

The State of Primary Science Education in the UK

October 2025



Foreword

Primary science education is a vital entitlement for every child. Learning should inspire wonder, provide purposeful hands-on investigations, and enable children to understand important scientific concepts and principles. Research and experience show that children need to identify positively with science from an early age, so that they engage fully with the world around them, develop skills and knowledge that unlock their potential, and are ready to enter secondary school eager to develop their learning further.

This report gives teachers, school leaders, governments and other stakeholders key insights into the current landscape of primary science teaching and leadership across the four nations of the UK. It builds on the Wellcome Trust's 2017 *State of the Nation report* on UK primary science education.

This new research finds positive developments since 2017 in the prevalence of science leaders in primary schools, the ability of those leaders to access relevant Continuing Professional Development (CPD), and the weekly provision of science teaching. However, there have been notable decreases in the confidence of both primary science leaders and other classroom teachers to teach science, and their access to mentoring and support, with significant variations between the four nations.

The report is a call to action to address such issues with a view to improving the quality of primary science education for all, and specific recommendations are given to stimulate sector discussion and decision making.

The research was commissioned and funded by the Primary Science Teaching Trust, The Ogden Trust and Science & Engineering Education Research and Innovation Hub (The University of Manchester) with the Comino Foundation.

We are grateful for the support of other stakeholders in the UK Primary Science Education Group, who have shared their insight and experience throughout the process. Our particular thanks go to the Association for Science Education, British Science Association, Centre for Industry Education Collaboration at the University of York, Primary Science Quality Mark, SSERC, and STEM Learning, as well as Professor Louise Archer from University College London, Professor Sarah Earle from Bath Spa University, Haf Hayes from Cardiff Metropolitan University, and Beverley McCormick from Ulster University.

Their collective expertise has been invaluable in informing this research.

We are pleased to present this report, and look forward to working with all interested stakeholders to address its challenges over the coming years.

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Executive Summary

This report presents findings from a study examining science teaching and leadership across UK primary schools. It has been commissioned by the Primary Science Teaching Trust, The Ogden Trust, and SEERIH (Science & Engineering Education Research and Innovation Hub) at The University of Manchester with the Comino Foundation. It was conducted by ImpactEd Group and builds on the Wellcome Trust's *State of the Nation* report in 2017¹.

The research reveals insights about the state of primary science across the four UK nations, with evidence of changes in science leadership appointments since 2017, and persistent challenges in science teaching time allocation, science teacher confidence, and science resource access. The presence of designated science leaders emerges as a crucial factor influencing teachers' perception of teaching quality and teacher support.

Sample

Survey data was collected from 1,277 teachers. Of these teachers, 78% were from England, 5% were from Northern Ireland, 8% were from Scotland, and 8% were from Wales. 96% of teachers had a science leader whilst 4% did not. Throughout this report, references to 'disadvantage' specifically relate to socio-economic disadvantage unless otherwise stated. 25% of teachers came from schools with low disadvantage, 39% from schools with medium disadvantage, and 36% from schools with high disadvantage. Additionally, 23 teachers participated in focus groups.



¹ Wellcome Trust, '*State of the nation*' report of UK primary science education (London: Wellcome Trust, 2017), <https://wellcome.org/reports/state-nation-report-uk-primary-science-education>



Key Statistical Findings

Changes Between 2017 and 2025

Over the eight years between 2017 and 2025 there has been progress in some areas of science education in primary schools and decline in other areas.



Improvements across the UK

- The number of schools with a designated science leader increased from 91% to 96%.
- The number of teachers reporting science being taught weekly increased from 75% to 96%.
- Science leaders' participation in Continuing Professional Development (CPD) increased from 52% to 66%.

Declines across the UK

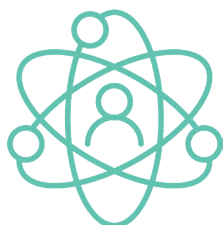
- The percentage of science leaders agreeing they feel confident to teach science decreased from 96% to 79%.
- The percentage of non-science leaders agreeing they feel confident to teach science decreased from 79% to 72%.
- Non-science leaders' access to science mentoring² decreased from 75% to 53%.
- Non-science leaders reporting feeling supported by their school³ to teach science decreased from 65% to 53%.
- Non-science leaders reporting that someone in their school was organising regular science meetings⁴ decreased from 48% to 35%.
- Non-science leaders' participation in CPD decreased, with the percentage of those receiving no CPD rising from 30% to 42%.



² Teachers were asked to what extent they agreed with the following statement: "Someone responsible for science is available to coach/mentor me in teaching science if needed".

³ Teachers were asked to what extent they agree with the following statement: "I feel supported to teach science by my school".

⁴ Teachers were asked to what extent they agree with the following statement: "Someone responsible for science organises regular staff meetings about science".



Science Leadership in Primary Schools in the UK

Teachers with a designated science leader ($n = 1,231$, 96%) reported a stronger approach to science across multiple measures, compared with those in schools without a designated science leader ($n = 46$, 4%). The data below compares outcomes between schools with designated science leaders versus those without.

Teaching of science in schools:

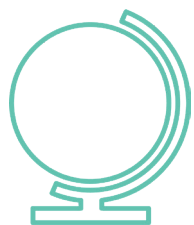
	Proportion of all teachers with a science leader	Proportion of all teachers without a science leader
teach science for over 2 hours weekly	25%	13%
provide weekly science instruction	96%	91%

Support and development of non-science leaders:

	Proportion of non-science leaders with a science leader	Proportion of non-science leaders without a science leader
feel supported by their school to teach science	55%	24%
have access to science mentoring	56%	17%
have someone in their school who organises regular science meetings	57%	9%
received science specific CPD in the past 12 months	59%	39%

School culture and resources:

	Proportion of all teachers with a science leader	Proportion of all teachers without a science leader
agree that science is valued in their school	68%	42%
rate science teaching quality positively	60%	31%
have access to support and resources to provide science trips to pupils	43%	31%
report that science enrichment activities are offered to all pupils in their school	95%	85%



National Variations

Teachers from England reported most positively across most measures, with marked differences between the four nations.

Leadership and teaching:

- Schools in England are most likely to have science leaders (99%).
- Teachers in England reported the most weekly science provision (97%).
- Of the four nations, teachers from England reported the highest confidence in teaching science (78%).

Support systems:

- More teachers in England report feeling supported than in other nations, with 58% of teachers feeling supported.
- Teachers in Wales were most likely to teach over 2 hours of science a week (32%), although this was not statistically significant.
- CPD participation varied markedly between UK nations; Scotland showed the highest rate (73%).
- More non-science leaders in England reported having access to mentoring (58%) than in other nations.
- Non-science leaders in England were most likely to report having regular science meetings (38%) compared to other nations.

Resources and enrichment:

- Access to outdoor learning areas varied markedly between UK nations; teachers in Northern Ireland reported the highest levels of access (66%).
- From the sample, a higher proportion of teachers in English schools (43%) reported they provide science trips compared to the other three nations (30 – 36%).



School Socio-economic Disadvantage Impact

Throughout this report, 'disadvantage' refers specifically to the socio-economic disadvantage of pupils in the schools where teacher respondents are based. When comparing schools by disadvantage - low ($n = 261$, 25%), medium ($n = 388$, 39%), and high ($n = 358$, 36%)⁵ - the differences between school groups showed no clear pattern and were often not statistically significant.

Significant differences found:

- CPD participation varies by school disadvantage level, with medium disadvantage schools showing the highest participation (69%) versus low disadvantage (58%).
- Science trip access decreases with disadvantage: 45% in schools with low levels of disadvantage versus 39% in high disadvantage schools.

No significant differences:

- Science leadership presence shows no variation by the school's level of disadvantage.
- Teacher confidence levels are consistent across disadvantage categories.
- Weekly science provision is unaffected by the school's disadvantage.
- Teachers' release time allocation shows no disadvantage impact.
- School support for science levels are consistent across disadvantage groups.

This pattern suggests that whilst disadvantage impacts some resource-dependent aspects of science education, provision to children and support structures remain relatively equitable across different contexts.

⁵ Low/medium/high disadvantage categories are defined on p. 12

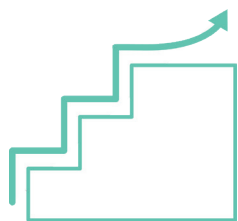


Role Variations

Among respondents who were not science leaders, senior leaders (headteachers and deputies) consistently reported more positive experiences than classroom teachers across most measures:

- 60% felt supported in science teaching, compared to 50% of classroom teachers.
- 77% believed science is valued in their school, versus 62% of classroom teachers.
- 66% rated the quality of science teaching positively, compared to 56%.
- 61% reported having access to mentorship, against 50% of classroom teachers.
- 68% had accessed science-specific CPD in the past 12 months, compared with 53%.
- 43% said someone in their school organises regular science meetings, compared to 31% of classroom teachers.





Recommendations

This report is a call to action. We encourage stakeholders across all four UK nations to review the evidence presented and identify key areas for development and support in primary science education. The following recommendations are framed in general terms to apply UK-wide, though stakeholders should pay particular attention to areas where national disparities exist.

Recommendations affecting all primary science teachers:

- 1. Non-science leader CPD:** proportion of teachers receiving no CPD has increased since 2017.
 - **Recommendation:** national governments should ensure sufficient provision of CPD for all teachers of primary science.
 - **Recommendation:** school leaders should ensure increased access for all teachers of primary science to CPD using a range of approaches.
- 2. School support for science teachers:** the number of teachers feeling supported by senior leadership to teach science has decreased.
 - **Recommendation:** national governments and inspectorates should emphasise the priority status of primary science.
 - **Recommendation:** school leaders should actively support teachers by advocating for science, recognising and raising its profile and relevance within the school and curriculum.

Recommendations affecting science leaders:

- 1. Subject leader release time:** primary science leaders are less likely to get weekly time release than maths and literacy counterparts.
 - **Recommendation:** each nation should provide an equitable entitlement for protected time across mathematics, literacy and science subject leadership.
 - **Recommendation:** senior leaders should adjust policies within schools, trusts and other structures to align science leader release time with that of other priority subjects.
- 2. Subject leader qualification levels:** 22% of science leaders have a science qualification beyond A level/Advanced Higher.
 - **Recommendation:** senior leaders should ensure increased access to professional development pathways, including accredited CPD or partnerships with STEM charities and universities, to enable all science leaders to access subject-specific support.
 - **Recommendation:** senior leaders should adjust policies within schools, trusts and other structures to allocate science leader CPD time and dedicated follow up support to upskill other teachers in school.
- 3. Science leadership roles:** schools without science leaders (4%) face reduced provision across all measures.
 - **Recommendation:** national governments should recommend all primary schools to identify a science leader.
 - **Recommendation:** local authorities, school trusts and other structures should identify schools without science leaders and offer support to introduce the role.

