

not experience a residential field trip, while nearly half of all A-level biology students will do no field work, with the possible exception of half a day's experience near their school<sup>4</sup>. Similar trends at all key stages and extending to universities' bioscience courses appear are leading to a shortfall in people with the practical skills needed to support even biodiversity-related careers and activities. So, secondary science fieldwork provision is declining in our schools despite the very clear educational, personal development and recruitment strengths that it offers, and at a time that UK science needs to be harnessing all the support it can muster.

Any reversal in the decline in science fieldwork will have to be led by teachers. The capacity and enthusiasm to teach science in the field will need to be increased and ensuring a high status for fieldwork in Initial Teacher Training (ITT) and the standards which underpin it will be the most effective way of equipping future teachers of science with competence, confidence and commitment to take their students into the 'outdoor classroom'. However, FSC and its partners believes that ITT is not working effectively enough to help produce sufficient numbers of science teachers to meet the modern day challenges of teaching fieldwork. Recently published evidence has shown that the quantity of fieldwork training and development within science ITT is highly variable: a significant proportion of providers offer no, or very little, training in fieldwork; and levels of fieldwork training during placements in schools are often unknown<sup>5</sup>. Furthermore, the Government currently holds limited evidence on how best to prepare teachers for fieldwork, has no measure of the status of fieldwork within ITT and "has made no assessment of whether the encouragement of fieldwork as a teaching method is adequately supported by teacher training courses<sup>6</sup>".

### **The Solution**

The FSC is, therefore, delighted that the Government has asked the Training and Development Agency for Schools (TDA) to review the Qualified Teacher Status standards and is looking forward to working with the TDA to strengthen them in order to provide an incentive for fieldwork to be used as a teaching method.

**In order to help in securing the future for science fieldwork we would specifically like to see the Government introduce minimum QTS standards for ITT fieldwork training and development. These will ensure that all ITT students will have fieldwork training.**

**Specifically, the government must ensure that trainee teachers:**

- 1. Attend, and have an active role, in a school visit as part of their training.**
- 2. Plan and lead a lesson with pupils outside the classroom as part of their training.**
- 3. Receive at least 4 hours of training in out of classroom learning as part of their ITT.**

### **Summary and Conclusions**

We believe that if the recommendations contained in the briefing were adopted by the Government it would build knowledge, skills and confidence to a level whereby newly-qualified teachers would feel more able to lead practical activities outside the classroom or laboratory, and make full use of the subject pedagogy associated with the effective teaching of science. We are committed towards contributing to the Government's policy goals of increasing the uptake of STEM students. As a result, we would greatly appreciate your support in communicating these issues to the Government and the responsible Minister.

If you would be willing to assist us and require any further information, please contact Dr Steve Tilling, Field Studies Council, Preston Montford, Montford Bridge, Shrewsbury, by telephone 01743 852106, or by email: [steve@field-studies-council.org](mailto:steve@field-studies-council.org)

<sup>4</sup> School Science Review, 2003

<sup>5</sup> School Science Review 2009

<sup>6</sup> House of Commons Hansard Written Answers, 22 January 2009