



***'i – Journey'* Paid Non-local Study Leave Scheme for Secondary School Teachers 2017/18**

Programme A(3)* – STEM Education

Mid April – Early June 2018 (Tentative)

Exeter, United Kingdom (UK)

Programme Brief

Background

In the Programme for International Student Assessment (PISA) 2015, the UK performed above the Organisation for Economic Co-operation and Development (OECD) average in Science, with a higher percentage of students being top performers when compared to Hong Kong. Students in the UK also showed a stronger support in scientific methods of enquiry and demonstrated greater self-efficacy in science. Back in 2009, Department of Education (DfE) published the *Report of the STEM Review* and laid down the initiatives in promoting STEM education. The National STEM Learning Centre has become the leading hub to provide STEM learning facilities, outreach services and training to schools and other groups working with young people across the UK.

This Exeter-based study programme is expected to provide participants with knowledge of relevant theories, research and latest policies and practices in the UK, and, more importantly, offer insight into how the effective measures can be adapted in the Hong Kong context. For example, participants will explore how the pedagogical foci of scientific creativity, problem-based learning and the use of educational technology can shed light on the corresponding emphases of promoting STEM education in the Ongoing Renewal of the School Curriculum.

Aim

The Programme aims to enable participants to

- (a) acquire knowledge of the local education system and its key features; as well as the focus of STEM education in the UK;
- (b) enhance their professional capacity in implementing and promoting STEM education holistically and effectively at school level;
- (c) integrate structured learning and attachment experience to become reflective practitioners; and
- (d) develop teacher leadership through sharing learning outcome in Professional Learning Communities (PLCs) and disseminating good practice, with a view to strengthening cross-curricular and/or cross-sector collaboration among teachers and the partnership with community stakeholders.

Quota

The quota for the Programme (2017/18) is **15**.

* Programmes A(1) and A(2) were announced via EDBCM No. 134/2017 on 1 August 2017. Relevant details can be retrieved from EDB website: (<http://www.edb.gov.hk/i-Journey>)

Graduate School of Education, University of Exeter

Administered by EDB, the Programme will be conducted by Graduate School of Education (GSE), University of Exeter. As a member of the Russell Group of leading research-intensive universities, Exeter is ranked 6th for internationally excellent research in education; and 21st for education and training in the 2017 QS ranking. The Graduate School has over 165 years of experience in education. A core team from within the GSE runs the University’s Centre for Science, Mathematics and Technology Education and collaborates with a number of national and international organisations to explore fundamental issues such as the nature of science, and the implications of these socio-scientific issues for enhancing science education.

Programme Content (Mid April – Early June 2018) [Tentative]

Week 1	Pre-trip (Hong Kong)	
Overseas Experience (Exeter, United Kingdom)		
Week 2	<p>Structured Courses</p> <ul style="list-style-type: none"> ● The English National Curriculum & National policies in STEM education ● Problem-based Learning in STEM ● STEM to STEAM – Creativity in STEAM Pedagogy ● Leadership of Learning: Change & Improvement ● Practitioner Research: Lesson Study 	<p>Other Learning Activities:</p> <ul style="list-style-type: none"> ● Orientation to English schools ● Individual consultation with mentors
Weeks 3-4	<p>Structured Courses</p> <ul style="list-style-type: none"> ● Use of Educational Technology in STEM ● Practitioner Research: Action Research <p>School Attachment (in 3 groups of 4 or 5)</p> <ul style="list-style-type: none"> ● English secondary schools from the University of Exeter’s partnership 	<p>Other Learning Activities:</p> <ul style="list-style-type: none"> ● Co-planning and co-teaching ● Post-observation reflection ● Individual consultation with mentors
Week 5	<p>Structured Courses</p> <ul style="list-style-type: none"> ● ‘Virtual Labs’ – technology supported STEM education ● Practitioner Research: looking ahead – group discussion and planning ● Reflection and Evaluation workshop ● Place-based STEM education 	<p>Other Learning Activities:</p> <ul style="list-style-type: none"> ● HK:UK STEM ‘Teachmeet’: sharing good practice ● Self-directed learning ● Visit to an informal STEM education venue (Tentative location: the <i>Eden Project</i> in Cornwall)
Weeks 6-7	Post-trip (Hong Kong)	



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(Image source: <http://socialsciences.exeter.ac.uk/media/universityofexeter/collegeofsocialsciencesandinternationalstudies/education/featureboxes/218x115stlukesrocus.jpg>)