Introduction

It is a critical time for primary science education. As technological advancement and scientific literacy become increasingly essential for societal progress, the quality and consistency of science education has never been more important. Building on foundational research conducted in 2017 by the Wellcome Trust, this study provides a follow-up assessment of how science teaching and leadership have evolved across UK primary schools over the past eight years.

This research has been commissioned by the Primary Science Teaching Trust, The Ogden Trust, and SEERIH (Science & Engineering Education Research and Innovation Hub) at The University of Manchester with the Comino Foundation. It seeks to understand the current state of primary science education and identify areas requiring strategic intervention. The collaboration between these organisations and those represented in the UK Primary Science Education Group⁶ reflects a shared commitment to enhancing science education quality and accessibility across all UK primary schools.

This research examines the current state of primary science teaching across the UK, exploring who teaches science, how it is taught, and the support available to teachers. The research also investigates teachers' perceptions of how science is valued in their schools and assesses their confidence in teaching different curriculum topics.

These areas of inquiry build upon the 2017 report, enabling both contemporary analysis and cross-year comparisons to identify trends and changes in primary science education. This research implemented a mixed methods approach, primarily driven by quantitative survey data and supplemented through focus groups with individuals currently teaching science in UK primary schools. The research enabled us to explore differences in science provision across the four UK nations, each of which employs distinct educational approaches. From England's subject-specific National Curriculum to Wales' skills-based reforms, Scotland's flexible Curriculum for Excellence, and Northern Ireland's cross-curricular integration, these structural differences preclude direct comparisons. However, our standardised survey provides insights into how these varied approaches influence teacher confidence and practice in science.

This report presents findings across six key themes emerging from the research: the current landscape of science teaching and leadership, science teaching practices and time allocation, teacher confidence and support systems, perceptions of science value and quality, professional development opportunities, and resource access. Statistical significance testing has been conducted to determine whether differences between groups are meaningful, thereby strengthening the robustness of the findings. Insights from focus groups provide context for understanding the numerical data.

The research provides evidence to support a range of influencers across the sector, including policymakers, learned bodies, charities, school leaders, and science education stakeholders seeking to enhance primary science education quality and equity across the UK.



⁶ A full list of member organisations and individuals can be found in the foreword

Methodology

Research Design

The aim of this research is to understand the current state of primary science teaching and leadership in the UK by answering the following research questions:

1. Who is teaching science in primary schools in the UK?
 2. How is science being taught in primary schools in the UK?
 3. How supported are teachers in their role to teach science?
 4. To what extent do teachers consider science teaching and learning is valued in their school?
 5. How confident are teachers in teaching different curriculum topics?

Data Collection

Timeline and sample - survey

Quantitative research was conducted with primary school teachers involved in teaching science. A survey was distributed between 28th March 2025 and 5th June 2025, reaching 1,277 primary school staff across all four nations. It was initially distributed through ImpactEd Group and science networks via direct email lists (28th March to 5th June 2025). The survey was then distributed through a panel provider to maximise our ability to get responses proportionately across the four nations. This survey was distributed between 16th May and 28th May 2025.

The table below shows the number and proportion of responses from direct email lists and from the panel provider.

	Direct distribution	Panel distribution
Proportion of teachers	19%	81%
Number of teachers	242	1035

The table shows the distribution by nation by direct distribution and panel distribution.

	Direct distribution		Panel distribution	
	Proportion of teachers	Number of teachers	Proportion of teachers	Number of teachers
England	70%	169	80%	829
Northern Ireland	5%	12	6%	58
Scotland	20 %	49	5%	54
Wales	2%	4	9%	94

The table below shows the distribution of which teachers were or were not science leaders by direct distribution and panel distribution.

	Direct distribution		Panel distribution	
	Proportion of teachers	Number of teachers	Proportion of teachers	Number of teachers
Is a science leader	76%	183	36%	376
Is not a science leader	24%	59	64%	659

The table below shows the percentage and number of teachers responding to the survey across both sources from each nation.

	England	Northern Ireland	Scotland	Wales
Proportion of primary teachers in the UK*	84%	3%	9%	4%
Proportion of respondents	78%	5%	8%	8%
Number of respondents**	998	70	103	98

*Data from TES

**Location data was insufficient to classify eight teachers by nation.

Timeline and sample – focus groups

Qualitative research was conducted with primary school teachers involved in teaching science. Teachers from the direct distribution survey were able to select whether they would be interested in participating in follow-up focus groups. From those who expressed interest, individuals were selected based on their nation, science leader status, and role type, aiming for representation from all four nations, both science leaders and non-science leaders, and different roles. Efforts were undertaken to recruit participants from Northern Ireland; however, the limited number of direct distribution responses from Northern Ireland posed challenges in securing sufficient participation. A comparable difficulty arose in recruiting teachers who were not science leaders, due to the relatively small size of this subgroup from direct distribution.

Focus groups were conducted between May 8th and May 19th 2025; they included 23 teachers.

The table below shows the percentage and number of teachers in the focus groups from each nation.

	England	Northern Ireland	Scotland	Wales
Proportion of teachers	70%	0%	22%	8%
Number of teachers	16	0	5	2

The table below shows the percentage and number of teachers in the focus groups who were or were not science leaders.

	Is a science leader	Is not a science leader
Proportion of teachers	86%	14%
Number of teachers	19	3

For the definition of senior leaders, this report includes the following roles:

- Acting Headteacher
- Deputy Headteacher
- Assistant Headteacher
- Executive Headteacher
- Headteacher

Analysis & Sampling

Survey - descriptive analysis

The survey data was analysed by examining each question individually and calculating the percentage distribution of teachers across category options. For questions allowing multiple responses, we calculated the percentage of all teachers who selected each option.

Our analysis includes systematic comparisons between subgroups based on three key factors:

- Presence of a designated science leader in the school.
- Nation where the teacher works.
- Level of socio-economic disadvantage at the teacher's school.

We conducted temporal comparisons between 2017 and 2025 data where possible.

Survey - inferential analysis

We used two-proportion z-tests to assess statistical significance between 2017 and 2025 results. This test determines whether observed differences in response percentages reflect genuine changes over time rather than random variation.

To examine differences between subgroups (nations, disadvantage levels, and schools with/without science leaders), we applied chi-squared tests of independence. These tests assess whether observed differences in proportions between groups are statistically significant beyond what chance would predict.

Focus group analysis

Focus groups followed a semi-structured interview format. We analysed the resulting focus group data using a deductive thematic approach. This means we systematically coded responses to identify common themes and drew on relevant examples to support our findings.

Disadvantage classification

Throughout this report, 'disadvantage' refers specifically to the socio-economic disadvantage of pupils in the schools where teacher respondents are based. Given the absence of standardised disadvantage measures across the four UK nations, we developed a pragmatic classification system to enable meaningful comparisons of how socio-economic factors impact primary science teaching and leadership.

Scottish schools: We used the Scottish Index of Multiple Deprivation (SIMD20) as our disadvantage marker:

- high disadvantage: deciles 1-3
- medium disadvantage: deciles 4-7
- low disadvantage: deciles 8-10

All other nations: We used the percentage of pupils eligible for Free School Meals:

- high disadvantage: above 25% eligibility
- medium disadvantage: 10-25% eligibility
- low disadvantage: below 10% eligibility

Sampling approach

We prioritized geographic representation across all four UK nations in our data collection strategy. However, our focus group data showed limited representation of non-science leaders.

Survey statement definitions (all from 2017 report):

- **Feeling supported:** Teachers responded to "I feel supported to teach science by my school."
- **Access to mentoring:** Teachers responded to "Someone responsible for science is available to coach/mentor me in teaching science if needed."
- **Regular meetings:** Teachers responded to "Someone responsible for science organises regular staff meetings about science."

Definition of teacher categories

- **All teachers:** all survey respondents.
- **Science leaders:** teachers who self-identify as science leaders.
- **Teachers with a science leader:** teachers who are either themselves a science leader or have a science leader.
- **Non-science leaders:** all teachers who are not science leaders.
- **Non-science leaders with a science leader:** teachers who are not science leaders themselves but whose school has a science leader.
- **Teachers without a science leader:** teachers who are not science leaders and whose school does not have a science leader.

Limitations

Several factors limit the scope and comparability of our findings:

- Cross-nation comparisons: Each UK nation operates distinct approaches to science teaching, making direct comparisons challenging. Differences in structure of curriculum, assessment methods, and pedagogical philosophies mean a like-for-like comparison is not feasible. The standardised questions, however, can provide insights into how these different educational approaches influence teachers' understanding and confidence in teaching science.
- We lacked access to the 2017 dataset, which restricted our ability to ensure full comparability between survey iterations and limited the temporal comparisons we could conduct with confidence.
- Our standardised socio-economic disadvantage methodology, while pragmatic, represents an approximation rather than a definitive measure of socio-economic factors. The inherent challenges in unifying the different national systems mean these classifications are indicative rather than precise.
- Our disadvantage classification system could not be applied to all responses, resulting in smaller sample sizes for disadvantage-related analyses compared with our overall sample.
- Given the different measures for disadvantage across UK nations, and although we were able to develop a pragmatic approach to calculate this for our sample size, applying this methodology to all schools across the entire UK is not feasible and therefore it is not possible to state what percentage of schools across the entire UK are classified as low, medium, and high disadvantage.
- We rounded all percentages to the nearest whole number for clarity of presentation.
- Our focus group data would benefit from greater representation of non-science leaders to provide more balanced perspectives.
- Direct distribution was conducted via direct email lists from partner organisations, which may have resulted in a skewed perspective; however, this was mitigated using a panel provider to ensure broader representation.

Findings

1. The Current Landscape of Science Teachers and Leadership in the UK

1.1 Who is teaching science in the UK?

The survey achieved UK-wide representation, with teachers from England (78%), Wales (8%), Scotland (8%), and Northern Ireland (5%). Teachers represented schools across the full spectrum of socio-economic disadvantage. Over a third (39%) worked in schools with medium socio-economic disadvantage, whilst high socio-economic disadvantage schools accounted for 36% of responses and low socio-economic disadvantage schools for 26%. Please refer to the limitations section for an explanation of why comparison to a UK-wide breakdown of socio-economic disadvantage is not possible.

Responses came from schools of varying sizes, with the largest group (51%) teaching in schools with 300 or more pupils. Medium-sized schools were also well represented: 24% of teachers worked in schools with 200-299 pupils, and 18% in schools with 100-199 pupils. The smallest schools (99 or fewer pupils) comprised 8% of responses. The average primary school size in the UK is around 260 pupils.

