

Subject	Year 10 Foundation Threshold Concepts – Spring Term	How to support students' learning
Mathematics	<u>Unit 5: Geometry</u> 5a. Plans and elevations 1. Recognise 3D shapes and their properties 2. Describe 3D shapes using the correct mathematical words 3. Understand the 2D shapes that make up a 3D object 4. Identify and sketch planes of symmetry of 3D shapes 5. Draw and interpret plans and elevations of 3D shapes 5b. Constructions, loci and bearings 1. Make accurate drawings of triangles using a ruler, protractor and compass 2. Identify SSS, ASA, SAS and RHS triangles as unique from a given description 3. Identify congruent triangles 4. Accurately draw angles and 2D shapes using a ruler, protractor and compass 5. Construct a polygon inside a circle 6. Bisect angles and lines using rulers and compass 7. Find the shortest distance from a point to a line 8. Draw loci for the path of points that follow a given rule 9. Identify regions bounded by loci to solve practical problems 10. Draw diagrams to scale 11. Use scales on maps and diagrams to work out lengths and distances 12. Solve problems involving scales 13. Find and use three-figure bearings 14. Use angles on parallel lines to work out bearings 15. Solve problems involving bearings and scale diagrams	▪ Encourage your child to have the correct equipment for lessons, e.g. pen, pencil, ruler, protractor, compass, calculator. ▪ Use www.sparx.com for support if needed. Teachers will have provided your child with a login and password. Students can use the independent learning feature to review work set in lessons. ▪ Classroom notes will be available on Microsoft Teams, via the Class Notebook, after the lesson has taken place. ▪ Encourage your child to show all their working out. If they have homework online, then encourage them to write down all their working out in their homework book.

	<u>Unit 6: Algebra</u> 6a. Quadratic equations: expanding and factorising 1. Expand double brackets 2. Recognise quadratic expressions 3. Square single brackets 4. Factorise quadratic expressions 5. Solve quadratic equations algebraically 6b. Quadratic equations: graphs 1. Plot graphs of quadratic functions 2. Recognise a quadratic function 3. Use quadratic graphs to solve problems 4. Solve quadratic equations $ax^2 + bx + c = 0$ using a graph 5. Solve quadratic equations $ax^2 + bx + c = k$ using a graph	▪ Encourage your child to have the correct equipment for lessons, e.g. pen, pencil, ruler, protractor, compass, calculator. ▪ Use www.sparx.com for support if needed. Teachers will have provided your child with a login and password. Students can use the independent learning feature to review work set in lessons. ▪ Classroom notes will be available on Microsoft Teams, via the Class Notebook, after the lesson has taken place. ▪ Encourage your child to show all their working out. If they have homework online, then encourage them to write down all their working out in their homework book.
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