

18th ELEMENTZ SCIENCE RESEARCH CONFERENCE & EXHIBITION RESULTS

Group A

Group	School	Title of Project	Name of students in project group	Name of teacher mentor or mentor from higher institutions	Awards
A1	Anderson Secondary School	Characterisation of Manganese Oxide as anode for Lithium Batteries	Sithanathan Rahul Felix Ling Jit Hao Ho Soon Kang	Mdm Tey Chin Chin Dr.M.V Reddy	COC
A2	CHIJ St Nicholas Girls' School	Effects of Homemade Disinfectants on Bacteria	Peh Ming Ying Chan Wei Lin Lee Xin Rou, Alicia	Mr Wan Yew Boon Ms Lee Ruo-Ning	COC
A3	Christchurch Secondary School	Exercise my finger (Finger Strengtheners)	Heng Em Xuan Lawrencia Ng Kai Jie	Mr Alahappan Ms R K Devi	Bronze
A4	Compassvale Secondary School	Investigating the effectiveness of fruit peels in removing metal ions in water samples	Lo Ho Tin Adinda Fitri Falinka Johan Fadli Bin Jailani Lim Jasen Tan Xin Yi	Mdm Low Qin Tian Mdm Preeti V Palkar Mr Kartik G R	COC
A5	Maris Stella High School	Deterministic plasma aided fabrication of advanced silicon nitride thin films for applications in high-efficiency photovoltaic cells	Brandon Goh Zhuo Rui Lim Yong Kang Tan Ding Xuan Lim Xi Perry	Ong Siok Lee Ngo Mei Zhi Mabel Lee Kee Ming, Eugene Lee Xu En, Sean Lim Jian Wei, Mark (Mentor from NIE)	COC
A6	Orchid Park Secondary School	Investigating the viability of bioplastics to replace commercial plastic bags	Lim Heng Yu, Dian Sofia Bte Riduan, Nevin Hansel Simon Gideon Isaac Ong Gie Leong	Mr Wong Yiu Hang Mr Jason Law	Silver
A7	Presbyterian High School	Solar powered water pump	Irving Tan, Benny Lee Jun Jie, Brandon Boo, Jeremy Wong, Oh Jia Rong	Mr Teo Wei Hong Mr Edmund Choo	Silver
A8	Serangoon Secondary School	Using of Smart Materials to reduce temperature of a Classroom	Jervis Chua Ding Lin Gan Kah Eng Koven Tan Ding Ze	Marvin Lo Dennis Kwek	COC
A9	School of Science and Technology, Singapore	Investigation of the light spectrum of various light sources	Kwan Jun Jie Ting Ming Jie, Nathaniel Ng Kang Zhe	Tan Hoe Teck	Gold
A10	School of Science and Technology, Singapore	Investigation Of Iodine Clock Reaction Times With Different Concentrations Of Hydrogen Peroxide	Khor Hsien Kit Grace Cahyadi Amadea Aubrey Supriyadi	Tan Hoe Teck	COC
A11	Singapore Chinese Girls' School	Protease in fruit	Joanna Chen Xu Meiqi Ng Yin Kit Ying Tze	Yeo Siew Li Julia Teo	Withdrawn
A12	Whitley Secondary School	Extracting terpenes from citrus rinds and studying its feasibility as a potential biofuel	Kainoa Ho Wei Jie Ahmat Firz Bin Zulkifli Sathya Krishna	Mr Teoh Chin Chye, Alex	Bronze
A13	MWITS, Thailand	Endothelial activation in Thalassemia disease after hematopoietic stem cell transplantation	Mr. Nattaphat Putawornsub Mr. Sawitt Sirasittikarn	Dr. Aunyarat Bunyawat	Bronze
A14	Kunming No 14 High School, China	The optimize strategy of vehicle routing problem in Medium-sized city	Yang Rong Ze Hu Tong Yan Zi Wen Shen Xin Di Wang Hao Yuan	Wu Cheng Bo Ma Yu Xiao	COC
A15	Nguyen Tat Thanh High School, Vietnam	Synthesis, structural analysis and luminescent capability of Y(III), Eu(III) complexes	Nguyen Duy Kien Đoan Danh Huy Nguyen Đức Tam Đặng Tuan Minh Đỗ Minh Châu	Dinh Thi Hien Le Thi Hong Hai	Gold

