**Science Teaching Survey**

**Text in red font for scripting use only (not shown to respondents)**

**[WELCOME PAGE]** <PAGE 1>

Thank you for taking part in the second Science Teaching Survey.

The first survey, conducted in 2022, received over 3,700 responses from science teachers and technicians across the UK and Ireland. The findings cast a light on the rewards and challenges that face science teachers, including on staffing, skills, and wellbeing.

More details of what the 2022 survey revealed, and the actions the RSC is taking, can be viewed on our [website](https://ukc-word-edit.officeapps.live.com/we/:%20https:/www.rsc.org/new-perspectives/talent/the-science-teaching-survey/).

The Royal Society of Chemistry’s (RSC’s) education mission is to empower communities to offer an excellent chemistry education to all, driving diversity and improving skills in the chemical sciences. The aim of this research is to ensure that our decisions are well-informed.

Specifically, the RSC is keen to learn more about:

· access to high quality subject-specific CPD

· awareness of and advocacy for vocational pathways

· wellbeing and job satisfaction

· challenges for teachers teaching in schools in areas of high socioeconomic deprivation

· deployment of subject experts teaching students throughout their education

· perceived inclusivity and relevance of curriculum, qualifications, and assessments

· retention and development of talent in the teaching workforce

In the 2023 survey, we will further expand on these themes so that we can provide a more detailed view of what it is like to teach/work in science education in the UK and Ireland.

The survey is being led by the Royal Society of Chemistry (RSC) with support from the Institute of Physics (IOP) and the Royal Society of Biology (RSB).

Your feedback is valuable and will help us to better represent and support those who are teaching science.

The survey will take between 12 and 18 minutes to complete.

This survey includes optional demographic questions, about your gender, age and ethnicity, to help us understand more about the science workforce in the UK and ROI. Findings from this research will be available to the public. However, all responses will be strictly confidential and will be aggregated together for analysis to ensure your anonymity. The RSC will collect the data for analysis and provide an anonymised data set to the IOP and RSB, who will also review the survey responses. This data set will include the optional demographic questions but exclude personal information where collected (i.e. name, email, school name, school postcode). Open comment responses will also be supplied to the IOP/RSB and, while every effort will be taken to remove any personal references in these responses, we cannot guarantee anonymity in these cases. For more information, please see our [privacy statement](https://www.rsc.org/help-legal/legal/privacy).

If you have any questions about the 2023 survey, please contact [insights@rsc.org](mailto:insights@rsc.org).

**---------------------------------------------------------------------------------------------------------------------------**

Respondent criteria:

* Teachers and technicians working in secondary schools and FE colleges in UK and Ireland.

Notes:

* Survey to be conducted in English and Welsh
* All questions mandatory except where specified.
* SA – Single answer | MA – Multiple answer | OA – Open answer
* Page headers to repeated for each page in that section

Acronyms:

EWNI – England, Wales, Northern Ireland

Note on Welsh version of the survey

There will be a separate link created with the Welsh language version of the survey. The email sent to contacts based in Wales will include both the English and Welsh links and ask them to choose their preference. We will also need to include a note to say that, if they take a break from the survey, they will need to re-enter the same link.

**SECTION A: ABOUT YOU AND YOUR SCHOOL**

PAGE HEADER: About you and your school.

**[INTRO TO SECTION 1]** <PAGE 2>

To start the survey, we’d like to understand a little more about your role and the school where you work.

**A1 [JOB ROLE]**

TERMINATE IF CODE 7,8 SELECTED

Which of the following best describes your current job role? *Please select one* [SA]

1. Head of department/principal teacher – Science
2. Head of department/principal teacher – Chemistry
3. Head of department/principal teacher – Physics
4. Head of department/principal teacher – Biology
5. Classroom teacher of science, biology, chemistry and/or physics
6. FE lecturer of science, biology, chemistry and/or physics
7. Science technician
8. Trainee / student science teacher
9. Other staff member with science teaching responsibilities, e.g. SLT
10. None of the above

…………………………………………….

**ROLE DEFINITIONS**

TEACHERS: A1=1-5,9

TECHNICIANS: A1=6

…………………………………………….

ASK ALL

**A2 [TYPE OF SCHOOL]** <PAGE 3>

Which of the following best describes the school where you work? *Please select one* [SA]

1. Local authority, Community, Foundation, or ETB
2. Academy (standalone)
3. Academy (in a MAT)
4. Special School
5. Grammar school/selective school (any type of state school with selective admissions)
6. Private/independent school
7. Further education college
8. Other type of school

ASK IF CODE 1-6, 8 SELECTED AT A2

**A3 [SIXTH FORM]** <PAGE 4>

Does your school have a sixth form?

1. Yes
2. No

ASK ALL

**A4 [NATION]** <PAGE 5>

TERMINATE IF CODE 6 SELECTED

Where is your school based? [SA]

*Note: If your school is based in Jersey, Guernsey or the Isle of Man, and offers English qualifications, please select the England option.*

1. England
2. Scotland
3. Wales
4. Northern Ireland
5. Republic of Ireland
6. I work outside of the UK and Republic of Ireland

ASK IF CODE 1 SELECTED AT A4

**A5 [REGION - ENGLAND]** <PAGE 6>

In which region is your school? [SA]

1. East Midlands
2. East of England
3. London
4. North East England
5. North West England
6. South East England
7. South West England
8. West Midlands
9. Yorkshire and the Humber
10. Other

**PAGE HEADING FOR A6 TO A8:** <PAGE 7>

In order for us to better contextualise your responses with data about your school, we would appreciate if you could also supply your school name and postcode/Eircode. Please be assured that your responses will remain anonymous and we won’t use this data to report on individual schools.

