

15th ELEMENTZ SCIENCE RESEARCH COMPETITION & EXHIBITION_RESULTS BY JUDGES

Group A

	School	Title of Project	Number of pupils in project group and their names	Name of teacher mentor or mentor from higher institutions	Awards
A1	Anderson Secondary School	Investigating effects of environmental conditions on plastic degradation	1. Jan Adrienne C Relador 2. Ang Guo Xiong 3. Cedric Lim Jun Wei	Lee Xin Zhan Andrew	COC
A2	Anderson Secondary School	Investigation of the most suitable type of tea for an all-natural antibacterial soap	1. Li Mingyao 2. Kate Toh Qi Xuan 3. Wee Yu Hui	Mr Ng Wei Da	COC
A3	CHIJ St Nicholas Girls' School	Industrial waste water treatment using cheap environmentally-friendly material	1. Chang Jing Yi 2. Amanda Chan 3. Aw Xin Min 4. Chloe Chua 5. Ang Ying Zhen	Ms Zhong Wanying	Bronze
A4	CHIJ St Nicholas Girls' School	Effect of glycerine and vinegar on the tensile strength of bioplastics made from potato starch	1. Kwan Hui Xuan 2. Ivana Faith Ding 3. Ho Hui Tong 4. Hoe Shi Min, Jessica 5. Lee En Ci	Ms Zhong Wanying	Bronze
A5	Fuchun Secondary School	A Comprehensive Preliminary Study of the McGurk Effect Among Singaporeans.	1. Chia Yee Shyen 2. Ayao-ao Rhuay Sabadi 3. Claire Chan Yen Hwa 4. Jerome Tan Jin Hong 5. Sean Daniel Lee En	Ng Chao Xiang Ismail Haji Ahmad	Silver
A6	Maris Stella High School	Oral Microbiome among Ethnic groups in Singapore	1. Shaun Lee Jia Han 2. Wee Chin Hin, Winston 3. Brandon Chen Yun Xin 4. Pok Ruey Jye 5. Seetoh Wei Song	Mabel Ngo Mei Zhi Prameeta Menon Nadiah Karina	COC
A7	Marsiling Secondary School	Energy Audit	1. Ong Swee Sian 2. Yang Zen Yong 3. Ange Ng Jing Min 4. Jeslene Oh Tian Ning	Mr Srinivasan Shyam Miss Tan Xing Yu	COC
A8	Northland Secondary School	Carbon Dioxide Sequestration from Combustion Engines	1. Soh Cai Li, Cherry 2. Phadennavar Anuj Sanjeev 3. T Kavin 4. R Sabarish	Reuben Seow	Silver
A9	North Vista Secondary School	To study the effects of common mouthwashes on dental hygiene	1. Sylvester Chan Jie Ying 2. Vivian Lim Yi Xuan 3. Toh Yao Zong 4. Elaine Goh Si Hui 5. Chia Jue Xuan	Ng Li Wei	COC
A10	Orchid Park Secondary School	The best/most effective colour combinations of car number plates in Singapore	1. Wong Xin Pei 2. Sim Jia Ren 3. Britania Princess Buni 4. New Gin Lee	Goh Chye Joo	COC

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A11	Pasir Ris Crest Secondary School	Research on plants parts that may possibly replace plastic which are cheaper to manufacture and less harmful to our environment	1.Ong Xiu Ning 2.Jacintha Kwan 3.Hoo Yu Qing 4.Christie Toh 5.Teo Jing Xuan	Ong Xinyi	Bronze
A12	Presbyterian High School	Biofuel as an alternative energy	1.Vidal Kathryn Ann Marie De Vera 2.Cheong Yin Wei 3.Ocampo Kristen Althea Lazaro 4.Deng Feifan 5.Bong Jia Hui	Ms Hoh Yi Ting	Gold
A13	Serangoon Secondary School	To investigate the effectiveness of detergents and their possible effects on environment	1.Sharon Tan Wenshuai 2.Liu Xinyue 3.Yang Nanyang 4.Chloe Liang Xuxian 5.Keith Chen Zhun	Mdm Lung Sau Ying Miss Lim Sze Shien Melissa	Gold

