



	Theme	Overview of key learning to take place	How learning will be assessed
Term 1	Unit 1: Significant figures, powers and standard form.	<p><b>1.1</b> Use and understand powers of 10.            Use the prefixes associated with powers of 10.            Understand the effect of multiplying and dividing by any integer power of 10.</p> <p><b>1.2</b> Calculate with powers.            Round to a number of significant figures.</p> <p><b>1.3</b> Use negative indices.            Work out powers of fractions.</p> <p><b>1.4</b> Write numbers using standard form.            Order numbers written in standard form.</p> <p><b>1.5</b> Calculate with numbers written in standard form.</p>	<p><b>Examples of Formative Assessment to be used this term:</b></p> <p>There will be several modes of formative assessment. Grades are not given for these pieces of work as the focus is on supporting students to make improvements to future pieces of work.</p> <p>Pre-knowledge questions            Question worksheets            Sparx Maths            Exercise tasks            AFL questions            Checkpoint questions</p> <p><b>Summative assessment</b></p> <p>Assessment to take place 2 times this term.</p> <p><b>Approximate</b> timings and Units            Week 5 - assessment Unit 1 and 2            Week 9 - assessment Unit 3 and 4</p>
	Unit 2: 2D shapes and 3D solids	<p><b>2.1</b> Sketch nets of 3D solids.            Calculate the surface area of prisms.</p> <p><b>2.2</b> Calculate the volume of right prisms.</p> <p><b>2.3</b> Calculate the circumference of a circle.            Solve problems involving circles or prisms.            Use appropriate apparatus (including pairs of compasses) to identify and draw the diameter and radius of a circle.            Identify the circumference, arc and sector of a circle.</p> <p><b>2.4</b> Calculate the area of a circle.            Solve problems involving circles.</p> <p><b>2.5</b> Calculate the volume and surface area of a cylinder.</p> <p><b>2.6</b> Use Pythagoras' theorem in right-angled triangles.</p>	
Term 1	Unit 3: Quadratics	<p><b>3.1</b> Use the <math>n</math>th term to generate a linear and quadratic sequence.            Find the Use the <math>n</math>th term to generate a linear or quadratic sequence.</p> <p><b>3.2</b> Recognise and continue geometric sequences.            Solve problems involving geometric sequences.</p>	

	Unit 4: Constructions	<p><b>3.3</b> Multiply pairs of brackets. Square a linear expression. Use quadratic identities.</p> <p><b>3.4</b> Factorise quadratic expressions into two brackets.</p> <p><b>3.5</b> Solve quadratic equations by factorising.</p> <p><b>4.1</b> Draw accurate nets of 3D solids. Construct triangles using a ruler and compasses. Construct nets of 3D solids using a ruler and compasses.</p> <p><b>4.2</b> Bisect a line using a ruler and compasses. Construct perpendicular lines using a ruler and compasses.</p> <p><b>4.3</b> Bisect angles using a ruler and compasses. Draw accurate diagrams to solve problems. Construct perpendicular bisectors and angle bisectors.</p>	Students will receive a mark for each assessment and personalised next steps for improvement
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Term 2	Unit 5: Inequalities, equations and Formulae	<p><b>5.1</b> Substitute values into expressions and formulae involving powers, roots and brackets. Write expressions and formulae involving more than one variable. Solve problems involving formulae and expressions. Write expressions and formulae involving more than one variable. Substitute values into a formula and find the value of a variable that is not the subject. Solve problems involving formulae and expressions.</p> <p><b>5.2</b> Solve linear inequalities and represent the solution on a number line. Multiply both sides of an inequality by a negative number. Represent solutions to linear inequalities on a number line.</p> <p><b>5.3</b> Use index laws with zero and negative powers.</p> <p><b>5.4</b> Distinguish between expressions, identities, equations and formulae. Expand and factorise expressions involving powers.</p> <p><b>5.5</b> Construct and solve complex equations.</p>	<p><b>Examples of Formative Assessment to be used this term:</b></p> <p>There will be several modes of formative assessment. Grades are not given for these pieces of work as the focus is on supporting students to make improvements to future pieces of work.</p> <p>Pre-knowledge questions Question worksheets SparxMaths Exercise tasks AFL questions Checkpoint questions</p> <p><b>Summative assessment</b> Assessment to take place 2 times this term. <b>Approximate</b> timings and units</p>