**A6 [SCHOOL NAME]**

What is the name of the school where you work? [OA]

SHOW ON SAME PAGE AS A6

**A7 [POSTCODE/EIRCODE]**

What is the postcode/Eircode of your school? [OA]

SHOW ON SAME PAGE AS A6

**A8 [LINK TO DFE DATA]**

We would like to link your school’s name and postcode/Eircode with data from the Department for Education (and equivalent in other nations) and other published sources to better understand your school. Your responses in the survey are still anonymous, your school **will not be individually identified** – results will be aggregated and the school name / postcode will be removed from the data set after this additional information has been appended to the data so that your information remains anonymous during the analysis.

Would you be happy for us to do this?

1. Yes
2. No

ASK IF CODE 1, 3, 4 SELECTED AT A4

**A9 [TAUGHT AGE GROUPS - EWNI]** <PAGE 8>

TERMINATE IF CODE 1-3 NOT SELECTED

To which key stages (or equivalent) do you currently teach or provide technician support to in the sciences?

*Please select all that apply.* [MA]

1. KS3
2. KS4
3. KS5
4. Other

TEACHERS ONLY + ASK IF CODE 1, 3, 4 SELECTED AT A4

**A10 [TAUGHT SUBJECTS - EWNI]** <PAGE 9>

Below is a list of qualifications that may or may not be offered at your school or college.

For each one, please tell us if your school/college offers the qualification and whether you are personally involved in teaching it. [SA PER ROW]

Response list [Header]:

1. Not offered at my school
2. Offered at my school but I don’t personally teach it
3. I teach this qualification at my school
4. Don’t know / Not sure

Subject list [Row]:

1. GCSE Biology
2. GCSE Chemistry
3. GCSE Physics
4. GSCE Combined Science | Science (Double Award)
5. GSCE Combined Science | Science (Single Award)
6. GSCE Applied Science (Single or Double Award)
7. iGCSE Biology
8. iGCSE Chemistry
9. iGCSE Physics
10. BTEC National in Applied Science
11. AS/A level Biology
12. AS/A level Chemistry
13. AS/A level Physics
14. T Level Science
15. International Baccalaureate
16. Other science qualification

TEACHERS ONLY + ASK IF CODE 1, 3, 4 SELECTED AT A4

**A11 [TOPIC CONFIDENCE\_EWNI]** <PAGE 10>

For each of the key stages that you teach, how confident are you in teaching biology, chemistry and/or physics **subject content** to these key stages? If you don’t teach the particular subject content to a key stage, either as a single subject or as part of a combined science course, select ‘Do not teach’. [SA PER ROW]

Response lists [Header]:

1. Very unconfident
2. Somewhat unconfident
3. Neither confident nor unconfident
4. Somewhat confident
5. Very confident
6. Do not teach

Subject list [Row]:

1. Biology at KS3
2. Biology at KS4
3. Biology at KS5
4. Chemistry at KS3
5. Chemistry at KS4
6. Chemistry at KS5
7. Physics at KS3
8. Physics at KS4
9. Physics at KS5

TEACHERS ONLY + ASK IF CODE 2 SELECTED AT A4

**A12 [TAUGHT AGE GROUPS - SCOTLAND]** <PAGE 11>

TERMINATE IF CODE 3-6 NOT SELECTED

To which year groups do you currently teach or provide technician support in the sciences?

*Please select all that apply.* [MA]

1. S1
2. S2
3. S3
4. S4
5. S5
6. S6
7. Other

TEACHERS ONLY + ASK IF CODE 2 SELECTED AT A4

**A13 [TAUGHT SUBJECTS - SCOTLAND]** <PAGE 12>

Below is a list of subjects/qualifications that may or may not be offered at your school or college.

For each one, please tell us if your school/college offers the subjects/qualification and whether you are personally involved in teaching it. [SA PER SUBJECT]

Response list [Header]:

1. Not offered at my school
2. Offered at my school but I don’t personally teach it
3. I teach this subject/qualification at my school
4. Don’t know / Not sure

Subject list [Row]:

1. National 3 Science
2. National 3 Physics
3. National 3 Chemistry
4. National 3 Biology
5. National 4 Science
6. National 4 Physics
7. National 4 Chemistry
8. National 4 Biology
9. National 5 Physics
10. National 5 Chemistry
11. National 5 Biology
12. Higher Physics
13. Higher Chemistry
14. Higher Biology/Human Biology
15. Advanced Higher Physics
16. Advanced Higher Chemistry
17. Advanced Higher Biology/Human Biology
18. Other science qualifications

TEACHERS ONLY + ASK IF CODE 2 SELECTED AT A4

**A14 [TOPIC CONFIDENCE\_SCOT]** <PAGE 13>

For each of the levels that you teach, how confident are you in teaching biology, chemistry and/or physics **subject content** to these levels? If you don’t teach the particular subject content to a level, either as a single subject or as part of a combined science course, select ‘Do not teach’. [SA PER ROW]