Group B

Group	School	Title of Project	Name of students in project group	Name of teacher mentor or mentor from higher institutions	Awards
B1	Anderson Secondary School	Investigation on the characterisation of novel photovoltaic materials under saline conditions	Lim Wan Hui Soo Jun Neng Sylvia Aw	Arthur Lim Kuan Yick Arief Budiman	Gold
B2	CHIJ St Nicholas Girls' School	Effect of the type of Spice on growth of E.Coli bacteria	Zhou Wan Ting Yu Kai-Ning Chantell Yu Shi Hui	Ms Clarissa Lua Ms Lee Ruo-Ning	COC
B3	Christchurch Secondary School	Back Straightener	Babu Regan Eshwar Tan Yi Yang Ryan	Mr Alahappan Ms R K Devi	Silver
B4	Fuchun Secondary School	Effect of amylase concentration on the physical properties and sensory characteristics of bread.	Chng Jun Xian Chanon Wiroadpaisit Yuen Geng Hung Kevan Tan Wei Xian	Lwa Heng Qian Ng Chao Xiang	Bronze
B5	Northland Secondary School	Investigation on the feasibility of using food wastes as batteries.	Lu Jiyuan Shi Yunpeng Zhu Wendong Karman Ng Shao Kai	Lim Mei Teng	COC
B6	Orchid Park Secondary School	Effect of processing method on vitamin C content in orange juice	Khoos Rui Han Dior Priscilla Audrey Tanujaya Stefan Lim Yi Zhao Fong Tsz Hang May Thu Nyo	Marwin Low Jeanne Lim	COC
B7	Presbyterian High School	To investigate if chitosan and starch can be used as alternative coagulants in the removal of clay particles	Chin Xue Ying Gladys Victoria Huang Xu Qi Di Esther Tan Khai Yan Tan Jia Wen, Joyce	Mrs Choy Hui Peng	COC
B8	Serangoon Secondary School	To investigate the possibility of making Bioplastics from Starch	I'li Qurratu'aini Bte M F Vickneswari D/O Thamir Chelvam Tan Yi Lin Chewen Thing Kwan	Peh Su Fang Tan Xiang Yeow	Bronze
B9	School of Science and Technology, Singapore	Investigation on the effect of microwaving homemade bread at different durations on the growth of mould	Hanis Bte Safarin Ivonne Tan Yan Qi	Tan Hoe Teck	COC
B10	Singapore Chinese Girls' School	Comparing the effectiveness of selected fruit peels to hold back water.	Chen Yingxuan Natalia Ng Rui Jing Regine Koh Rui Yi Hannah Liew	Yeo Siew Li Julia Teo	COC
B11	Singapore Chinese Girls' School	Grow your plant smart!	Ng Xin Xia Jermaine Sahana Devi Tessa Chiam Rachel Lim	Yeo Siew Li Julia Teo	COC
B12	Woodlands Ring Secondary School	To Investigate the Effects of Conductivity on the Power Performance of a Soil Microbial Fuel Cell	Bryan Chan Jun Han Oh Kai Kiat Toong Jun Chun Nicholas Tan Kai Xuan Muhammad Firdaus B Uhamad N	Jeremy See	Bronze
B13	PCCCR, Thailand	The Effect Brown Planthopper Pesticide on <i>Anabaena azollae</i>	Wannapat Chitsanuthanyachot	Ms.Kunakorn Chittangkul	Gold
B14	Kunming No 14 High School, China	Regional noise pollution monitoring alarm	Liu Aishan Bao Linxiao Liu Qingrui Ouyang Chuxin	Zhu Lingqing Zhao Shuangli	COC
B15	Nguyen Tat Thanh High School, Vietnam	Research For Conditions Of Eliminating Amonium And Phosphate From Landfill Lechate By Precipitation Method Chemical Precipitation And Applying Product To Make Controlled Release Fertilizer	Le Doan Tung Lam Nguyen Quang Duy Đặng Tri Chung Phan Van Thai Vu Mai Diep Linh	Tran Minh Duc	Silver

