

Maths has one of the largest glossaries of technical terms, these are particularly hard to learn because you are only exposed to them in technical situations, e.g. the Maths classroom. Multiple words are used to describe the same thing, how many different words can you think of to describe addition? The same word can have different meanings in different situations, a translation will mean very different things in a Maths or a French lesson. The new GCSEs put a greater emphasis on language complexity and problem solving. Language and vocabulary are used in all aspects of teaching, it's in our spoken and written instructions, it's on worksheets, text books, guides and of course, exam questions. Without significant Maths vocabulary knowledges a student cannot achieve their Mathematical potential.

I started working as a Maths teacher at Mary Hare in 2016. Mary Hare is the largest school in the UK for children who are deaf. We use the oral communication method, supporting students to use their voice, their residual hearing and lip reading. Deaf students have the same ability range as their peers, but there are barriers to learning and approximately 40% of our students have additional needs. I've always worked with SEND, but I hadn't taught anyone with a hearing impairment before. I quickly learnt that for these students, vocabulary knowledge was one of the biggest barriers to academic success. Deaf children don't pick up new language incidentally and explicit teaching is considered essential for progress.

I've always considered one of my strengths as a teacher was to recognise a good resource, 'don't reinvent the wheel', was my mantra. Sadly, most of what I found on Maths vocabulary was aimed at Primary aged children and there was no clarity on what words should be learnt. I wrote some simple vocabulary assessments for our end of term tests but given the significance vocabulary knowledge plays, I knew I had to do more. As part of a Masters qualification in Deaf Education, I collated all the technical words used in Maths GCSE papers and rated them based on frequency used. The top 210 words became the focus for the vocabulary intervention package; Count on Words.

Count on Words will eventually consist of 14 Maths topics and has been developed using available research and collaboration with Teachers of the Deaf, Maths Specialists and Speech Therapists. Each topic is a series of 5 lessons with an assessment to enable tracking on a single word level. The lessons include bespoke images for each of the key Maths words to capture students' interest, help make connections and support memory retention. The lessons are full of games, jokes and opportunities for discussion. They provide exposure to the key words in a variety of ways including spoken and written forms.

Our students have made statistically significant improvements in their Maths vocabulary knowledge using this intervention. All students with low language levels could benefit from Maths vocabulary intervention including poor comprehenders, poor readers, students with DLD (developmental language disorder which affects approximately 7% of children), or English Language Learners. The topics of 'time' and 'angles and shapes' are available freely to download from our school website, with 'calculations' and 'statistics' soon to follow.

[Downloadable Resources | Mary Hare School](#)

For Bio:

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