Response lists [Header]:

1. Very unconfident
2. Somewhat unconfident
3. Neither confident nor unconfident
4. Somewhat confident
5. Very confident
6. Do not teach

Subject list [Row]:

1. Biology at N4
2. Biology at N5
3. Biology at Higher
4. Biology at Advanced Higher
5. Chemistry at N4
6. Chemistry at N5
7. Chemistry at Higher
8. Chemistry at Advanced Higher
9. Physics at N4
10. Physics at N5
11. Physics at Higher
12. Physics at Advanced Higher

TEACHERS ONLY + ASK IF CODE 5 SELECTED AT A4

**A15 [TAUGHT AGE GROUPS - IRELAND]** <PAGE 14>

TERMINATE IF CODE 1-3 NOT SELECTED

To which year groups do you currently teach or provide technician support to in the sciences? Please select all that apply. [MA]

1. Junior Cycle
2. Transition Year
3. Senior Cycle
4. Other

TEACHERS ONLY + ASK IF CODE 5 SELECTED AT A4

**A16 [TAUGHT SUBJECTS - IRELAND]** <PAGE 15>

Below is a list of subjects/qualifications that may or may not be offered at your school or college.

For each one, please tell us if your school/college offers the subjects/qualification and whether you are personally involved in teaching it. [SA PER SUBJECT]

Response list [Header]:

1. Not offered at my school
2. Offered at my school but I don’t personally teach it
3. I teach this subject/qualification at my school
4. Don’t know / Not sure

Subject list [Row]:

1. Junior Cycle Science
2. Leaving Certificate Biology
3. Leaving Certificate Chemistry
4. Leaving Certificate Physics
5. Leaving Certificate Physics and Chemistry
6. Leaving Certificate Agricultural Science
7. Leaving Certificate Computer Science
8. Other science qualification

TEACHERS ONLY + ASK IF CODE 5 SELECTED AT A4

**A17 [TOPIC CONFIDENCE\_IRELAND]** <PAGE 16>

For each of the key stages that you teach, how confident are you in teaching biology, chemistry and/or physics **subject content** to these key stages? If you don’t teach the particular subject content to a key stage, either as a single subject or as part of a combined science course, select ‘Do not teach’. [SA PER ROW]

Response lists [Header]:

1. Very unconfident
2. Somewhat unconfident
3. Neither confident nor unconfident
4. Somewhat confident
5. Very confident
6. Do not teach

Subject list [Row]:

1. Junior Cycle Biological World
2. Junior Cycle Chemical World
3. Junior Cycle Physical World
4. Junior Cycle Earth and Space
5. Transition Year Science
6. Leaving Cert Biology
7. Leaving Cert Ag Science
8. Leaving Cert Chemistry
9. Leaving Cert Physics
10. Leaving Cert Chem and Physics
11. Leaving Cert Computer Science

TEACHERS ONLY

**A18 [TEACHING MULTIPLE QUALS IN ONE CLASS]** <PAGE 17>

For any of the classes that you teach, are you required to teach multiple science qualifications in the same class? [SA]

1. Yes
2. No
3. Don’t know / not sure
4. Prefer not to say

TEACHERS ONLY + ASK IF A18 = 1 [YES]

**A19 [CHALLENGES OF TEACHING MULTI QUALS IN ONE CLASS]** <PAGE 18>

What challenges, if any, are there associated with teaching multiple qualifications in one class? *Please select all that apply.* [MA]

1. Curriculum content is not aligned
2. Different student abilities levels
3. Difficult to support all the students
4. Don’t know / not sure
5. There are no challenges
6. Other (Please specify)

TEACHERS ONLY

**A20 [SPECIALISM]** <PAGE 19>

For which of these subjects, if any, would you define yourself as a specialist?

Please select all that apply. [MA]

1. Biology
2. Chemistry
3. Physics
4. General Science
5. None of the above
6. Don’t know / Not sure

TEACHERS ONLY + ASK IF CODE 1 SELECTED AT A20

**A21 [REASON FOR SPECIALISM - BIOLOGY]** <PAGE 20>

What do you think makes you a specialist in **biology**?

Please select all that apply. [MA]

1. An undergraduate degree in the subject
2. A postgraduate degree in the subject
3. Initial teacher training in the subject
4. Formal CPD in the subject
5. Experience teaching the subject
6. Other qualifications e.g. A-level
7. Don’t know / Not sure
8. Other (please specify)

TEACHERS ONLY + ASK IF CODE 2 SELECTED AT A20

**A22 [REASON FOR SPECIALISM - CHEMISTRY]** <PAGE 21>

What do you think makes you a specialist in **chemistry**?

Please select all that apply. [MA]

1. An undergraduate degree in the subject
2. A postgraduate degree in the subject
3. Initial teacher training in the subject
4. Formal CPD in the subject
5. Experience teaching the subject
6. Other qualifications e.g. A-levels
7. Don’t know / Not sure
8. Other (please specify)

TEACHERS ONLY + ASK IF CODE 3 SELECTED AT A20

**A23 [REASON FOR SPECIALISM - PHYSICS]** <PAGE 22>

What do you think makes you a specialist in **physics**?