Classroom teachers formed the largest group of teachers at 61%. Senior leadership was well represented, with deputy or assistant headteachers comprising 20% and headteachers 12% of responses. Support staff accounted for 2% of teachers, whilst 5% held other roles within their schools.

Teachers reported a range of professional teaching experience. The largest group (39%) had 11–20 years of experience, followed by 33% with 21–30 years. Early-career teachers were represented by 15% with 6-10 years of experience and 7% with 0-5 years. 5% of teachers responded that they had over 31 years in the profession.

Teachers showed diverse science qualification backgrounds. 48% of teachers held science qualifications below Advanced level (A level) or Advanced Higher standard, whilst almost a quarter (23%) reported having no formal science qualifications. (Some teachers may have GCSE science qualifications but not recognised these as formal qualifications below A level standard.) Among those with A level or Advanced Higher qualifications (28%) Biology was most common (21%), followed by Chemistry (13%) and Physics (9%). Additionally, 16% of teachers held science qualifications above A level or Advanced Higher standard.



1.2 Presence of science leaders

Nearly all UK schools recognise the importance of science leadership, with 96% of schools having designated someone responsible for science. This is a statistically significant improvement from the 91% recorded in 2017 ($z = -7.74$, $p < 0.01$). Schools in England are significantly more likely to have science leaders than schools in other UK nations ($n = 1,269$, $p < 0.01$). This may be because England is the only nation where science is typically taught as a stand-alone subject, whereas science leadership roles in other nations may be incorporated into broader responsibilities.

	England	Northern Ireland	Scotland	Wales
Proportion of teachers who had a science leader in their school	99%	90%	83%	93%
Number of teachers who had a science leader in their school	985	63	85	91

Analysis by school socio-economic disadvantage levels reveals minimal variation, suggesting that the establishment of science leadership roles is not influenced by socio-economic factors at the school level. The difference was not statistically significant ($n = 1010$, $p = 0.62$).

	Socio-economic disadvantage		
	Low	Medium	High
Proportion of teachers who had a science leader in their school	97%	97%	97%
Number of teachers who had a science leader in their school	261	388	358

School size, as determined by number of pupils, seemed to have a small impact on the likelihood that it has a person responsible for science. This difference was statistically significant ($n = 1278$, $p < 0.01$).

	99 pupils or fewer	100 - 199 pupils	200 - 299 pupils	300 or more pupils
Proportion of teachers who had a science leader in their school	94%	98%	96%	96%
Number of teachers who had a science leader in their school	97	219	293	622

1.3 Profile of science leaders

The research from the focus groups revealed that science leaders fell into two main categories: some teachers had a passion for science, while others had been asked to take on the role. Those with personal passion typically had academic backgrounds in relevant science subjects or a natural curiosity:

“I did [...] A level sciences and then I did a biology degree alongside QTS. So [...] it’s me if you know what I mean. I am just science-y.” *Participant 8, Science leader in England*

“I also am really passionate about the environment and establishing children’s connection with the environment is so important.” *Participant 10, Science leader in England*

“I don’t actually have a science background, but my family is very scientific.”
Participant 5, Science leader in Scotland

“I did my primary teaching degree, but I specialised in science and technology. We had to choose a specialism and I chose that because [of my] similar love for science.”
Participant 16, Science leader in Wales

Other science leaders were assigned this responsibility rather than actively choosing it initially:

“I think they asked me, and I said yes, I’ll do it. I think that’s how I got into it.”
Participant 18, Science leader in England.

Most science leaders (61%) in the study were classroom teachers who had taken on additional responsibilities, whilst those in senior leadership positions account for most of the remainder: 20% are assistant or deputy headteachers, and 12% are headteachers, with 7% holding other roles.

Regarding qualifications, 22% of teachers hold science qualifications beyond A level or Advanced Higher, whilst 19% reported having no formal science qualifications. However, some teachers in the latter group may hold science GCSEs, as the survey may not have made it clear that GCSEs count as formal qualifications below A level standard. It is worth noting this potential overlap when interpreting these findings.

	No. of science leaders with this qualification	Proportion of science leaders with this qualification
No formal science qualification	107	19%
Science qualifications below A level or Advanced Higher	235	42%
Biology A level/Advanced Higher	160	28%
Chemistry A level/Advanced Higher	106	18%
Physics A level/Advanced Higher	70	12%
Science qualifications beyond A level or Advanced Higher (e.g., undergraduate degree)	125	22%

1.4 Release time allocation

The proportion of science leaders receiving specific release time has increased from 51% in 2017 to 69% in 2025.

However, when examining the frequency of this release time, the picture becomes more nuanced. Only 15% of science leaders receive dedicated weekly time to focus on their leadership responsibilities, a slight decrease from 17% in 2017, though this change was not statistically significant ($z = 0.88, p = 0.38$). This proportion remains notably lower than literacy and mathematics: 28% of literacy subject leaders and 24% of mathematics subject leaders receive weekly release time. This comparison suggests that whilst science leadership is increasingly recognised, it has yet to achieve the same level of practical support as literacy or mathematics.

Additionally, national variations are notable: science leaders in Scotland are most likely to have weekly release time (25%), whilst those in England are the least likely (12%). This national variation was statistically significant ($n = 397, p = 0.03$).

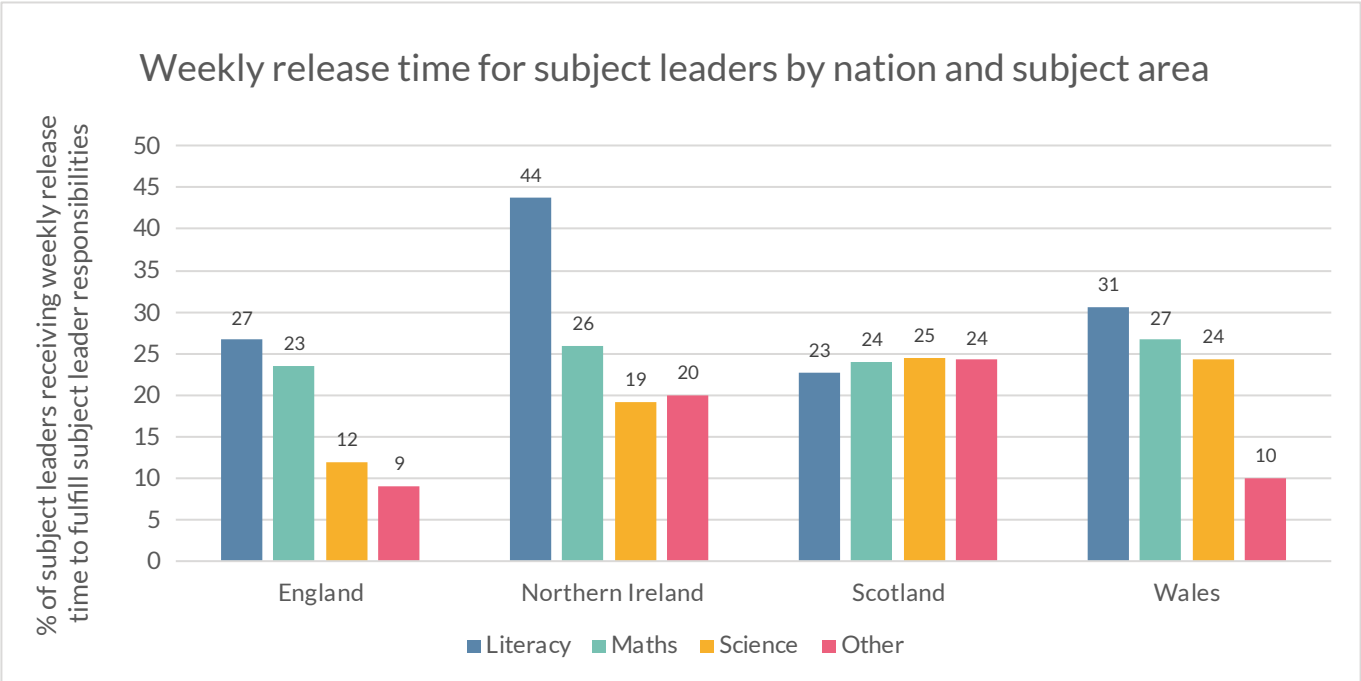


Figure 1 - England base = 998, Northern Ireland base = 70, Scotland base = 103, Wales base = 98

Release time allocation varies between schools of different disadvantage. Teachers in schools categorised as having medium and high levels of socio-economic disadvantage were more likely to have weekly release time (13%) than those in schools with low socioeconomic disadvantage (8%). This variation by disadvantage was not statistically significant ($n = 319, p = 0.95$).

2. Science Teaching in Schools

2.1 Weekly science provision

Most teachers (96%) now provide weekly science instruction, representing a significant improvement from 75% in 2017 ($z = -14.30, p < 0.01$). However, schools without science leaders show lower weekly provision rates (91% versus 96%), a statistically significant difference ($n = 1,224, p = 0.03$).

Teachers in England are most likely to maintain regular weekly science instruction (97%). The difference between nations was statistically significant ($n = 1269, p < 0.01$).

The disadvantage level of a school had no bearing on the likelihood of having weekly science lessons.

