Subject	Year	Month	
Mathematics	9	June	Balcarras From strength to strength

Topic:

TRIGONOMETRY — 5 LESSONS

Content (Intent)

Prior Learning

This chapter follows up really nicely after the 5 lessons on Pythagoras.

Future Learning

Pythagoras and Trigonometry will both come back in Year 10 and Year 11
In Year 11, students will learn about trigonometry in non right-angled triangles.

Objectives

MAIN	FURTHER	EXTRA
• Understand and use the trigonometric ratios sine, cosine and tan • Apply them to find lengths in right angled triangles • Apply them to find angles in right angled triangles	• Use the trigonometric ratios to solve 2D problems; • Find angles of elevation and depression; • Mixture of Pythagoras and Trigonometry	• Know the exact values of sin θ and cos θ for θ = 0°, 30°, 45°, 60° and 90°; know the exact value of tan θ for θ = 0°, 30°, 45° and 60°.

Pedagogical notes (implementation)

- To find in right-angled triangles the exact values of sin θ and cos θ for θ = 0°, 30°, 45°, 60° and 90°, use triangles with angles of 30°, 45° and 60°.
- Use a suitable mnemonic to remember SOHCAHTOA.
- Use Pythagoras' Theorem and trigonometry together.

How will understanding be assessed & recorded (Impact)

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)
168, 173

Further reading/discussion

Reading / Enrichment	Literacy	Numeracy Links	Careers Links
https://nrich.maths.org/6843 Trigonometry by Blitzer Essential trig-based physics by McMullen Art of problem solving by Rusczyk	Trigonometric ratios, trigonometry, sine, cosine, tan, inverse functions, hypotenuse, opposite, adjacent, exact value, elevation, depression, …		engineer medical service technicians data entry specialist loggers chemist boilermaker machinist millwright