

Science Teacher

Introduction

Science teachers teach students about how science is relevant to their everyday lives and the natural world around them. They teach scientific theories, and topics such as global warming, genetic modification, radioactive substances, how to keep healthy and how drugs affect the body.

Work Activities

Secondary school science teachers cover biology, chemistry and physics in combined science lessons. They might also teach them as separate subjects.



Teaching methods include group and project work, doing experiments, and using interactive whiteboards, audio-visual materials and the internet, as well as more traditional teaching sessions.

Teaching might also involve field trips and visits to places of educational interest.

Other activities include:

- Preparing and planning lessons.
- Demonstrating and supervising experiments.
- Marking work and giving feedback.
- Going to staff meetings and parents' evenings.
- Setting and enforcing standards of behaviour.

Some science teachers are form tutors, involving duties such as taking a register, providing general information and giving guidance.

Science teachers might supervise the work of one or more teaching assistants and laboratory technicians.

Personal Qualities and Skills

As a science teacher, you'll need:

- The ability to encourage, motivate and inspire your students.
- Good communication skills.
- Tact and patience.
- The ability to maintain discipline and deal with challenging behaviour.
- An awareness of health and safety issues when doing experiments and storing hazardous materials.
- Good organisational and planning skills.
- The ability to work well under pressure.

Pay and Opportunities

Pay

Teachers in the state education sector are paid on a scale according to their qualifications, experience and responsibilities. The highest salaries are available in inner London schools.

The pay rates (per year) below are approximate.

- Unqualified teachers [who haven't yet received Qualified Teacher Status] earn in the range of £16,000 - £25,000.
- Qualified teachers earn in the range of £21,500 - £31,500.
- 'Advanced skills teachers' earn in the range of £37,500 - £57,000.

- 'Excellent teachers' earn in the range of £39,500 - £52,000.

In the private sector, salaries are generally higher, though they are sometimes linked to state sector pay scales.

Hours of work

Teachers normally work from 8:30 am or 9 am to 3:30 pm or 4 pm, Monday to Friday. However, most teachers work extra hours - marking work, preparing lessons and going to meetings. They often have to work in the evenings and at weekends to prepare lessons and mark work.

Where could I work?

Employers are state and private schools.

There are also opportunities to teach in other countries.

Some teachers supplement their income by teaching privately, marking national exams or writing textbooks.

In Wales there is demand for Welsh-medium education, so if you plan to teach in Wales, and are a first or second language Welsh speaker, you could improve your prospects of obtaining a teaching post by training to teach through the medium of Welsh.

You could also get financial support through a Welsh-medium incentive scheme. Check with your course provider.

Where are vacancies advertised?

Vacancies are advertised by local authorities and in the local and national press, including The Guardian and The Times Educational Supplement (TES). There are also job boards, such as eTeach.

Entry Routes and Training

To become a science teacher, you usually need to gain Qualified Teacher Status (QTS) through initial teacher training (ITT). There are several ITT routes.

There are a small number of degrees in secondary science education, leading to QTS.

Most people take a science degree, followed by a PGCE in science or one of the separate science subjects. Courses are usually one-year full-time. To apply for a PGCE, you need to go through UCAS Teacher Training.

There are also employment-based training schemes: you'll train while working in a school. The expectation is that you'd go on to work in the school or group of schools where you trained, although there's no guarantee of employment at the end of your training. Please see under 'Employment-based training' for further information

You can also train in a school after your degree through school-centred initial teacher training (SCITT). These programmes are delivered by groups of neighbouring schools and colleges and often aim to meet local teaching needs.

Teach First is a charity that recruits and supports graduates to teach in schools in low-income communities in a number of UK regions. The programme takes two years to complete.

If you're not very confident about your subject knowledge or don't have the qualifications to begin postgraduate training straight away, you might be able to take a Subject Knowledge Enhancement (SKE) course first. Your course provider will assess whether you need to increase or refresh your knowledge. There are SKE courses in physics and chemistry.

Training

Once employed, newly qualified teachers (NQTs) must complete a three-term induction period, usually within a single school year.

Progression

There are opportunities for teachers to move into teacher training, advisory work, educational research or schools inspection.

Teachers can become heads of department, heads of year, or co-ordinators of special educational needs or careers guidance.

Rehabilitation of Offenders

This career is an exception to the Rehabilitation of Offenders Act 1974. This means that you must supply information to an employer about any spent or unspent convictions, cautions, reprimands or warnings, if they ask you to.

This is different from other careers, where you only have to reveal information on unspent convictions if you are asked to.

