

Maths breaks A-level records and leaves English to the parents

The subject has staged a remarkable turnaround and now attracts 100,000 teenagers a year. Experts say it's time parents stop joking about their own rubbish sums

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A record 100,000 children took maths A-level in England this summer, an 11.4% increase on last year and making the subject easily the most popular choice for sixth-formers.

It is an extraordinary turnaround for a subject that used to languish far behind English, which was the most popular A-level until 2014.

Children, many of whom have parents who did English for A-level, are now giving up the subject at the earliest opportunity and choosing maths in record numbers. This year the number who did either English language or literature – 56,745 – is barely half the number who did maths at 101,230.

Simon Singh, the author of the bestselling *Fermat's Last Theorem*, said the figures are a sign that the attitude is finally changing about the importance of maths and how taking it at A-level can be the gateway to a good degree and a high-paying career.

Further maths is the fastest-growing A-level subject, up 20% in a year to 17,420, according to data from Ofqual, the exam regulator.

He said: “This is a trope that we are bad at maths. It gets rolled out all the time that it is OK in Britain to say maths is boring. But if you are good at maths you should have the chance to apply it to the highest level.”

While few parents would laugh about not being able to read to their children, many joke about being terrible at maths, although teachers warn against this attitude as it can discourage their child.

		2024 entries ▼	Change since 2023	Change since 2014
1	Mathematics	101,230	11%	22%
2	Psychology	76,130	-2%	44%
3	Biology	69,045	0%	19%
4	Chemistry	58,850	2%	20%
5	English (literature and language)	56,745	5%	-29%

Data is England only, 2024 figures are provisional
Table: The Times and The Sunday Times • Source: Ofqual

Singh, 59, put £1 million of his own money into creating free online maths circles – an extracurricular activity aimed at enriching a student’s understanding of the subject – to try to help develop a new mathematical elite in the UK. The concept of maths circles started in Bulgaria, then spread to Russia, where children queue to join them in the evenings and mathematicians are treated as stars.

Singh said maths circles, YouTube channels and websites such as Dr Frost Learning, set up by the maths teacher Jamie Frost, and Numberphile have helped inspire children to get excited by concepts such as Pi and the Fibonacci sequence, even though many UK state schools lack teachers with a degree in the subject. There is a critical shortage of specialist maths teachers: about one in eight maths lessons are taught by a teacher without a maths degree, and almost half of secondary schools used a non-specialist teacher for maths.

Frost, who teaches at the Tiffin grammar school in Kingston-upon-Thames, was shortlisted for the \$1m Global Teacher prize in 2020 for helping to keep children learning during the lockdown.

Specialist maths schools for 16 to 18-year-olds, linked to universities, have also been “incredibly important”, Singh said. He said every top university should open one and those that had not yet done so “should hang their heads in shame”.

For example, the King’s College London Mathematics School is run in partnership with King’s College London university. Last year, students got an A* in 69% of the A-levels – maths, further maths, physics – that they sat.

With maths firmly in the ascendancy, sciences are also close behind in the popularity stakes. Psychology, biology and chemistry take the second, third and fourth highest number of entries at A-level this summer.

The first arts subject to enter the list is history, with 43,400 entries, less than half the number for maths and a 2.6% drop on last year.

The trend is reflected in universities, with arts courses and jobs being reduced to reflect demand as students, including from overseas, opt for maths, computer science and science degrees.

Not everyone shares Singh’s view of the value of arts subjects, such as languages. Dame Mary Beard, professor of classics at Cambridge, wrote on Twitter/X last week: “If you ask: what is the value of the humanities? I would say that it teaches you to read with acuity, to analyse wild claims, to argue responsibly to questions to which there are no right answers. Do we need the humanities? Let’s hear it for yes!”

The U-turn in the attitude to maths has not been quick. England climbed from 27th in 2009 in the international Pisa rankings, based on maths tests taken by 15-year-olds in 80 different countries, to 11th in 2022. The tiger economies of Singapore, Japan and South Korea still top the international rankings, but the UK did beat France.

It is a considerable improvement from the findings of Carol Vorderman, the former *Countdown* star, who was appointed as a maths tsar by David Cameron in 2009.

Her taskforce’s report found that almost half of 16-year-olds failed to achieve grade C at GCSE, with just 15% studying maths beyond that level. It said 24% of economically active adults were “functionally innumerate” and universities and employers complained that school-leavers did not have necessary maths skills.

“Who knows which countries will come out on top in 20 years – is it going to be a country which has a lot of numerate people, or the one that doesn’t?” she said at the time.

While British pupils can give up maths at 16, other countries, including Australia, Canada, France, Germany, Finland, Japan, Norway and America, ensure students take some form of maths until they are 18, an approach that Rishi Sunak, the former prime minister, wanted to copy.