Please select all that apply. [MA]

1. An undergraduate degree in the subject
2. A postgraduate degree in the subject
3. Initial teacher training in the subject
4. Formal CPD in the subject
5. Experience teaching the subject
6. Other qualifications e.g. A-levels
7. Don’t know / Not sure
8. Other (please specify)

TEACHERS ONLY + ASK IF CODE 4 SELECTED AT A20

**A24 [REASON FOR SPECIALISM – GENERAL SCIENCE]** <PAGE 23>

What do you think makes you a specialist in **general science**?

Please select all that apply. [MA]

1. An undergraduate degree in the subject(s)
2. A postgraduate degree in the subject(s)
3. Initial teacher training in the subject(s)
4. Formal CPD in the subject(s)
5. Experience teaching the subject(s)
6. Other qualifications e.g. A-levels (s)
7. Don’t know / Not sure
8. Other (please specify)

TECHNICIANS ONLY

**A25 [SUBJECT COVERED BY TECHNICIAN]** <PAGE 24>

Which of the following subjects do you cover in your role as a science technician?

*Please select all that apply* [MA]

1. Biology
2. Chemistry
3. Physics
4. Other, please specify

ASK ALL

**A26 [REASON FOR SCHOOL CHOICE]** <PAGE 25>

Thinking about where you currently work, why did you choose this school to work in?  *Please select all that apply.* [MA]

1. I attended the same/a similar school
2. I want to give back to the community
3. Inspection rating
4. Post-16 provision
5. Status/reputation of the science department
6. School leadership
7. Pay
8. Supportive culture
9. Perceived student behaviour
10. Student outcomes
11. Workload policy (marking/after school interventions)
12. Career opportunities
13. Able to teach/work in my native language (e.g. Welsh/Gaelic/Gaidhlig/Gaeilge)
14. Convenient location
15. Lack of options/I didn’t choose/I didn’t have a choice
16. Don’t know/not sure
17. Not applicable
18. Other (Please specify)

ASK ALL

**A27 [SCHOOL IN CHALLENGING CIRCUMSTANCES]** <PAGE 26>

Do you consider your school to be in challenging circumstances? [SA]

1. Yes
2. No
3. Don’t know / Not sure
4. Prefer not to say

**SECTION B: STAFFING AT THE SCHOOL**

PAGE HEADER: About science teachers and staff in your school.

**B0 [SECTION B INTRO]** <PAGE 27>

This next section explores the science department in your school.

ASK ALL

**B1 [STAFFING PROVISION]**

Please describe the staffing at your school in each of the following areas:

*By under-staffed, we mean that you do not feel that the current provision is sufficient for your school.*

Response lists [Header]:

1. Overstaffed
2. Adequately staffed
3. Understaffed
4. Don’t know / Not sure
5. Not applicable

Subject list [Row]:

1. Biology teachers
2. Chemistry teachers
3. Physics teachers
4. Science technicians

**SECTION C: ROLE**

PAGE HEADER: About your role.

**C0 [SECTION C INTRO]** <PAGE 28>

This next section asks you about how you feel in your current role.

**C1 [JOB SATISFACTION - TEACHER]** <PAGE 29>

On a scale of 0 to 10, where '0' is not satisfied at all and '10' is completely satisfied, how satisfied are you with your job as a teacher? [SA]

[SHOW 11 POINT SCALE]

0 = Not satisfied at all

10 = Completely satisfied

Not sure

**C2 [JOB SATISFACTION - TECHNICIAN]** <PAGE 30>

On a scale of 0 to 10, where '0' is not satisfied at all and '10' is completely satisfied, how satisfied are you with your job as a technician? [SA]

[SHOW 11 POINT SCALE]

0 = Not satisfied at all

10 = Completely satisfied

Not sure

**C3. [LENGTH OF TIME TO STAY AT CURRENT SCHOOL]** <PAGE 31>

How long do you intend to stay at your current school? [SA]

1. Up to the end of the current academic year
2. Up to the end of the 23/24 academic year
3. Up to the end of the 24/25 academic year
4. Into the 25/26 academic year or beyond
5. Don’t know / Not sure
6. Prefer not to say

ASK FOR THOSE ANSWERING CODE 1-3 AT C3

**C4. [PLANS AFTER LEAVING CURRENT SCHOOL]** <PAGE 32>

What are you planning to do after leaving your current school? *If you have more than one plan, please select the one that is most likely.* [SA]

1. Retirement
2. Move to a similar role at a different state school
3. Move to a different state school for promotion
4. Move to a similar role at a private/independent school
5. Move to a private/independent school for promotion
6. Move into teaching at higher education
7. Move into another role in education (not teaching)
8. I want to do something outside of education / career change
9. Have a career break
10. Don’t know / Not sure
11. Other (please specify)

ASK IF CODE 2-11 SELECTED AT C4

**C5 [REASON FOR LEAVING]** <PAGE 33>

What are your reasons for leaving your current school?

