

Group	1. School	2. Cat	3. Title of Project	4. Synopsis of Project	Remarks
A1	Admiralty Primary School	P3-4	Shiny Nails!	The aim of this investigation is to find the most effective solution to remove rusts from rusty nails	Silver
A10	Rosyth School	P3-4	Everlasting Strawberries	We are going to investigate which temperature can fully remove the mold in strawberries.	COC
A11	SI LING PRIMARY SCHOOL	P3-4	Skin and Shell	To investigate whether the banana skin or the egg shell is a better fertilizer.	Bronze
A12	Woodlands Ring Primary School	P3-4	Green Wall	To find out how the temperature inside a box is affected by the presence of bubble wrap and plants	COC
A13	Yishun Primary School	P3-4	Plants' Reaction to Different Coloured Lights	To investigate how different coloured lights could affect the growth of plants. The aim is to improve the growth of harvests hence, reduce the production of genetically modified crops.	COC
A2	Marsiling Primary School	P3-4	Effects of Scarification on Seed Germination	To enhance seed germination success rate and to shorten time taken for germination, mechanical scarification of seeds were used. The effects of scarification of green bead seeds by abrasive paper were investigated.	Gold
A3	Endeavour Primary School	P3-4	Investigation on the different ways to propel a rocket	We will be using different types of soda to launch rockets to see which goes the furthest.	COC
A4	Greendale Primary School	P3-4	Eco-Friendly Stain Busters	The aim of our investigation is to find out what are some natural products that can be used as cleaners and their effectiveness on removing stains, compared to commercial cleaners.	Gold
A5	Hougang Primary School	P3-4	No More Smelly Shoes	Investigation is done on shoes to find out which type of pasta best absorbs sweat from the shoes and thus keeping them dry and not smelly.	Bronze

A6	Naval Base Primary School	P3-4	Saltwater battery	Students investigate the use of saltwater to create electricity	Bronze
A7	North View Primary School	P3-4	Choose the healthier side of whitening	To find out which brand of toothpaste has the best whitening effect as it has claimed and the effects of our teeth.	COC
A8	Northoaks Primary School	P3-4	Zero Electricity Cooler	The project aims to find out the effectiveness of a zero electricity cooler in helping us lower the air temperature in our classrooms. If the air temperature is lowered significant, it will provide us with an environmentally friendly product that can make our classrooms a more comfortable place to study.	Silver
A9	Peiying Primary School	P3-4	Noisy Noise!	The team aims to investigate how different materials can be used to reduce the noise created by the movement of chairs in the classroom.	COC
B1	Admiralty Primary School	P3-4	Keep Your Apples Fresh!	Hate that apples turn brown so quickly? The aim of this investigation is to find out which natural solution, can effectively keep your apples from turning brown.	COC
B10	Rosyth School	P3-4	Keep it Freezing!	Ice melts at 0 degree celcius. We want to find out how different substances can slow down the speed of ice melting.	COC
B11	Woodlands Ring Primary School	P3-4	To test the iodine content in different types of salts.	Our aim is to find out if there is iodine in different types of salt	COC
B12	Yio Chu Kang Primary School	P3-4	I can't hear you!	Investigating which material absorbs the most sound and is best for soundproofing.	Bronze
B2	Anderson Primary School	P3-4	Making an Eco-friendly Laundry Detergent	This project aims to manufacture a homemade laundry detergent using baking soda, washing soda and castile soap that can eliminate various types of stains effectively.	Gold

B3	Evergreen Primary School	P3-4	Dirty to clean water - the sunny way!	To investigate if solar energy can help purify muddy water faster	COC
B4	Greenwood Primary School	P3-4	Keep it Cool	Ice melts once it is taken out of the freezer. We want to find out which added material will make ice melt fastest.	Bronze
B5	Hougang Primary School	P3-4	Fresh Banana Business	Investigation is done on banana to delay it from ripening by using different packaging. Results is based on how marshy the banana is and the colour of the banana peel.	Gold (Presentation)
B6	North Spring Primary School	P3-4	Energy Kidz	To compare the energy content of nuts by burning them in a homemade calorimeter	Silver
B7	North Vista Primary School	P3-4	Feed Our Plants!	Singapore generates a lot of food waste every year. This hampers recycling efforts and may cause unpleasant odours. Our group has put in effort to investigate which types of liquid food waste can be recycled to water plants. Four types of food waste were used to water balsam plants and results were recorded.	COC
B8	Northoaks Primary School	P3-4	Are healthier-choice snacks indeed a healthier choice?	Many students love eating snacks. Some snacks have the healthier choice label but some snacks do not have. In this project, we will compare the amount of oil collected from both types of snacks. With the findings, we will help students make better choices for snacks.	Silver
B9	Rosyth School	P3-4	Fluffy Bread!!!	Yeast is usually added to bread to allow the bread mixture to rise. We want to investigate if different brands of yeast affect how fluffy the bread will be.	Bronze
C1	Anderson Primary School	P5-6	Soft-boiled egg, get it right!	To determine the best method for consistently producing the best soft boiled egg.	COC

