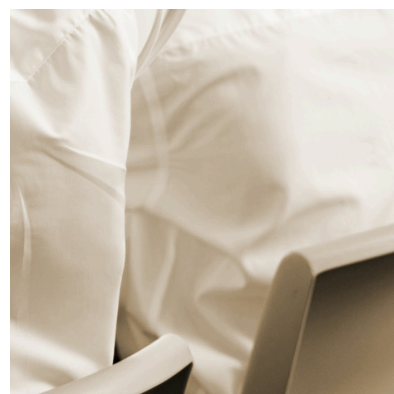
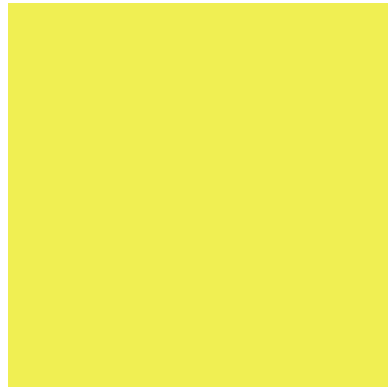


# Commission on School Reform:

## Broken STEM

2025 Update



# Membership of the Commission on School Reform is as follows:

- **Keir Bloomer (Chair):** Education Consultant and former Director of Education
- **Councillor Sarah Atkin:** Independent Councillor at The Highland Council and member of the Education Committee. Former Parent Council Chairwoman and School Governor.
- **John Edward:** Scottish Council on Global Affairs, Former Director SCIS; School Governor and Board Member of AGBIS.
- **Carole Ford:** Former head teacher of Kilmarnock Academy and former president of School Leaders Scotland
- **Heather Fuller:** Primary Headteacher at Jordanhill School, former Development Officer at Education Scotland
- **Jim Goodall:** Former Head of Education and Community Services at Clackmannanshire Council and former Lib Dem councillor at East Dunbartonshire Council
- **Anna Hazel-Dunn:** Deputy head teacher, Blackhall Primary, Edinburgh
- **Johann Lamont:** Former teacher (1979-99) and retired Member of Scottish Parliament (1999-2022)
- **Frank Lennon:** Former Head of Dunblane High School and St Modan's, Stirling
- **Darren Leslie:** Teacher in Fife and host of The Becoming Educated Podcast
- **Councillor Alix Mathieson:** Conservative Councillor at East Dunbartonshire Council, member of education committee and Former Chairperson of a third sector nursery
- **Lindsay Paterson:** Professor emeritus of education policy in the School of Social and Political Science at Edinburgh University.
- **Bruce Robertson:** An experienced secondary headteacher and best-selling author of The Teaching Delusion trilogy and Power Up Your Pedagogy: The Illustrated Handbook of Teaching.

Please note that all members of the commission participate in an individual capacity and that the views of the commission do not represent the views of any other organisation to which the individual members belong.

**The Commission on School Reform is the education arm of the independent think tank Enlighten.** Enlighten is a non-partisan public policy institute which works to promote increased economic prosperity, more effective public services and expanded opportunities for all Scots. Enlighten is independent of political parties and any other organisations. It is funded by donations from private individuals, charitable trusts and corporate organisations. The Director and Research Director work closely with the Advisory Board, chaired by Lord McConnell, which meets regularly to review the research and policy programme.

# Summary

In December 2024, against a backdrop of declining maths and science scores in PISA, the Commission on School Reform carried out research to look at National 5 attainment levels by year cohort. While published SQA data provides attainment levels and pass rates for those who sit exams, it gives no indication of the qualifications that are being achieved by the broad cohort. For example, if 100 pupils sit Nat 5 Maths and 90 pass, this would generate a pass rate of 90% and looks to be a positive result. However, if the total number of pupils was actually 200, and with 100 sitting the exam and 90 passing, the overall proportion of the cohort gaining the qualification is only 45%, which looks far less positive.

There are many different educational paths individual pupils can take, both through school and beyond, and pupils should of course pick the subjects and qualifications that are best suited for them individually. This paper is not looking at individual situations, rather the collective results. It is often repeated that Scotland needs STEM skills; we cannot produce the work-force and graduates we need if we don't ensure that enough pupils are coming out of our schools with these skills.

The data published by the Commission on School Reform last year showed that a worryingly low level of the S4 year cohort were gaining an A-C in Nat 5 Maths, and that the proportion gaining A-C in STEM subjects was in decline.