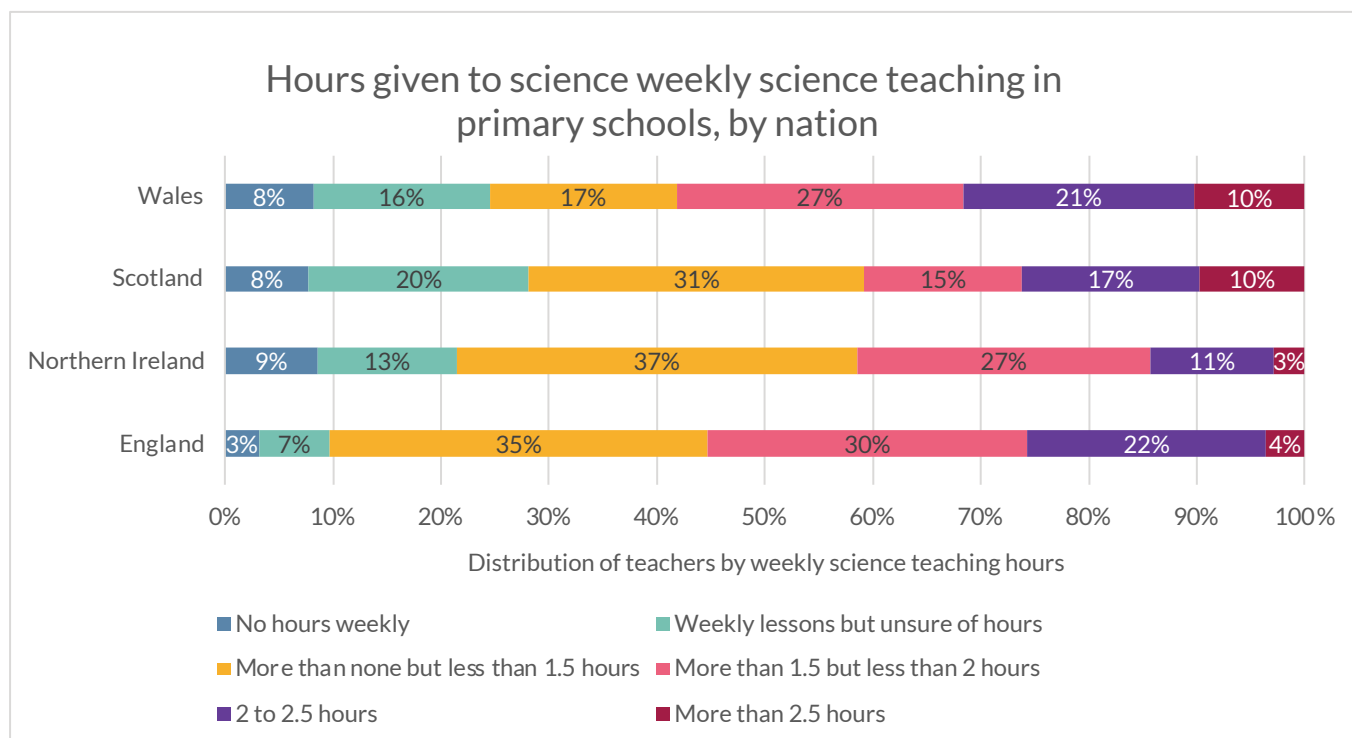


Figure 2 - England base = 998, Northern Ireland base = 70, Scotland base = 103, Wales base = 98



2.2 Teaching time allocation in comparison to other priority subjects

Whilst more schools provide weekly science, the volume of teaching hours has decreased. In 2017, 58% of all teachers taught less than two hours of science weekly; by 2025, this had increased to 75%.

The pattern of science instruction reveals notable gaps compared with other priority subjects. The key difference between science and mathematics/literacy lies in teaching volume. While 85-86% of all teachers taught mathematics and literacy for over 2 hours weekly, only 25% met this threshold for science. In schools without science leaders, this dropped to 13% ($n = 1277, p = 0.049$).

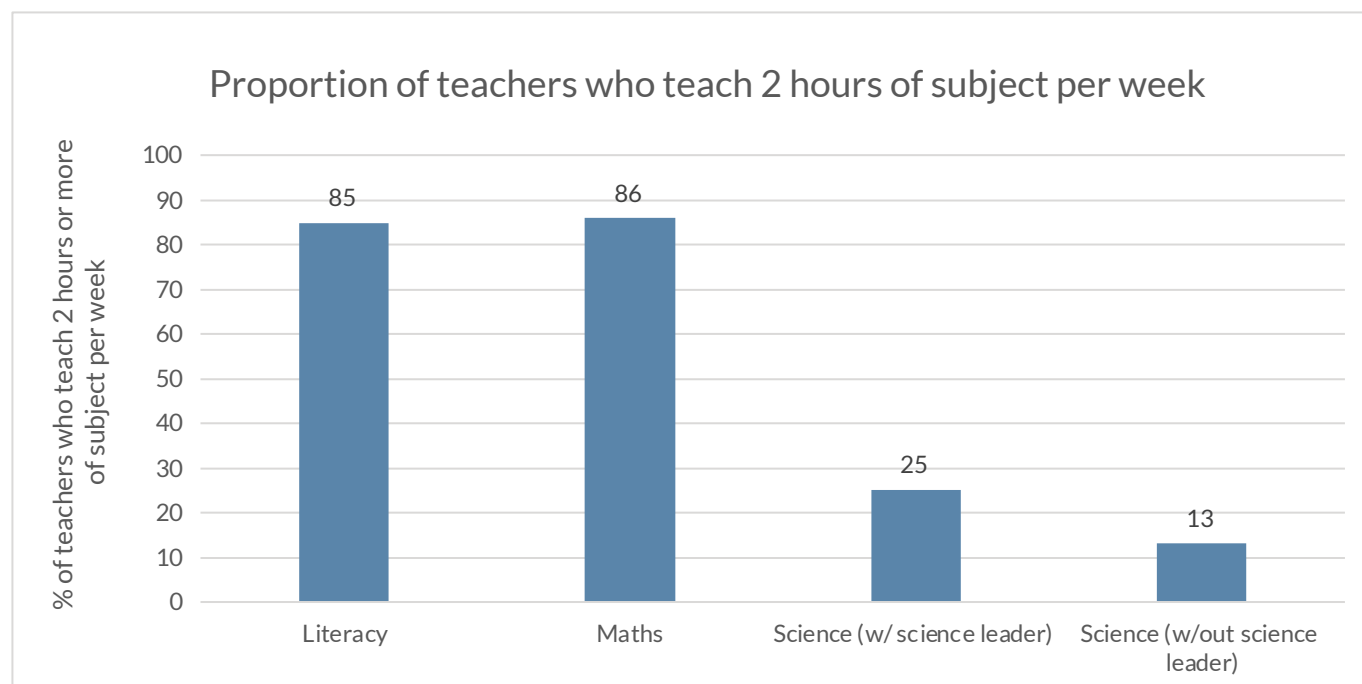


Figure 3 - Literacy base = 1231, mathematics base = 1231, science (w/ science leader) base = 1231, science (w/out science leader) base = 46

All teachers in Wales were most likely to teach over 2 hours of science a week (32%), which was still less than the proportion of all teachers in Wales who would teach mathematics or literacy for over 2 hours a week (74% for both subjects). This variation between nations was not statistically significant ($n = 1269, p = 0.09$).

This sense that science was not given equal priority to literacy and mathematics was reflected in the focus groups:

“Science [...is] competing with other priorities [...] with literacy, numeracy being at the forefront.” Participant 1, Teacher in Scotland

2.3 Teaching approaches

Across all teachers who completed the survey, most teach science as a standalone subject rather than through integrated approaches. Cross-curricular integration varies by nation: England and Wales favour standalone teaching (86% and 60% respectively), whilst Northern Ireland and Scotland teach using cross-curricular approaches (71% and 73% respectively) perhaps because of the structure of their wider curriculum.

Additionally, the use of dedicated science weeks has declined dramatically from 56% in 2017 to just 20% in 2025. This could suggest either a shift towards more regular embedded science instruction, or that teachers lack the time and resources to organise such activities.

Inclusion and accessibility in science teaching were central themes of focus group discussions. Many participants reported employing creative approaches—such as visual aids, verbal exercises, and reduced reliance on written outputs—to ensure engagement among all pupils, including those with special educational needs (SEN).

“I’ve got a wee boy who has English as a second language, and he still, as you know, he [has] a very limited English ability. But quite often he’s the first to finish a construction project or to finish an experiment. [...] He knows that language isn’t a barrier for him, so it really builds... the confidence for these children.” *Participant 1, Teacher in Scotland*

“[We’re still] making sure what they do present is clear, but they can do it pictorially. They can, you know, make a collage. They can paint and draw in their books. It makes it quite flexible and unique for them, but means we can be inclusive.”

Participant 14, Science leader in England



Teachers advocated for pupil-led investigations, outdoor learning, cross-curricular projects, and creative approaches like integrating rap, dance, or technology into lessons.

“We’ve engaged with the primary engineer programme and their [...] competitions have been really successful with the kids, and it’s really inspired them.”

Participant 4, Teacher in Scotland

“You know, it’s a lot more group based, so I just think less emphasis on written recording...You could do that as a song and you could do that as a group dance.”

Participant 15, Science leader in England.

“I’m using series 5 enquiry types just to sort of structure and really help when it comes to the monitoring of practical science that we’re getting good coverage across the school, especially as we’ve got mixed classes.” *Participant 13, Science leader in Wales.*

“[I have] started asking the children if they’ve got smart watches at times, if they’re doing the pulse investigation and heart rate.” *Participant 19, Science leader in England*

“We’ve also we’ve got some funding towards purchasing some science equipment last year and we bought some [robotics] kit.” *Participant 16, Science leader in Wales*

Monitoring and assessment practices, such as book looks, pupil interviews, learning walks and lesson observations, vary in frequency and rigour—highlighting the lack of a standardised framework for assessing science education, especially in assessing progression and “greater depth” knowledge.

3. Teacher Confidence and Support

This dataset contains a high proportion of science leaders, which may skew some results towards science specialists' perspectives. Science leaders have been separated from other teachers for some analyses but not all, so this should be considered when interpreting the findings.

3.1 Teachers' confidence levels

Among science leaders, the percentage of teachers agreeing they feel confident in teaching science dropped from 96% in 2017 to 79% in 2025—a statistically significant decline ($z = 9.61, p < 0.01$). Similarly, confidence among non-science leaders decreased from 79% to 72% ($z = 3.62, p < 0.01$). Note that the decline in confidence was much greater for science leaders than non-science leaders.