Group B

	School	Title of Project	Number of pupils in project group and their names	Name of teacher mentor or mentor from higher institutions	Awards
B1	Anderson Secondary School	Comparison of efficiency of copper (II) and nitrate ion absorption among different local mangrove species.	1. Lim Zhi Zhen 2. Felicia Tung Yan Ru 3. Caroline Liow Jia Li 4. Ma. Cristina Medina Yumena 5. Poon Shu Qi	Arthur Lim Kuan Yick	Bronze
B2	CHIJ St Nicholas Girls' School	Microbiological study of body lotions and efficacy of preservative systems of commercial products versus self preserving organic products	1. Lim Si Yuan, Hazel 2. Tan Xin Wei 3. Quek Si Ting, Joey 4. Teo Hui Si Shavonne 5. Stephanie Ho Jia Xian	Ms Josephine Neo Ms Cheryl Cheong	COC
B3	CHIJ St Nicholas Girls' School	Design of a DNA microarray chip to test for prenatal diseases ; Duchennes Muscular Dystrophy, Tay Sachs and Cystic Fibrosis	1. Wee Han Jing 2. Cai Hai Yun 3. Claudia Aw Yan Qin 4. Yen Christine 5. Natalie Phang Suet Yee	Ms Josephine Neo Ms Cheryl Cheong	Silver
B4	Compassvale Secondary School	Investigation on the feasibility of an autonomous self-service crockery return system with the use of geometric optics	1. Tan Xieng Hua 2. Long Chay Yeen 3. Pang Shu Wen 4. Seet Jing Da	Tay Zhi Xiong Chng Jun Liang Emmanuel Ahamed Shah	Gold
B5	Fuchun Secondary School	To study the effects of nitrogenous waste of <i>Poecilia reticulata</i> on the growth of <i>Brassica oleracea</i>	1. Tang Shao Hui 2. Lay Hui Yuan 3. Yong Shi Min 4. Shreen Sitara Bte Jamaludin 5. Ruth Chan Hui Ru	Chen Chaojian Kelvin	Bronze
B6	Maris Stella High School	A Comparative Study on the Efficiency of Home Made Biodiesel	1. Yoong Wei Jie, Marcus 2. Ma Chen 3. Tan Marcus Dan 4. Chang Liang 5. Chong Zhi Hao	Mabel Ngo Mei Zhi Prameeta Menon Nadiah Karina	Gold
B7	Marsiling Secondary School	ECOOKER	1. Tan Jing Xiong 2. Cham Shu Ting, Dianne 3. Khoo Shi Wei 4. Nur Sukainah Bte Asro L Adam 5. Mohamad Noafandy B Osman	Mr Srinivasan Shyam Miss Tan Xing Yu	Silver
B8	Montfort Secondary School	Investigate the use of sprays, powder and specially coated socks in reducing the amount of bacterial growth on feet	1. Lim Rui Hong 2. Robin Yeo Shao Jie 3. Brandon Chiu Xi	Ms Mabel Tan Mr Lim Kim Huat	COC

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B9	Northland Secondary School	Water Filtration System using Graphene-Coated Sand	1. Bryan Tan Zixun 2. Teo Jun Ning 3. Ng Yi Jing Melinda 4. Kartikeyan Subramaniam 5. Thandar Maw	Reuben Seow	COC
B11	Pasir Ris Crest Secondary School	Research on the use of food fibers to replace wood fibers in the making of papers	1. Aiken Ong 2. Joseph Pang 3. Jemyn Yeo 4. Siddiqah Mariam 5. Boon Yang	Ong Xinyi	COC
B13	Serangoon Secondary School	An investigation to determine the most effective natural ant repellent to be used safely in a household.	1. Jacqueline Lau Xiao Xuan 2. Liew Su Yee 3. Wang Houwen 4. Sean Tay Xian Xiong 5. Raymond Low Jia Hong	Adrian Sim Peh Su Fang	Bronze