The Commission has repeated our Freedom of Information requests from last year and updated the data to include 2025 figures.

## The Key findings are:

- The proportion of the S4 year cohort gaining an A-C pass at Nat 5 English is continuing to rise. In 2025, 76.3% of the cohort gained an A-C pass, up from 75.2% in 2024 and from 65.3% in 2015.
- In contrast the proportion of the S4 cohort gaining an A-C pass in Nat 5 Maths has fallen. In 2025 39.5% of the cohort gained an A-C pass in Maths, down from 40.1% in 2024, though up on the 38.9% in 2015.
- The proportion of S4 pupils gaining an A-C pass at Nat 5 in physics, chemistry and biology have all fallen over the past year, and are down on 2015. Computing remained unchanged on 2024, but is down on 2015.
- The proportion of the S4 cohort gaining an A-C pass in Nat 5 Maths is only 1.2% higher than the proportion of the cohort gaining a pass in Nat 5 Physical Education.
- Many of the people who pass Applications of Maths also pass Maths, so the two maths qualifications cannot be added together – for example in 2024 50% of the individuals getting an A-C in Applications of Maths also gained an A-C pass Maths. It is also important to note that the very low level of the S4 cohort gaining an A-C pass in Nat 5 Maths also pre-dates the creation of the Applications exam. In other words, the problems with maths learning have existed for some time, but have not yet been adequately addressed.
- The period since Covid has not been encouraging for STEM; All three sciences were stable up to 2019 (though with a slight increase for biology and a slight decrease for physics), but have declined since 2022. Mathematics was rising up to 2019, and has fallen since 2022.
- It is also worth noting the decline in languages. Although Spanish has increased from 6.9% of the S4 cohort achieving an A-C in 2015 to 10.3% in 2025, French and German have roughly halved, with French falling from 20.1% to 10.2% and German from 4% to 1.9%. Mandarin (simplified) and Urdu have increased significantly over this period, but from a very low base and are still at a very low level at 0.4% and 0.2% respectively.

# Background

## PISA & The Data Desert

In December 2023 the latest PISA results were published, highlighting worrying declines in Scotland's maths and science scores.

For maths the score in 2022 was 471, just below the OECD average of 472 and down from 489 in 2018, 491 in 2015 and 498 in 2012. It was ahead of Wales (466), but behind Northern Ireland (475) and England (492).

In science, Scotland's score was 483, down from 490 in 2018, 497 in 2015 and 513 in 2012. Again this was better than Wales (473) but behind Northern Ireland (488) and England (503). The decline could not be explained away by the pandemic, not least because it carried on a trend of decline that began before Covid.

At the time the results were published, Lindsay Paterson wrote on a blog for Enlighten outlining the scale of the decline<sup>1</sup>:

*“Scottish attainment fell from early in the century to the middle of the first decade, stabilised for a few years, and then, from 2012, started a steady decline which was unmitigated except for a brief rise in reading in 2018 (which was wiped out by the 2022 fall). As a result, over the whole decade from 2012 to 2022, the Scottish decline was equivalent to about 16 months of schooling in mathematics, 8 months in reading, and 18 months in science.”*

There is a general lack of good education data in Scotland which means that it is effectively impossible to track learning or teaching, to assess the outcome of schooling for leavers, and therefore to evaluate government policies intended to improve schooling. As a result when PISA data is published and highlights trends that should cause alarm, we have no basis to work from either to understand the problem, or to fix it.

In our report, 'Why Educational Data Matters', the Commission on School Reform set out how it would be possible to put a credible data structure in bringing together evidence from the Scottish National Standardised Assessments and the SQA assessment process and adding a regular sample survey at key stages. The report called for:

- A longitudinal sample survey of pupils as they progress through P1, P4, P7, S3 and after leaving school. There would be a new survey of this kind every three years.
- Annual tracking data using the existing Scottish National Standardised Assessments and SQA assessments, which are currently held separately and unaligned
- An Office for Scottish Education Data to oversee the new structure, accountable to Parliament, not Government.

