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

Topic:

PYTHAGORAS
5 LESSONS

Content (Intent)

Prior Learning
Earlier in KS3 :
- shapes, angles, sides
- squaring
- root
- rearranging formulae
- coordinates

Future Learning
Trigonometry at the end of year 9
Pythagoras and Trigonometry will both come back in Year 10 and Year 11

Objectives
- 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
- HIGHER SETS Give an answer to the use of Pythagoras' Theorem in **surd** form;

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 **End of term** Assessment in **December** **End of Year** Assessment in **May**
	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,