	<p>Unit 6: Collecting and Analysing data</p>	<p>Solve equations involving an <math>x^2</math> term and a number.  <b>5.6</b> Change the subject of a formula.</p> <p><b>6.1</b> Identify sources of primary and secondary data.  Choose a suitable sample size.  Understand how to reduce bias in sampling and questionnaires.  Identify a random sample.</p> <p><b>6.2</b> Design a good questionnaire.  Design and use data collection sheets and tables.  Design and use data collection sheets and tables.</p> <p><b>6.3</b> Estimate the mean and range from a grouped frequency table.  Calculate an estimate of the mean from a grouped frequency table.</p> <p><b>6.4</b> Construct and use a line of best fit to estimate missing values.  Identify and explain outliers in data.  Identify further lines of enquiry.  Construct and use frequency polygons.</p>	<p>Week 4- assessment Unit 5 and 6  Week 10- assessment Chapter 7 and 8</p> <p>Students will receive a mark for each assessment and personalised next steps for improvement</p>
<p>Term 2</p>	<p>Unit 7:  Multiplicative reasoning</p> <p>Unit 8: Scale drawings and Measures</p>	<p><b>7.1</b> Recognise data sets that are in proportion.  Set up equations that show direct proportion.  Identify a proportional relationship between sets of data</p> <p><b>7.2</b> Set up equations to show direct proportion.  Use algebra to solve problems involving proportion.</p> <p><b>7.3</b> Understand and use column vectors in translations.  Work out the scale factor of an enlargement.  Enlarge shapes using positive scale factors, about a centre of enlargement.  Describe an enlargement on a coordinate grid.</p> <p><b>7.4</b> Enlarge 2D shapes using a negative whole number scale factor.  Enlarge 2D shapes using a fractional scale factor.  Understand that the scale factor is the ratio of the lengths of corresponding sides.</p> <p><b>7.5</b> Find an original value using inverse operations.  Calculate percentage change.</p> <p><b>8.1</b> Use scales in maps and plans.</p>	

	<p>Use and interpret maps.</p> <p><b>8.2</b> Measure and use bearings. Draw diagrams to scale using bearings.</p> <p><b>8.3</b> Draw diagrams to scale. Use and interpret scale drawings.</p> <p><b>8.4</b> Identify congruent and similar shapes. Use congruence to solve problems in triangles and quadrilaterals.</p> <p><b>8.5</b> Use similarity to solve problems involving 2D shapes.</p>	
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Term 3	<p>Unit 9: Accuracy and measures</p> <p>Unit10: Graphical solutions</p> <p>Unit11:Trigonometry</p> <p>Unit 12 : Probability</p>	<p><b>9.1</b> Solve problems involving rates of change. Convert units with compound measures.</p> <p><b>9.2</b> Calculate density and pressure. Solve problems involving compound measures.</p> <p><b>9.3</b> Understand the effect of rounding. Find upper and lower bounds.</p> <p><b>10.1</b> Draw graphs with equation <math>y = mx + c</math>. Draw graphs with equation <math>ax + by = c</math>. Identify parallel lines.</p> <p><b>10.2</b> Understand and draw graphs of quadratic functions. Identify quadratic graphs and their features. Solve problems using quadratic graphs.</p> <p><b>10.3</b> Solve a pair of simultaneous equations.</p> <p><b>10.4</b> Rearrange equations of graphs to find the gradient and y-intercept. Find the equation of the line between two points.</p> <p><b>10.5</b> Solve more complex simultaneous equations.</p> <p><b>10.6</b> Solve simultaneous equations by drawing graphs.</p> <p><b>11.1</b> Use conventions for naming the sides of a right-angled triangle. Work out the tangent of any angle. Use the tangent ratio to work out an unknown side of a right-angled triangle.</p> <p><b>11.2</b> Work out the sine of any angle.</p>	<p>Formative Assessment</p> <p>There will be several modes of formative assessment. Grades are not given for these pieces of work as the focus is on supporting students to make improvements to future pieces of work.</p> <p>Pre-knowledge questions Question worksheets Exercise tasks SparxMaths AFL questions Checkpoint questions</p> <p>Summative assessment</p> <p>Assessment to take place 2 times this term <b>Approximate</b> timings and Units: Week 4- assessment Unit 9 and 10 Week 9 – assessment Unit 11 and unit 12</p>

		<p>Use the sine ratio to work out an unknown side of a right-angled triangle.</p> <p><b>11.3</b> Work out the cosine of any angle.</p> <p>Use the cosine ratio to work out an unknown side in a right-angled triangle.</p> <p><b>11.4</b> Use the trigonometric ratios to work out an unknown angle in a right-angled triangle.</p> <p><b>11.5</b> Use trigonometry to solve problems involving missing lengths and angles.</p> <p><b>12.1</b> Use correct set language and notation.</p> <p>Sort and compare sets of data using Venn diagrams.</p> <p><b>12.2</b> Use correct set language and notation.</p> <p>Present the possible outcomes of single events, or two successive events using lists, tables, Venn diagrams and sample space diagrams.</p> <p style="padding-left: 40px;">Identify mutually exclusive outcomes and events</p> <p>Find the probabilities of mutually exclusive outcomes and events.</p> <p><b>12.3</b> Use tree diagrams to find the probabilities of two or more events.</p> <p><b>12.4</b> Compare experimental and theoretical probabilities.</p> <p>Compare probabilities.</p> <p>Solve problems involving probability.</p>	<p>Students will receive a mark for end of topic assessment and personalised next steps for improvement.</p>
<b>Term 3</b>	<b>Revision and End of Term Assessment</b>	<b>Content to be revised in preparation for End of Term Assessment.</b>	<b>Style of the assessment- TBC</b>