

Top Tips for supporting the Maths in the Real World class session

The class session will be delivered by the teacher, with you there to support. At the start of the lesson you will be asked to introduce yourself and your job to the class and give the pupils another opportunity to ask you any questions.

Once the class has been split into their groups, you can join a group at their desks and get involved in their discussions. Encourage them with their ideas, ask some prompt questions and if they are stuck, you can help them along with a couple of answers. You can then move to another group when you change over characters, so you can get involved in helping discussions with all the pupils.

Below are some prompts and possible answers for each character that you can use to direct your discussions with each of the groups:

Name	Prompt questions	Answers for how they use maths in their job	Answers for how they use maths in their hobby
Jamie	• What might a nurse need to measure? • What numbers might a nurse need to know/use? • What numbers are used in baking? • What if Jamie's recipe isn't big enough for all his friends to have a cake?	Nurse • Working out what amount of medicine to give • Understanding patient information • Taking patient readings such as blood pressure and temperature	Baking • Using complicated timings to ensure everything is ready at the right time • Weighing and measuring ingredients • Multiplying up ingredients to bake products for the right number of people
Sid	• What numbers might Sid need to use to make and sell clothes? • What if Sid needs to make another jumper but needs it in a bigger size? • How would Sid use patterns to help him at work? • What are the steps Sid would need to follow before putting up the shelves? Are there certain things he will need to work out first?	Fashion Designer • Use of patterns and angles to create great designs • Calculating measurements to ensure clothes will fit • Use of fractions, percentages and ratio to size clothing up and down • Calculating cost of fabrics, thread, time and equipment work out the cost of the items	DIY • Measuring materials • Buying the right quantities at the best price • Using shapes in design • Understanding instructions e.g., 'place the plank parallel to the window.'

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Maryam	• What information would Maryam need to collect about the weather? • How might she compare weather data? Will she need to use charts/graphs? • Will she need to convert any units e.g temperature for a different country? • How might numbers/measurements be involved in mixing paint to get a correct colour?	Weather Forecaster • Measuring the air pressure (baramoter), rain (rain gauge), sun (sunshine recorder) temperature (thermometer), wind (wind vane) • Using computer programmes to predict the weather • Analysing data using graphs	Painting • Mixing paint colours with the right ratio • Ordering the right size canvasses and or frames • Understanding proportion to keep paintings life like • Estimating the amount of paint needed to make sure there is enough of each colour
Mei	• What parts of maths might be used in designing the look of the game? • How would Mei make sure the game works? • What numbers are involved in Mei cooking dinner for her friends - time/weight etc? • What would Mei need to work out if she only had a certain amount of money to buy all the necessary ingredients?	Video Games Designer • Using angles, shapes and geometry in gameplay design • Using numbers and data for coding • Scaling and proportion to make realistic settings and characters • Using probability to assess chances of a level being completed	Hosting dinner parties • Using timings to make sure all the courses are ready at the right time • Buying ingredients within a budget • Getting the right amounts for the number of guests, which may not match the recipes • Weighing ingredients, converting from pounds and ounces to kilograms

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Monica	- What will Monica need to measure at work? Could this involve conversions? - What numbers will go into planning the building project- could it be time/money/number of staff etc? - How does Monica use maths and numbers to understand which team is winning/had the most possession of the ball? - How can Maths help her estimate who will win the league?	Builder - Using ratio to mix cement - Understanding scale of plans to ensure it's built correctly - Measuring materials - Project management – using time to plan the project	Watching football - Understanding the league table - Understanding statistics such as the percentage time a team has had the ball - Working out who would win the league on the last day with different results - Keeping her fantasy football team within budget
Michael	- What does Michael need to work out when mixing hair dye so he gets the correct colour? - How will Michael use maths to plan his appointment times? - What does Michael need to know when charging customers for their haircuts? - Are there any board games that involve money/time/coordinates/keeping score?	Hairdresser - Understanding shape - Using measurements for example, the customer would like 2 inches trimmed - Mixing colours and dyes using the correct ratio - Making appointments and planning enough time for each customer	Playing board games - Keeping score in Scrabble - Using money in Monopoly – knowing when to re-mortgage a property, whether to buy at auction - Understanding probabilities – what are the chances you would roll a double - Using coordinates in Battleships