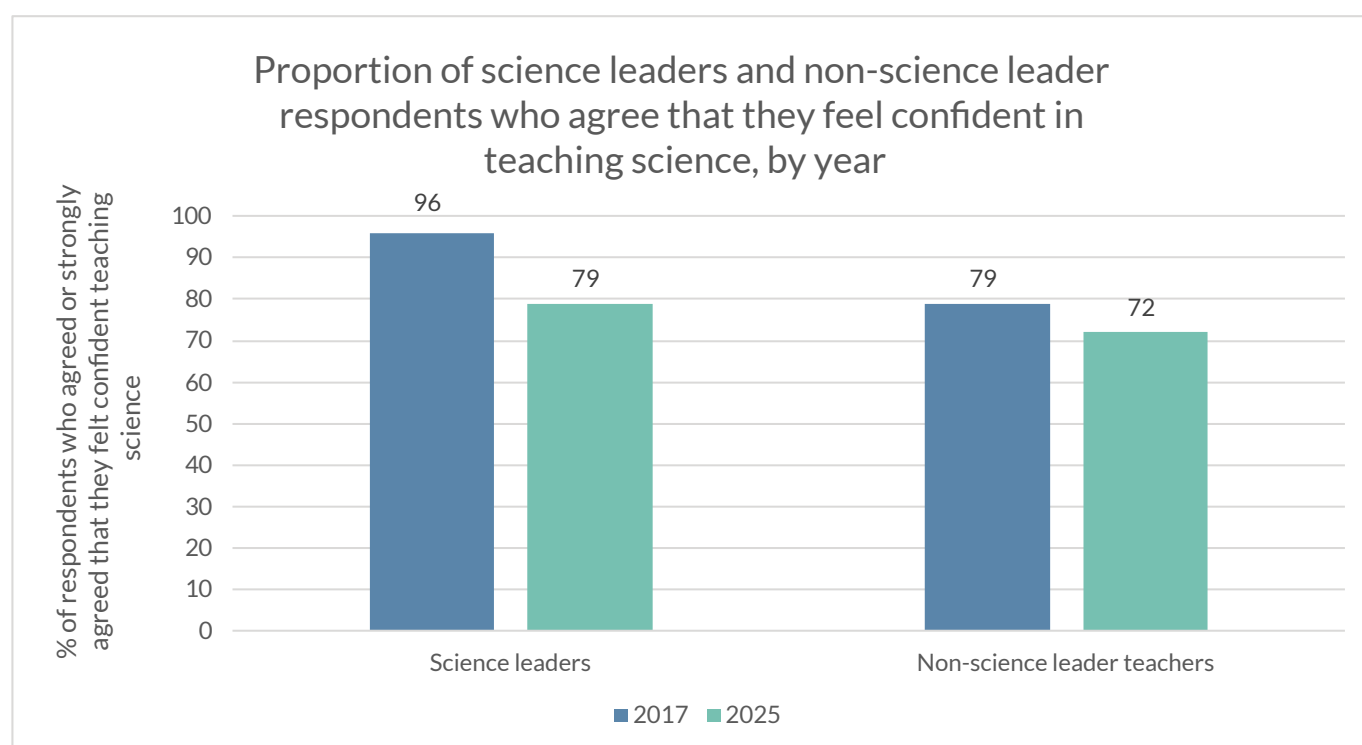


Figure 4 - 2017 science leader base = 738, 2025 science leader base = 559, 2017 non-science leader = 1099, 2025 non-science leader = 718

When considering all teachers, those in England reported the highest confidence (78%) compared to other nations. The national differences are statistically significant ($n = 1,269, p < 0.01$)

73% of teachers with a science leader in their school agreed or strongly agreed that they feel confident in teaching science; this dropped to 57% amongst teachers without a science leader in their school. This difference, however, was not statistically significant ($n = 718, p = 0.87$).

Schools with medium disadvantage levels report the highest confidence rates (81%), whilst those with high and low socio-economic disadvantage levels show lower confidence (75%). However, this difference was not statistically significant ($n = 1007, p = 0.07$).

Among non-science leaders, those in senior leadership positions were more likely to report feeling confident in teaching science (75%) than classroom teachers (72%).

3.2 Confidence in answering pupils' questions in science lessons

67% of teachers in a school with a science leader agreed or strongly agreed that they were confident answering their pupils' questions. This dropped to 57% of teachers without a science leader in their school. This difference was not statistically significant ($n = 718$, $p = 0.54$). 77% of science leaders reported feeling confident in answering their pupils' questions about science. Teachers in England showed the highest confidence levels (75%) compared to other nations. This national difference was statistically significant ($n = 1269$, $p < 0.01$).

Teachers in the focus groups reflected that teachers were not confident in letting pupils take control of their own science learning:

"[Classroom teachers] are frightened of losing control or allowing children to make decisions rather than being told what to do." Participant 9, Science leader in England

3.3 Teacher confidence in specific science topics

Teachers were asked to rank the topics they felt most confident teaching. It is worth noting that these topic titles may not be consistently used across all four nations, but these titles were reviewed with a small group of teachers across the UK. On average, teachers were most confident teaching plants and habitats and least confident teaching evolution and inheritance.

The table on page 25 shows the median ranking across all teachers by topic. The smaller the number, the higher the ranking (i.e., the more confident teachers felt teaching that topic). Where subgroups showed notably different median rankings from the overall sample, these variations are noted in the comments column. The comments specify which demographic group had different rankings and whether this represented higher or lower confidence compared to the overall median. England does not appear in the variation comments as it constitutes the largest sample size and therefore its responses primarily determine the baseline median rankings shown.



	Topic Area	Overall median ranking	Variation by nation (compared to England)	Variation by presence of science leader	Variation by disadvantage
Most confident	Plants and habitats	2	Teachers in Scotland were less confident on this.		
	Animals and humans	2	Teachers in Scotland and Wales were less confident on this.	Teachers without science leaders were less confident on this.	
	Properties and changes in materials	5	Teachers in Scotland and Wales were less confident on this.		
	Earth and space	6	Teachers in Scotland, Northern Ireland and Wales were more confident on this.	Teachers without science leaders were more confident on this.	Teachers in schools with medium disadvantage were more confident on this.
	Electricity	6		Teachers without science leaders were more confident on this.	
	Light and sound	6	Teachers in Scotland, and Wales were less confident on this.		Teachers in schools with medium disadvantage were more confident on this.
	Working in a scientific way	6	Teachers in Scotland and Wales were less confident on this.		Teachers in schools with medium disadvantage were more confident on this.
	Forces	7	Teachers in Northern Ireland were less confident on this.		
	Rocks and soils	8	Teachers in Northern Ireland were less confident on this.	Teachers without science leaders were less confident on this.	Teachers in schools with low disadvantage were more confident on this.
Least confident	Evolution and inheritance	9	Teachers in Scotland and Wales were more confident on this. Teachers in Northern Ireland were less confident on this.	Teachers without science leaders were more confident on this because of the large presence of teachers from Scotland in the group of teachers without science leaders.	
	Climate change and renewable energy	9	Teachers in Northern Ireland, Scotland and Wales were more confident on this.		

Some discussions from the focus groups corroborated the quantitative findings, revealing considerable variation in teachers' confidence across different science topics and exploring how this uneven confidence shapes the science curriculum delivered in schools.

“[On teaching engineering] I think there are still some teachers who find it quite a daunting topic to teach and would stay clear to a certain extent until the topic kind of forces your hand a little bit.” Participant 4, Teacher in Scotland

3.3 Support from school to teach science

The presence of science leadership dramatically impacts teachers' sense of support for science. Overall, 53% of non-science leaders agreed they felt supported by their school to teach science. This is a decrease from 2017 where 65% of non-science leaders provided a positive response. This change was statistically significant ($z = 4.8, p < 0.01$).

This figure dropped to just 24% for teachers without science leaders—a stark contrast that underscores the importance of dedicated science leadership. The difference between those with science leaders and without science leaders was statistically significant ($n = 718, p < 0.01$). 57% of science leaders agreed that they felt supported by their school to teach science.

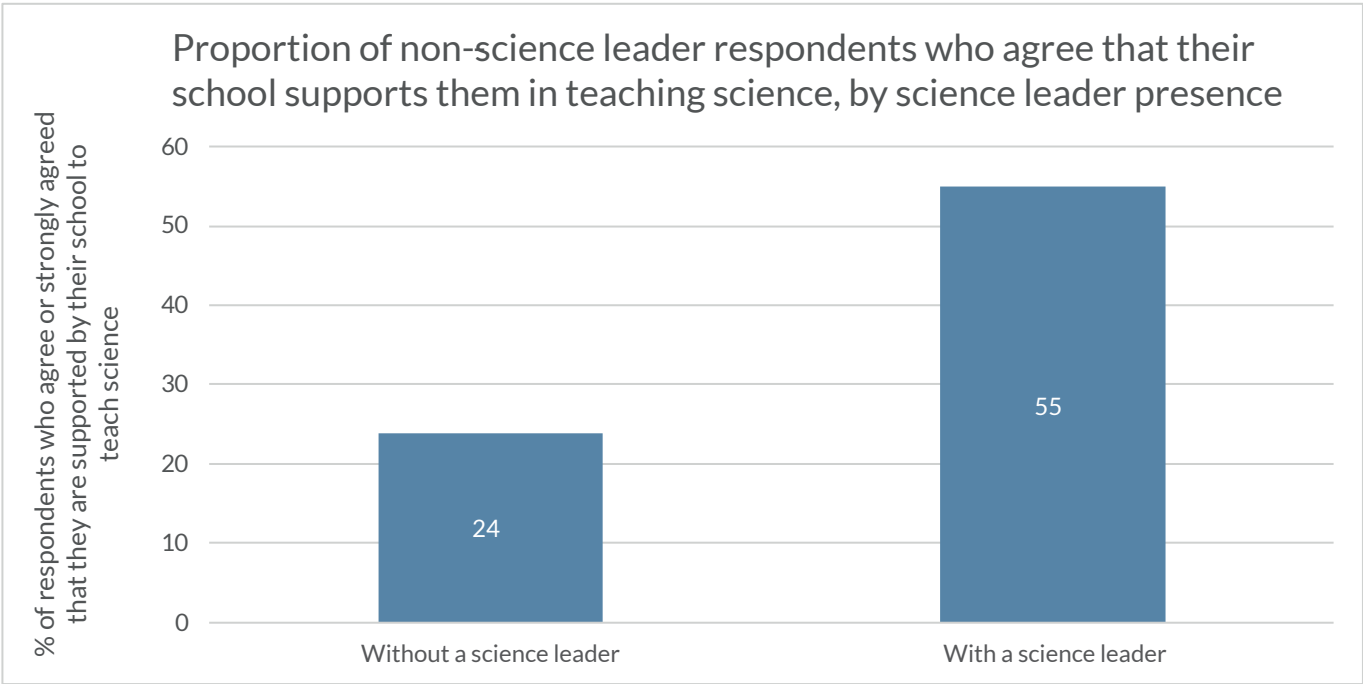


Figure 5 - Without a science leader base = 46, with a science leader base = 672

There was variation between nations on how supported they felt by their school. The proportion of teachers who felt supported differed across nations: 58% in England, 53% in Scotland, 38% in Wales, and 33% in Northern Ireland. These national variations were statistically significant ($n = 1269, p < 0.01$).

Schools with medium disadvantage levels were most likely to feel supported (62%), whilst schools with low and high disadvantage were equally likely to feel supported (56%). These differences were not statistically significant ($n = 1007, p = 0.12$).

Among non-science leaders, those in senior leadership positions were more likely to report feeling supported by their school in teaching science (60%) compared to classroom teachers (50%).

4. Perceptions of Science Value and Quality

Teachers in the focus groups were passionate about the value that science education provides pupils in primary schools. There was a strong consensus on the importance of science education in fostering curiosity, building critical thinking, understanding the world around them and preparing pupils for STEM careers, alongside a call for systemic change to enhance the prominence and quality of science within the primary curriculum.

