

Technical and Vocational Students Showcase Creativity at the 11th National Senior High School Professional and Creative Project Competition

(Photo/Text: Li Wan-Ting, Division of Academic Senior High Education)

全國高級中等學校專業群科
110年專題及創意製作競賽
創意組
農業群
2-110-09-03

找「茶」罩得住 茶樹精油與口罩盒的創新研發

75%精油處理 第五天
對照組 第五天

1 抑菌
茶樹精油
天然抗菌劑

2 芳香
3 : 1

3 方便攜帶

4 環保

5 農產價值

6 商品化
效益 ↑
成本 ↓

7 功能plus

塑膠盒
密閉式空間

木片
精油擴香介質

The 2021 National Senior High School Professional and Creative Project Competition organized by K12EA offers participants two competition categories to sign up for, namely the Special Project Category and Creative Project Category. For both categories, the preliminaries were held in various schools, while the semi-finals were held in the 15 Centers for Study Area across the island before the finals were held in May. For the Special Project Category, 103 projects, 178 teachers, and 431 students received prizes in recognition of their hard work. For the Creative Project Category, 72 projects, 122 mentors, and 208 students were given awards. Through the competition, the students from technical and vocational high schools demonstrated their creativity and ability to apply what they have learned.

This year, the themes for the Special Project Category are "professionalism", "energy-saving measures", and "practical utility". As for the Creative Project Category, the projects revolve around the themes of "environmental protection", "integrating creativity into daily life", and "originality". One project that stood out in the Special Project Category was the "Drawing Boundaries – My Body, My Choice" project created by a group of Home Economics students. The project uses story-telling to impart the importance of body autonomy to students through engaging activities. The sex education teaching package includes teaching aids such as a poster of a human body and hand puppets. The poster shows both the front and the back of the human body with the genitalia marked out, while the hand puppets are used in the story-telling process with the purpose of teaching children and their parents the importance of respect for themselves and other people.

Meanwhile, in the Creative Project Category, the "Tea Tree Oil Infused Mask Storage Box" designed by a group of Agricultural students caught the eye of many judges. The idea for the project was conceived after the students noticed that people reuse masks during the COVID-19 pandemic. Seeing that many people are worried about the presence of pathogens or odors on reused masks, the students tapped on what they learned in school and the resources on hand to develop mask storage boxes that are handy and resistant to pathogens and odors. Furthermore, the team carried out experiments to prove that these boxes are more resistant to pathogens than

commercial UV light sterilizer boxes. Put simply, these tea tree oil infused storage boxes are easy to use, do not require electricity, are environmentally friendly, cost little to produce, and will not have issues related to drug resistance.

The "Automobile Facial Recognition Activation System", another outstanding project in the Creative Project Category, is the brainchild of a group of Mechanical students who were inspired by the facial recognition unlocking mechanism on mobile phones and the sign-in system commonly used in many companies. Their idea is to bring the convenience of these technologies to the world of automobiles to unlock and start vehicles. In this project, visual sensors and Arduino are used to perform basic facial recognition. If a user has activated the facial recognition function, they can then unlock the doors of their vehicle by just pushing a button, skipping the need for keys. At the same time, Arduino is used in the specially-designed circuit to trigger the relay, which will then enable the user to start the vehicle by pushing a special button.

K12EA pointed out that the National Senior High School Professional and Creative Project Competition is a great testimony to the excellent quality of technical and vocational education in Taiwan. At the same time, the competition also opens up channels of exchange between the schools and relevant industries that might lead to future collaborative projects. For more information about the winning works, please visit the website or Facebook page of the National Senior High School Professional and Creative Project Competition.