

Hydroponic Farm @ Heung Chung **(16 June 2021)**

Hydroponic Farm is a cross-curricular project aiming to promote STEM education at our school. It is co-organized by the STEM Education Team, Environmental Protection Team, Biology Department, Geography Department and Science Department. As a mean of introducing food production to students, the project provides an opportunity for students to apply what they have learnt in various disciplines to utilize modern agricultural production techniques on campus while instilling positive values and attitude into students.

Since early March, 20 students started off conducting research on hydroponics and set up a base for hydroponic farming on campus. They tried to plant lettuce, Chinese cabbage and Indian lettuce in early April. They worked in groups and utilized the STEM knowledge to produce customized nutrient solution, make analysis of different environmental conditions, and conduct a series of experiments in a bid to solve problems like high temperature, algae growth, pest control, and nutrition control. After trials and modifications, a bumper harvest was made in mid-May, gaining a yield per hectare, on average, higher than that in traditional soil-based farming.

Students demonstrated great teamwork and developed an inquisitive mind in scientific exploration. They took great initiative during the whole project, including collecting data on environmental evaluation and crop production, making observation and analysis, conducting research and modifying growth conditions of the plants. All participants had a deeper understanding of food production and learnt to be grateful and cherish the food and resources. Above, all, they truly understood the importance of environment protection.

Another 20 junior form students have been recruited and trained to participate in the second phase of the project, studying the relationship between crop production and application of science and artificial intelligence.



Students enjoy a fruitful experience and harvest at the Hydroponic Farm base



Principal YUEN listens to student's detailed introduction of hydroponic farming