## National 5 Applications of Mathematics vs National 5 Mathematics

The introduction of the Nat 5 Applications of Mathematics qualification has done nothing to improve Scotland's performance in mathematics for two reasons. As noted above, over 50% of those achieving an A to C pass in the Applications course also achieve an A to C pass in the Mathematics course. In essence, for capable pupils, Applications in Mathematics is an additional qualification akin to a 'buy one, get one free' offer. The reason that it is possible for pupils to achieve this is attributable to the second reason that the Applications course is not contributing to improvement; it is not even close to the mathematical level of Nat 5 Mathematics, neither in content nor in level of challenge.

1. [PISA 2022 in Scotland: declining attainment and growing social inequality - Lindsay Paterson - Enlighten](#)

For example, despite ‘mathematics’ remaining in its title, the course contains no algebra, no reference to equations or functions, no trigonometry, no geometry related to angles, straight lines, similarity or vectors.

Applications in Mathematics content consists of arithmetic, including social arithmetic related to finance, very basic scale drawing, very basic statistics and probability. Any pupil who has completed the mathematics course would require only a short explanation of the vocabulary associated with finance and a demonstration of particular diagrammatic approaches to probability and specific problems in order to tackle the Applications examination. Even without this, most of the Applications paper would be easily accessible to a pupil who had completed the Maths course. Very obviously, the reverse would not be true for a pupil who had only completed Applications.

The level of challenge in these courses is significantly different. The more abstract and difficult concepts of Nat 5 Maths are simply missing from Nat 5 Applications. Maths pupils must apply their skills in the contexts of quadratic functions, trig graphs, surds, indices, vectors and systems of equations. Applications pupils deal only with concrete contexts such as area or volume, money, scale drawing or data, all of which are of course also included in Mathematics.

There is clearly a place for a course like Applications of Maths to ensure that pupils not capable of passing Nat 5 Maths are still able to gain a qualification in maths. However, Nat 5 Applications of Mathematics is not equivalent to Nat 5 Mathematics. Indeed, the mathematical content at Nat 4 Mathematics is greater. As a result, it is also concerning, that Nat 5 Applications is now accepted as the equivalent of Nat 5 Maths for aspiring primary teachers.<sup>2</sup> If Nat 4 Maths is not sufficient, and it isn't, then neither is Nat 5 Applications.

## FOI Exam Data

We asked the SQA, under Freedom of Information, to provide the National 5 exam results broken down by year cohort. We also asked the number of pupils in each cohort (S4, S5 and S6). Taken together with the data gathered last year, we have been able to track the proportion of the year cohort entering each subject, as well as the proportion of the overall S4 year group who are achieving an A-C pass in each subject.

For example, while the proportion of S4 entries in Nat 5 English achieving an A-C pass has fallen from 91.2% in 2015 to 88.3% in 2025, the actual overall proportion of the S4 cohort passing Nat 5 English has increased from 65.3% to 76.3%. Looking at the cohort figures highlights that there has been improvement in Nat 5 English.

In contrast, the percentage of the S4 cohort passing each of the main sciences has fallen. It is worth noting that pupils who do not pass a STEM subject at Nat 5 in S4 will be unable to sit the Higher in S5 and are therefore less likely to be able to bring any worthwhile STEM skills to their future education and employment. For example, becoming a scientist or medic will be out of the question.

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2. For example - [Professional Graduate Diploma in Education \(Primary\) PGDE - Postgraduate taught programmes](#) | [The University of Edinburgh](#)

**S4 cohort attainment in English, Maths and Science 2015 - 2025**  
 (2020 and 2021 are denoted in red as external exams did not take place due to the pandemic)

