

Life-wide Learning: Mathematics Education

Curriculum Aims

To develop students' ability to conceptualise inquire, reason, communicate, formulate and solve problems mathematically; and their capability of appreciating the aesthetic nature and cultural aspects of mathematics.

Learning and Teaching

- Arranging diversified learning activities at different levels, such as hands-on exploratory activities, project work, mathematics reading activities, and activities that based on a topic in Mathematics to integrate relevant learning elements from other KLAs
- Incorporating the use of information technology for interactive learning and self-directed learning
- Adopting different strategies to cater for learner diversity, such as adapting the Mathematics curriculum and using the curriculum space created flexibly for consolidation and enrichment
- Assigning quality homework to consolidate learning, and discouraging mechanical drilling

Life-wide Learning

Learning may not be confined to the classroom. The provision of life-wide learning (LWL) opportunities enables students to learn mathematics in authentic contexts and gain learning experience which are more difficult to acquire in ordinary classroom settings. The choice of life-wide learning activities should be based on students' needs and school contexts.

At the senior secondary level, LWL can be effectively carried out through various kinds of experiential learning of the curriculum component of Other Learning Experience (OLE) organised by the school. Reflection on one's LWL experience and OLE can enhance students' deep learning and their reflective habit of mind as self-directed learners. These are essential for fostering students' whole-person development and lifelong learning.

Examples of LWL

There are many opportunities for students to learn mathematics through experiential learning outside the classroom, e.g.

- Conducting a real statistical survey for the student union election in the school;
- Inviting guest speakers or experts to deliver talks or run workshops on some interesting mathematics topics or real-life applications of mathematics, such as
- cryptography, history of mathematics, paper folding of polyhedron and mathematics games;
- Setting up a mathematics corner or a mathematics room for students to play mathematics games, investigate mathematics puzzles or construct 3-D figures; and
- Encouraging students to participate in a variety of mathematics competitions such as the following:

Competitions	Organising bodies
Mathematics Project Competition for Secondary	Mathematics Education Section, EDB
Mathematics Book Report Competition for Secondary Schools	Mathematics Education Section, EDB
Statistical Project Competition for Secondary School Students	Hong Kong Statistical Society and EDB
Statistics Creative-Writing Competition for Secondary School Students	Hong Kong Statistical Society and EDB
Hong Kong Mathematics Olympiad	Mathematics Education Section, EDB and Department of Mathematics and Information Technology, EdUHK
Hong Kong Mathematics Creative Problem Solving Competition for Primary Schools Hong Kong Mathematics Creative Problem Solving Competition for Secondary Schools	Gifted Education Section, EDB and Hong Kong Federation of Education Workers in collaboration with Hong Kong Aided Primary School Heads Association

Source from Mathematics Education Key Learning Area Curriculum Guide (Primary 1 - Secondary 6) (CDC 2017)