

## Part B Project Summary

### A Summary of the Project

**Project Title:** The Development of Student-Oriented Teaching and Learning Resources in Science and a Science Enrichment Programme for Secondary 3-4 Students

**Project Number:** 2007/0351

**Name of Organisation:** Faculty of Science, The Chinese University of Hong Kong

**(1) Goals:**

- (i) contribute our expertise and strengths in nurturing gifted students;
- (ii) support the development of metacognition-focused and student-oriented learning;
- (iii) enlarge the pool of talented youngsters who could appreciate the importance and the power of science.

**Objectives:**

- (i) build on the success of a previously funded QEF project to implement a 3-stage science enrichment programme to a group of S3-4 students;
- (ii) organise a series of professional development workshops for teachers;
- (iii) design a set of instruments with a focus on exploring higher order thinking capability and creativity for the early identification of students who are exceptionally gifted in science;
- (iv) develop and disseminate a set of teaching and learning resources in science that foster a cultural change towards student-oriented learning.

**(2) Targets:** Secondary 3-4 students gifted in science, and teachers in science disciplines.

**Expected number of direct beneficiaries:** Enrichment programme: 300 students; teacher development workshops: about 200 teachers; symposium: about 500 participants; identification instruments: gifted education sector; teaching and learning resource: complimentary copies will be sent to all secondary schools.

**(3) Implementation Plan:**

- (i) **Duration:** 30 months, from September 2008 to February 2011
- (ii) **Process/Schedule:** (a) The enrichment programme will be in three phases. Phase 1: Feb 2009 to May 2009; Phase 2: July 2009 to December 2009; Phase 3: Feb 2010 to May 2010. (b) Teacher development workshops: at least 10 organised in parallel to the enrichment programme. (c) Symposium: May 2010. (d) A set of instrument for the identification of gifted students: Nov 2008 to May 2009. (e) A set of teaching and learning resources: May 2009 to Feb 2011.
- (iii) **Collaboration with other parties/partners:** Gifted Section, Mathematics Section and Science Education Section, Curriculum Development Institute, Education Bureau.

**(4) Products:**

- (i) **Deliverables/outcomes:** A three-phase Enrichment Programme; at least 10 teacher development workshops; a symposium; a set of instruments for the identification of students exceptionally-gifted in science; a set of teaching and learning resources to be published in 4 books (2 for teachers and 2 for students, 2 in Chinese and 2 in English).
- (ii) **Dissemination of deliverables/outcomes:** By student and teacher participants; by workshops and website, and complimentary books to be sent to every secondary school.
- (iii) **Commercialisation potential of deliverables/outcomes:** By utilising the outputs of the project and replicating the model of the Enrichment Programme, similar enrichment programmes can be replicated and offered to gifted students on an annual basis. The books to be published can be adopted by secondary schools as text or reference books.

**(5) Budget:** Total: \$3,500,000. Staff cost: \$586,000; General Expenses: \$113,000; Equipment: \$40,000; Services: \$2,761,000.

**(6) Evaluation Model:** Qualitative type method of focus group and personal interviews as well as quantitative type method of questionnaire will be used to collect feedback for all activities from various sources. About 10 discipline-specific self-reflection reports will be produced shortly after the completion of the activities to trigger timely improvement actions, and at least 5 overall self-reflection reports reviewing the entire programme will be produced.