“I also think [science is] really good at teaching skills, you know, problem solving, independence, working in a group. Those kind of skills that you don’t always see being taught formally in school but are great assets as [pupils] move on in their education and career.” *Participant 4, Teacher in Scotland*

“Immediately it’s building that [...] deeper understanding of concepts besides what the immediate feedback from a TikTok or a video that you’ve seen.” *Participant 2, Teacher in Scotland*

“So many careers involve STEM and just looking at job opportunities for our young people and the area we’re in particularly has a lot of work to do with [STEM].”

Participant 5, Science leader in Scotland

“It’s probably more important that [...] they can solve the problems and ask the questions.” *Participant 6, Science leader in England*



4.1 The value of science in schools

Focus group participants described the tension between senior leaders expressing their support for science in the curriculum and their actions not reflecting that science is a priority on a par with literacy and mathematics (this is reflected in the data on the number of hours each of the subjects is taught). Teachers explained that science leaders often need to advocate extensively for senior staff to take science seriously.

“That’s been our real focus on part of our school development plan. But in the same breath as saying that science is really important, it keeps getting bundled in with all the foundation subjects.” Participant 8, Science leader in England

“I think it’s appreciated in our school that science is a core subject, and that’s partly because I keep banging on about it. But it’s a core subject and insisting that people prioritise it, but it’s certainly not given the same status as English and maths.”

Participant 11, Science leader in England.

“It’s slipped from the radar in a lot of ways. I’m quite passionate about science and I do a lot of science and encourage other people and support them where I can, but we don’t have a formal science lead in the school.” Participant 2, Teacher in Scotland

68% of science leaders thought science was valued in their school. 68% of non-science leaders with a science leader also thought that science teaching was valued in their school, whereas only 42% of teachers without science leaders agreed this was the case, demonstrating how leadership influences institutional commitment to science. The difference between non-science leaders with science leaders and those without was statistically significant ($n=713$, $p = 0.01$).

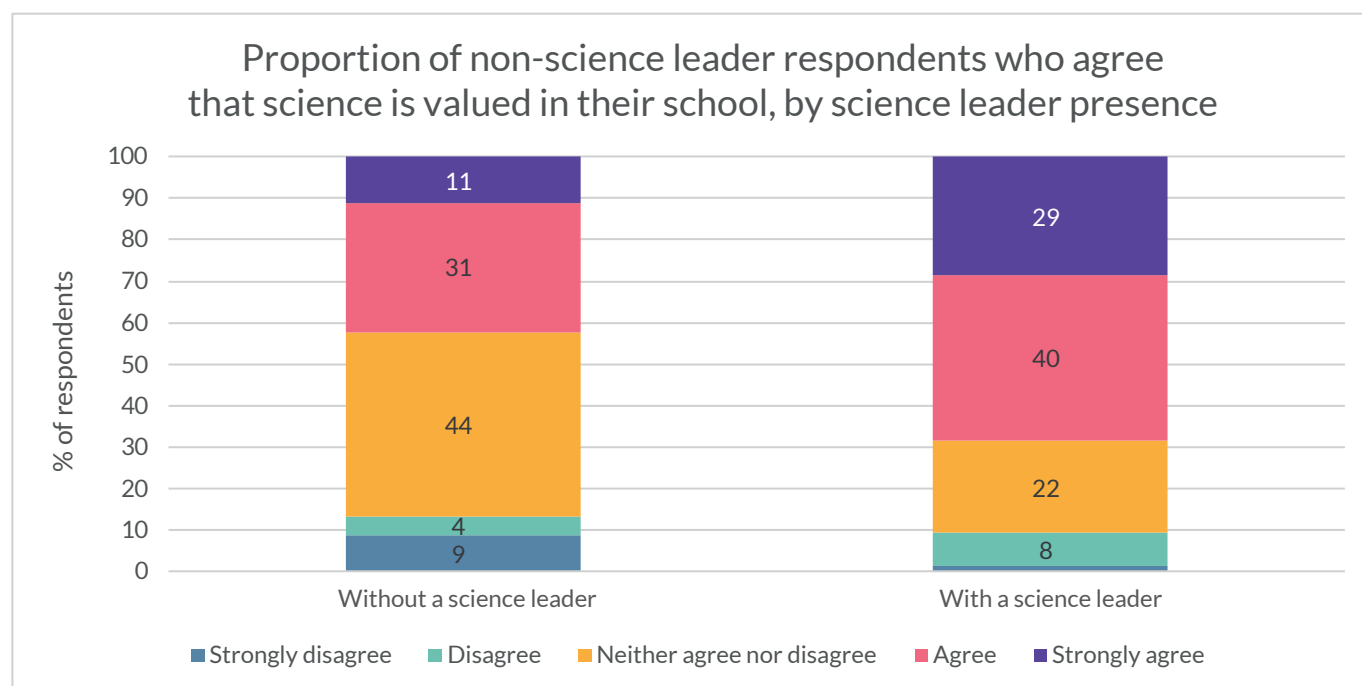


Figure 6 - Without a science leader base = 45, with a science leader base = 668

Teachers in English schools, compared to teachers in other nations, were most likely to strongly agree (30%) or agree (41%) that science was valued. The difference between nations was statistically significant ($n = 1263, p < 0.01$). Schools with high levels of socio-economic disadvantage were most likely to disagree (9%) or strongly disagree (2%) that science teaching was valued. This was not statistically significant ($n = 1007, p = 0.07$).

Among non-science leaders, those in senior leadership positions were more likely to think that science teaching was valued in their school (77%) compared to classroom teachers (62%).

4.2 Quality of science teaching

Most (64%) of all teachers responded positively about the quality of science teaching in their school, with only 9% responding negatively. However, responses varied across key factors. Teachers with science leaders were almost twice as likely to respond positively (60%) than those without (31%), whilst those without science leaders were almost three times as likely to respond negatively (without a science leader - 24%; with a science leader - 9%). The difference between those with a science leader versus those without was statistically significant ($n=713, p = 0.03$).

Most teachers in England, Scotland, and Wales responded positively about teaching quality (67%, 51%, 63%), whereas colleagues from Northern Ireland saw a large proportion responding neutrally (40%). These national differences were statistically significant ($n=1263, p < 0.01$).

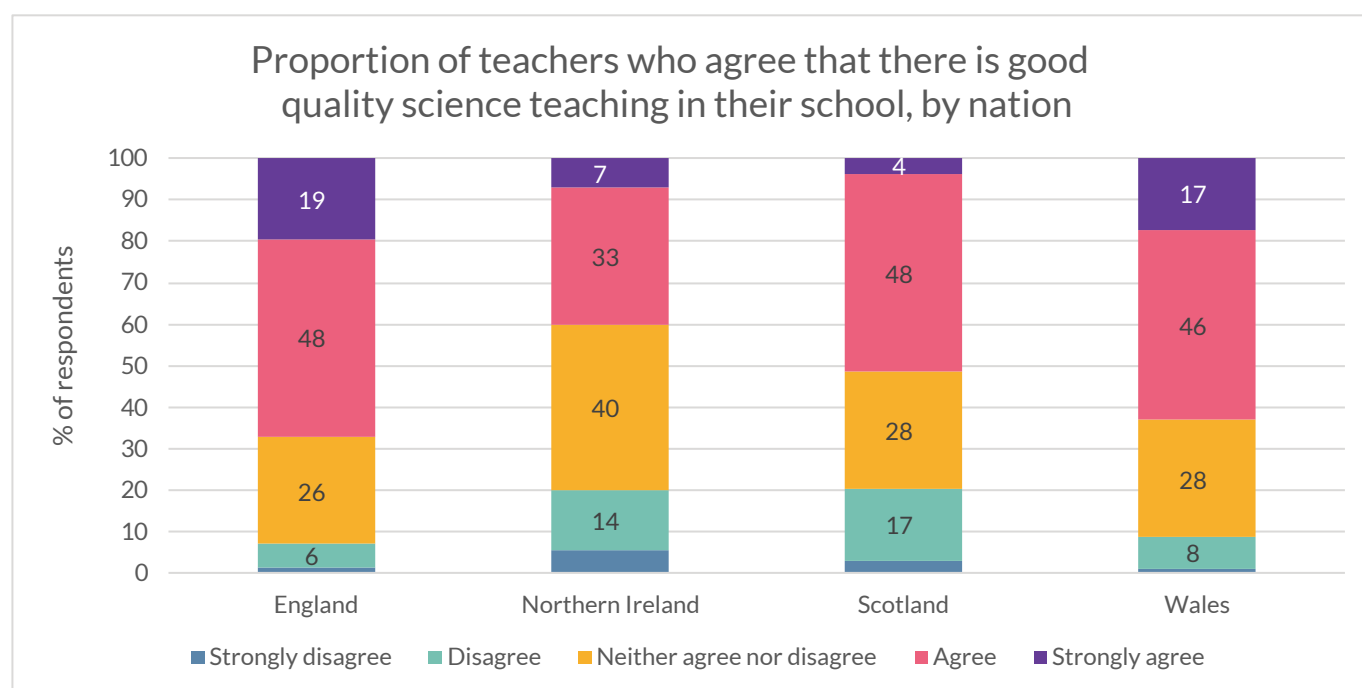


Figure 7 - England base = 998, Northern Ireland base = 70, Scotland base = 103, Wales base = 92

Schools with medium socio-economic disadvantage were most positive about science teaching quality (69% either agree or strongly agree), whilst those with highest socio-economic disadvantage were most likely to report concerns about teaching quality (11% strongly disagree or disagree). These differences were not statistically significant ($n = 1007, p = 0.07$).

Among non-science leaders, those in senior leadership positions were more likely to agree that there was good quality science teaching in their school (66%) compared to classroom teachers (56%).

4.3 Adequate teaching time for primary science

51% of all teachers felt their school provided adequate time to address expected learning outcomes. Science leader presence showed significant impact: 52% of teachers with science leaders responded positively compared to only 29% without. 51% of science leaders thought there was an 'adequate amount of time' in their school for science to be taught. Teachers without science leaders were twice as likely (40%) to respond negatively about adequate time allocation compared to those with science leaders (19%).

Teachers in England showed the strongest positive response (55%) to feeling there was adequate time to teach primary science compared to other nations. Teachers in schools with medium disadvantage were most likely to respond positively (56%).

5. Professional Development and Support Systems

5.1 Access to mentoring and coaching

Overall, 53% of non-science leaders agreed or strongly agreed that someone responsible for science is available to coach or mentor them in teaching science if needed. This was a decrease from 75% of non-science leaders in 2017. In 2025, 56% of non-science leaders in schools that have science leaders responded positively, compared to only 17% in schools without science leaders. This was statistically significant ($n = 718, p < 0.01$).

