

## Article from April 2006 EIS

### **RECOGNISING PROFESSIONAL EXPERTISE: an invitation to apply to become a Chartered Science Teacher**

Science teaching is a demanding and complex process. Skilled science teachers, knowledgeable in pedagogy, science education and science deserve professional recognition. The ASE has worked in collaboration with the Science Council to create a mechanism which recognises and celebrates high quality science teachers and science education professionals through the award of Chartered Science Teacher (CSciTeach) status.

The introduction of the CSciTeach designation provides for the first time an opportunity for individuals to gain an award which accredits and values their all round expertise in science education and their commitment to updating the knowledge, skills and understanding they require. CSciTeach, as our current President, Professor Sir Gareth Roberts, noted:

*"... will provide science teachers, working in a wide range of settings, with a professional status recognising and rewarding their high quality expertise which is in turn underpinned by a commitment to CPD. Ultimately the main beneficiaries, however, will be our pupils and students."* (Education in Science Feb 2005)

#### **What is CSciTeach?**

CSciTeach, or Chartered Science Teacher, is a chartered designation in line with other awards, such as Chartered Scientist, Chartered Engineer, Chartered Accountant or Chartered Surveyor, that recognises the professional standing of an individual working in that field. The awards are made under powers granted by the Privy Council to particular organisations and incorporated in their Royal Charters. As a chartered designation CSciTeach recognises the unique and demanding combination of skills, knowledge, understanding and expertise that are required by individuals involved in practicing and advancing science teaching and learning.

Chartered Science Teachers, therefore, are professionals, teachers and educators, who are practicing and/or advancing science teaching and learning and for whom knowledge and skills in pedagogy, science education and science are essential elements in their role. They will have a critical awareness of current issues which is informed by developments in educational practice, pedagogy and scientific endeavour.

#### **Who awards CSciTeach?**

ASE awards CSciTeach. Under the terms of its Royal Charter, ASE, as a licensed body of the Science Council, is empowered to award CSciTeach to individuals who meet the requirements and to maintain a register of holders of the designation. This register in turn is a special section of the register of Chartered Scientists (CSci) which underpins the quality and equivalence of the awards. In other words it means that CSciTeach will be widely accepted alongside other chartered qualifications.

#### **What are the benefits of CSciTeach?**

As CSciTeach is in its infancy the benefits relate mainly to raising the overall profile of science teaching and learning and, for individuals, to providing recognition of their expertise and commitment. In time, as with other chartered designations, it is hoped that CSciTeach will provide access to more tangible benefits and rewards. Currently CSciTeach aims to:

- promote high quality science teaching and learning;
- recognise high and improving professional expertise;
- reflect best effective practice in science education;

- provide evidence of a commitment to continuing professional development.

### **What are the requirements for CSciTeach?**

To be awarded CSciTeach individuals must be members of ASE and be active in science education in a capacity that involves them in science teaching and learning in the UK or elsewhere. This includes teachers in schools, colleges and universities, those working in other settings (e.g. science centres or museums) as well as advisers, inspectors and consultants. Other individuals may be eligible and should consider applying if they feel they can meet the requirements. Pre-application advice is available.

By providing evidence through a combination of recognised qualifications, acknowledged achievements and other supporting material, each candidate qualifying for CSciTeach should:

- meet the qualifying educational standard of an M-level qualification or equivalent in pedagogy / education together with an honours level qualification in which there is a minimum of 50% of course content in science;
- have a minimum of four years experience of teaching science of which two should involve an appropriate level of responsibility (for most candidates this will be after achieving qualified teacher status);
- have engaged in, and reflected on, appropriate professional development during the qualifying period;
- work with colleagues and others in developing science education beyond the classroom or laboratory;
- be able to demonstrate their commitment to continually maintaining and updating their professional expertise and competence;
- work within the professional code of conduct for Chartered Science Teachers;
- be able to provide evidence of their professional expertise and competence in relation to, Professional Knowledge and Understanding, Professional Practice, Professional Attributes.