Group C

	School	Title of Project	Number of pupils in project group and their names	Name of teacher mentor or mentor from higher institutions	Awards
C1	Anderson Secondary School	Investigating and optimizing the effectiveness of slimming effects (with specific concern regarding fat reduction) arising from consumption of Indian spices	1. Rukmani Alagusundaram 2. Leong Wen Qi Chelsea 3. Seh Wei Liea	Mrs See Lee Yong	COC
C2	CHIJ St Nicholas Girls' School	Research on Best Material for Anti-Slip Shoe Soles	1. Lee Wen, Nicole 2. Oh Qiu Yan 3. Ong Li Xuan, Melissa 4. Ong Shi Yun, Tricia 5. Phua, Grace	Mr Wang Choon Kiat	COC
C3	CHIJ St Nicholas Girls' School	Using eggshells with corn starch and vinegar as an oil-absorbent dishwashing cleaning agent alternative	1. Nicole Tan Si Qi 2. Joan Pong Jia Min 3. Rachel Goon Hui Zhen 4. Rachel Phua Rui Qi 5. Shermine Chua Xin Min	Mdm Loo Shook Ling	COC
C4	Compassvale Secondary School	An investigation on the use of different fruit peels in the production of bioplastic	1. Teo Kai Ling 2. Chui Si Min Valery 3. Alicia Lee Jing Ting 4. Law Junkai Samuel 5. Clemente Kristine Nicole M	Tay Siew Woon Low Qin Tian Sharoo Jenny	Silver
C5	Fuchun Secondary School	The effect of a bag's centre of gravity on the motion of the person carrying the bag	1. Shahan 2. Yap Zhe Wei 3. Chen YiZhou 4. Loo Zhao Xuan 5. Soo Yan	Chong Kin Hoe Terence Chee	Gold
C6	Maris Stella High School	Synergy Studies of Herb Extracts against Bacteria	1. Bryan Soh Zhi Wei 2. Herrick Koh Yu Kan 3. Sean Tan Jun Kai 4. Sirius Phua Si Ren 5. Ian Koh	Mabel Ngo Mei Zhi Prameeta Menon Nadiah Karina	Gold
C7	Marsiling Secondary School	Insight of wind energy: Savonius wind turbine	1. Lee Choon Liang 2. Grace Wong Hui Zhen 3. Kanaga Durga Valli D/O S E 4. Lim Jun Cheng 5. Riyadh Al-Muttaqin B Othman	Mr Srinivasan Shyam Miss Tan Xing Yu	Bronze
C8	Northland Secondary School	Natural vs. artificial cricket repellents	1. Muhammad Harith Iskandar BMS 2. M Shifa 3. On Zhi An, Alfred 4. Tan Chin Wei, Jasper 5. Lim Jun Wen Joseph	Miss Johanna Johan Adam Chin	COC

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C9	Orchid Park Secondary School	To determine the vitamin C and glucose content in locally available fruits	1. Syamilah Razali 2. Lim Sin Yee 3. Johanna Van Thi An 4. Sarah Sim Wan Xuan 5. Kim Wei Hao	Michelle Kwok Shi You Jeanne Lim Shu Ying Denise Lee Mui Suan	Silver
C10	Pasir Ris Crest Secondary School	Extraction of citrus oil from fruit peel as possible fuel in the future.	1. Liew Chen Kai 2. Bryan Ong 3. Sarah Seng Hui Yi 4. Sandy Low Yu Xian 5. Viorica Ong Yi Qian	Ong Xinyi	COC
C11	Presbyterian High School	Could detergent water used to water the plant?	1. Ryan Chan I-Xiu 2. Wee Xiao Wen 3. Wong Hui Xin 4. Tan Sing Yew 5. Toh Yi Hong	Mrs Choy Hui Peng	Bronze
C12	Presbyterian High School	Effects of fruit peels on water pollutants that will harm aquatic wildlife	1. Isaac Lee Wei En 2. Teo Kai Jie 3. Ho Zi Ying 4. Ang Xingyu Yuwadee 5. Teo Hui Jin	Mrs Choy Hui Peng	Bronze
C13	Yio Chu Kang Secondary School	To investigate the amount of calories found in different types of sugar given the same sweetness level.	1. Kaung Thant Naing 2. Leshawn Yap Zheng Xian 3. Thien Yuheng 4. Tikyi Min Khant Naing 5. V. Navin Kumar	Mr Wee Daiqi Mr Brandon Chin	COC

