

Collaborative Research & Development (“Seed”) Project for 2019/20

Section	Mathematics Education Section
Title of the Project	Promotion of STEM Education by Infusing Mathematical Modelling into Secondary Mathematics
Class Level (Please check and ✓ the appropriate box.)	<input type="checkbox"/> Kindergarten <input type="checkbox"/> Primary <input checked="" type="checkbox"/> Secondary <input type="checkbox"/> Primary and Secondary Please specify levels: <u> S1 - 6 </u>
Brief Description (e.g. Objectives, expected outcomes)	<p>The project aims at exploring and developing effective strategies for the learning and teaching of mathematical modelling through various topics of secondary Mathematics to promote STEM education. The project investigates how to infuse the concepts and techniques in mathematical modelling to enhance students’ ability to integrate and apply mathematical knowledge and skills to STEM-related real-life scenarios, as well as to work out creative solutions.</p> <p>The objectives of the project are:</p> <ul style="list-style-type: none"> ● to explore and develop effective strategies for the learning and teaching of mathematical modelling through various topics in secondary Mathematics ● to promote STEM education by infusing activities of mathematical modelling with the use of the lesson time allocated to the Further Learning Unit in secondary Mathematics curriculum ● to try out and refine various learning and teaching activities ● to build up and support the development of resources in STEM education ● to share the experiences of the participating schools and disseminate the project results through the professional development programmes for teachers
Key Emphases (Please check and ✓ the appropriate box(es). You can choose more than one box.)	<input checked="" type="checkbox"/> Curriculum planning, learning, teaching and assessment strategies <input checked="" type="checkbox"/> Development of generic skills in an integrative approach through learning activities <input type="checkbox"/> Four key tasks (project learning, reading to learn, moral and civic education, and information technology for interactive learning) <input checked="" type="checkbox"/> Major Renewed Emphases (strengthening values education (including moral and civic education, and Basic Law education), reinforcing the learning of Chinese history and Chinese culture, extending “Reading to Learn” to “Language across the Curriculum”, promoting STEM education and ITE, fostering an entrepreneurial spirit, diversifying life-wide learning experiences (including those for VPET), stepping up gifted education, enhancing the learning and teaching of Chinese as a second language) <input type="checkbox"/> Others, please specify* : _____
Deliverables (Please check and ✓ the	<input checked="" type="checkbox"/> Exemplars to be used for curriculum documents <input type="checkbox"/> Learning & teaching packages, self-learning packages for teachers

appropriate box(es). You can choose more than one box.)	<input checked="" type="checkbox"/> Workshops and seminars <input type="checkbox"/> Others (please specify) : _____	
Duration and Nature of the Project	From <u>Sept</u> mm <u>2019</u> yy to <u>Aug</u> mm <u>2020</u> yy <input checked="" type="checkbox"/> New <input type="checkbox"/> Ongoing (started from _____ mm _____ yy)	
Name of Advisor(s) / Consultant(s) to be invited	Not Applicable	
Officer i/c	Name: Mr LEE Kin-sum	Post: CDO(Ma)4
	Tel No.: 2153 7456	Fax No.: 3426 9265

Please use a separate sheet for each project.

* e.g. catering for learner diversity, experiential learning, self-directed learning, whole-person development, interdisciplinary learning, etc.