C10	Peiying Primary School	P5-6	Energy efficient ways to keep a building cool	In this project, our team will explore the various methods of keeping a building cool without using too much energy.	Gold (Presentation)
C11	Qihua Primary School	P5-6	Water Conservation	To investigate the different types of nozzles to conserve water	COC
C12	SI Ling Primary SCHOOL	P5-6	Natural DIY Pesticide	This project seeks to investigate whether a mixture of fruits or herbs is more effective to act as natural pesticides to kill or keep away insect pests.	COC
C13	Yio Chu Kang Primary School	P5-6	The effect of talking and texting on a cell phone on a person's reaction time.	Texting and talking on cell phone can lead to injuries while walking and driving. This project investigates how these two types of phone usage will affect reaction time.	Gold
C14	YISHUN PRIMARY SCHOOL	P5-6	Electromagnetic waves around the school	To find out whether green spaces in a school has lower electromagnetic waves and suggest reasons why.	COC
C2	Canberra primary school	P5-6	Propeller	As electricity are important to small country like Singapore. Thus, we are trying to find ways to save electricity through fans design	COC
C3	Evergreen Primary School	P5-6	Hydro Power	To investigate if the type of material can affect the spinning rate of a water wheel. Water wheels will be made using different materials. The energy generated from the spinning wheel under running water will be used to lift a load. The time taken for the load to be lifted to a particular height is equated to the spinning rate of the wheel. The investigation aims to find out which material will be the most suitable to make a water wheel that produces the most hydro power.	Silver

C4	Greendale Primary School	P5-6	Effects of pH level on bone mass	The aim of our experiment is to find out how different pH level in the body affect bone mass	Silver
C5	HOUGANG PRIMARY SCHOOL	P5-6	Reducing food waste by Composting	We found that food waste in our canteen can be managed better so to do our part to reduce food waste our school purchased machines that reduce food waste to 1/10 of the original mass. The remaining powdered waste is then mixed with our compost to break it down further. We want to show how this compost made from food waste can be made to be beneficial for plants.	Bronze
C6	Mee Toh School	P5-6	To investigate the use of organic items as source of electricity	The project is on using organic materials like potato, lemon and orange to create an electrochemical battery cell to power up low voltage devices.	COC
C7	Naval Base Primary School	P5-6	DIY Hydraulic Jack	Students create a model of a Hydraulic Jack that is powered by water.	COC
C8	North View Primary School	P5-6	No Oily Crackers	To find out which brand of prawn crackers has the least amount of oil and is least detrimental to health.	Bronze
C9	North Vista Primary School	P5-6	Mould killer!	Both mould and yeast are fungi. Some mould are dangerous to health. By observing the fermentation process of yeast, we want to find out and infer from the findings which type of household cleaning agent is the best for controlling the growth of mould.	Bronze
D1	Canberra Primary School	P5-6	Biofuel	Investigation on the use of mushroom extract to increase the cellulobiase efficiency in breaking down the cellulose in non-edible parts of plants into glucose. This is essential as there is a need to find alternative sources of fuel	Bronze

D10	Qihua Primary School	P5-6	Clean Recycled Water Everyday	Investigate the different materials that can be used to filter water	COC
D11	Seng Kang Primary School	P5-6	Investigation on the difference in the effect of adding sugar or salt to the density of water	To investigate if adding sugar or salt will make the water more dense. The aim is to find the more effective way to make ice float more visibly on water.	COC
D12	Woodlands Ring Primary School	P5-6	Testing the strength of Bioplastics	This project aims to investigate on the strength of the bioplastics made using agar powder with the addition of eggshells and fish scales	Gold
D13	Yio Chu Kang Primary School	P5-6	Glue Strength Comparison: Homemade Casein Glue and Commercial Glue	This project investigates the holding strength of homemade casein glue with that of some commercial glues.	Gold
D14	YISHUN PRIMARY SCHOOL	P5-6	Can fruit-based compost help plants to grow better?	To find out whether fruit-based compost helps the plant to grow better.	COC
D2	Endeavour Primary School	P5-6	Fortified	We are testing what is the best structure to hold the heaviest load.	Bronze
D3	Evergreen Primary School	P5-6	Cool Sprouts!	Pupils will investigate if the colour of the roof and the presence of plants will lower the temperature of the air in a building.	Silver
D4	Greenwood Primary School	P5-6	Side We Go and Up We Go!	Skyscrapers are usually found on a flat ground. We want to investigate how wide must a building be to keep the tower standing upright at different angles.	COC
D5	Huamin Primary School	P5-6	Alternative stain remover	This project looks at the possibility of replacing commercial detergents with less harmful household products, such as baking soda, lime juice and vinegar, to remove fabric stains	COC

