, proportion, simplify, equivalent, quotient



• Calculate fractional amounts using a bar model • Express one number as a fraction of another • Calculate the original amount • Convert between fractions, decimals and percentages • Recognise recurring and terminating decimals • Represent percentages using pictorial representations • Represent one number as a percentage of another **Conditional Knowledge:** • Compare the size of fractions through common denominator • Compare the size of fractions through common denominators • Compare the size of fractions, decimals and percentages • Identify combinations of fractions which are the same by matching shapes • Combine different fractions to identify the parts of a whole that is shown in a picture • Identify fractions in their simplest form • Identify equivalent decimals to tenths and show decimals in a bar/double number line • Identify equivalent decimals to hundredths (fractions with a numerator smaller than 10) • Identify equivalent decimals to hundredths (fractions with a numerator greater than 10) • Order a mixture of fractions, decimals and percentages		End of unit exam completed in lesson time at the end of the unit. There will be a feedback lesson at the end of the unit, which includes relearning tasks. End of Term 2 exam during the formal assessment window will include content from this unit, alongside Term 1 units.
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