

Quality Education Fund Thematic Network (QTN)

Science in ACTION: Facilitating STEM Education in Primary/Secondary Schools

1. Support Service Co-ordinator

Man Kwan Pak Kau College

2. Areas of Collaboration

Curriculum development and learning and teaching of STEM education in primary and secondary schools

3. Foci of Development

QTN co-ordinator will support teachers of participating schools to promote and develop STEM education at schools. The foci of development are as follows:

- To promote STEM education to primary and secondary schools by using science package, micro:bit controller and sensors
- To set up an online platform for the Remote Laboratory
- To run a 3-year plan and establish a STEM education activity exchange platform based on the “Science Education Key Learning Area Curriculum Guide (P1-S6)” for teachers and to bridge STEM education between primary and secondary schools
- To design and create products for the community and address the needs of the under-privileged

4. Modes of Exchange and Collaboration

On-site support and network activities: QTN co-ordinator will support and collaborate with teachers of participating schools regularly for one school year through the followings:

- workshops
- curriculum development meetings
- inter-school lesson co-planning
- school-based lesson co-planning
- lesson observation and evaluation
- reflection meeting and dissemination seminar

5. Expectations on Participating Schools

To make good use of the support services, participating schools are expected to:

- develop a school-based science curriculum (4-6 lessons) including lesson plans and related activities with the use of controller and sensors
- carry out an Internet of Things (IoT) science project
 - Primary school: a smart weather monitoring system and a maglev model (Primary 4), automatic mist spray hand sanitizing dispenser (Primary 5), a biological smart outdoor housing system (Primary 6)
 - Secondary school: a smart environment monitoring system and a water purifying and testing system (Secondary1), a smart house for the elderly (Secondary 2)
- co-create a lesson exemplar for related activities

6. Points to Note

- The support services normally last for one year
- Active engagement of participating schools throughout the support services is expected
- All participating schools should appoint panel heads / deputy panel heads to be responsible for the liaison of QTN activities
- At least one representative should attend each QTN activity
- Participating schools are required to attend two Executive Committee (EC) meetings and an annual dissemination seminar to share the good practices derived and challenges faced

7. Enquiries

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