Group C

Group	School	Title of Project	Name of students in project group	Name of teacher mentor or mentor from higher institutions	Awards
C1	CHIJ St Nicholas Girls' School	Effect of the different types of Milk on the Strength of Plastic	Tammie Ong Megan Seet Tammy Tan	Ms Clarissa Lua Ms Lee Ruo-Ning	COC
C2	CHIJ St Nicholas Girls' School	Antibacterial Effects of Vegetables against E. Coli	Chiang Qi, Faith Charis Chow Charmaine Yeo	Ms Clarissa Lua Ms Lee Ruo-Ning	COC
C3	Christchurch Secondary School	Smart Medicine Box	Emmanuel Cheong Zhi En Koh Jye Sheng Zenson	Mr Alahappan Ms R K Devi	Gold
C4	Fuchun Secondary School	Improving the Rate of Biodegradation of Polystyrene Waste By <i>Tenebrio molitor</i>	Sky Lim Kai Yi Chia Yee Jey Rachelle Kirsten V Evangelista Siti Insyirah Bte Mohd Taib	Lwa Heng Qian Ng Chao Xiang	Silver
C5	Holy Innocents' High School	Investigating the feasibility of using fish wastes to sustain plant growth	Lee Ching Yee, Kylie Cham Yi Tong Ng En Bao, Joan Frederick Siah Dexter Ang Kai Yi	Mrs Susan Tan Dr Jeffrey Seng Eng Khuan	Silver
C6	Orchid Park Secondary School	Investigations on the removal of paint	Teo Kai Jie Kelvin, Ng Wei Qi Ethel, Qu Jianyang, Lim Rui Heng, Anthony See Teck Ho	Jacqueline Lie Afiah Abdul Razak	COC
C7	Pasir Ris Crest Secondary School	Investigations on the optimal response distance for a bicycle sensor	Lakshmanan Neeraj Serena-Marge, Ong Wei Wei, Hasya Mus'ifah Bte Mohd Rizal, Daljit Singh S/O Sarbjit Singh, Leo Lee Zhong Liang	Koh Lin Lin	COC
C8	Serangoon Secondary School	Solutions to Sound Pollution	Zhuo Yufa Aaron, Sherman Foo Chang Shen, Maniego Eucharistian Sioco, Wong Guan Zheng, Muhd Zawawi Bin Abdul Halimi	Mr Tan Kian Chong Ms Eunice Leow Mr Goo Chun Song	COC
C9	School of Science and Technology, Singapore	Investigation on the anti fungal property of azole and allyamine	Kottaimuthu Lakshaya Baheera Bte Mohamed Ali	Tan Hoe Teck	COC
C10	Singapore Chinese Girls' School	Different type of bridges	Naomi Oh Jia Li, Jessica Michele Yeoh Xiu Ling, Ng Jing Yi, Leong Xin Yun	Yeo Siew Li Julia Teo	COC
C11	Singapore Chinese Girls' School	Resonance Bomb Alarm	Joleen Tan Wei Leng, Ng Jing Yi, Joanne Wong Su-ann, Genevieve Wong Shih Ting	Yeo Siew Li	COC
C12	Woodlands Secondary School	Designing a self-regulating rooftop garden to provide a natural cooling effect in urban structures.	Eldon Ng Jun Ming Frias Ethan Christopher B Lee Xuan Wei Jervis Muhammad Izzat B Ramlee Oh Wei Kiat	Nur Shahzreen Binte Mohd Taufik Mr Tan Eng Hui Mrs Dione Chen Low Chang Peng (Stem Educator)	Bronze
C13	Yio Chu Kang Secondary School	Mobile Phones, cannot live without it	Mohamed Shervin S/O Abdul N, Low Gin Lim Yeo Zhi Wei, Loke Wei Jun Jeremy Loke Wai Onn	Sin Puay San Sarasvathy Sivalingam S	Bronze
C14	MWITS, Thailand	Efficiency of <i>Trichoderma hamatum</i> on controlling <i>Sclerotium rolfsii</i> root rot disease of chili in herbicide condition	Kantaphat Punyanitniran	Dr. Aunyarat Bunyawat	Bronze
C15	Nguyen Tat Thanh High School, Vietnam	Applications of Naturally Occurring Polyphenol and Alkaloid in the Preservation of Various Fruits	Nguyen Le Thuy Duong Nguyen Xuan Huyen Tran Bao Long Nguyen Cong Đang Linh Le Phuong Thao	Tuong Duy Hai	Gold

