

SINGAPORE YOUTH STEM FAIR 2025 RESULTS

PRIMARY SCHOOLS

CERTIFICATE OF PARTICIPATION

SCHOOL	PROJECT TITLE
Bendemeer Primary School	Our smart & sustainable home
Boon Lay Garden Primary School	Effect of launch angle on distance travelled by an object
Bukit View Primary School	Effect of slip-on plastic on the frictional force between floor and the block
Edgefield Primary School	Effects of the number of blades of wind turbine on the amount of energy produced
Endeavour Primary	Investigation on which truss bridge design made of ice cream sticks can hold the most weight
Fuhua Primary School	Comparing soilless gardening methods
Fuhua Primary School	Designing a smart bin for our schoolmates
Geylang Methodist School (Primary)	'Investigation of Different Sugars on Yeast Fermentation
Jing Shan Primary School	Comparing tap water and nutrient-rich recycled rainwater: which is better for plant growth?
Jing Shan Primary School	Encouraging and educating JingShanites to recycle right.
Jurong West Primary	To find out how to make water from water vapour
Jurong West Primary	To investigate if compost made out of food waste improves the growth of plants
Naval Base Primary School	Does adding glycerin make cornstarch-based bioplastic better?
Paya Lebar Methodist Girls' School (Primary)	Which type of cleaning agent can remove the most mangosteen stain from a bedsheet?
Punggol Primary School	Solar the cooker!
St. Stephen's School	A prototype that serves as an alerting system to protect underwater heritage sites
Temasek Primary School	Upcycled smart planters
Woodgrove Primary School	Comparing the effectiveness of moss-based vs. homemade charcoal filters in purifying polluted water
Woodgrove Primary School	How rubbish may affect our green environment in Singapore
Woodgrove Primary School	Investigating the durability of biodegradable plastic spoons in water over time
Woodlands Ring Primary School	Chilling without power: sustainable ice-making
Xinghua Primary School	To find out if the temperature of the surrounding will affect the rate of decomposition of natural food waste
Xinghua Primary School	To find out if the temperature of the water given to the plant will affect the growth of plant
Xingnan Primary School	Greenery's effect on flood damage reduction in neighbourhoods
Xingnan Primary School	How plants can help to reduce indoor temperature
Yew Tee Primary School	BatAway: student innovation for a bat-free hall

SCHOOL	PROJECT TITLE
Yew Tee Primary School	Sustainability with Seed Paper
Yumin Primary School	Shape of the blade of a wind turbine affects the brightness of the bulb.
Yumin Primary School	Type of fruit skin compost affects how well the bean plant grows (the height of the bean plant and the thickness of the stem)

COMMENDATION

SCHOOL	PROJECT TITLE
Cantonment Primary School	To find out which fruit peel breaks down the fastest during composting
Dazhong Primary School	Investigations on the frequency of watering for plant growth
Edgefield Primary School	Designing an eco-friendly car by investigating how the angle of a solar panel affects the speed of a solar-powered car
Endeavour Primary	Which sanitising agent works best for cleaning phone cases?
Fernvale Primary School	Making paper from fallen leaves
Fernvale Primary School	Orange peel bioplastic
Frontier Primary School	Investigation of harnessing heat from roads as a sustainable energy solution for street lighting in Singapore
Geylang Methodist School (Primary)	To find out if the size of water beads affects the growth of green beans.
Greendale Primary School	Natural alternatives for silica
Jing Shan Primary School	How to make natural composting faster and more effective while keeping environmental impact low
Jurong West Primary	To investigate how plants can help to making the environment cooler
Kuo Chuan Presbyterian Primary School	A comparative study of the effectiveness of 2 natural cleaning agents
Naval Base Primary School	Can we turn rainwater into safe drinking water?
North View Primary School	Exploration of strength in fruit peel biodegradable packaging
Paya Lebar Methodist Girls' School (Primary)	Can music make plants grow faster?
Punggol Cove Primary School	Bio-based material from fruit waste of fruit peels for the community
Punggol Cove Primary School	Investigating the antifungal properties of pomelo peel extract in bread preservation
Punggol Cove Primary School	Orange smell delight investigation
Punggol Primary School	Ecobreeze
Punggol View Primary School	Compost and its effect on plants and soil
Punggol View Primary School	The bioplastic advantage: reducing plastic waste and promoting sustainability