Group D

	School	Title of Project	Number of pupils in project group and their names	Name of teacher mentor or mentor from higher institutions	Awards
D1	Anderson Secondary School	To investigate the effectiveness of sodium hypochlorite in commercial bleach as compared to natural cleaning agents in removing stains and killing bacteria	1. Tay Kee Kong 2. Goh Quan Sheng 3. Png Qun Shen 4. Ng Bin 5. Fu Jia Hua	Mr Wong Foo Kit	Bronze
D2	CHIJ St Nicholas Girls' School	Effects of anti-bacterial foods oregano and chilli on growth of E-coli	1. Victoria Ang Ser Ning 2. Vienna Tan Wei Na 3. Zeen Tng Rui Ying 4. Zhang Xiting	Mdm Loo Shook Ling	COC
D3	CHIJ St Nicholas Girls' School	Comparison on oil absorption and removal properties of seashells and crab shells	1. Tan Yoke Ting 2. Teh Qi Lin 3. Teh Wenqi 4. Toh Qian Qi 5. Toh Yi Shien	Mdm Loo Shook Ling	COC
D4	Deyi Secondary School	Hands Off!	1. Krithika Selvarajoo 2. Mehreen Ayub 3. Waie Nade Yone Hmee 4. Ong Zhen Zhen	Miss Teo Chong Ming	Silver
D5	Holy Innocents' High School	A study on the shelf life of minimally processed potato	1. Lim Jiamin 2. Chng Jia Yuan Brian 3. Lorena Lynn Lopena Legaspi 4. Sheryl Lim Er Shan 5. Teng Hau Wei	Woo Wei Shan Sze Wee Ping (Nanyang Polytechnic)	Gold
D6	Montfort Secondary School	Study of perpetual motion devices	1. Lim Zhong Yi Jon 2. Derrick Ng Choon Seng 3. Ron Koh Woon Kai 4. Keefe Christian Lee Kit Onn	Eugene Ong Ng Mun Leong	COC
D7	Northland Secondary School	pH-sensitive Art Paper	1. Justin Thu 2. Fan Yuke 3. Kam Zhi Yu 4. Foo Siok Kuan	Eric Xie	Bronze
D8	North Vista Secondary School	How safe is your Burner?	1. Zopa Pua Wei Yuan 2. Justin Choo Cheng Hong 3. Chin Jing Hng 4. Lim Yu Long 5. Elijah Yeoh Shih Ang	Abdul Ra'uf	COC
D10	Pei Hwa Secondary School	Investigating the conversion of kinetic energy from daily movements into useful electrical energy	1. Nur Dayana binte Effandy 2. Samuel Chin Wei Kiat 3. Muhammad Sofian Bin Abdullah 4. Luke Lim Dong Yi	Mr Joseph Chua Choon Sian Miss Michelle Lim Beiyi	COC
D11	Presbyterian High School	Comparison of the boiled and unboiled herbs in anti-bacteria properties	1. Chan Ming Jun, Marcus 2. Aloysius Chia Zi En	Sujena D/O Sethuram	COC

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D12	Presbyterian High School	To investigate the effect of using natural ingredient to remove oil from the hair	1. Gabriel Wong Kong Yee 2. Joenz Kim-Chan Tze Yong 3. Khoo Yong Seng	Mrs Choy Hui Peng	Silver
D13	MWITS High School, Thailand	Effect of Chitosan Application Methods on Growth and Sodium Accumulation in Thai Jasmine Rice Seedlings under a Saline Condition	1. Ms. Lanlalit Terdsutatham 2. Jidapa Jitchanvichai 3. Kanticha Wanicharoenchai	Mrs. Somruthai KAOBOON	Gold