Qualifications

In Wales, all candidates for teacher training need to have Grade B in English Language and Maths. Students training to teach through the medium of Welsh may also need a GCSE grade C or above in Welsh (first language).

If you don't have the GCSEs that are usually needed, you might be able to sit a pre-entry equivalency test; you should contact individual course providers to discuss your situation before making your application.

To achieve Qualified Teacher Status, student teachers need to pass tests in English and maths. Welsh medium applicants will also need to complete a literacy test in Welsh.

For entry to a degree in a science subject, the usual minimum requirement is:

- 2/3 A levels, including at least one science subject (the subjects you'll need will depend on which area of science you want to study).
- GCSEs at grade C and above in your A level subjects.
- A further 2/3 GCSEs at grade C and above, including English and Maths.

Alternatives to separate science GCSEs (Biology, Chemistry and Physics) are:

- Science and Additional Science, or
- Science and Additional Applied Science.

You might also need A level Maths, often depending on the degree subject. For example, you will usually need A level Maths to do a physics degree. You should check prospectuses carefully to check which, and how many, science/maths subjects you need.

Alternatives to A levels include:

- Edexcel (BTEC) level 3 Nationals
- The International Baccalaureate Diploma.

However, course requirements vary, so please check prospectuses carefully.

It can be possible to enter postgraduate teacher training without a directly relevant degree. For example, universities might suggest that you increase your knowledge through a subject knowledge enhancement (SKE) course. There are SKE courses in physics and chemistry.

Some universities accept the Welsh Baccalaureate as equivalent to 1 A-level.

Adult Opportunities

Skills/experience

To enter teacher training courses, you'll usually need to have at least observed some classes in a mainstream secondary school. For some courses, you'll need paid or voluntary work experience in a secondary classroom, or other relevant experience with young people.

Courses

If you don't have the qualifications you need to enter a degree course, you might be able to start one after completing a college or university Access course, such as Access to Science. You don't usually need any qualifications to start an Access course, although you should check this with the course provider.

Distance learning

Some PGCE courses are available on a flexible learning basis. For example, you might be able to train by distance learning in combination with classroom-based teaching practice and campus study.

Employment-based training

Instead of going to university to do a PGCE, graduates can follow an employment-based route. This is where you train in a school. Employment-based routes include School Direct, school-centred initial teacher training (SCITT) the scheme offered by Teach First, and in Wales, through the Graduate Teacher Programme (GTP) but places are limited. For more information, please see 'Entry Routes and Training'.

Funding

For funding information, see the GOV.UK website, or Student Finance Wales if living in Wales.

Further Information

Contacts

- **UCAS Teacher Training**
Website: www.ucas.com/how-it-all-works/teacher-training
- **Teach First**
Website: www.teachfirst.org.uk
- **Department of Education Northern Ireland**
Northern Ireland Enquiries
Email: DE.DEWebMail@education-ni.gov.uk
Website: www.deni.gov.uk
- **General Teaching Council for Scotland (GTC Scotland)**
Scottish enquiries
Email: gtcs@gtcs.org.uk
Website: www.gtcs.org.uk
- **GOV.UK**
UK government services and information
Website: www.gov.uk
- **Teach in Scotland**
Scottish enquiries
Email: teaching@infoscotland.com
Website: www.teachinginscotland.com
- **Coleg Cymraeg Cenedlaethol**
Information on Higher Education courses and scholarships through the medium of Welsh
Email: gwybodaeth@colegcymraeg.ac.uk
Website: www.colegcymraeg.ac.uk
- **Welsh Government Education and Skills Department**
Email: customerhelp@gov.wales

Website: www.wales.gov.uk/topics/educationandskills/?lang=en

- **Student Finance Wales**

Welsh enquiries

Tel: 0845 6028845

Website: www.studentfinancewales.co.uk

Related Careers

- Nursery Nurse
- NVQ Assessor
- School Lunchtime Supervisor
- History Teacher
- Geography Teacher
- Modern Foreign Languages Teacher
- Teaching Assistant
- Music Teacher
- English Teacher
- Maths Teacher
- Education Welfare Officer
- Playworker
- Special Educational Needs Teacher
- Art and Design Teacher
- Design and Technology Teacher
- Early Years Teacher
- Physical Education Teacher
- Primary Teacher
- Secondary Teacher
- Training Manager
- Higher Education (HE) Lecturer
- School Business Manager
- Teacher of English as a Foreign Language
- Lecturer
- Teacher
- Welsh Teacher
- Nursery Assistant
- Headteacher