SCHOOL	PROJECT TITLE
St. Stephen's School	Rainwater collection system
Telok Kurau Primary School	Soil sparks: unleashing nature's electrical potential
West View Primary School	Investigating the cooling effect of green walls on air temperature
Woodlands Primary School	The design of the shoes soles affecting the amount of friction on the shoes
Xingnan Primary School	To investigate if music affects plant growth
Xishan Primary School	Research into an effective agent for methane gas generation for landfill
Yumin Primary School	Shape of the building affects building resistance to earthquakes.

ACCOMPLISHMENT

SCHOOL	PROJECT TITLE
Ai Tong School	From breakfast to biotech: eggshells in dental implant innovation
Blangah Rise Primary School	A.I. object recognition system for sustainable waste management
Canossa Catholic Primary School	To investigate if air purifier machine built with leaves from rubber plant and aloe vera can trap pollutants-formaldehyde (HCHO) more effectively in order to filter and circulate cleaner air.
Cantonment Primary School	To find out how many layers of newspaper are needed to create a dustbin liner that can hold at least 3 kilograms of household waste without tearing
Cantonment Primary School	To find out which type of food waste —eggshells, banana peels, or orange peels—helps plants grow the best
CHIJ Primary (Toa Payoh)	Effectiveness of yeast and vermicompost as mosquito traps
East Spring Primary School	Investigating the effectiveness of the different methods used to preserve food
Edgefield Primary School	To find out if the type of plant affects the temperature of its surroundings
Fernvale Primary School	Eggshell ceramic
Greendale Primary School	Ecocane: A scientific investigation on sustainable paper innovations for a greener future
Mee Toh School	Effects of type of music on hydroponic plant growth
Paya Lebar Methodist Girls' School (Primary)	What type of sugar helps flowers stay fresh the longest?
Qihua Primary School	Durable DIY bioplastic using coffee grounds
Queenstown Primary School	Investigating the effect of fat content on milk's melting rate
Raffles Girls' Primary School	Which is the best type of organic homemade fertiliser for growing xiao bai cai?
Telok Kurau Primary School	Peel to purpose - Giving food waste another life

SCHOOL	PROJECT TITLE
Woodlands Primary School	Effectiveness of reflective and bright surfaces on the internal temperatures of boxes
Xinghua Primary School	To find out if changing how fast the water flows (with a DIY faucet lid made from recycled material) helps you wash your hands clean more efficiently, using the same amount of water each time.
Yew Tee Primary School	Effects of calcium chloride and glycerin on alginate-based biofabrics

DISTINCTION

SCHOOL	PROJECT TITLE
Ai Tong School	Investigate the use of food waste to make adhesive
Ai Tong School	Spinning Polyethylene Terephthalate (PET) waste into useful fiber
Ang Mo Kio Primary	Project Kronos : Investigating the feasibility of harvesting clean energy from footsteps using piezo transducers to light up our cities
Blangah Rise Primary School	Automated recyclable classification through A.I.-powered object recognition
Greendale Primary School	The soap showdown: bar vs. liquid soap
Huamin Primary School	Eco-friendly bento box
Huamin Primary School	Investigating the use of food waste to make paper
North View Primary School	Investigating the effectiveness of eco-scouring pads
Punggol Primary School	Making bioplastic using fruit peel
Queenstown Primary School	Investigation on how the paint colour affects the indoor temperature
Rulang Primary School	Turning trash into treasure: investigating various food wastes for bioplastic production
Telok Kurau Primary School	Sonic Greens - Enhancing plant growth through frequencies