Group E

	School	Title of Project	Number of pupils in project group and their names	Name of teacher mentor or mentor from higher institutions	Awards
E1	Anderson Junior College	2-in-1 recyclable use of spent Bentonite to treat volatile organic compounds in industrial wastewater	1.Kee Sejie, Edmund 2.Dang Thi Mai, Vy 3.Yap Ziqi	Ang Pei Ling Ho Kian Tong	Silver
E2	Yishun Junior College	Antibacterial Effects of Natural Extracts: Investigation of andrographolide on the growth of bacteria in Singapore Waters	1. Toh Zi Jian 2. Wanwaree Maneewan 3. Samuel Chin Zhi Hui 4. Chee Rui Yi	Mr Lee Siu Kee Ms Lu Huiping	COC
E3	Anderson Junior College	Computational design of small organic dyes with strong optical absorption by controlled quinoidization of the thiophene unit	Tu Wei Han	Manzhos Sergei Mdm Tay Sai Ghor	Bronze
E4	Yishun Junior College	Molten Salt Synthesis and Characterization of Sn-hollandites $K_2(MSn)_8O_{16}$	Keno Chan Jia Nuo	Dr. M.V. Venkatasamy Reddy Tay Woon Ping	Bronze
E5	Anderson Junior College	Tendon Tissue Engineering	1. Lim Li Feng 2. Tan Jin De 3. Teoh ZhiHui	Dr Wen Feng Jeffrey Toh, Mdm Tay Sai Ghor Sng Peng Poo	Silver
E6	Yishun Junior College	Exploring the Molecular Interactions between Non-structural Proteins NS4B and NS3 of Dengue Virus	Lou Wei Hao Darren	Dr Kang Cong Bao Lu Huiping	Gold
E7	Anderson Junior College	Functional Characterisation of Velvet Gene in Magnaporthe Pathogenesis	Woo Shi Min	Poh Wei Leong (Teacher-in-charge) Qu Ziwei (Mentor, Temasek Life Sciences Laboratory)	Gold
E8	Yishun Junior College	The synthesis of different home-made silver nanoparticles and its antimicrobial application	1.Tan Siew Hiang Adrienna 2.Jacin Ng 3.Sai Nikleshwari D/O V D 4.Sai Saileshwari D/O V D 5.Koh Xin Li	Mr Tan Kok Ping Lawrence Dr Lim Siew Leng	COC
E9	Anderson Junior College	Synthesis, characterization and analysis of siRNA loaded Layer-by-layer Nanoparticles	1. Bao Xinwei 2. Ng Peng Yun 3. Cheong Sze Ting Clarissa	Tan Yang Fei Jeffrey Toh	Silver
E10	Yishun Junior College	LiV_3O_8 rods as cathode for Li-ion batteries	1.Benedict Chua Song Shing	Dr. M.V. Venkatasamy Reddy Ms Lu Huiping	Bronze

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E11	Anderson Junior College	New Water Soluble Fluorescent Dyes	1. Lee Shu Mei 2. Lim Hyun Jeong 3. Yap Jing Ting Jane	Toh Ping Yong Jeffrey Park Moo Jin	COC
E12	Yishun Junior College	Experimental Design of soft robots for external and internal surgical procedures' applications, using 3D printing technology	1. Lou Wei Hao Darren 2. Koh Rui Wen Brescia 3. Michelle Livia Adiwangsa 4. Chai Kai Hui	Asst Prof Raye Yeoh Chen Hua Tan Kai Ying	COC
E13	Anderson Junior College	Visible Microactuation of a Ferromagnetic Shape Memory Alloy by focused laser beam	1. Khaw Yew Onn 2. Tanachart Kujareevanich 3. Jason Hutomo Aryanto	Mr. Jeffrey Toh Ping Yong Prof. Sow Chorng Haur	Bronze
E14	Anderson Junior College	Whispered Voice Activity Detection Using Novel Speech Features	1. Darren Wee	Lim Boon Pang, Institute of Infocomm Research, Singapore Poh Wei Leong	Gold