

## &lt;KAGAYAKI AWARD FINALISTS (6 Teams)&gt;(November 29 @ KX Building)

Note: It is in random order.

| Presentation No. | Team Name       | Team Leader's Name<br>(First name) | Team Leader's Name<br>(Last name) | Affiliation                                   | Field of Study<br>研究分野                        | Research Title<br>研究タイトル                                                                                                                                                       |
|------------------|-----------------|------------------------------------|-----------------------------------|-----------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| K1               | MicroNewtonics  | Torfun                             | Vorabunpot                        | The Newton Sixth Form School                  | Science                                       | Study of Microplastic Release from Polypropylene Thermoplastic Orthodontic Retainer : A Simulation Study Under Wear Conditions in Water                                        |
| K2               | Manta Ray by KS | Sirathree                          | Itsarapongpukdee                  | Kajonkietsuksa School                         | Engineering                                   | Real-Time Water Pollution Detection with Surface Drones and AI (Sentinel)                                                                                                      |
| K3               | SawSense        | Peam                               | Rattanaprapa                      | Montfort College Secondary Section            | Other: Data Science - Artificial intelligence | Development of AI Models for Acoustic Detection of Illegal Logging Activities                                                                                                  |
| K4               | One4Ever        | Natthawit                          | Am-in                             | Sainoi School                                 | Physics                                       | Eclipse of Eclipse                                                                                                                                                             |
| K5               | Kurobuta        | Phimonnat                          | Rangsaritweerachot                | Princess Chulabhorn Science High School Satun | Biology                                       | An Investigation of Ant Genera and Their Abundance on Experimental Meat Samples under Varying Environmental Conditions for Application in Postmortem Interval (PMI) Estimation |
| K6               | Shrimple        | Kawisara                           | Chumwas                           | Amatyakul School                              | Science                                       | Smart medical sutures                                                                                                                                                          |

## &lt;POSTER PRESENTATION (21 Teams)&gt;(November 29 @ KX Building)

Note: It is in random order.

| Presentation No. | Team Name<br>チーム名          | Team Leader's Name<br>チームリーダー名(Last name) | Affiliation                                                   | Field of Study<br>研究分野 | Research Title<br>研究タイトル                                                                                                                                                                                       |
|------------------|----------------------------|-------------------------------------------|---------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P1               | VermiLab                   |                                           | Phanatpittayakarn School                                      | Biology                | Effective development of earthworm manure for sustainable agriculture                                                                                                                                          |
| P2               | TAIYO                      |                                           | Samsenwittayalai School                                       | Science                | Smart Insect Repellent System using AI Detection and Ultrasonic Control Powered by Solar Energy                                                                                                                |
| P3               | Detective C(on)an cer      |                                           | The Essence School                                            | Biology                | AI Model to Predict Lung Cancer Risk Factors from Living Environment, Genetic and Lifestyle Behaviors                                                                                                          |
| P4               | CatapPlus+                 |                                           | Bangkok Christian College                                     | Chemistry              | CatapPlus+: Development of Terminalia catappa-Based Bilayer Hydrogel Composed of Sodium Alginate/Carboxymethyl Chitosan and Polyvinyl Alcohol/Polycaprolactone Electrospun Nanofibers for Burn Wound Treatment |
| P5               | Manthoxanteen              |                                           | Suankularb Wittayalai Nonthaburi                              | Other: Biochemistry    | Mangosteen Anti Inflammatory pH responsive release Biopolymer Film                                                                                                                                             |
| P6               | POP SIAM                   |                                           | Kanchanapisek Wittayalai Nakhon Pathom School                 | Chemistry              | Study and Development of a Spoilage Detection Film for Squid Using Phenolic Extracts from Mangosteen Peel (Garcinia mangostana L.)                                                                             |
| P7               | NeuroFit                   |                                           | Princess Chulabhorn Science High School Satun                 | Engineering            | Development of an Intelligent Real-Time Platform for Cognitive Fatigue Detection and Preliminary Eye Disease Analysis Using Machine Learning Techniques                                                        |
| P8               | Non Nai Dtae Non Na        |                                           | BanSuan Jananusorn School                                     | Chemistry              | BioLight Shield: A Bio-based UV Protection Patch Derived from Spirulina Algae                                                                                                                                  |
| P9               | KW Superhydrophobic powder |                                           | Kanlayanawat School                                           | Environment            | Development of Superhydrophobic Powder from Precipitated Calcium Carbonate (PCC) Enhanced with Carbon Powder from Cassava core for High-efficiency Oil Contamination Adsorption in the Environment             |
| P10              | Kkw603                     |                                           | Kaeng Khro Wittaya School                                     | Science                | Sugar kills ants with a mixture of wormwood and wormwood.                                                                                                                                                      |
| P11              | MAKUT Grill                |                                           | Mathayom Wat Makutkasat School                                | Engineering            | Development of a Low-Cost Zeolite-Based Filtration System with IoT Monitoring for Smoke and Odor Control in Charcoal Grilling Restaurants                                                                      |
| P12              | AquaPine Solutions         |                                           | Mahidol University International Demonstration School (MUIDS) | Environment            | Development of a PVA/Chitosan Composite Biosorbent from Pineapple Crown Waste for the Eco-Friendly Removal of Lead (II) Ions                                                                                   |
| P13              | MAKUT IoT Duckweed         |                                           | Mathayom Wat Makutkasat School                                | Biology                | Development of a Vertical IoT-Based Wolffia Cultivation System with Automated Nutrient Supply and Water Recycling                                                                                              |
| P14              | PoxScan                    |                                           | Wattana Wittaya Academy                                       | Biology                | PoxScan: Smart Colorimetric Test for Next-Gen Monkeypox Screening                                                                                                                                              |
| P15              | DoublePig                  |                                           | Princess Chulabhorn Science High School Nakhon Si Thammarat   | Other: Materials       | Development and Study of Silica Extracted from Rice Husk via Solvent Extraction for Reinforcement of Natural Rubber in Soft Cast Applications                                                                  |
| P16              | Furfur                     |                                           | Varee Chiangmai School                                        | Science                | Development of products for the treatment of Tinea versicolor for inhibiting the growth of Malassezia furfur on the skin                                                                                       |
| P17              | Go-Rai                     |                                           | Suankularb Wittayalai School                                  | Biology                | Comparison of the Antibacterial Efficacy of Mangosteen Peel Extract and Erythromycin Against Staphylococcus epidermidis for the Development of an Antimicrobial Insertion Site Dressing in Hospitals           |
| P18              | Edogawa Conan              |                                           | Varee Chiang Mai                                              | Biology                | Investigation of the Role of Gut Microbiota in Microplastic Degradation and Accumulation in the Gastrointestinal Tract of Aquatic Animal                                                                       |
| P19              | KCP forever                |                                           | Princess Chulabhorn Science High School Phetchaburi           | Chemistry              | Metal-organic frameworks (MOFs) materials synthesized using organic ligands derived from the depolymerization of PET plastic waste                                                                             |
| P20              | CNTPJSANGLOI               |                                           | Sriboonyanon School                                           | Physics                | Synthesis of Porous Carbon Electrodes Derived from Biomass Waste Lotus Petals for Supercapacitor Applications                                                                                                  |
| P21              | AlirCare                   |                                           | Saipanyarangsit school                                        | Engineering            | AI Breath Sound Analysis for Allergy/Asthma Screening via LINE.                                                                                                                                                |