SECONDARY SCHOOLS

CERTIFICATE OF PARTICIPATION

SCHOOL	PROJECT TITLE
Anderson Secondary School	Effectiveness of different geotextile coverings on soil erosion
Anglo-Chinese School (Independent)	Varying sound frequencies to improve the growth/germination of pisum sativum (pea shoot plant) and its applications to enhance Singapore's market.
Bedok South Secondary School	Bridges
Bedok South Secondary School	Mimosa plants (mimosa pudica)
CHIJ St Theresa's Convent	Food quality inspection
CHIJ St Theresa's Convent	Smart food storage container
Dunman High School	Comparing the antibacterial and stain removal effectiveness of different detergents
Hougang Secondary School	Dye-vert it: turning everyday food scraps to everyday colourful wear
Hougang Secondary School	Investigating which plants can reduce the impact of flooding more effectively
Jurong Secondary School	Non-drowning smart pool
Jurongville Secondary School	Creating a smart air freshening and mood-boosting system for classroom environments
Jurongville Secondary School	Setting up an automated hydroponics farming system
Kent Ridge Secondary School	Using natural materials to make an eco-friendly and cost-effective insulator
NUS High School of Math & Science	Improving wheelchair mobility through user-actuated ramp design
Pasir Ris Crest Secondary School	Preserve or perish: how kitchen staples affect mould growth
Pasir Ris Secondary School	Sustainable bricks using natural waste materials
St. Joseph's Institution	A geometric proof of Goldbach's Conjecture
St. Joseph's Institution	Step powered electricity generator
Yusof Ishak Secondary School	Soil-like solutions: creating porous pavement from food waste for water absorption
Yuying Secondary School	Earthquake in our neighbourhood! How safe are we?

COMMENDATION

SCHOOL	PROJECT TITLE
Admiralty Secondary School	AI-powered visual recognition glasses: enhancing object recognition
Admiralty Secondary School	The influence of different exterior characteristics on building heat retention
Anderson Secondary School	Effects of osmolality on survival of kidney epithelial cells
Anderson Secondary School	Investigating the fire retardancy of pineapple skin
Anglo-Chinese School (Independent)	Smart salt sensor: measuring salt levels and health impact in food
CHIJ St Theresa's Convent	Eco-Charge: An AI-powered food waste scanner
Jurong Secondary School	Smart robotic rubbish bin
Kent Ridge Secondary School	Investigation of the best arrangement of light for vertical farming methods for optimal plant growth in small indoor spaces
Northbrooks Secondary School	Investigating and designing a container to examine the efficiency of thermal transfer in food container
Northbrooks Secondary School	Thermal effects on compost-enriched growing media: a comparative analysis of mung bean cultivation in traditional soil versus hydroponic systems
Northland Secondary School	CareMed Connect: AI-Powered medication box with customized melody reminders for elderly
Pasir Ris Secondary School	Rice husk ash as a natural ant repellent
Paya Lebar Methodist Girls' School (Secondary)	Effectiveness of mango and aloe-vera as a bio-based fire retardant
Paya Lebar Methodist Girls' School (Secondary)	What are the most effective natural ingredients for creating a biodegradable pest-repellent that can effectively control pests while being safe for the environment and being less harmful for accidental consumption?
Punggol Secondary School	Efficacy of coenzymes
Raffles Girls' School (Secondary)	Levitating carousel toy
Raffles Girls' School (Secondary)	Project GRAP - effect of the extension of a rubber band on the distance travelled by a magnetically levitating toy
River Valley High School	Saying bye to pesticides: investigating impacts of different washing agents have on residual pesticides for food safety
Riverside Secondary School	Poop to energy
Riverside Secondary School	Which fruit can make a stronger leather: banana, watermelon, or lemon?
School of Science And Technology, Singapore	Investigation of the speed of sound under different temperatures
Woodlands Secondary School	Rainwater collection, analysis and treatment: influence parameters and efficiency for reuse
Yishun Secondary School	Compare the growth rate of plants using handmade fertilisers to chemically made fertilisers.