Group D

Group	School	Title of Project	Name of students in project group	Name of teacher mentor or mentor from higher institutions	Awards
D1	CHIJ St Nicholas Girls' School	Effect of Antibacterial properties of Food on E.Coli	Samantha Koh Loke Shuang Alexis Lim Ziqing Kristy Hong Xue Yan	Ms Clarissa Lua Ms Lee Ruo-Ning	COC
D2	CHIJ St Nicholas Girls' School	The Effect of Natural Meat Tenderizers on the Tenderness of Chicken Breast	Shannie Kwok Aw Kimberly Karen Low	Mr Wang Choon Kiat Ms Lee Ruo-Ning	Bronze
D3	Comassvale Secondary School	Investigating the use of the thermoelectric effect to generate electricity	Tan Hong Ming Andre Neo Jun Wen Joycelyn Kwok Ying Xuan Tay Qi Ying Derica Kon Yi Ru	Mr Tan Wei Kiang Derek Mr Chng Jun Liang Emmanuel Mr Ahamed Shah	COC
D4	Holy Innocents' High School	Extraction of collagen from fish scales	Duangutha Prakrit Tan Wei Tze Aloysius Phang Zhao Zhi Derrick Toh Kar Le Lim Yi Ying	Ms Lau Mei Tong Ms Bernice Pan Ms Valerie Hu Ms Rita Rai	Gold
D5	Maris Stella High School	Maintenance of an aquatic environment through the use of a micro-controller	Julian Chang Zhen Yang Tan Gian Sen Matthias Ong Jing Jie Brandon Tan Jingkai	Ong Siok Lee Ngo Mei Zhi Mabel Lee Kee Ming, Eugene Lee Xu En, Sean Associate Professor Lee Choon Keat, Paul (Mentor from NIE)	Silver
D6	Northland Secondary School	Investigation on overcooking affecting nutrients in food.	Lin Xiang, Nie Yi, Qiu Xinyang, Yoon Sunho	Nilasari	COC
D7	North Vista Secondary School	Effect of Screen Time on Human Reaction Time	Phyo Thant Kyaw Mavis Lee En Hui Khayr Ahmad Luisa Salminen Manesh Lingam	Ng Li Wei Lee Lu Xian	COC
D8	Pei Hwa Secondary School	Investigating the Efficiency of Various Filter Systems in Lowering Nitrate Concentrations	Rikhil Singh Pearl Teo Li Yi Tricia Tay Seah Bing Heng Ulfah Irdina Bte Affandi	Jason Chen Yasmin Yeow	Gold
D9	Serangoon Secondary School	Production of Homemade Bioplastics from Different Types of Flour and the Investigation of their Effectiveness	Indah Fatihah Sharlyn Aloysius Koh Goh Jun Jie	Ang Chian Huey Fong Jia Hui	Bronze
D10	School of Science and Technology, Singapore	Investigation of the effect of dimples on the drag force of ship's hull	Tang Kai Yuan Justin Teng Liang Yu, Benjamin	Tan Hoe Teck	COC
D11	Singapore Chinese Girls' School	Study on the effectiveness of selected herbs on inhibiting the growth of various types of fungi that grow on bread	Koh Rui Yi Cheryl Yong Kai Lin Kwek Shi Qi Ashley Lee Ruoxin Naomi Oh Jia Li	Mrs Yeo Siew Li	COC
D12	Singapore Chinese Girls' School	Comparative study on the effectiveness of zinc oxide and red raspberry seed oil in homemade mineral sunscreens.	Koh Hui Qing Winnie Lim Wen Ying Goh Ning En Glenda Chloe Lynn Cheong	Mrs Yeo Siew Li	COC
D13	Yio Chu Kang Secondary School	Effect of Rooftop Gardens on Indoor Temperatures	Chen Borui, Oh Jia Shang Lu Sicheng, Hai Oufan	Sin Puay San Sarasvathy Sivalingam S	COC
D14	PCCCR, Thailand	The Study of Baked Clays from Local Pottery Areas to Adsorption Properties on BTEX in Air	Natthanicha Boonlert Nitchaya Nettrakun	Mr.Dusadee Srisongrach	Silver
D15	Kunming No 14 High School, China	A new toilet deodorization equipment	Wang Yixuan Yin Caixin Wu Qiyue Fang Xinyi Yang Haoran	Li Yan Zhao Qiang	Bronze

