

Sir Ellis Kadoorie Secondary School (West Kowloon)
Use of Promotion of STEM Education Grant (2018/2019)

Programme Plan

School Major Concerns:

Theme: Multiple Pathways to Glory

1. Excelling Effective Learning and Teaching
2. Excelling Students' Core Values and Potential
3. Excelling Teachers' Professional Development

I. Achievement Targets (AT)

1. To arouse the interest of students in learning science, technology, engineering and mathematics through hands-on projects.
2. To equip students with the ability to take holistic approach to solve problems by integrating different disciplines.
3. To allow students to acquire basic programming knowledge.
4. To enhance students' environmental awareness.
5. To strengthen students' ability to perfect and embellish the end products.

II. Strategies / Tasks to achieve targets

AT	Strategies / Tasks	Time Scale	Success Criteria	Method of Evaluation	People Responsible	Resource Required (\$)
1, 2	<p>To study some concepts in science through projects in which mathematical tools, engineering & aesthetic elements are involved.</p> <ol style="list-style-type: none"> a. 3D printing projects b. Making Water Rocket c. Making science projects such as Burglar Alarm, Pin-hole Camera, Simple Projector, and electrical Matching Board. 	6 lessons each	<ul style="list-style-type: none"> • At least 70% of the S. 2 students found STEM lessons rewarding. • At least 2 STEM-related workshops or projects are implemented for target students in one academic year. 	Questionnaires / Teachers' observation	STEM Education Teachers	<ol style="list-style-type: none"> a. 40 000 b. 2 000 c. 0 (Materials are ready)

AT	Strategies / Tasks	Time Scale	Success Criteria	Method of Evaluation	People Responsible	Resource Required (\$)
1, 2, 3	To use micro-computers or electronic controllers as means for learning programming. a. Micro-bit Board tasks & programming b. Arduino Board tasks & programming c. Lego Robot assembling & Coding	6 lessons each	<ul style="list-style-type: none"> At least 70% of the S. 2 students found STEM lessons rewarding. At least 2 STEM-related workshops or projects are implemented for target students in one academic year. 			a. 15 000 b. 15 000 c. 8 000
1, 4	To assemble model cars which use renewable energy. a. Fan driven Model Cars with super capacitor as energy storage b. Solar Cars	6 lessons each				a. 4 000 b. 2 000
1, 5	To do hands-on projects, product finishing or artwork. Using paper cutting machine	6 lessons				12 000
	Other expenditures a. Science Club Activities b. Hand Tools c. Competition Expenses d. Reference Books e. Consumables					a. 3 000 b. 2 500 c. 2 500 d. 1 500 e. 1 492.1

Estimated Total: \$ 108 992.1