	Year	number of S4 pupils	number of S4 entries	% of S4 entered	Number of As	% of entries awarded As	% of S4 pupils awarded As	Number of A-C	% of entries awarded A-C	% of S4 pupils awarded A-C
English	2015	45,002	32,211	71.6%	15,557	48.3%	34.6%	29,366	91.2%	65.3%
	2016	44,815	34,264	76.5%	15,160	44.2%	33.8%	31,162	90.9%	69.5%
	2017	44,685	36,007	80.6%	15,740	43.7%	35.2%	32,686	90.8%	73.1%
	2018	43,526	35,767	82.2%	15,047	42.1%	34.6%	31,850	89.0%	73.2%
	2019	44,861	37,191	82.9%	15,183	40.8%	33.8%	33,462	90.0%	74.6%
	2020	46,292	38,632	83.5%	17,262	44.7%	37.3%	36,240	93.8%	78.3%
	2021	47,160	39,424	83.6%	20,868	52.9%	44.2%	36,844	93.5%	78.1%
	2022	48,605	40,946	84.2%	19,236	47.0%	39.6%	37,329	91.2%	76.8%
	2023	50,072	42,614	85.1%	18,793	44.1%	37.5%	38,017	89.2%	75.9%
	2024	50,387	43,436	86.2%	17,685	40.7%	35.1%	37,898	87.3%	75.2%
Maths	2015	45,002	24,604	54.7%	9,960	40.5%	22.1%	17,517	71.2%	38.9%
	2016	44,815	25,472	56.8%	10,504	41.2%	23.4%	18,619	73.1%	41.5%
	2017	44,685	25,858	57.9%	11,232	43.4%	25.1%	19,023	73.6%	42.6%
	2018	43,526	25,456	58.5%	11,333	44.5%	26.0%	19,167	75.3%	44.0%
	2019	44,861	26,383	58.8%	11,314	42.9%	25.2%	19,961	75.7%	44.5%
	2020	46,292	26,783	57.9%	12,467	46.5%	26.9%	22,817	85.2%	49.3%
	2021	47,160	25,083	53.2%	12,088	48.2%	25.6%	20,463	81.6%	43.4%
	2022	48,605	26,644	54.8%	12,586	47.2%	25.9%	21,041	79.0%	43.3%
	2023	50,072	27,247	54.4%	9,903	36.3%	19.8%	19,568	71.8%	39.1%
	2024	50,387	26,627	52.8%	13,120	49.3%	26.0%	20,227	76.0%	40.1%
2025	50,777	26,193	51.6%	12,583	48%	24.8%	20,071	76.6%	39.5%	
Applications of Mathematics	2018	43,526	532	1.2%	166	31.2%	0.4%	387	72.7%	0.9%
	2019	44,861	2,152	4.8%	739	34.3%	1.6%	1,461	67.9%	3.3%
	2020	46,292	6,417	13.9%	2,388	37.2%	5.2%	5,213	81.2%	11.3%
	2021	47,160	6,172	13.1%	1,800	29.2%	3.8%	4,382	71.0%	9.3%
	2022	48,605	8,879	18.3%	2,850	32.1%	5.9%	6,380	71.9%	13.1%
	2023	50,072	12,998	26.0%	4,007	30.8%	8.0%	8,860	68.2%	17.7%
Biology	2015	45,002	16,485	36.6%	4,900	29.7%	10.9%	12,573	76.3%	27.9%
	2016	44,815	16,341	36.5%	5,774	35.3%	12.9%	12,853	78.7%	28.7%
	2017	44,685	16,736	37.5%	5,522	33.0%	12.4%	12,780	76.4%	28.6%
	2018	43,526	16,477	37.9%	6,082	36.9%	14.0%	12,896	78.3%	29.6%
	2019	44,861	17,270	38.5%	5,990	34.7%	13.4%	13,195	76.4%	29.4%
	2020	46,292	17,460	37.7%	6,999	40.1%	15.1%	15,088	86.4%	32.6%
	2021	47,160	17,499	37.1%	7,195	41.1%	15.3%	13,951	79.7%	29.6%
	2022	48,605	18,818	38.7%	6,926	36.8%	14.2%	14,433	76.7%	29.7%
	2023	50,072	19,236	38.4%	7,410	38.5%	14.8%	14,879	77.3%	29.7%
	2024	50,387	18,801	37.3%	5,923	31.5%	11.8%	13,049	69.4%	25.9%
2025	50,777	18,487	36.4%	6,019	32.6%	11.9%	12,954	70.1%	25.5%	
Computing Science	2015	45,002	6,391	14.2%	2,416	37.8%	5.4%	5,506	86.2%	12.2%
	2016	44,815	6,554	14.6%	2,465	37.6%	5.5%	5,603	85.5%	12.5%
	2017	44,685	6,319	14.1%	2,072	32.8%	4.6%	5,319	84.2%	11.9%
	2018	43,526	5,565	12.8%	1,789	32.1%	4.1%	4,349	78.1%	10.0%
	2019	44,861	5,377	12.0%	1,880	35.0%	4.2%	4,183	77.8%	9.3%
	2020	46,292	5,315	11.5%	2,320	43.7%	5.0%	4,858	91.4%	10.5%