### **What is meant by Professional Knowledge, Professional Practice and Professional Attributes?**

Science teaching is a complex process that involves a wide range of activities and processes which can vary in differing contexts and circumstances as well as stages in a career. For CSciTeach these are defined in terms of three interrelated elements.

- 1) ***Professional Knowledge and Understanding*** which provides the underpinning base for practice and includes:
  - a) a broad and up to date knowledge and understanding of science and science curricula related to the nature of science teaching;
  - b) a broad and up to date knowledge and understanding of teaching, learning and assessment specifically related to science education;
  - c) a knowledge of students and understanding of influences on them including developmental, cultural, gender and other contextual factors that might impact on their learning in science;

- 2) **Professional Practice** which relates specifically to the development of effective teaching and learning strategies, including those which contribute to enhancing the quality of the educational experience of students and to the wider professional context of science education. This includes:
  - a) planning coherent programmes of teaching and learning in science that are intellectually challenging, emotionally supportive and physically safe
  - b) engaging students in generating, constructing and testing scientific knowledge by collecting, analysing and evaluating appropriate evidence while at the same time looking for and implementing ways of extending students' understanding of major ideas of science;
  - c) developing students' confidence and ability to use scientific knowledge and processes to understand the world around them and make informed decisions through using a wide variety of strategies, coherent with learning goals, to monitor and assess students' learning and provide effective feedback.
  
- 3) **Professional Attributes** which are the overarching principles that characterise professional autonomy and relate to self-evaluation, collegial activity, personal responsibility and leadership. These include:
  - a) analysing, evaluating and refining teaching to improve student learning;
  - b) working collegially with colleagues and the wider professional communities to improve the quality and effectiveness of science education
  - c) contributing to, and taking responsibility for, leadership, management and development of science teaching;

### **How might the evidence be presented?**

There is no set way of presenting the evidence for CSciTeach. The application form requires candidates to provide a written summary on each of the three elements and be able to substantiate these with appropriate material. It might be anticipated, therefore, that candidates maintain a portfolio of evidence that could contain a CPD diary, examples of articles or papers, leadership and development of others, examples of analysis of particular aspects of practice. It is important that the evidence and summaries demonstrate the ability to reflect on experiences and the ways in which they have influenced subsequent thinking and practice.

### **How do I apply for CSciTeach?**

An application pack with detailed notes for guidance is available from ASE Headquarters. The application form with supporting evidence should be completed and returned to ASE at CSciTeach, College Lane, Hatfield Herts AL10 9AA. The application will then be considered by a panel of assessors and a recommendation made to the CSciTeach Registration Board which will make the final decision. The process will take a little while because it will be necessary to check the information and verify qualifications as part of the quality assurance process. Candidates will then be notified of the outcome.

### **How much will it cost?**

Unfortunately there are administration and registration costs attached to making the awards and fees will be chargeable for the initial application (a single payment) and for maintaining the registration (an annual charge). This is going to be £50 and £20 ref fees in year 2006

**Will I have to renew CSciTeach?**

Yes. Once CSciTeach registration has been achieved, Chartered Science Teachers have an obligation to maintain their professional competence and are required to revalidate their registration every five years. This provides further assurance that the award is current and that holders are developing and updating their expertise.

**So why not apply for CSciTeach now?**

CSciTeach is a designation to which teachers of science can aspire and demonstrate their achievements and ongoing commitment to their professional development. It provides an opportunity for acknowledging the quality of their science teaching through peer recognition and raising the profile of the profession as a whole. CSciTeach is available now so why not ask for more details and apply? If you need any further information, have any questions or wish to discuss possibilities contact ASE at CSciTeach, College Lane, Hatfield Herts AL10 9AA, Telephone 01707283000, email [CSciTeach@ase.org.uk](mailto:CSciTeach@ase.org.uk) .