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Curriculum Planning Template

Subject: Maths Year 9 Ability Higher

Half Term 4 and 5 / weeks	**Week 1-2**	**Week 3**	**Week4-5**	**Week 6-8**	**Final week of the half term**
Topic	Unit 8 – Angle Properties	Unit 9 - Sequences	Unit 10 – Handling Data	Extra Unit – Problem Solving and Finance	Reteach and Retention
Topic overview **Students will learn…**	Students are able to find missing angles in a series of scenarios through calculation understanding the importance of communicating reasons used	Students should be able to identify sequences and the rules they work to.	Students should be able to use and understand a range data handling skill.	To understand maths in context within finance and how these impact in real life.	Focus on the process of reteach and retention for this half term, knitting together the learning in reaction to the assessments completed. Students will follow a bespoke set of lessons looking at errors seen this in the work covered in this half term and any supporting knowledge. If this is covered staff will look forward to cover historic supporting knowledge for the next half term.
Components	Students should be able: • To measure, draw and label angles • To find angles on a straight line and around a point • To find angles around parallel lines • To find angles in triangles and quadrilaterals • To find the angles in regular polygons	Students should be able: • To know the difference between an arithmetic sequence and geometric • To know how to continue a sequence by looking at the differences between terms • To know how to find the nth term of a sequence • To generate a sequence from a given rule • To say if a number is within a sequence • To solve picture sequences by converting them to numbers	Students should be able: • To know that a bar chart must have gaps between the bars, a histogram has no gaps • To know that when plotting frequency polygons the centre of the group is plotted • To draw and interpret pie charts. • To know if a scatter graph has positive or negative correlation. • To draw in a line of best fit • To state the differences between two averages and say which is best • To draw and interpret two box plot diagrams	Students have the opportunity to work on a variety of problem-solving questions based on the previous units taught in year 9. The finance unit will introduce the students to general budgeting, loans, mortgages, tax and wage slips. Individual lessons on the above foster the conversations on the students understanding of these terms and importance of these after education.	Staff complete a program of adaptive reteaching on specific topics based on the individual/class needs within their groups that have been flagged in this block of learning. Regular assessments are used to identify gaps in learning. Any gaps found are then addressed in lessons to help support learning and retention. Clear areas for improvement are monitored by individual staff and at a departmental level.
What students should already know (prior learning components)	Students should come from primary and Y7/8 knowing the classification of different angle types. Students should	Good mental arithmetic is needed to start sequences. Students should be able to recognise patterns, know the	Students should be able to use a protractor to draw angles, and be able to calculate the mean, median,	Students will use the modelling and structuring of exam questions	All the half term content will have been covered by this point. Staff will use departmental

