

Nowadays, development of pedagogy changes fast with advanced technology. Online interactive micro-modules are believed to be the future trend of learning. At the same time, this could enhance students' self-study in addition to traditional classroom teaching. With the support of Micro-Module Courseware Development Grant, we have finished FOUR intensive micro-modules, including "Rocks and Minerals Gallery", "Virtual Geological Field Trip (Hong Kong)", "Virtual Geological Field Trip (Taiwan)" and three KEEP courses.

(1) "Rocks and Minerals Galley" serves as a database that contains high quality photos of the rock and mineral samples in our unit's laboratory Science Center 331, with annotation. Students, as well as the general public, can access to the materials by visiting the website: <https://cuhkesscelearn.wixsite.com/home/rocks-minerals>. Together with the "Rocks and Minerals Gallery" as the teaching guide, students can gain more hands-on experience of the skills when they visit the laboratory.

(2) Virtual Geological Field Trip (Hong Kong) displays 32 educational videos of 5 geologically interesting destinations in Hong Kong.

(3) Virtual Geological Field Trip (Taiwan) displays 18 educational videos of Taiwan's geologically interesting destinations from the north to the south of the island.

(4) Three KEEP courses, namely "Petrology", "Volcanoes" and "HK Geology", are designed to enhance self-study. The contents of the KEEP courses align with the educational videos, Rocks and Minerals Gallery and ESSC programme courses. Students enrolling particular ESSC programme courses can log into the respective KEEP courses to test their understanding of related topics.

Beside, Kahoot QnA mini game and a Flipped Classroom are designed to facilitate learning and discussion both in and outside classroom.