Please select all that apply. [MA] [RANDOMISE LIST]

1. Workload is too high / Lack of work life balance
2. High levels of stress / exhaustion
3. Having to teach outside specialism
4. Low pay
5. Lack of progression opportunities
6. Lack of respect / don’t feel appreciated
7. Lack of recognition
8. Poor student behaviour
9. Issues with management
10. Want to try something different
11. Don’t know / not sure
12. Other (Please specify)

ASK IF CODE 6-11 SELECTED AT C4 + TEACHERS ONLY

**C6 [WHAT WOULD MAKE THEM STAY IN SECONDARY EDUCATION]** <PAGE 34>

You mentioned that you are planning to move out of teaching at secondary school. What changes would convince you to stay on as a teacher at secondary school? *Please select up to 5 factors from the following list that would be most influential.* [LA5] [RANDOMISE LIST]

1. More balanced / reduced workload
2. Better work/life balance
3. Having the option to work part-time
4. Having the option to work remotely/work from home where feasible
5. Increased pay
6. Only expected to teach content you consider yourself a specialist in
7. More opportunity for progression
8. More respect / appreciation
9. More recognition of work performance
10. More support with student behaviour
11. Less emphasis on exam results
12. Less pressure regarding assessed school performance and inspections
13. More support from parents
14. More support from senior management team
15. Increase funding for classroom/school resources
16. Timetabled / regular professional development
17. Being able to find a position in a different school
18. There isn’t anything that could convince me
19. Other (Please specify)

**SECTION D: CHALLENGES & BARRIERS**

PAGE HEADER: Challenges and barriers.

**D0 [SECTION D INTRO]** <PAGE 35>

This next section we would like to ask you about the various challenges you experience in your role.

TEACHERS ONLY

**D1 [GREATEST CHALLENGES - CLASSROOM]** <PAGE 36>

Which of the following present challenges to your classroom teaching in science?Please select all that apply. [MA][RANDOMISE]

1. Limited numeracy skills of students
2. Limited literacy skills of students
3. Insufficient classroom support, e.g. no teaching assistants
4. Student attendance
5. Challenging student behaviour
6. Inadequate teaching resources (lesson plans / scheme of work)
7. No technician/not enough technicians
8. Teaching outside of specialism
9. Lack of confidence in the subject area
10. Insufficient lab access
11. Insufficient classroom equipment
12. There are no challenges
13. Other (Please specify)

ASK ALL

**D2 [GREATEST CHALLENGES - ACROSS SCHOOL]** <PAGE 37>

What challenges does your school face?Please select all that apply. [MA][RANDOMISE]

1. Insufficient funding
2. High staff turnover
3. Insufficient staff non-contact time (encroachment and reallocation)
4. Lack of support to students from parent/family/guardian
5. Poor pupil attendance
6. Understaffing of teaching staff
7. Understaffing of classroom support staff
8. High staff absence
9. Insufficient support from leadership
10. Negative working environment
11. Lack of collaboration/teamwork amongst staff
12. Not enough support for inexperienced teachers
13. There are no challenges
14. Other (Please specify)

ASK ALL

**D3 [TYPE OF SUPPORT REQUIRED]** <PAGE 38>

What support do you need to address these challenges, either in the classroom and/or across the school? Please select all that apply. [MA][RANDOMISE]

1. Consistent policies including behaviour management, attendance and learning and teaching
2. More funding
3. More non-contact time (for planning, PD, practicing practical work)
4. More classroom support staff
5. Support from leadership
6. Greater access to subject specific professional development
7. Greater collaboration with colleagues
8. Protected non-contact time
9. Leadership led cultural shift
10. Don’t require support
11. Other (Please specify)

ASK ALL

**D4 [MOST VALUABLE SUPPORT]** <PAGE 39>

What is the most valuable support you have been offered by your school? *Please select all that apply.* [MA][RANDOMISE]

1. Quality assured and specification linked resources
2. Whole school/staff professional development
3. Subject specific professional development (Internal or external)
4. Opportunities to collaborate with colleagues
5. Protected non-contact time
6. Mentoring or coaching
7. Not been offered any support by school
8. Other (Please specify)

TEACHERS ONLY

**D5 [BARRIERS TO PRACTICAL WORK]** <PAGE 40>

What are the barriers you face to running practical work in your school? *Please select all that apply.* [MA][RANDOMISE]

1. Understaffing of science technicians
2. Insufficient time for practical to be taught alongside theory
3. Lack of equipment
4. No time for training/practicing
5. Health and safety concerns
6. Challenging student behaviour
7. Cost of consumables and chemicals
8. Lack of confidence in delivering practical sessions
9. Insufficient lab access
10. Unsuitable labs
11. No barriers
12. Other (Please specify)

SECTION E SHOWN TO TEACHERS ONLY

**SECTION E: PROFESSIONAL DEVELOPMENT**

PAGE HEADER: Professional development.