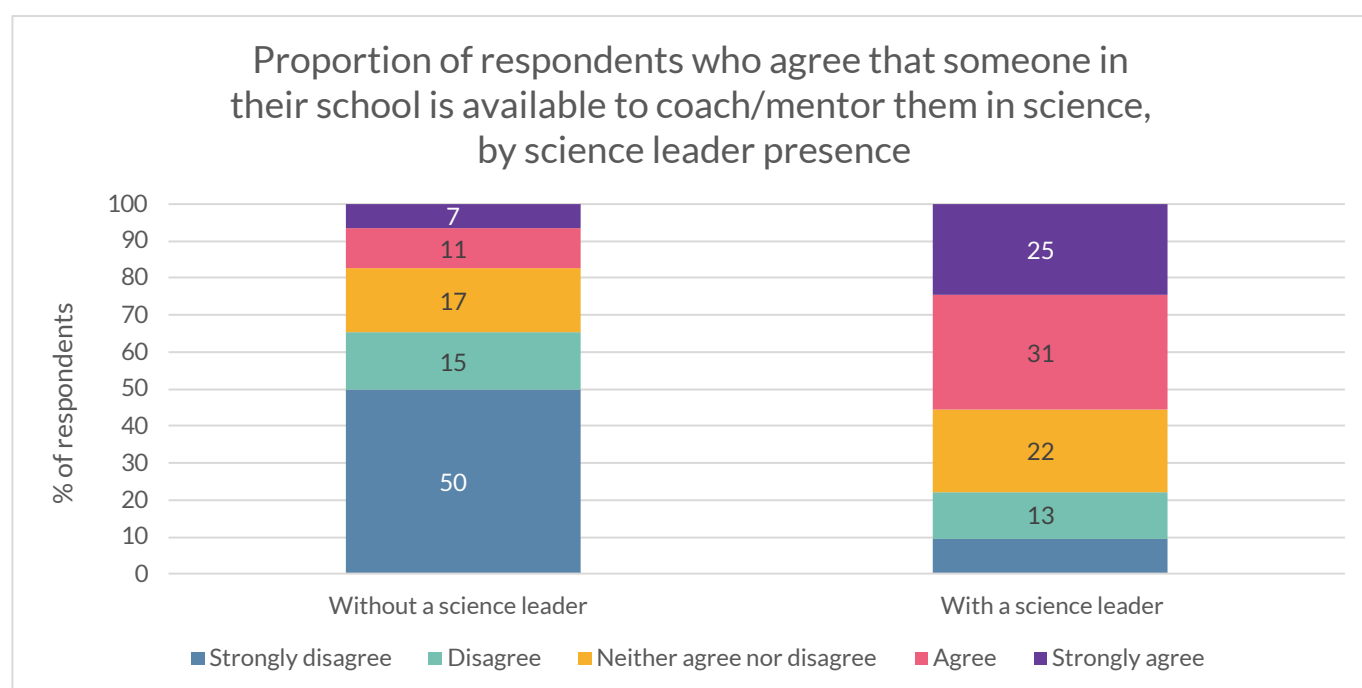


Figure 8 - Without a science leader base = 46, With a science leader base = 672

Teachers in England were most likely to have a positive response (58%) compared to other nations. These national differences were statistically significant ($n = 716, p < 0.01$).

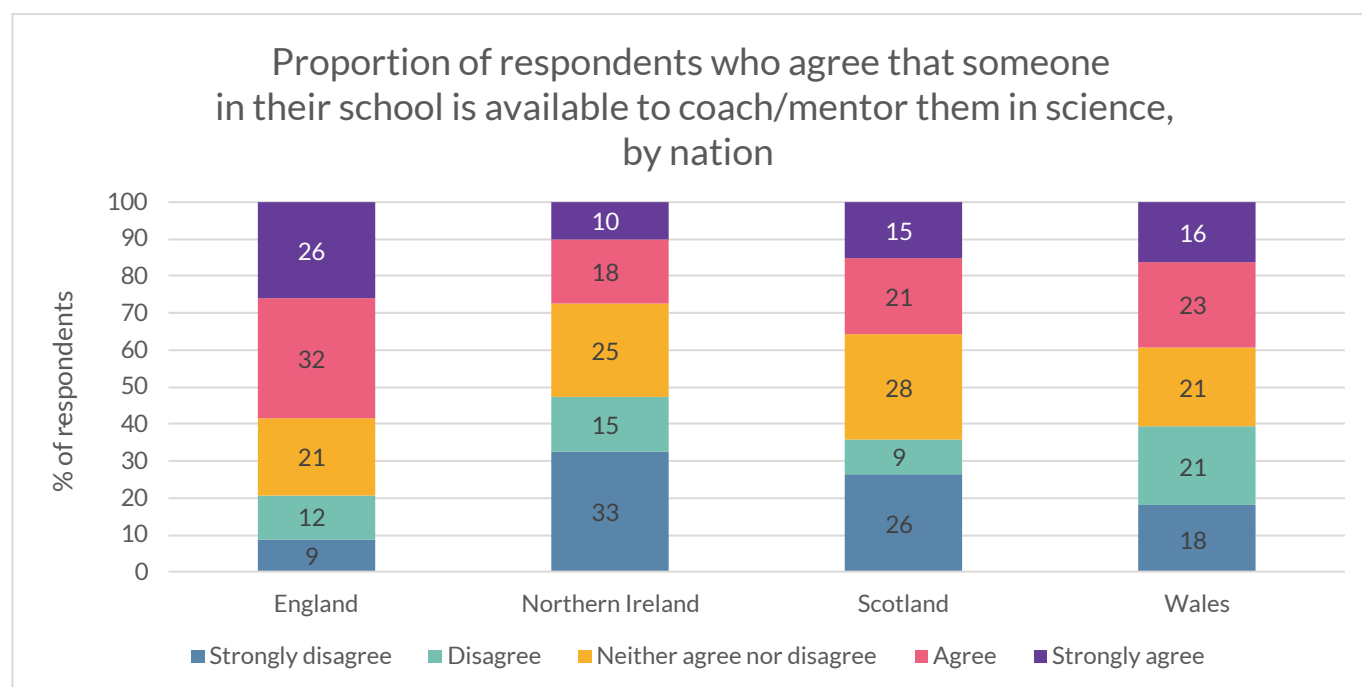


Figure 9 - England base = 562, Northern Ireland base = 40, Scotland base = 53, Wales base = 61

Teachers from the least disadvantaged schools were least likely to respond negatively, whilst those from the most disadvantaged schools were most likely to respond negatively (23%). These differences were not statistically significant ($n = 573$, $p = 0.94$).

Among non-science leaders, those in senior leadership positions were more likely to agree with this statement (60%) compared to classroom teachers (50%).

5.2 Regular science meetings

35% of non-science leaders agreed or strongly agreed that someone responsible for science organised regular staff meetings to discuss science. This is a decrease from 2017 which saw 48% of non-science leaders agreeing or strongly agreeing with this statement. This difference was statistically significant ($z = -2.84$, $p < 0.01$). The contrast by science leader is stark: there was a 57% positive response from non-science leaders whose schools had a science leader, versus only 9% in schools without a science leader. This difference was statistically significant ($n = 718$, $p < 0.01$). Teachers in England were most likely to report having regular science meetings (38%) compared to other nations. These national differences were statistically significant ($n = 716$, $p < 0.01$).

Disadvantage levels showed no clear trend, with 35% positive responses from both the lowest and highest disadvantage schools, and 39% from medium disadvantage schools. These differences were not statistically significant ($n = 573$, $p = 0.76$).

Those in senior leadership positions were more likely to provide a positive response to this statement (43%) compared to those who were classroom teachers (31%).

5.3 Continuing professional development (CPD)

CPD participation trends differ markedly by whether a teacher is a science leader or not. Whilst 66% of science leaders received formal science CPD in the past 12 months (an increase from 52% in 2017), overall teacher participation in science CPD has declined. Among non-science leaders, 42% had received no CPD in the past 12 months, up from 30% in 2017, which is a statistically significant increase ($z = -5, p < 0.01$).

The presence of science leaders in schools was connected to higher staff CPD participation (59% versus 39% without science leaders). This difference was statistically significant ($n = 1277, p = 0.047$).

Teachers in Scotland were most likely to have participated in CPD (73%) compared to other nations. This national difference was statistically significant ($n = 1269, p < 0.01$).

Schools with medium disadvantage schools showed the highest participation (69%) in CPD and low disadvantage schools showing lowest (58%). These differences were statistically significant ($n = 1007, p = 0.01$).

Among non-science leaders, senior leaders were more likely to have received CPD in the past 12 months (68%) in comparison to classroom teachers (53%).

Focus group participants indicated that a school's location often would predict the quality of development:

“We have good links because obviously we’re in the North East with the oil industry. So I guess engineering in oil and gas takes a bit of a precedence over some other science and we do primary engineering.” *Participant 4, Teacher in Scotland*

“In my experience rural communities and schools frequently have the least access to STEM related partnership to support education, professional development opportunities for teachers, teachers with broader experiences in science and STEM, science centres, etc. For example, organising STEM events in Fort William (rural but not remote in terms of the west highlands), I’ve only been able to engage one STEM ambassador this year after years of trying.” *Participant 2, Teacher in Scotland*

5.3.1 CPD content focus

Subject knowledge enhancement emerged as the most accessed CPD type (36%). National patterns varied:

- England and Northern Ireland: Subject knowledge enhancement most popular (35% and 24% respectively).
- Scotland: Interactive online resources most popular (53%).
- Wales: Pedagogical training most popular (30%).

Action research represented the least accessed CPD type (5%). Few teachers reported accessing external science mentoring, but teachers with science leaders were three times more likely to access external science mentoring and coaching (6%) compared to those without (2%).

5.3.2 CPD providers

Schools or school groups emerged as the primary CPD provider, with STEM Learning as the second most common. National variations included:

- England and Wales: School/school group most common (40% and 28% respectively).
- Northern Ireland: STEM Learning most common (23%).
- Scotland: SSERC (a Scottish-specific science provider) most common (45%)⁷.

The same trend was the case when slicing by disadvantage.

In schools who did not have a science leader, the most accessed CPD was provided by SSERC. This is likely because 40% of those schools who do not have a science leader are based in Scotland. Otherwise, the trends are broadly the same.

6. Resources and Enrichment

6.1 Access to teaching resources

42% of all teachers felt they had adequate access to science teaching equipment and kits. This result dropped to 20% for teachers without science leaders. This difference was not statistically significant ($n = 1274$, $p = 0.28$).