**S4 cohort attainment in English, Maths and Science 2015 - 2025**

(2020 and 2021 are denoted in red as external exams did not take place due to the pandemic) CONTINUED

	2021	47,160	5,461	11.6%	2,642	48.4%	5.6%	4,825	88.4%	10.2%
	2022	48,605	5,674	11.7%	2,514	44.3%	5.2%	4,619	81.4%	9.5%
	2023	50,072	6,089	12.2%	2,740	45.0%	5.5%	4,920	80.8%	9.8%
	2024	50,387	6,083	12.1%	2,891	47.5%	5.7%	4,921	80.9%	9.8%
	2025	50,777	5,957	11.7%	3,111	52.2%	6.1%	4,990	83.8%	9.8%
Physics	2015	45,002	12,083	26.8%	4,120	34.1%	9.2%	9,491	78.5%	21.1%
	2016	44,815	12,237	27.3%	4,443	36.3%	9.9%	9,615	78.6%	21.5%
	2017	44,685	11,837	26.5%	4,257	36.0%	9.5%	9,042	76.4%	20.2%
	2018	43,526	11,424	26.2%	4,018	35.2%	9.2%	9,024	79.0%	20.7%
	2019	44,861	11,536	25.7%	4,138	35.9%	9.2%	9,010	78.1%	20.1%
	2020	46,292	11,669	25.2%	5,102	43.7%	11.0%	10,235	87.7%	22.1%
	2021	47,160	11,245	23.8%	5,257	46.7%	11.1%	9,421	83.8%	20.0%
	2022	48,605	11,592	23.8%	4,381	37.8%	9.0%	8,967	77.4%	18.4%
	2023	50,072	11,539	23.0%	4,334	37.6%	8.7%	8,558	74.2%	17.1%
	2024	50,387	11,771	23.4%	4,360	37.0%	8.7%	9,028	76.7%	17.9%
2025	50,777	12,023	23.7%	4,232	35.2%	8.3%	9,044	75.2%	17.8%	
Chemistry	2015	45,002	14,512	32.2%	5,178	35.7%	11.5%	10,971	75.6%	24.4%
	2016	44,815	14,860	33.2%	5,573	37.5%	12.4%	11,690	78.7%	26.1%
	2017	44,685	14,414	32.3%	5,518	38.3%	12.3%	11,345	78.7%	25.4%
	2018	43,526	13,990	32.1%	5,528	39.5%	12.7%	11,147	79.7%	25.6%
	2019	44,861	14,199	31.7%	5,294	37.3%	11.8%	11,278	79.4%	25.1%
	2020	46,292	14,364	31.0%	6,517	45.4%	14.1%	12,804	89.1%	27.7%
	2021	47,160	13,652	28.9%	6,485	47.5%	13.8%	11,453	83.9%	24.3%
	2022	48,605	14,052	28.9%	6,349	45.2%	13.1%	11,505	81.9%	23.7%
	2023	50,072	14,107	28.2%	6,294	44.6%	12.6%	11,268	79.9%	22.5%
	2024	50,387	14,392	28.6%	6,287	43.7%	12.5%	11,325	78.7%	22.5%
2025	50,777	13,865	27.3%	6,570	47.4%	12.9%	11,286	81.4%	22.2%	

The table below outlines the changes in the proportion of the S4 cohort gaining an A-C pass in a wider range of subjects between 2015 and 2025.

