**Why is learning mathematics to the age of 18 still on the agenda?**

**What is the current situation?**

Almost all students, in England, up to the age of 16, study GCSE mathematics. Students who fail their GCSE mathematics and indeed those who do pass their GCSE mathematics examination but do not achieve the ‘agreed’ standard of a grade 4 have to repeat the examination until they do achieve a grade 4 whilst they are in full time education or training. In many cases, the ‘reward’ for achieving a grade 4 is that you no longer have to study mathematics. May those students who are required to continue to study GCSE mathematics beyond the age of 16 see their continued compulsory attendance at mathematics lessons some kind of punishment?

Those students who wish to continue to study mathematics may go on to study A-level. **A-level mathematics** is studied, in England, by more students than any other A-level. In addition, students may also study an A-level in F**urther mathematics**, a combination of studying a wider range of mathematics topics and some more challenging topics, so long as their school/college offer this as an option.

**What happens in other subjects?**

Let us look at geography. There is no particular reason I chose geography. I have nothing against geography. I could just as easily have chosen history or art or music. Students can take a GCSE in geography if they want to, but they don’t have to. After GCSE, a student may take an A level in geography. There is no further geography A-level qualification for keen geographers who want to go ‘beyond the ox-bow lake’. Students who do not achieve a grade 4 in GCSE geography do not have to repeatedly retake the examination.

So why is there a call, by the current prime minister and backed up by many both in, and beyond, the world of education, for the study of mathematics to be made compulsory up to the age of 18? I don’t see calls for the study of geography (or history or art or music) to be made compulsory to the age of 18.

**Why is learning mathematics so important?**

People have many answers to this question. To be able to function in a modern society. To be able to understand personal finances. To be able to apply their mathematical knowledge in real life situations. To be statistically literate in a data rich world so as to be able to interpret the information being presented to us, something the recent Covid enquiry claimed the then prime minister found challenging. To appreciate the aesthetic beauty of the wonderful world of mathematics, although admittedly this view is mainly held by maths teachers and those in mathematics education more generally.

My own view. I want students, and indeed the public in general, to feel comfortable with maths. To feel that maths is for them and not just for those who are deemed to be ‘good at it’. Mathematics needs an image makeover. I believe this is where Core Maths can come to the fore.

**What is Core Maths?**

In a growing number of schools and colleges, in England, students may study Core Maths after completing their GCSE. Core Maths is a qualification which can be studied alongside other post 16 courses. Whilst students will learn some new maths, the main emphasis is on students applying the mathematics they already know to enable them to solve everyday real life contextualised problems. A core maths lesson looks, and feels very different from a GCSE or A level maths class. There is far more discussion, group work, explanation of your solution and justification as to why your answer is sensible.

I believe the image the general public have of mathematics has to change and a few myths have to be busted such as:

* Mathematics is about right and wrong answers. I have heard it said that some people like maths because there is a correct answer. You know whether you have got the right answer and, more painfully when you have got the wrong answer.
* Mathematics is about about speed. Being good at mathematics is being able to do calculations quickly.
* Mathematics is about numbers and algebra and trigonometry and loads of other stuff you will never use again once you have left school.

Core maths is different. There may not be a correct answer to your problem. There are many sensible answers based upon the assumptions you have made and the decisions you have taken. You will have time to consider all the options and decide the best route to your solution. You will use the mathematics you need in order to solve the real-life, everyday problems you will be posed.

**If Core Maths is so good, why don’t more students study it?**

They are! Over 12,000 students studied Core Maths in England last year but there is scope for many more to do so. The Maths Hubs and the Advanced Maths Support Programme (AMSP) offer a range of support to schools and colleges to support teachers deliver the courses, to help senior leaders understand what Core Maths involves, to support schools explain to students how they will benefit from studying Core Maths and to help schools explain to parents the benefit of their child studying Core Maths. If you are a parent, student, teacher or senior leader and you want to know more about Core Maths see this [website](https://amsp.org.uk/teachers/core-maths/) or simply get in touch with your local Maths Hub for a chat.

**Can you study Maths to the age of 18?**

Yes. If you don’t have to retake your GCSE and do not want to study mathematics at A level then the new way of learning and applying your maths is for you and is called **Core Maths.**