Teachers in England were most likely to report high satisfaction with their access to teaching resources (43%) compared to other nations. The national differences were not statistically significant ($n=1266$, $p = 0.07$). Socio-economic disadvantage levels showed little differentiation and were not statistically significant ($n = 1007$, $p = 0.82$).

Teachers' comments in focus groups identified organisations such as STEM Learning, The Ogden Trust, and the Primary Science Teaching Trust for their resources.

"We've been really fortunate to link up with The Ogden Trust and they've been able to fund quite a lot of their own equipment around the physics side of things, which has been amazing." Participant 18, Science leader in England

One teacher's comment in the focus group also indicated that the range of resource options was sometimes difficult to navigate:

"Sometimes there seems to be an overwhelming amount of resources available to you...you've got so many things to choose from that you have to think...what's going to be the best and what's most appropriate and available to us."

Participant 1, Teacher in Scotland

6.2 Outdoor learning spaces

The majority of teachers were satisfied with their access to suitable outdoor learning spaces (56% agree or strongly agree), with science leader presence showing no significant impact. There were large national variations in access to outdoor learning spaces; teachers from Northern Ireland were most likely to have access (66%), whilst teachers from Wales were least likely (47%). High disadvantage areas showed reduced access (50% positive) compared to low-medium disadvantage areas (60 and 61%). None of the differences across these groups were statistically significant.

⁷ SSERC is part funded by the Scottish Government to provide CPD,

6.3 Science trip opportunities

41% of all teachers were satisfied with their access to science-related school trips, but this dropped to 31% for teachers without a science leader. This difference was statistically significant ($n = 1274$, $p = 0.01$).

Teachers in England were most likely to report being satisfied with their access to provide science opportunities (43%) compared to other nations. These national differences were statistically significant ($n = 1266$, $p = 0.03$). A school's level of disadvantage impacted access, with 45% of low disadvantage schools having access compared to 39% of highly disadvantaged schools. These differences were statistically significant ($n = 1007$, $p = 0.02$).

6.4 Enrichment activities

Most schools represented in the survey offered science enrichment activities, with only 5% offering no options. Teachers in Wales were least likely to report not providing enrichment opportunities to pupils (2%) compared to other nations. These national differences were not statistically significant ($n = 1269$, $p = 0.44$).

Teachers without science leaders were most likely to report that their school did not offer any enrichment (15%). This difference was statistically significant ($n = 1218$, $p < 0.01$).

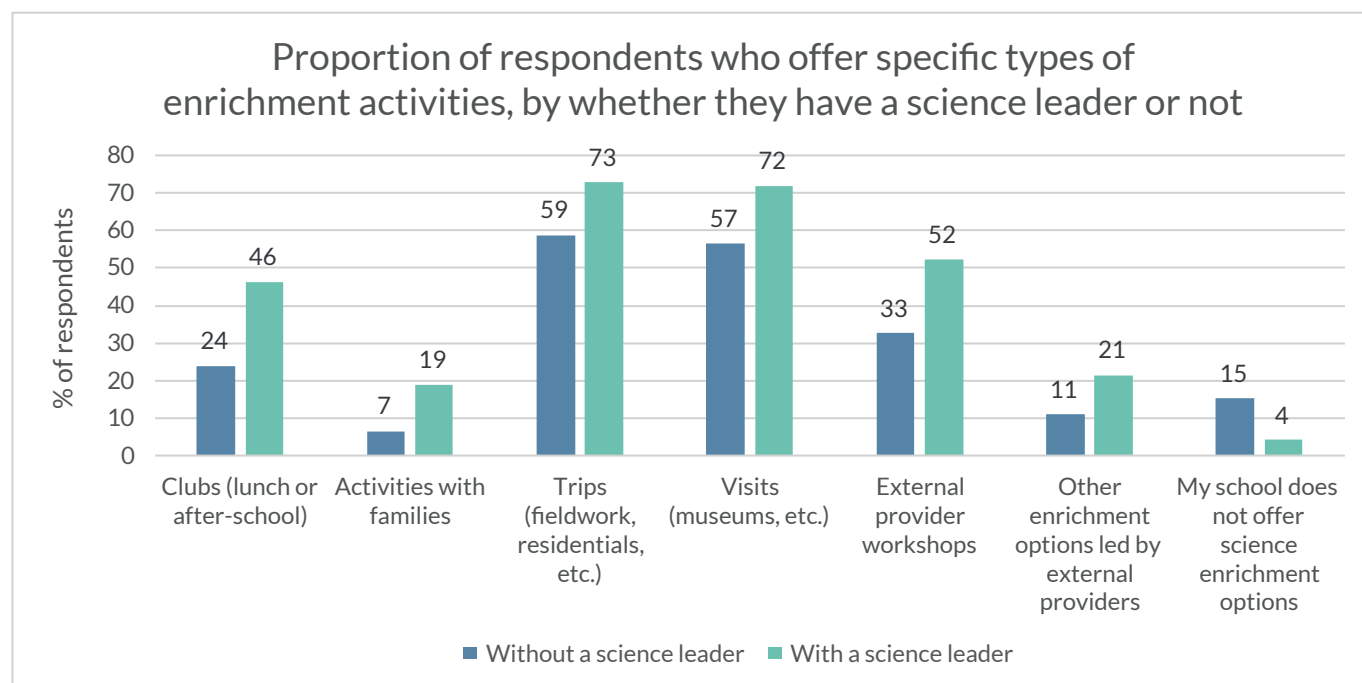


Figure 10 - Without a science leader base = 46, with a science leader base = 1231

Trips (72%) and visits (71%) emerged as the most popular enrichment activities across all categories. Teachers with science leaders consistently reported that their school offered higher rates of every enrichment type. Activities with parents represented the least popular option (18%) across most categories, except in Scotland where external provider activities were least popular (21%).

6.5 Resource sources

Teachers identified resources that they accessed for primary science, most often naming STEM Learning (64%), Explorify (44%), and Oak National Academy (40%). This pattern held regardless of science leader presence, though schools without science leaders showed SSERC as third most popular (28%), likely reflecting the high proportion of Scottish schools without science leaders.

National patterns showed STEM Learning as most popular, except in Scotland, where SSERC dominated (68%). Disadvantage levels showed no impact on resource preferences.

Conclusion and Recommendations

The Big Picture

Primary science teaching and leadership outcomes from this survey tell two stories: an increase in science leader presence alongside a decline in teacher confidence and support. Between 2017 and 2025, there has been progress in the following areas:

- Percentage of teachers reporting the presence of a science leader increased from 91% to 96% of schools.
- Weekly science provision jumped from 75% to 96% of teachers.

Across the same time, there has been some decline in science provision, particularly around support systems:

- Science leader confidence dropped from 96% to 79%.
- General teacher confidence fell from 79% to 72%.
- Access to mentoring decreased from 75% to 53%.
- 42% of non-science leaders now receive no CPD (up from 30%).

Difference in schools

Having a science leader has a positive impact on science provision in a school. Schools with science leaders consistently report better outcomes than those without in the following metrics:

- 25% versus 13% teaching over 2 hours weekly.
- 53% versus 24% of teachers feeling supported.
- 56% versus 17% having access to mentoring or coaching.
- 68% versus 42% agreeing that science is valued in their school.



Recommendations

This report is a call to action. We encourage stakeholders across all four UK nations to review the evidence presented and identify key areas for development and support in primary science education. The following recommendations are framed in general terms to apply UK-wide, though stakeholders should pay particular attention to areas where national disparities exist.

Recommendations affecting all primary science teachers:

- 1. Non-science leader CPD:** proportion of teachers receiving no CPD has increased since 2017.
 - **Recommendation:** national governments should ensure sufficient provision of CPD for all teachers of primary science.
 - **Recommendation:** school leaders should ensure increased access for all teachers of primary science to CPD using a range of approaches.
- 2. School support for science teachers:** the number of teachers feeling supported by senior leadership to teach science has decreased.
 - **Recommendation:** national governments and inspectorates should emphasise the priority status of primary science.
 - **Recommendation:** school leaders should actively support teachers by advocating for science, recognising and raising its profile and relevance within the school and curriculum.

Recommendations affecting science leaders:

- 1. Subject leader release time:** primary science leaders are less likely to get weekly time release than maths and literacy counterparts.
 - **Recommendation:** each nation should provide an equitable entitlement for protected time across mathematics, literacy and science subject leadership.
 - **Recommendation:** senior leaders should adjust policies within schools, trusts and other structures to align science leader release time with that of other priority subjects.
- 2. Subject leader qualification levels:** 22% of science leaders have a science qualification beyond A level/Advanced Higher
 - **Recommendation:** senior leaders should ensure increased access to targeted professional development pathways, including accredited CPD or partnerships with STEM charities and universities, to enable all science leaders to access subject-specific support.
 - **Recommendation:** senior leaders should adjust policies within schools, trusts and other structures to allocate science leader CPD time and dedicated follow up support to upskill other teachers in school.
- 3. Science leadership roles:** schools without science leaders (4%) face reduced provision across all measures.
 - **Recommendation:** national governments should recommend all primary schools to identify a science leader.
 - **Recommendation:** local authorities, school trusts, and other structures should identify schools without science leaders and offer support to introduce the role.

About the commissioning organisations

This report was commissioned by Primary Science Teaching Trust, The Ogden Trust, and SEERIH (Science & Engineering Education Research and Innovation Hub) at The University of Manchester with the Comino Foundation. If you are interested in discussing science teaching in your school or would like to explore these findings further, you can find more information about each organisation and their contact details below.

Primary Science Teaching Trust

The Primary Science Teaching Trust promotes excellence in primary science education by working with science leaders and classroom teachers across the UK. It is a nationally recognised charity which develops and delivers innovative programmes of training, mentoring and resources. It also celebrates and nurtures talented teachers through its annual awards and the Primary Science Teacher College (<http://www.pstt.org.uk>)

The Ogden Trust

The Ogden Trust is a charitable trust established by Sir Peter Ogden in 1999 that promotes the teaching and learning of physics. As a nationally recognised organisation supporting physics education, it successfully develops and delivers a comprehensive portfolio of free professional development programmes for teachers from early years through to Key Stage 5, working to increase physics uptake post-16 and enhance learning opportunities for young people aged 4-18 (www.ogdentrust.com).

SEERIH (Science & Engineering Education Research and Innovation Hub) at The University of Manchester with the Comino Foundation

SEERIH is based in The University of Manchester, and is a nationally recognised centre of science and engineering education. As a team of specialist science and engineering educators it successfully develops and engages teachers in innovative, research-informed continuing professional development programmes to ensure high-quality learning outcomes for young people between 5-14 years (www.seerih.manchester.ac.uk).





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