Share Multi Academy Trust

Curriculum Planning Template

Subject:	**Maths**	**Year**	**8**	**Ability**	**Mixed**

Half Term 6 / weeks	**Week 1**	**Week 2-3**	
Topic	Unit 12 – Coordinates and transformations	Unit 13 – Pythagoras.	Reteach and Retention
Topic overview **Pupils will learn…**	To understand how to plot coordinates find midpoints and reflect, rotate, enlarge and translate shapes	To recall and use Pythagoras' theorem in a range of contexts for different styles of questions before extending these questions to include trig.	Focus on the process of reteach and retention, knitting together the learning in reaction to the assessments completed
Components	• Plot coordinates and find the midpoints of coordinates • Find the gradient of straight lines • Plot horizontal and vertical lines • To perform transformations such as reflections, rotations, enlargements and translations.	• To use Pythagoras' theorem in two dimensions. • To find the length of a line segment given coordinates. • To use Pythagoras' theorem and trigonometry to solve problems.	Staff complete a program of adaptive reteaching on specific topics based on the individual/class needs within their groups. 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 pupils should already know (prior learning components)	Students should be able to: • Draw straight lines with a ruler • Add numbers together • Half numbers	Students should be able to: • confident at squaring, square rooting numbers and rearranging equations • round their values to given decimal places or significant figures.	All the half term content will have been covered by this point. Staff will use departmental 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)	This topic will introduce coordinates, straight line graphs and transformations to students. This will prepare students for when this extends into straight line graphs and translations later in KS4.	This topic will use students' knowledge and understanding of squaring and use of formulae and then extend this to increasing difficult problems requiring students to visualise and assess the validity of answers. This will be used again later in 3D questions	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 pupil will know and learn	Co-ordinate, Positive, Negative, Horizontal, Vertical, Translation, Reflection, Rotation, Enlarge, Vector, Centre, Clockwise	Square, square root, right angled triangle, theorem, hypotenuse, shorter side, area, length, Pythagoras, Coordinates, missing side, longest side, right angle	
Assessment activities	Homework. Year 8 Test 6	Homework- Unit 14 – Pythagoras Year 8 Test 5	AFL and adaptive teaching will continue to support staff to assess the address areas.
Resources available		Maths watch clips: N25, G30, G35a, G35b, A1a, A1b	Before any assessments are completed, revision and guidance materials are provided for students to assist in independent study.

Notes **Why this topic is important…**	This topic will help students develop their understanding of graphs and coordinate's. This later links to topics such as straight-line graphs, quadratic graphs, cubic graphs, simultaneous equations etc.	The real-world use of Pythagoras is a significant skill for numerous jobs such as construction and design. This topic looks to build knowledge of the connection of theory and practice in the real world. Students need to understand the different styles of questions that can be asked as well as and understanding of the relevance of that answer. This topic should aim to set up 3D problems later in the curriculum.	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 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.