Ssm long and medium term planning

Year 3/4/5/6 SSM Mathematics Yearly Overview

	Autumn	Spring	Summer
Sequence 1	Properties of shape: Name, classify and describe 2-D shapes Polygons, triangles, rectangles, quadrilaterals and circles	Properties of shape: Recognise symmetry and reflection and translation of 2D shape	Properties of shape: 3D shapes Identify nets of open and closed cubes
Sequence 2	Properties of shape: Name, classify and describe 3-D shapes Prisms, perpendicular lines and faces	Position and direction: Recognise positions and directions, and use co-ordinates	Measures : Time Clocks, calendars and Timetables
Sequence 3	Measures : units of length	Properties of shape :Angles and rotation	Statistics : averages, probability and likely outcomes
Sequence 4	Measures : units of mass	Measures : Perimeter	Measures: units of capacity, temperature
Sequence 5	Measures : Time units of time	Measures : Area	Measures: reading scales
Seequence 6	Statistics : collecting, sorting interpreting data Tally, pictogram, bar, line, pie charts	Statistics : representing, extracting and interpreting data Venn, Carroll diagrams, databases, conversion charts	Statistics : Solve problems using data

Ssm long and medium term planning

Year 3/4/5/6 SSM Mathematics Yearly Overview

	Autumn	Year 3	Year 4	Year 5	Year 6
Sequence 1	Properties of shape: Name, classify and describe 2-D shapes Polygons, triangles, rectangles, quadrilaterals and circles	Draw 2-D shapes and describe them Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes *Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines*	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles Use the properties of rectangles to deduce related facts and find missing lengths and angles	Compare and classify geometric shapes based on their properties and sizes Draw 2-D shapes using given dimensions and angles Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
Sequence 2	Properties of shape: Name, classify and describe 3-D shapes Prisms, perpendicular lines and face	Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	Recognise, describe and build simple 3-D shapes, including making nets
Sequence 3	Measures : units of length	Measure, add and subtract lengths (m/cm/mm) Compare lengths (m/cm/mm)	Estimate and calculate lengths Compare lengths	*Use, read and write standard units of length to a suitable degree of accuracy* *Understand and use approximate equivalences between metric and common imperial units such as inches*	Use, read and write standard units of length using decimal notation to three decimal places
Sequence 4	Measures : units of mass	Measure, add and subtract mass (kg/g) Compare mass (kg/g)	Estimate and calculate mass Compare mass	Use, read and write standard units of mass to a suitable degree of accuracy Understand and use approximate equivalences between metric and common imperial units such as pounds	Use, read and write standard units of mass using decimal notation to three decimal places
Sequence 5	Measures : Time units of time	Record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight Know the number of seconds in a minute, and the number of days	Convert between different units of time, e.g. hour to minute Read, write and convert time between analogue and digital 12 and 24-hour clocks	Convert between units of time in a problem solving context Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks	Use, read and write standard units of time

		in each month, year and leap year Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24- hour clocks Estimate and read time with increasing accuracy to the nearest minute Compare durations of events (for example to calculate the time taken by particular events or tasks)			
Sequence 6	Statistics : collecting, sorting interpreting data Tally, pictogram, bar, line, pie charts	Use sorting diagrams to compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects	Use a variety of sorting diagrams to compare and classify numbers and geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes)	Continue to complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes)

	Spring	Year 3	Year 4	Year 5	Year 6
Sequence 1	Properties of shape: Recognise symmetry and reflection and translation of 2D shape	Identify lines of symmetry in 2-D shapes presented in different orientations Complete a simple symmetric figure with respect to a specific line of symmetry Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	Identify lines of symmetry in 2-D shapes presented in different orientations Complete a simple symmetric figure with respect to a specific line of symmetry. Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines Recognise the number of axes of reflective symmetry in regular polygons.	

Ssm long and medium term planning

Sequence 2	Position and direction: Recognise positions and directions, and use co-ordinates	Describe positions on a square grid labelled with letters and numbers	Describe positions on a 2-D grid as coordinates in the first quadrant Plot specified points and draw sides to complete a given polygon Describe movements between positions as translations of a given unit to the left/right and up/down	Describe positions on the first quadrant of a coordinate grid Plot specified points and complete shapes Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	Describe positions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes
Sequence 3	Properties of shape :Angles and rotation	Recognise angles as a property of shape or a description of a turn Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	Identify acute and obtuse angles and compare and order angles up to two right angles by size	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees (°) • Identify: • - angles at a point and one • whole turn (total 360°) • - angles at a point on a • straight line and 1/2 a turn • (total 180°) • - other multiples of 90°	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles Find unknown angles in any triangles, quadrilaterals, and regular polygons
Sequence 4	Measures : Perimeter	Understand that perimeter is a measure of distance around the boundary of a shape Measure the perimeter of simple 2-D shapes	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	Recognise that shapes with the same areas can have different perimeters and vice versa
Sequence 5	Measures : Area		Understand that area is a measure of surface within a given boundary Find the area of rectilinear shapes by counting squares	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	Calculate the area of parallelograms and triangles Recognise when it is possible to use the formulae for area and volume of shapes

Ssm long and medium term planning

Sequence 6	Statistics : representing, extracting and interpreting data Venn, Carroll diagrams, databases, conversion charts	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables Interpret and present data using bar charts, pictograms and tables	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables Interpret and present data using bar charts, pictograms and tables	Complete, read and interpret information in tables, including timetables (line graphs)	Interpret and construct pie charts and line graphs and use these to solve problems

	Summer	Year 3	Year 4	Year 5	Year 6
Sequence 1	Properties of shape: 3D shapes Identify nets of open and closed cubes	Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	Recognise, describe and build simple 3-D shapes, including making nets
Sequence 2	Measures : Time Clocks, calendars and Timetables	Record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight Know the number of seconds in a minute, and the number of days in each month, year and leap year Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24- hour clocks Estimate and read time with increasing accuracy to the nearest minute Compare durations of events (for example to calculate the time taken by particular events or tasks)	Convert between different units of time, e.g. hour to minute Read, write and convert time between analogue and digital 12 and 24-hour clocks	Convert between units of time in a problem solving context Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks	Use, read and write standard units of time

Ssm long and medium term planning

Sequence 3	Statistics : averages, probability and likely outcomes			*Calculate and interpret the mode, median and range*	Calculate and interpret the mean as an average
Sequence 4	Measures: units of capacity, temperature	*Continue to estimate and measure temperature to the nearest degree (°C) using thermometers*	*Order temperatures including those below 0°C*	*Continue to order temperatures including those below 0°C*	*Calculate differences in temperature, including those that involve a positive and negative temperature*
Sequence 5	Measures: reading scales				
Sequence 6	Statistics : Solve problems using data	Solve one-step and two-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in scaled bar charts and pictograms and tables	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	Solve comparison, sum and difference problems using information presented in *all types of graph including* a line graph	*Solve comparison, sum and difference problems using information presented in all types of graph*