D6	Mee Toh School	P5-6	Fastest way to cool soft drinks.	The project is about investigating different types of materials used in the rate of cooling of soft drinks in a given time.	COC
D7	North Spring Primary School	P5-6	Myth or Fact: House Plants Increase Oxygen Levels?	To investigate if house plants significantly affect oxygen level in the air with/without human activity.	COC
D8	North Vista Primary School	P5-6	Our favourite drinks...friend or foe to our teeth?	The main culprit of tooth decay is not only the sweets and chocolates that we consumed; the depletion of the enamel by common drinks also plays an important part in our dental health. The eggshell has a similar structure to our teeth and by studying the corrosive effect of the drinks on eggshell, we want to find out the effect of common drinks to our dental health.	Bronze
D9	Peiyong Primary School	P5-6	THE RESISTANCE	Some materials are electrical conductor while some are electrical insulator. What about lead? We wanted to find out if lead is a conductor of electricity. If it is, we also want to find out if a longer or shorter lead have less or more resistance.	Silver
E1	Anderson Secondary School	S1-2	To investigate how to make paper by recycling orange peels	Investigate the viability of producing paper out of orange peels which can be used to make book marks and greeting/salutation cards.	Silver
E10	WOODLANDS RING SECONDARY SCHOOL	S1-2	OPTIMIZATION OF BOTTLE FLIPPING CHALLENGE	THIS PROJECT INVESTIGATES THE FACTORS THAT WOULD INCREASE THE SUCCESSFUL LANDING OF A BOTTLE FLIP.	Bronze
E11	Yishun Town Secondary School	S1-2	Effect of essential oil as an anti-bacteria agent in the making of cosmetic products	Methylparaben is commonly used as anti-bacteria agent in most of the cosmetic products. However, it has several side effects which are detrimental to health. Thus, the group has decided to use essential oil as an alternative to Methylparaben in the area of cosmetic lip products.	COC

E12	Nguyen Tat Thanh Lower and Upper Secondary School	S1-2	Traffic culture education through Scratch Game	We create a Scratch game helps players get more knowledge about traffic systems, traffic rules as well as educate people to respect the traffic regulations, have responsibility for community	Gold
E2	CHIJ St Nicholas Girls' School (Secondary)	S1-2	Effect of Temperature and pH on the Amount of Chemicals leaching out of Styrofoam	Investigating how temperature and pH affect the amount of chemicals leaching out of Styrofoam. For effect of temperature on the amount of chemicals leached out of Styrofoam, water of different temperatures were added to Styrofoam cups for 2 hour. The cups were then emptied, rinsed and dried in incubator for 2 days. The mass were then recorded to find the decrease in mass of the cup. For effect of pH on the amount of chemicals leached out of Styrofoam, the above procedure was repeated with acids at room temperature instead of water.	COC
E3	Christ Church Secondary School	S1-2	A Rice substitute for the aging population of Singapore	The project aims to find a suitable staple item that is suitable for the elderly by comparing the amount of sugar, protein, fats and cations present.	Gold
E4	Deyi Secondary School	S1-2	Qualitative Analysis of the Effect of Brewing Temperature on the Amount of Antioxidants in Tea Extract	Teas have been well-documented for its high antioxidants content and tea culture is growing in Singapore. This project aims to investigate the effects of temperature on the amount of antioxidants in teas that are commonly found in Singapore.	COC
E5	Nan Chiau High School	S1-2	Effects of yogic eye exercises on fatigue in secondary two students in Nan Chiau High School	To investigate the effects of yogic eye exercises on fatigue in secondary two students doing near work during computer lessons.	Bronze
E6	Northbrooks Secondary School	S1-2	Anti Antagonistic Ants!	This project aims to investigate which natural ingredient will keep ants away.	Bronze