Group E

Group	School	Title of Project	Name of students in project group	Name of teacher mentor or mentor from higher institutions	Awards
E1	Anderson Junior College	3D Printed Platform for Chemotaxis Study	Darren Ng Wei Xuan Issac Jose Ignatius Yu De Ze Terrance	Ms Aw Meng Yuan	Bronze
E2	Yishun Junior College	A Fast Way To Compute Matrix Multiplication	Poh Zi Xiang	Tan Kai Ying Shu Jian Jun	Bronze
E3	Anderson Junior College	Research on Recovery Rate of Shape Memory Polymers	Cheng Wen Hui Khant Nyi Nyi Toh Chien Yu	Goh Sok Leng	COC
E4	Yishun Junior College	Design and Setup a Detection Module in a Pharmaceutical Drug Screening Machine	Jerome Wong Jia Jin	Zeng Xiangjun, Glenn Yan Jie Lim Wei Li	Bronze
E5	Anderson Junior College	Incorporation of Sol-gel Method and Pattern Design for the Development of Electrochromic Smart Windows	Phang Ting Ting Rachit Agrwal Chew He Sheng Irvin	You Kailun	Silver
E6	Yishun Junior College	Performance of Aluminium - Air battery	Low Jia Yu Quah Zong Wei	Lim Siew Leng	COC
E7	Anderson Junior College	Fluorescence Enhancement and Modification of Carbon Enriched Zinc Oxide Nanowires vis Field Emission	Kum Wing Ho Kasandra Kang Yeo Hui Qing	Sng Peng Poo Andrew Bah Shen Jing	COC
E8	Yishun Junior College	Building your own satellite 101- CanSat	Xu Fei Xiao Chin Jia Yi (RI)	Dr Shao XuGuang, Michelle Lim Siew Leng	COC
E9	Anderson Junior College	Similarity Metric for Video Retrieval	Toh Hong Wei Jeremy Caitlin Ong Kai Lin Hoe Jun Leong	Chieu Hai Leong Chai Kian Ming Adam	Gold
E10	Yishun Junior College	Brain- Computer interface for user authentication	Yao Min Hui Lynn Lee Kai Wing (SRJC)	Tay Woon Ping Chin Zheng Yang Dr Ang Kai Keng Lim Chieh Yeng	COC
E11	Anderson Junior College	Resistive switching materials	Ignatius Ong Sing Yee Vicent Koh Zhi Han Caleb Ng Wei Hao	Ho Kian Tong Chang Lei	Gold
E12	Yishun Junior College	Investigating the use of Control Rules to detect disruptions in Supply Chains	Jeremy Khoo Jianming	Gabriel Yee Qi Ming Lu Huiping Dr Lim Sin Chun	Silver
E13	Anderson Junior College	The Effect of Metal Nanoparticles and Different Synthesis Methods on the Light Absorption Property of ZnO Semiconductors-Metal Hybrid Nanowires	Simon John Remuel Soriano Lim XueYan (RI)	Mr Sng Peng Poo Dr Wang XueSen , Associate Professor	Bronze
E14	Yishun Junior College	Using smart foreign molecules to manipulate the structure of solid crystalline materials	Justin Thu	Dr Han GuangJun Lu Huiping Dr Lim Sin Chun	Gold
E15	Anderson Junior College	Development of a Portable Network Enabled Control Using Arduino and QR Code	Felicia Tay Wan Yee Jasmine Goh KaiLi	Ho Kian Tong	COC
E16	Yishun Junior College	Study of the stimulate germination index of corn by using extracts of tea residue	Mark Zhi Wei Supachai Rinkhum Araya Sakham Thanaphong Kaewlha	Mr Anek Chaiboot Dr Lim Sin Chun Miss Lim Weili	Silver