ACCOMPLISHMENT

SCHOOL	PROJECT TITLE
Cedar Girls' Secondary School	Evaluating flour types for use in raw banana powder-based edible ice cream sticks
Cedar Girls' Secondary School	Investigating the effects of different natural ingredients in gel based microcapsules as a self healing bioplastic film
CHIJ St Nicholas Girls' School	Microplastics everywhere!
CHIJ St Nicholas Girls' School	Which worm will be able to reduce plastic pollution in our environment?
Chung Cheng High School (Main)	Investigating the best design for a solar cooker based on the principles of reflection and emissivity
Dunman High School	Investigating the synergistic antibacterial effects of moringa oleifera and curcuma longa powders
NUS High School of Math & Science	Construction of an automatic functioning window
NUS High School of Math & Science	Reducing the formation of zinc dendrites in zinc-based batteries to increase sustainability
Pasir Ris Crest Secondary School	The adhesive potential of caramel: A study on natural bioadhesives
Pasir Ris Secondary School	Exploring the feasibility of algae-saltwater power cell for electricity generation
Paya Lebar Methodist Girls' School (Secondary)	Investigating the use of sound waves for fire suppression
Peirce Secondary School	Water-efficient irrigation using Micro:bit
Queensway Secondary School	Synthesising bioplastics from orange peels
Riverside Secondary School	Comparison between oils produced by different plants
School of Science And Technology, Singapore	Investigation of the effect of temperature on the expansion of metal bars
Singapore Chinese Girls' School	Investigating sound absorption capabilities of sustainable materials from discarded textile materials and weaving patterns
Woodlands Ring Secondary School	A DIY MFC approach to boost affordability and accessibility
Woodlands Ring Secondary School	Investigating the tensile strength of alternative plastics
Woodlands Ring Secondary School	Investigating the tensile strength of paper constructed from waste paper and fruit peels
Yishun Secondary School	Compare the strength and durability of different types of bioplastics

DISTINCTION

SCHOOL	PROJECT TITLE
CHIJ St Nicholas Girls' School	Investigating different sustainable materials to be used to absorb oil
Dunman High School	The effects of artificial food dyes on microbial growth: investigating potential antimicrobial properties and toxicity
Nanyang Girls' High School	An investigation of the effectiveness of natural and biodegradable materials in the removal of oil spills
Nanyang Girls' High School	To investigate the effectiveness of methods used to help cool down or reduce heat gain in buildings in Singapore
Nanyang Girls' High School	To investigate the use of food waste to make bioplastics
River Valley High School	Haste makes waste: investigating the antimicrobial and antioxidant properties of fruit peels for preservation of food
School of Science And Technology, Singapore	Investigation of the amount of vitamin C in different fruits
Singapore Chinese Girls' School	Utilizing invasive lantana plant to make bar soap
Yusof Ishak Secondary School	Effect of blue light on kangkong (ipomoea aquatica) at different stages of development for potential yield optimisation methods

RESULTS OF SPECIAL CATEGORIES

CATEGORY OF AWARDS	RECIPIENTS
Best Written Report	<p>Ang Mo Kio Primary School: Project Kronos : Investigating the feasibility of harvesting clean energy from footsteps using piezo transducers to light up our cities</p> <p>Singapore Chinese Girls' School: Utilizing invasive lantana plant to make bar soap</p>
Best Video Presentation	<p>North View Primary School: Investigating the effectiveness of eco-scouring pads https://go.gov.sg/4nw2ce</p> <p>Yusof Ishak Secondary School: Effect of blue light on kangkong (ipomoea aquatica) at different stages of development for potential yield optimisation methods https://go.gov.sg/yfvrfo</p>
Best Display and Exhibit	<p>Ang Mo Kio Primary School: Investigating the feasibility of harvesting clean energy from footsteps using piezo transducers to light up our cities</p> <p>Nanyang Girls' High School: To investigate the use of food waste to make bioplastics</p>
Most Innovative Project	Blangah Rise Primary School: Automated recyclable classification through A.I.-powered object recognition

CATEGORY OF AWARDS	RECIPIENTS
	NUS High School of Math & Science: Reducing the formation of zinc dendrites in zinc-based batteries to increase sustainability
Most Outstanding Participation Award	Ai Tong School <ol style="list-style-type: none"> 1. Investigate the use of food waste to make adhesive 2. Spinning Polyethylene Terephthalate (PET) waste into useful fibre 3. An investigation of the effectiveness of natural and biodegradable materials in the removal of oil spills Nanyang Girls' High School <ol style="list-style-type: none"> 1. To investigate the use of food waste to make bioplastics 2. To investigate the effectiveness of methods used to help cool down or reduce heat gain in buildings in Singapore 3. From breakfast to biotech: eggshells in dental implant innovation