**Proportion of S4 cohort gaining A-C in Nat 5 exam in top 20 subjects**

(2020 & 2021 are denoted in red due as external exams did not take place due to the pandemic)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
English	65.3 %	69.5 %	73.1%	73.2 %	74.6 %	78.3 %	78.1 %	76.8 %	75.9 %	75.2 %	76.3 %
Mathematics	38.9 %	41.5 %	42.6%	44.0 %	44.5 %	49.3 %	43.4 %	43.3 %	39.1 %	40.1 %	39.5 %
Physical Education	26.7 %	27.1 %	28.5%	29.9 %	32.1 %	33.5 %	35.0 %	35.6 %	35.9 %	36.4 %	38.1 %
Biology	27.9 %	28.7 %	28.6%	29.6 %	29.4 %	32.6 %	29.6 %	29.7 %	29.7 %	25.9 %	25.5 %
Applications of Mathematics				0.9%	3.3%	11.3 %	9.3%	13.1 %	17.7 %	21.6 %	25.2 %
Chemistry	24.4 %	26.1 %	25.4%	25.6 %	25.1 %	27.7 %	24.3 %	23.7 %	22.5 %	22.5 %	22.2 %
History	24.2 %	24.5 %	22.8%	23.0 %	23.4 %	26.1 %	25.6 %	24.2 %	24.3 %	21.4 %	21.7 %
Art and Design	16.5 %	16.6 %	16.6%	16.3 %	16.1 %	18.2 %	17.8 %	17.2 %	17.3 %	17.3 %	18.9 %
Physics	21.1 %	21.5 %	20.2%	20.7 %	20.1 %	22.1 %	20.0 %	18.4 %	17.1 %	17.9 %	17.8 %
Modern Studies	17.4 %	16.8 %	18.5%	17.2 %	17.6 %	20.6 %	21.9 %	20.0 %	19.0 %	17.8 %	16.7 %

Business Management	11.5 %	11.6 %	11.0%	10.8 %	10.7 %	12.0 %	12.0 %	13.2 %	13.9 %	14.2 %	14.7 %
Geography	18.4 %	17.5 %	16.1%	14.4 %	14.0 %	16.6 %	16.8 %	15.9 %	14.4 %	13.9 %	13.4 %
Music	14.8 %	14.7 %	14.1%	14.1 %	13.8 %	14.6 %	15.5 %	13.6 %	12.7 %	12.9 %	13.3 %
Practical Woodworking	5.0%	5.5%	5.9%	5.8%	6.8%	8.3%	9.0%	10.1 %	11.0 %	11.0 %	12.7 %
Practical Cookery						7.6%	7.9%	8.4%	8.9%	10.0 %	10.9 %
Spanish	6.9%	8.0%	8.2%	9.2%	8.9%	10.5 %	9.3%	9.6%	9.4%	10.1 %	10.3 %
French	20.1 %	17.0 %	17.1%	15.2 %	13.9 %	14.6 %	12.9 %	11.2 %	10.9 %	10.5 %	10.2 %
Computing Science	12.2 %	12.5 %	11.9%	10.0 %	9.3%	10.5 %	10.2 %	9.5%	9.8%	9.8%	9.8%
Drama	8.9%	8.6%	8.5%	8.9%	9.3%	9.9%	9.1%	8.3%	7.9%	8.2%	8.7%
Graphic Communication	11.3 %	9.8%	10.3%	8.1%	7.6%	8.8%	8.2%	7.1%	6.9%	6.2%	7.2%

Trends can also be seen for those studying National 5s in later years – for example only around 50% of the S5 cohort sitting stem subjects at Nat 5 level pass, though there is greater variation between subject and year to year. It is likely that some of these pupils either sat the National 4 in their fourth year, or are repeating the qualification. With such a low pass rate there is a question over whether the system is failing these pupils. The SQA should be able to examine this situation further because each person has a unique Scottish Candidate Number.

#### S5 entries at Nat 5, STEM, 2015-2024

(2020 & 2021 are denoted in red due as external exams did not take place due to the pandemic)

	Year	S5 pupils	S5 entries	As	% entries A	A-C	% entries A-C
Mathematics	2015	24,706	9,773	878	9.0%	4,364	44.7%
	2016	24,732	10,779	1,106	10.3%	5,329	49.4%
	2017	23,476	10,358	1,119	10.8%	5,059	48.8%
	2018	22,113	9,997	939	9.4%	4,824	48.3%
	2019	21,398	9,384	770	8.2%	4,455	47.5%
	2020	21,691	9,253	1,507	16.3%	6,066	65.6%
	2021	20,984	7,272	917	12.6%	3,760	51.7%
	2022	20,865	7,931	1,021	12.9%	4,034	50.9%
	2023	20,428	6,947	367	5.3%	2,536	36.5%
	2024	20,964	6,799	824	12.1%	3,188	46.9%
2025	20,574	5,463	620	11.3%	2,516	46.1%	
Applications of Mathematics	2018	22,113	1,067	114	10.7%	521	48.8%
	2019	21,398	1,386	121	8.7%	610	44.0%
	2020	21,691	2,483	297	12.0%	1,519	61.2%
	2021	20,984	3,013	311	10.3%	1,486	49.3%
	2022	20,865	3,760	417	11.1%	1,965	52.3%
	2023	20,428	4,190	408	9.7%	1,905	45.5%
	2024	20,964	5,432	459	8.4%	2,290	42.2%
2025	20,574	6,376	785	12.3%	2,992	46.9%	
Computing Science	2015	24,706	962	142	14.8%	683	71.0%
	2016	24,732	1,005	95	9.5%	694	69.1%
	2017	23,476	788	72	9.1%	557	70.7%
	2018	22,113	579	54	9.3%	307	53.0%
	2019	21,398	636	56	8.8%	354	55.7%
	2020	21,691	597	117	19.6%	484	81.1%
	2021	20,984	531	104	19.6%	371	69.9%

