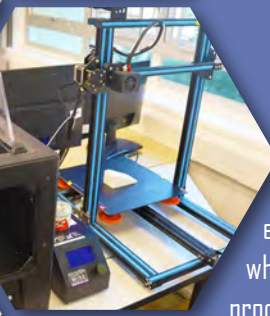# SCIENCE AND TECHNOLOGY EXPLORATION STUDIO

STEAM education, where STEAM is an acronym standing for Science, Technology, Engineering, Arts and Mathematics, focuses on the application of cross-curricular knowledge, as well as problem solving and innovation skills. In order to equip students to meet the challenges of the 21st century, Concordia applied for funding from the Quality Education Fund successfully to build the Science and Technology Exploration Studio.

STEAM

The design rationales for the Studio are innovation and leading-edge technology. It is equipped with smart devices, such as smart curtains, smart lockers, smart whiteboards, ceiling power supply systems and a smart electric gate. Through computer programming, students, as well as teachers, can control a variety of smart devices to experience the brand new learning experience of the new era. To align with our school curriculum, it features two themed rooms, namely the Innovative Learning Room and the Product Creation Room.

In the Innovative Learning Room, desks and chairs can be combined in different ways for classroom activities, and laptop computers are available to use. There is also a product display cabinet to showcase students' masterpieces so as to enhance students' learning achievements, not to mention for peer learning.

Besides, the Product Creation Room is equipped with 3D printers, laser cutting machines, smart workbenches and colouring and painting tools. Under teachers' guidance, students can use different tools and equipment to create products and put what they dream into practice.

THEME AND CONTENT OF SCHOOL-BASED STEAM CURRICULUM

STEAM

Reviewing the subject content of Science, Mathematics and Computing, our experienced teachers carefully design the STEAM curriculum for junior forms so that, in STEAM class, students can apply the knowledge they learn from the subjects. Taught with the theme-based approach, students learn basic 3D printing technology, laser cutting technology, basic microcomputer programming and a lot more. They can develop a new vision and talent, unlocking their unlimited creativity throughout the learning process.

Junior STEAM curriculum

In order to facilitate the development of STEAM, Concordia has implemented the STEAM curriculum, which incorporates graphic and 3D design, 3D printing technology, laser cutting technology and microcomputer programming. With theme-based instruction, not only can creativity be nurtured in our students, but they can also develop problem-solving skills through group discussions and practices, equipping themselves to embrace the ever-changing world.

Artificial Intelligence

Our senior STEAM curriculum places emphasis on cultivating students' creativity and problem-solving skills, enabling them to overcome a variety of challenges in lives through observation, data collection and applied technology. Learning advanced microcomputer programming and artificial intelligence, they will be able to enrich their knowledge to meet the challenges of the 21st century.

Senior STEAM curriculum