The Rt Hon Gillian Keegan MP
Secretary of State for Education

Sanctuary Buildings 20 Great Smith Street Westminster London SW1P 3BT
tel: 0370 000 2288 www.education.gov.uk/contactus/dfe

Name: Mr Robin Walker, MP
By email: educom@parliment.uk

10 July 2023

Dear Robin,

Thank you for your letter regarding our intention to move towards a system where all young people study some form of maths to 18, and for the work of your committee in holding an oral evidence session on the topic.

I am pleased to hear that your witnesses welcomed the policy, which will play a vital part in ensuring young people are equipped with the knowledge and skills they need to succeed in a modern economy.

As we develop a model to deliver the Prime Minister's ambition by 2030, we are engaging with experts and key stakeholders to ensure our proposals are robust. Through this, we will address questions on curriculum and content, delivery and workforce, incentives, attitudes to maths, and pre-16 maths – including those posed at your recent evidence session. In the interim, I have set out an initial response to witnesses' questions below.

Would you be able to clarify: a) whether the proposal to extend maths to 18 will require more maths teachers to be recruited, and if so, how the Department plans to achieve this; and b) what steps the Department is taking, in light of these proposals, to ensure a workforce plan for mathematics is developed?

The department is carefully considering the workforce implications of maths to 18 across schools and further education (FE). As we develop our policy proposals, we will be able to determine the workforce necessary to deliver the Prime Minister's ambition.

In FE, we offer tax-free bursaries of up to £29,000 for trainee teachers of high-priority subjects, including maths, in England. The Taking Teaching Further programme offers up to £18,200 to FE colleges to enable them to recruit experienced industry professionals to retrain as FE teachers, including in maths. Our national recruitment campaign runs alongside a dedicated service to support prospective FE teachers into jobs, and our newly mandated FE Workforce Data Collection will enhance our understanding of the sector.

In schools, we also offer £27,000 bursaries and £29,000 scholarships for trainee maths teachers, as well as a Levelling Up Premium worth up to £3,000 tax-free annually for maths teachers who work in disadvantaged schools in the first five years of their careers.

You also raise questions about the Department's postgraduate initial teacher training (PGITT) targets for maths. Although these targets were not met in academic years 2020/21 and 2021/22, overall, the numbers of PGITT trainees, returners, and teachers new to the state-funded sector did increase. Consequently, targets for maths were lower for 2022/23 than for 2021/22.[1]

We would welcome clarification from the Department on whether it intends to make maths or numeracy a central focus of these reforms.

Rather than focusing on rigid distinctions between arithmetic, numeracy and maths, our driving principle is to equip all young people with the knowledge, skills, and confidence they need to succeed in their future careers and use maths in a range of contexts. We are working with maths experts, educators, and employers to determine the right maths content to deliver.

Whilst the Government's current proposals focus on extending maths to 18, we would urge the Department to consider how to support pupils' confidence and enjoyment of maths from the early years as part of these reforms, so that when it is extended to 18, pupils feel encouraged to participate in these lessons.

We agree that it is important that young people feel confident in their mathematical abilities and positive about continuing to study maths until the age of 18. Maths is already the most popular subject at A-level, and we have seen this popularity grow in recent years, as young people are increasingly aware that a good understanding of maths will have significant benefits for their future. To build on this progress, we agree we must support pupils' confidence and enjoyment of maths throughout their school career.

We already support pupils' confidence in, and enjoyment of, maths from the early years, and we are pleased to see that trends in England's year 5 and year 9 mathematics scores (captured in the Trends in International Mathematics and Science Study) have improved over time.[2]

Our National Centre for Excellence in the Teaching of Mathematics works with a network of 40 Maths Hubs to help local schools improve teaching quality based on best practice from East Asia. The Maths Hubs programme focuses on closing attainment gaps associated with disadvantage, gender, or other factors.

---

[1] 'The subject with the largest percentage decrease in target is mathematics, decreasing by 760 trainees, from 2,800 to 2,040 (27.1% decrease).' Source: Postgraduate initial teacher training targets, Academic year 2022/23, gov.uk

[2] 'The trend in England's year 5 mathematics score in TIMSS has improved over time, from significantly below the TIMSS centre point in 1995 to significantly above in 2019', and 'performance in year 9 mathematics has seen significant improvement over the last 24 years, most notably between 2003 and 2007, and has been broadly stable since 2007'. Source: Trends in International Mathematics and Science Study (TIMSS) 2019: National report for England.

Maths Hubs deliver our £100m Teaching for Mastery programme, which will bring mastery teaching methods to 11,000 primary and secondary schools across England by the end of this year. Based on teaching methods used in the top performing countries in the world for mathematics attainment, this programme focuses on depth of understanding, fluency in efficient written methods, and encouraging all pupils to believe they can succeed at maths by working hard. Teaching for mastery assumes everyone can learn and enjoy mathematics.

The Department also funds the Advanced Mathematics Support Programme (AMSP) which provides support for teachers and students in state-funded schools and colleges in England. The AMSP's primary aim is to increase participation in level 3 mathematics qualifications. To support this aim, the AMSP provides engagement and enrichment opportunities for 11 to 16-year-olds (particularly female students and other under-represented groups) to stimulate interest and understanding of the value of post-16 mathematics qualifications.

We would welcome more detail on how the Department will support those children not meeting the required grade 4 pass mark in GCSE maths, when planning to extend maths to 18. What assessment has been made of the costs and benefits of students having to resit GCSE mathematics on multiple occasions and whether there are any alternatives that would enable them to get some form of qualification or recognition for progress in numeracy without having to retake the whole exam?

Through the continued improvements in pre-16 maths education outlined above, we envisage that the number of students who leave school at 16 with a grade 4 pass in GCSE maths will increase over time. However, we recognise that some young people will continue to need support to achieve level 2 maths in 16 to 19 education, and that this cohort should form an important part of our plans for maths to 18. Students who leave education with a good grasp of maths have better chances of securing a job or going on to further study, which is why the Department requires young people to continue studying maths in their 16 to 18 study programmes if they have not achieved a GCSE grade 4 or above at age 16. Students with a GCSE grade 3 must study GCSE maths. Students with a GCSE grade 2 or below can study towards a GCSE grade 4 or above or a pass in Level 2 Functional Skills.
Since we introduced the Condition of Funding policy in 2014, level 2 maths achievement for students aged between 16 and 19 has improved consistently. Approximately 69.1% of those aged 19 in 2021 had achieved level 2 maths at age 16, rising to 78.8% at 19, which is a 9.7 percentage point rise in achievement. In 2021, 50,658 students had achieved level 2 maths through their post-16 colleges, compared with 30,614 in 2014 before the policy was introduced - an increase of 65.5%.

We do not require students who are yet to achieve GCSE grade 4 or above in maths to repeatedly resit the qualification. Schools and colleges are best placed to decide when a student is ready to sit an exam.

Due to the disadvantage gap at age 16, those resitting maths are disproportionately from economically disadvantaged backgrounds. The Condition of Funding provides more young people with the opportunity to realise their potential. We are working to

ensure that all students who have yet to achieve Level 2 in maths receive sufficient curriculum time and high-quality teaching to support their progress.

As we work towards all young people studying some form of maths to age 18, we will be unapologetic about demonstrating the value of maths and the real-life benefits to young people of advancing their maths skills. Further details on this policy will follow in due course, but we look forward to the support of the Committee as we advocate for the importance of maths education over the coming months and years.

Happy to meet to discuss when the panel has reported.
Very best,

Yours sincerely,

The Rt Hon Gillian Keegan MP
Secretary of State for Education