**E0 [SECTION E INTRO]** <PAGE 41>

In this next section, we would like to ask you about subject specific professional development (SSPD). For this survey, SSPD is defined as:

*“A programme or course, whether attended in person or online, that focuses on both subject and pedagogical knowledge and helps in enhancing the teacher’s knowledge, in line with the subjects you’re currently teaching or have been asked to teach in the future.”*

**E1 [# OF HOURS OF SSPD]**

Thinking about the last 12 months (since June 2022), please select the number of hours of subject specific professional development that you received for each of the following subjects:  
If you didn't teach this subject in the last 12 months, please select 'Not applicable - don't teach this subject'. [SA PER ROW]

Response lists [Dropdown]:

1. Not applicable – don’t teach this subject
2. 0 hrs - Didn't access any professional development in this subject
3. Up to 5 hours
4. 5 – 9 hours
5. 10 – 14 hours
6. 15 – 19 hours
7. 20 – 24 hours
8. 25 – 29 hours
9. 30 – 35 hours
10. 35+ hours
11. Don’t know / Can’t remember

Subject list [Row]:

1. Biology
2. Chemistry
3. Physics
4. General Science
5. Non-science subjects

**E2 [SUFFICIENCY OF SSPD]** <PAGE 42>

Thinking again about the last 12 months since June 2022. Was the **amount of time** that you undertook subject specific professional development for each subject …? *If you didn’t teach this subject in the last academic year, please select ‘Not applicable – don’t teach this subject*’. [SA PER ROW]

Response lists [Header]:

1. Not applicable – don’t teach this subject
2. Insufficient
3. Somewhat insufficient
4. Neither sufficient nor insufficient
5. Somewhat sufficient
6. Sufficient
7. Don’t know / Can’t remember

Subject list [Row]:

1. Biology
2. Chemistry
3. Physics
4. General Science
5. Non-science subjects

**E3 [BARRIERS TO ACCESSING SSPD]** <PAGE 43>

Which of the following barriers apply to your own experience of accessing subject specific professional development? *Please select all that apply.* [MA] [RANDOMISE LIST]

1. Lack of funding for cover teachers
2. Lack of available cover teachers
3. Course cost & expenses to attend courses
4. School policy restricts the type of courses I can attend
5. Having to attend PD courses/training in my own time
6. Availability of courses
7. Lack of knowledge about opportunities
8. Not having access to the required technology/software/learning platforms, etc.
9. Prohibitive travel time / distance
10. There are no barriers
11. Other (Please specify)

**SECTION F: VOCATIONAL PATHWAYS**

PAGE HEADER: Vocational pathways

TEACHERS ONLY

**F0 [SECTION F INTRO]** <PAGE 44>

This section considers guidance offered to students on careers and pathways into these careers.

TEACHERS ONLY

**F1 [CONFIDENCE IN ADVOCATING]**

How confident do you feel about the following areas? [SA PER ROW]

Response lists [Header]:

1. Very unconfident
2. Somewhat unconfident
3. Neither confident nor unconfident
4. Somewhat confident
5. Very confident
6. Don’t know / Not sure
7. Not applicable / Don’t include in my teaching

Subject list [Row]:

1. Linking the curriculum to real-life contexts
2. Linking the curriculum to scientific careers
3. Providing information on academic routes into scientific careers
4. Providing information on technical/vocational routes into scientific careers

TEACHERS ONLY

**F3 [ACCESS TO CAREER SUPPORT]** <PAGE 45>

In which of the following ways do you/your science department access support to demonstrate career opportunities and to contextualise lesson content? *Please select all that apply.*[MA]

1. Through local industry contacts
2. Through university contacts
3. Through science centres
4. Online resources
5. Parental links
6. Dedicated school career service
7. None
8. Other (please specify)

TEACHERS ONLY

**F4 [FREQ OF INCLUDING CAREER CONTEXT]** <PAGE 46>

How often do you incorporate the following in your science teaching? *Please select all that apply.* **[SA]**

Response lists [Header]:

1. At every opportunity
2. After completing a topic area
3. When carrying out practical work
4. During science week
5. I don’t include this in my science teaching
6. At other times

Subject list [Row]:

1. Contextualisation
2. Career links / examples

TEACHERS ONLY + ENGLAND ONLY (CODE 1 AT A4)

**F5\_ENG [VOCATIONAL PATHWAYS - ENG]** <PAGE 47>

For each of the following academic and vocational science pathways, please tell us which you are aware of and advocate to your students. [SA PER ROW]

Response lists [Header]:

1. Not aware
2. Aware but don’t advocate
3. Aware and advocate to my students
4. Don’t know / Not sure

Subject list [Row]:

1. A levels
2. International Baccalaureate
3. T levels
4. BTEC Nationals
5. BTEC Apprenticeships
6. Cambridge Technicals
7. NVQs
8. Advanced Apprenticeships
9. Higher Apprenticeship
10. Degree Apprenticeship
11. Foundation degree
12. Undergraduate degree

TEACHERS ONLY + SCOTLAND ONLY (CODE 2 AT A4)

**F5\_SCOT [VOCATIONAL PATHWAYS - SCOT]** <PAGE 48>

For each of the following academic and vocational science pathways, please tell us which you are aware of and advocate to your students. [SA PER ROW]

Response lists [Header]:

1. Not aware
2. Aware but don’t advocate
3. Aware and advocate to my students
4. Don’t know / Not sure

Subject list [Row]:

1. Highers
2. Advanced Highers
3. International Baccalaureate
4. National Progression Award (NPA)
5. SVQs
6. Foundation Apprenticeship
7. Modern Apprenticeship
8. Graduate Apprenticeship
9. Further Education courses (e.g. HNC/HND)
10. Undergraduate degree

TEACHERS ONLY + WALES / NORTHERN IRELAND ONLY (CODE 3,4 AT A4)

**F5\_WNI [VOCATIONAL PATHWAYS - WNI]** <PAGE 49>

For each of the following academic and vocational science pathways, please tell us which you are aware of and advocate to your students. [SA PER ROW]

