Subject	Year	Month	
Mathematics	9	June	Balcarras *From strength to strength*

Topic:

PYTHAGORAS
5 LESSONS

Content (Intent)

Prior Learning	Future Learning
Earlier in KS3 : - shapes, angles, sides - squaring - root - rearranging formulae - coordinates	The next topic after this is Trigonometry Pythagoras and Trigonometry will both come back in Year 10 and Year 11

Objectives

MAIN	FURTHER	EXTRA
• Understand, recall and use Pythagoras' Theorem • Calculate the length of the **hypotenuse** in a right-angled triangle (including decimal lengths and a range of units); • Find the length of a **shorter side** in a right-angled triangle;	• Given three sides of a triangle, justify if it is right-angled or not; • Calculate the length of a line segment AB given pairs of coordinates; • Apply Pythagoras when solving geometric problems	• Give an answer to the use of Pythagoras' Theorem in **surd** form; • Use Pythagoras Theorem in **3D shapes**

Pedagogical notes (implementation)	How will understanding be assessed & recorded (Impact)
• Drawing the squares on the three sides will help when deriving the rule. • Scale drawings are not acceptable. • Calculators need to be in degree mode.	**BAM task** – Pythagoras' Theorem This topic will be part of the revision list for the Year 10 October assessment
	How can parents help at home?
	MathsWatch clips (Qualification GCSE) 150a, 150b, 150c, 217

Further reading/discussion

Reading / Enrichment	Literacy	Numeracy Links	Careers Links
https://mathshistory.st-andrews.ac.uk/Biographies/Pythagoras/ Pythagoras: His Lives And The Legacy Of A Rational Universe The Philosophy Book Lif of Pythagoras	right-angled triangle, hypotenuse, square, root, surd		https://careertrend.com/info-8466810-jobs-use-pythagorean-theorem.html Management, agriculturist, surveyor, cartographer, production worker, geologist, sailor, engineer,