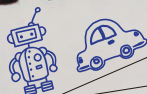


## "School Sharing" STEM Education in Primary General Studies



### School Profile

Tseung Kwan O Catholic Primary School (TKOCPS) aims to provide a diversity of experiences and activities for students to develop their abilities, skills and aptitudes for becoming life-long learners and achievers. The school is using Educational Publishing House's **General Studies** coursebook series and STEM support service in their General Studies lessons.



Headmaster of TKOCPS Mr Ma Yat Lung  
(second from the left) and his team.

In recent years, STEM education has become a global trend. It is vital to students' future because it equips them with the necessary skills and knowledge to succeed in the technological age. Therefore, STEM education has been promoted among schools in a holistic and coherent manner, through enriching students' learning activities, providing suitable learning and teaching resources, and enhancing teacher professional development.



We are pleased to have Mr Hon Man Tak from Tseung Kwan O Catholic Primary School to share with us the aim of STEM education and how his school copes with the difficulties in its implementation.

## Experience of implementing STEM education

Mr Hon: To maintain the international competitiveness of Hong Kong students, promoting STEM education is extremely important. STEM education is an interdisciplinary and applied approach to learning which integrates Science, Technology, Engineering and Mathematics into all subjects. Taking my school as an example, the implementation of STEM education requires the involvement of many teachers of different subjects such as Science, Computer Studies, Mathematics, General Studies, etc. We have spent a lot of time reviewing the cross-curricular framework and planning lessons together when developing our school-based curriculum, so as to align the approach with subject specific learning objectives and fulfil the needs of individual students.




Mr Hon: The Science Activity Day was organised for students in the past. In response to STEM education, we have redeveloped it into STEM Activity Day, which is co-organised by teachers of different subjects. The activity day aims to stimulate students' interest in learning, enhance their capacity to innovate, and develop their creativity and problem-solving skills through hands-on experience.

## Useful STEM resources to aid teaching

Mr Hon: We appreciate that **Educational Publishing House (EPH)** provides a variety of resources to support our STEM Activity Day. They provide a **detailed teaching plan** showing a clear overview of procedures and important points. In addition, resources such as instruction manuals, activity worksheets, PowerPoint slides, material lists and assessment forms, etc. are also available to facilitate our lesson preparation. Teachers are then able to concentrate on guiding students on-site and catering for their learning differences.



Students can turn their ideas into reality. 

## Enhancing the flexibility of teaching and learning effectiveness

Mr Hon: Besides providing useful STEM resources, EPH also provides comprehensive and flexible support. They can arrange **experienced tutors** to **conduct hands-on workshops** which allow teachers to fully understand the procedures of the activities and ways of guiding students. With the help of the tutors, the abundant teaching and learning resources they provide can be fully utilised to enhance the flexibility of teaching and reduce teachers' workload.



A STEM workshop for students can be provided by EPH's professional tutor.

## Problem-based learning approach fosters self-directed learning

Mr Hon: **A wide range of STEM resources developed by EPH** is designed with a **problem-based learning approach** that can guide students to apply their knowledge to everyday situations, and to investigate and discover practical solutions. Students can solve problems through research, discussion, investigation, invention, experiment, etc. This approach can lead to a positive impact on student learning and motivation. They become self-directed and active investigators as well as problem-solvers.

In the coming future, we will keep on organising more schoolwide STEM activities and other extra-curricular activities. Students will have opportunities to learn app design and other skills related to Information Technology. We also want to let our students participate in competitions so that they can broaden their horizons.



Through discussion, collaboration and active exploration, students learn to integrate and apply knowledge to solve everyday problems.



Different types of hands-on STEM activities help students define problems and find solutions on their own.



Deputy Headmaster Mr Hon Man Tak (far left) and Headmaster Mr Ma Yat Lung (far right) are happy to see students enjoying the STEM Activity Day.

'I am sure that more learning opportunities can be created for students through participating in local and international competitions and projects,' said Mr Hon.



# STEM Activities

## School Support Proposal

by Educational Publishing House

### STEM Curriculum Design

Well-designed, comprehensive and systematic STEM activities are available to help students develop and enhance their experimental and research skills.

### School-based Professional Training

Experienced tutors provide teachers with professional training on all of the STEM activities. Hands-on workshops can help teachers understand the procedures and rundown of the activities, as well as ways of guiding students in lessons.

### Abundant Teaching & Learning Resources

Simple, user-friendly teaching and learning resources are provided for teachers and students.

### Material Packs

Ready-to-use material packs are provided for all of the activities to reduce teachers' workload in searching for various materials.

### On-site Tutors for Student Workshops

Experienced tutors can be arranged to lead and conduct STEM workshops for students on-site.



**Educational Publishing House**

14/F, Tsuen Wan Industrial Centre, 220-248 Texaco Road, Tsuen Wan, N.T., Hong Kong

Tel : (852) 2942 9338 Fax : (852) 2408 8510

Email : ephhk@popularworld.com Website : <http://www.ephhk.com>



<http://newgs.ephhk.com>



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