Response lists [Header]:

1. Not aware
2. Aware but don’t advocate
3. Aware and advocate to my students
4. Don’t know / Not sure

Subject list [Row]:

1. A levels
2. BTEC Nationals
3. BTEC Apprenticeships
4. Foundation Apprenticeship
5. Apprenticeship
6. Higher Apprenticeship
7. Degree Apprenticeship
8. Foundation degree
9. Undergraduate degree

TEACHERS ONLY + IRELAND ONLY (CODE 5 AT A4)

**F5\_IRE [VOCATIONAL PATHWAYS - IRE]** <PAGE 50>

For each of the following academic and vocational science pathways, please tell us which you are aware of and advocate to your students. [SA PER ROW]

Response lists [Header]:

1. Not aware
2. Aware but don’t advocate
3. Aware and advocate to my students
4. Don’t know / Not sure

Subject list [Row]:

1. Established Leaving Certificate
2. Leaving Certificate Vocational Programme
3. Leaving Certificate Applied
4. International Baccalaureate
5. Advanced Apprenticeships
6. Apprenticeship
7. Further Education Courses
8. Undergraduate degree

TEACHERS ONLY

**F6 [REASONS FOR NOT ADVOCATING]** <PAGE 51>

What are the barriers, if any, that prevent you from advocating for vocational pathways to your students? *Please select all that apply*. [MA]

1. Lack of detailed knowledge about the pathways
2. Lack of funding
3. Lack of local availability of courses
4. Lack of local availability of placements
5. School is focused on academic pathways
6. Don’t know / Not sure
7. There are no barriers
8. Other (Please specify)

G0 TO G4 ENG & NI ONLY - CODE 1, 4 SELECTED AT A4

G0 TO G4 INVOLVED WITH TEACHING CHEMISTRY AT KS4 (A11\_5=1-5)

**SECTION G: CURRICULUM**

PAGE HEADER: Curriculum content.

TEACHERS ONLY + INVOLVED WITH TEACHING CHEMISTRY AT KS4 (A11\_5=1-5)

**G0 [SECTION G INTRO]** <PAGE 52>

Previous research conducted by the Royal Society of Chemistry has identified that teachers feel that there is too much content within the chemistry curriculum (Curriculum Survey 2020 and Science Teaching Survey 2022). We would like to explore this topic in a little more detail.

TEACHERS ONLY + INVOLVED WITH TEACHING CHEMISTRY AT KS4 (A11\_5=1-5)

**G1 [CURRICULUM REVISION]** <PAGE 53>

Below is a list of topics, covered in the KS4 curriculum for **GCSE Combined Science** and **GCSE Chemistry** that teachers identified as ‘unnecessary’ or ‘irrelevant’.For each topic, please indicate whether you think it should be kept in the curriculum without change, kept in the curriculum but revised, or whether it should be removed.[SA PER ROW]

Response lists [Header]:

1. Kept without change
2. Kept but revised
3. Removed
4. Don’t know / Not sure
5. Not applicable / Don’t teach this

Subject list [Row]:

1. Life cycle assessment and recycling
2. The Earth’s water resources and obtaining potable water
3. Electrolysis of molten ionic liquids and aqueous ionic solutions
4. Quantitative chemistry
5. Condensation polymerisation *(GCSE Chemistry only)*
6. Ceramics / Composite materials *(GCSE Chemistry only)*

TEACHERS ONLY + ENGLAND ONLY (CODE 1 AT A4)

**G6\_ENG [BARRIERS TO ACCESSING COURSES – ENGLAND]** <PAGE 55>

Are there any barriers to your students at age 16 accessing the following...? *Please select all that apply.*[MA]

1. A level sciences
2. Apprenticeships
3. International Baccalaureate (IB)
4. T levels
5. Vocational courses (e.g. BTECs, Cambridge Nationals)
6. No barriers
7. Don’t know / Not sure

TEACHERS ONLY + SCOTLAND ONLY (CODE 2 AT A4)

**G6\_SCO [BARRIERS TO ACCESSING COURSES – SCOTLAND]** <PAGE 56>

Which of the following qualifications, if any, are there barriers to accessing for your students at age 16? *Please select all that apply*[MA]

1. Highers
2. Advanced Highers
3. SVQs
4. Apprenticeships
5. No barriers
6. Don’t know / Not sure

TEACHERS ONLY + WALES/NORTHERN IRELAND ONLY (CODE 3,4 AT A4)

**G6\_WNI [BARRIERS TO ACCESSING COURSES – WALES + NI]** <PAGE 57>

Are there any barriers to your students at age 16 accessing the following...? *Please select all that apply*[MA]

1. A level Sciences
2. International Baccalaureate (IB)
3. Vocational courses (e.g. BTECs, Cambridge Nationals)
4. Apprenticeships
5. No barriers
6. Don’t know / Not sure

TEACHERS ONLY + IRELAND ONLY (CODE 5 AT A4)

**G6\_IRE [BARRIERS TO ACCESSING COURSES – IRELAND]** <PAGE 58>

Are there any barriers to your students at age 16 accessing the following...? *Please select all that apply*[MA]

1. Established Leaving Certificate
2. Leaving Certificate Applied
3. Leaving Certificate Vocational Programme
4. No barriers
5. Don’t know / Not sure

