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| **Subject**  | **Year 10 Foundation Threshold Concepts – Summer Term**  | **How to support students’ learning**  |
| Mathematics  | **Fractions and Decimals*** Order fractions and mixed numbers
* Add and subtract mixed numbers
* Multiply with mixed numbers
* Divide with mixed numbers
* Convert fractions to recurring decimals
* Convert recurring decimals to fractions

**Indices and Standard Form*** Use index rules with positive indices
* Use index rules with negative indices
* Simplify expressions using index laws
* Use standard form with positive indices
* Use standard form with negative indices
* Multiply and divide numbers in standard form
* Add and subtract numbers in standard form
* Use standard form with a calculator

**2D and 3D Representations*** Calculate angles in polygons
* Measure and draw bearings
* Calculate bearings
* Construct and use scale diagrams
* Create plans and elevations
* Calculate surface area of cones and spheres
* Calculate surface area of frustums
* Calculate surface area of composite shapes

**Transformations*** Be able to perform all four transformations; translation, reflection, rotation and enlargement
* Combine the four transformations

**Congruent and Similar Shapes*** Understand similarity
* Find unknown sides in similar shapes
* Understand congruence
* Prove that two triangles are congruent

**Probability*** Create and interpret sample space diagrams
* Create and interpret Venn diagrams
* Create and interpret Frequency Trees
* Use the addition law of probability
* Create and interpret tree diagrams for independent events
* Create and interpret tree diagrams for dependent events

**Financial Capabilities*** Understand basic tax calculations and payslips
* Understand how to budget, and the terms income and expenditure
* Use basic money management skills including getting a mortgage
 | * Encourage your child to review their knowledge of fractions and how to divide without a calculator
* Encourage your child to have the correct equipment for lessons, e.g. a calculator
* Use [www.sparx.com](https://sparxmaths.com/)for support if needed. Teachers will have provided your child with a login and password
* 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 exercise books
* Encourage your child to look at real-life examples of standard form numbers, e.g. very small (biological cells) and very large scientific numbers (astronomical weights and distances)
* Encourage your child to have the correct equipment for lessons, e.g. a calculator
* Use [www.sparx.com](https://sparxmaths.com/)for support if needed. Teachers will have provided your child with a login and password
* 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 exercise books
* Encourage your child to think about where they would see scale drawings outside of the classroom and what careers would work with scale drawings and maps
* Discuss real-life applications of bearings, e.g. compass directions
* Encourage them to think about units when talking about weight and distances
* Encourage your child to have the correct equipment for lessons, e.g. a pencil, ruler, calculator, protractor
* Use [www.sparx.com](https://sparxmaths.com/)for support if needed. Teachers will have provided your child with a login and password
* 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 exercise books
* Encourage your child to look at real-life symmetry, rotation and size changes within everyday objects
* Encourage your child to have the correct equipment for lessons, e.g. a pencil, ruler
* Use [www.sparx.com](https://sparxmaths.com/)for support if needed. Teachers will have provided your child with a login and password
* 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 exercise books
* Encourage your child to look at real-life rotation and size changes within everyday objects
* Encourage your child to have the correct equipment for lessons, e.g. a pencil, protractor, calculator
* Use [www.sparx.com](https://sparxmaths.com/)for support if needed. Teachers will have provided your child with a login and password
* 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 exercise books
* Encourage your child to review their prior knowledge of probability and calculations with fractions and decimals
* Discuss real-life applications of probability, e.g. weather forecasting, financial investment and everyday decision making
* Encourage your child to have the correct equipment for lessons, e.g. a pencil, ruler, calculator
* Use [www.sparx.com](https://sparxmaths.com/)for support if needed. Teachers will have provided your child with a login and password
* 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 exercise books
* Encourage your child to review their knowledge of percentage calculations
* Discuss scenarios which incorporate tax, e.g. VAT calculations in weekly shopping, your jobs and payslips and how income tax and national insurance is calculated
* Have discussions with your child around your own knowledge of purchasing a house
* Encourage your child to have the correct equipment for lessons, e.g. a calculator
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