Bishop Heber High School

Subject	Year	Term
Mathematics (Higher)	10	2

Topic

Shape and Data

Content (Intent)

Prior Learning (Topic): Number, Shape, Data & Algebra

- Sine and cosine rule
- Area of triangle using trig/ Area of segment
- Volume of pyramid, cone and sphere
- Volume and SA of Frustums
- 3D Pythagoras
- Histograms
- Vectors
- Congruence
- Proof (including Circle theorems)

Future Learning (Topic) Algebra

What Knowledge and Skills will be taught (Implementation)	How will your understanding be assessed & recorded (Impact)
• Find missing sides and angles using the sine and Cosine rule in non right-angled triangles • Calculate the area of a sector in a circle • Calculate the volume and surface area of pyramids, cones and spheres • Calculate the volume and surface areas of frustums of cones • Use 3D co-ordinates and Pythagoras in 3D • Draw histograms and calculate frequency density. Compare sets of data using histograms	<u>Ongoing Assessment</u> • Q&A in plenary • Mini-whiteboards • Self and Peer assessment • One written homework per fortnight • One online homework per fortnight • Feedback, Action and Challenge Time (FACT)
• Use vector notation • Add and subtract vectors (including graphically) • Calculate scalar multiples of vectors • Apply vector methods for geometrical proofs • Understand congruence of triangles • Prove any of the circle theorems • Derive mathematical proof algebraically • Use counter examples to show a statement is false	

How can parents help at home?

Help to learn 'need-to-know' formulas
Encourage use of MyMaths (www.mymaths.co.uk) and MathsWatch (vle.mathswatch.co.uk) [or MathsGenie]
Review previously taught topics regularly

Helpful further reading/discussion (including Reading and Vocabulary Lists)

Reading

Direct to the following websites (logon ids will be in the front of the orange maths book);
www.mymaths.co.uk
vle.mathswatch.co.uk
www.mathsgenie.co.uk

Vocabulary Lists

Sector
Frustum
Scalar Multiple
Congruence
Frequency Density
Counter Example