TEACHERS ONLY + NOT SHOWN IF CODE 3 [WALES] AT A4

**G8 [CONTENT ON CLIMATE CHANGE]** <PAGE 59>

In our 2021 ‘green shoots’ survey, 48% of teachers highlighted that they wanted more climate change and sustainability content within the curriculum and that this should be integrated within the relevant subjects. Of the options given below, which do you think is the best way to do this within the Science GCSE / Transition Year / National 5? [SA]

1. As an interdisciplinary module (biology, chemistry and physics) focusing on solving the problems of the future.
2. Make the ‘real life applications’ within each discipline explicit.
3. Increase the amount of substantive climate change and sustainability content within each discipline.
4. I don’t want more climate change and sustainability content
5. Don’t know / Not sure

**SECTION J: EDUCATION AND EXPERIENCE**

PAGE HEADER: About your qualifications and experience

**[INTRO TO SECTION J]** <PAGE 61>

In this section we would like to ask some more about you, your qualifications and background.

ASK ALL

**J1 [AWARDED QUALIFICATIONS]**

Which of the following training, awards or qualifications have you undertaken or been awarded so far? *Please select all that apply.* [MA]

1. HNC/HND in Applied Science or related
2. Degree (Biology or related subjects)
3. Degree (Chemistry or related subjects)
4. Degree (Physics or related subjects)
5. Degree (Education or related subjects)
6. Degree (Engineering or related subjects)
7. Post-graduate degree in a science subject, e.g. MSc, MRes, PhD
8. Post-graduate Certificate in Education (PGCE)
9. Professional Graduate Diploma in Education (PGDE)
10. Postgraduate degree in Education, e.g. MA, MEd, MSc, EdD, PhD, PME
11. Teaching qualification obtained outside of the UK or Ireland
12. Level 2 Award in Support Work in Schools
13. Level 3 Award in Supporting Teaching and Learning in Schools
14. Qualified Teacher Status (QTS)
15. Biology Subject knowledge enhancement course (Government funded in England)
16. Chemistry Subject knowledge enhancement course (Government funded in England)
17. Physics Subject knowledge enhancement course (Government funded in England)
18. Teacher subject specialism training (TSST) for Physics
19. Don’t know
20. Prefer not to say
21. Other, please specify

TEACHERS ONLY

**J2 [INITIAL TEACHER EDUCATION COURSE]** <PAGE 62>

What was the subject named on your initial teacher education (ITE) course? [SA]

1. Biology
2. Science with Biology
3. Chemistry
4. Science with Chemistry
5. Physics
6. Physics with Maths
7. Science with Physics
8. Engineers Teach Physics
9. Not sure / Can’t remember
10. Other, please specify

TEACHERS ONLY

**J3 [# OF YEARS TEACHING SCIENCE]** <PAGE 63>

How many years have you been teaching the sciences?

*Please do not include your training year.* [SA]

[SHOW DROPDOWN WITH 1-40 + Don’t know / Can’t remember + Prefer not to say]

TECHNICIANS ONLY

**J4 [# OF YEARS WORKING AS A TECHNICIAN]** <PAGE 64>

How many years have you been working as a science technician? [SA]

[SHOW DROPDOWN WITH 1-40 + Don’t know / Can’t remember + Prefer not to say]

**J5 [WEMWS 7POINT]** <PAGE 65>

The next question is about your mental wellbeing and will help us to better understand the wellbeing of teachers and technicians working in education. This question is optional and can be skipped by pressing [next].

Below are some statements about feelings and thoughts. Please select the answer that best describes your experience of each over the last 2 weeks. [SA PER ROW] [OPTIONAL]

Response lists [Header]:

1. None of the time
2. Rarely
3. Some of the time
4. Often
5. All of the time

Subject list [Row]:

1. I’ve been feeling optimistic about the future
2. I’ve been feeling useful
3. I’ve been feeling relaxed
4. I’ve been dealing with problems well
5. I’ve been thinking clearly
6. I’ve been feeling close to other people
7. I’ve been able to make up my mind about things

**CLOSING PAGE** <PAGE 78>

[No redirects]

Thank you for completing the survey.

All the supporting organisations, the Royal Society of Chemistry, Royal Society of Biology and the Institute of Physics, greatly appreciate your time and effort to fill out the survey.

Listed below are some additional resources from each organisation that you may be interest in:

**Royal Society of Chemistry – Teach Chemistry**

[Sign up](https://edu.rsc.org/register) to [Teach Chemistry](https://edu.rsc.org/teach-chemistry) to gain access to our next level of free teaching support, designed to help you deliver inspirational chemistry lessons and create a supportive and effective science department.

[Signing up](https://edu.rsc.org/register) makes all of this available to you and your school, at no cost:

* an online school account for easy resource sharing among colleagues
* free RSC membership for the lead contact
* access to CPD including our sustained professional development courses
* funding opportunities to help you run events and connect with others in science

**Royal Society of Biology – mySociety**

Register for a free RSB mySociety account and sign up to our monthly 5-19 education newsletter:

<https://my.rsb.org.uk/login.php?register=1>

**Institute of Physics**

Sign up to our community of physics teaching:

<https://www.iop.org/education/sign-up-community-physics-teaching>

Please click [Finish Survey] to submit your responses.