	be able to use a protractor to draw angles, know shape names and different types of quadrilaterals. For higher, they should know the properties of different shapes	importance of times tables (i.e the 3 times table is the sequence that increase by 3 each time). Higher will also need to recognise special sequences (square numbers, cube numbers, triangular numbers)	mode and range from a set of data. Students should also be able to give a dataset that satisfies some constraints i.e gives 3 numbers that have a mean of 5 and a median of 3	exemplified through the TFI questions throughout the year.	tracking documents to analyse the gaps in learning from the most recent assessments and all previous assessments. The ability to structure and breakdown a problem-solving question as exemplified in the TFI questions throughout the course.
Transferrable knowledge (skills)	The use of angle properties and skills are repeated through harder problems involving straight lines and then into circle theorems. The communication element of this unit is used frequently when students are asked for reasoning and justification in other types of questions.	The creation and use of formulae in this unit will be used in other contexts that are unrelated, however sequences will be extended into quadratics and Fibonacci.	Although these are the basic data handling ideas the skills to be able to understand these is a life skill. Within the course more difficult diagrams such as histograms and cumulative frequency. Ultimately these skills will be used throughout all data handling units up to and including KS5	Exam technique and the modelling of solutions helps students become logical thinkers able to break down large problems into smaller task. A skill that is transferable across all subjects.	This activity should serve to highlight and address areas of weakness in teaching and learning or retention. This early intervention to understand specific key areas for improvement or development. This should help to build confidence and improve students' ability to answer these and directly sequential problems.
Key vocabulary student will know and learn	Drawing, Measuring, Acute, Obtuse, Reflex, Right angle, Intersecting lines, Straight line, Parallel lines, Angles at a point, Vertically opposite, Alternate angles, Corresponding angles, Isosceles, equilateral, Polygons, Parallelogram, Square, Rectangle, Trapezium, Rhombus, Pentagon, Hexagon, Octagon, Quadrilaterals, Interior, Exterior	Patterns, Sequence, Arithmetic, Geometric, Generate	Bar charts, Pie charts, Pictograms, Line graphs, Dual bar charts, Frequency polygons, Histograms, Relationships, Scatter graphs, Positive correlation, Negative correlation, Line of best fit, Box plots, Median, Range, Interquartile range	Mortgage, rent, Loans, income tax,	
Assessment activities	Sparx Homework - Angle Properties Year 9 Test 4 (Non Calculator) and Test 5 (Calculator). Each will be completed in lesson (~50mins) at the end of the half term before the R&R section. It will cover the topics taught in this unit primarily but other previous knowledge maybe included.	Sparx Homework - Sequences Year 9 Test 4 (Non Calculator) and Test 5 (Calculator). Each will be completed in lesson (~50mins) at the end of the half term before the R&R section. It will cover the topics taught in this unit primarily but other previous knowledge maybe included.	Sparx Homework - Handling Data Year 9 Test 4 (Non Calculator) and Test 5 (Calculator). Each will be completed in lesson (~50mins) at the end of the half term before the R&R section. It will cover the topics taught in this unit primarily but other previous knowledge maybe included.		AFL and adaptive teaching will continue to support staff to assess the address areas.
Resources available	Sparx clips: M780, M331, M818, M606, M351, M679, M653 Departmental lesson folder Departmental resource folder www.corbettmaths.com www.justmaths.co.uk www.mathsbox.org.uk www.mathsgenie.co.uk www.mathspad.co.uk	Sparx clips: M381, M241, M991 Departmental lesson folder Departmental resource folder www.corbettmaths.com www.justmaths.co.uk www.mathsbox.org.uk www.mathsgenie.co.uk www.mathspad.co.uk	Sparx clips: U840, M574, M165, M769, M596, M440, U879, U837, U507 Departmental lesson folder Departmental resource folder www.corbettmaths.com www.justmaths.co.uk www.mathsbox.org.uk www.mathsgenie.co.uk www.mathspad.co.uk	Sparx clips: M187, M803, M354, M262 Departmental lesson folder Departmental resource folder www.corbettmaths.com www.justmaths.co.uk www.mathsbox.org.uk www.mathsgenie.co.uk www.mathspad.co.uk	Before any assessments are completed, revision and guidance materials are provided for students to assist in independent study.
Notes **Why this topic is important…**	Students must ensure they have a solid grasp of the use of angles and how these are drawn and illustrated. This is then extended in to more theoretical ideas that use diagrams as	The unit starts with students understanding that sequences have a link and how this can be used to find the next term. This is then moved to an algebraic form to allow a wide	Although the skills in this unit are relatively discreet with each diagram having its own methods an overarching link should be used to discuss the use of data illustration	This topic is a deep dive into maths in the real world through the eyes of usable finance. The ideas shared and discussed in this unit will hopefully allow students to apricate	This is an important point in the curriculum plan that enables individual teachers to review the gaps in learning for the classes they teach. The half-termly

	representations of a situation. Mathematical reasoning is then used to find missing angles with justification a central idea to the unit.	range of values to be found with ease. The use of the nth term to establish if a number is or is not in a given sequences provides the first elements to proof that will come much later in KS4.	and its role in wider life. Other charts and diagrams will be added to the portfolio later.	the usefulness of maths in key life mile stones that they are likely to meet.	assessments are used to track students' progress and enable teachers to react quickly to any gaps in knowledge and prepare students for the next assessment. The feedback and modelling of the exam answers enables students to pick up exam techniques and the ability to communicate effectively.