	2022	20,865	517	81	15.7%	301	58.2%
	2023	20,428	462	75	16.2%	270	58.4%
	2024	20,964	423	60	14.2%	231	54.6%
	2025	20,574	410	94	22.9%	265	64.6%
Physics	2015	24,706	2,337	145	6.2%	1,293	55.3%
	2016	24,732	2,046	154	7.5%	1,065	52.1%
	2017	23,476	1,743	118	6.8%	965	55.4%
	2018	22,113	1,586	106	6.7%	857	54.0%
	2019	21,398	1,590	101	6.4%	842	53.0%
	2020	21,691	1,386	202	14.6%	1,024	73.9%
	2021	20,984	1,166	181	15.5%	713	61.1%
	2022	20,865	1,104	96	8.7%	510	46.2%
	2023	20,428	1,224	124	10.1%	544	44.4%
	2024	20,964	1,066	98	9.2%	528	49.5%
2025	20,574	1,079	109	10.1%	545	50.5%	
Biology	2015	24,706	4,260	237	5.6%	2,312	54.3%
	2016	24,732	3,791	325	8.6%	2,125	56.1%
	2017	23,476	3,606	218	6.0%	1,883	52.2%
	2018	22,113	3,379	248	7.3%	1,757	52.0%
	2019	21,398	3,208	192	6.0%	1,454	45.3%
	2020	21,691	3,278	427	13.0%	2,282	69.6%
	2021	20,984	2,754	313	11.4%	1,502	54.5%
	2022	20,865	2,854	252	8.8%	1,381	48.4%
	2023	20,428	2,889	253	8.8%	1,386	48.0%
	2024	20,964	2,655	150	5.6%	923	34.8%
2025	20,574	2,680	150	5.6%	1,076	40.1%	
Chemistry	2015	24,706	1,750	141	8.1%	901	51.5%
	2016	24,732	1,742	165	9.5%	1,034	59.4%
	2017	23,476	1,468	125	8.5%	849	57.8%
	2018	22,113	1,455	137	9.4%	831	57.1%
	2019	21,398	1,349	132	9.8%	718	53.2%
	2020	21,691	1,233	231	18.7%	955	77.5%
	2021	20,984	1,052	179	17.0%	643	61.1%
	2022	20,865	1,054	151	14.3%	625	59.3%
	2023	20,428	1,045	179	17.1%	597	57.1%
	2024	20,964	1,019	153	15.0%	548	53.8%
2025	20,574	922	157	17.0%	523	56.7%	

## Conclusion

Curriculum for Excellence is not serving Scotland's teachers, pupils or parents well. It should be alarming that after 11 years of school, less than half of pupils are able to gain an A-C pass in National 5 Maths. If we are to thrive as a society in the economy of the future, amid increasingly fierce global competition, we must educate our children in ways that prepare them for the world they will inherit. Therefore, improving overall pass rates in mathematics and the sciences should be a matter of critical national importance. The fact that the cohort pass rate in STEM subjects has fallen since the Commission on School Reform first highlighted the problem last year adds to a sense of a lack of urgency on the issue.

We also knew from PISA that results in Scotland have been declining over time, that our outcomes in maths and science were very poor, but this data lays bare that we have a mountain to climb.

As the 2026 Holyrood election looms closer, we need politicians from across the parties to work towards a curriculum based on knowledge and rich in content, which both increases the attainment of students and better prepares them for life and work.

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To find out more about the work of Enlighten and the Commission on School Reform, visit our website at [enlighten.scot](http://enlighten.scot).