E7	Presbyterian High School	S1-2	Investigating the most effective chemical used to preserve food	To investigate the the type of chemical which causes banana to decompose the least in 12 hours. The aim is to find the most effective chemical to preserve food.	COC
E8	Singapore Chinese Girls' School	S1-2	Bioplastics made using fruit peels	To make bioplastics using banana peels, lemon peels and guava peels and investigate whether they have the properties to be integrated into the commercial market	Silver
E9	Woodgrove Secondary School	S1-2	The use of ants as bioindicators of habitat disturbance	The biodiversity of ants have been validated as bioindicators of habitat disturbance in Australia. This study investigates the possibility of using ants as bioindicators in Singapore.	COC
F1	Anderson Secondary School	S1-2	To investigate how to make an environmental friendly candle that can burn longer	To investigate how to make a new candle by exploring different environmental friendly wax and to increase the burn time of the candles by adding salt.	Gold
F10	Woodlands Ring Secondary School	S1-2	Extending the Vaselife of cut carnations	Investigating the effects of different chemicals on the vaselife of cut flowers.	Silver
F11	Yishun Town Secondary School	S1-2	The creation of magnetic field to stimulate plant growth.	The use of a magnetic field to stimulate plant growth has never been well documented in various scientific study. Thus, this group has decided to use common magnets to create a distinctive magnetic field to stimulate the growth of green bean, red bean and tomato plants and document the effect on it.	COC
F12	Nguyen Tat Thanh Lower and Upper Secondary School	S1-2	Investigation on the effect of colored light on vegetable growth.	Upon radiation of colored light, vegetables grow much better than in sunlight. The aim is to use colored lights to illuminate and investigate their effect on growth of vegetables.	Gold (Presentation)

F2	CHIJ St Nicholas Girls' School (Secondary)	S1-2	Effects of Warm and Cool Colours on Retaining Information for Study	Investigating how warm and cool colours affect the retention of information for study. Participants were tasked to play a memorisation game (to determine the participants' short term memory) and sit for 2 tests in which the words are printed in specific colour which were then assigned to the participants at random.	Bronze
F3	Compassvale Secondary School	S1-2	Investigating the effectiveness of using recycled materials to mitigate noise to achieve a quieter living environment	A study found that Singapore's average outdoor sound level is equivalent to the noise made by a vacuum cleaner. We aim to investigate the effectiveness of usage of different recycled materials to mitigate noise.	Silver
F4	Evergreen Secondary School	S1-2	Making paint from fruits	The team aims to produce paint from fruits to reduce food-wastage and encourage use of organic products rather than synthetic products. The team will experiment on commonly consumed fruits in Singapore to examine the colour of the paint that can be produced from them. The team hopes to promote such organic paints to schools in Singapore to be used for art lessons.	COC
F5	Nan Chiau High School	S1-2	To investigate which solvent is most effective in reducing the volume of polystyrene waste	This project seeks to investigate three organic solvents and their effect on polystyrene waste. We will measure the difference in the volume of the polystyrene after the treatment.	COC
F6	Pei Hwa Secondary School	S1-2	Using red cabbage extract as a pH indicator to detect milk spoilage.	Anthocyanins in red cabbage will be used to detect milk spoilage, as they are added into fresh milk. This is observed by its change in color from purple to red as milk turns sour. This will be a objective and safe way of informing consumers that the milk they have purchased is spoilt.	Bronze

F7	Punggol Secondary School	S1-2	Investigation on the effect of the application method of organic compost on plant growth	Organic compost produced from food waste is rich in macro and micro-nutrients. This research aims to investigate the effect of the application method of the compost on plant growth.	COC
F8	Singapore Chinese Girls' School	S1-2	Converting fruit skins into nutrients for the growth of yeast.	We want to show that yeast can be grown with nutrients extracted from the boiling of banana peels. Food waste can thus be salvaged and converted to nutritious edible yeast.	Bronze
F9	Woodgrove Secondary School	S1-2	Investigation on whether the Fruit Peel Extracts will Inhibit the Growth of Moss	Using the acids found in fruit peel extracts to inhibit the growth of moss and prevent competition of nutrients between the plant and moss in the process.	COC
G1	Anderson Secondary School	S1-2	To investigate how much of a popular drink containing sodium benzoate is safe to drink per kg body weight per day	To investigate the amount of sodium benzoate present in a popular drink sold in school canteen and how much of this drink is allowed per kg body weight per day to avoid health risks.	Bronze
G10	Woodgrove Secondary School	S1-2	Investigating the corrosiveness of different types of soda on egg shells	When we drink sodas, the enamel on our teeth will wear off. In this experiment, we aim to find out how different sodas have different effects on the enamel on our teeth by using egg shells	Bronze
G11	Yio Chu Kang Secondary School	S1-2	Carbon footprint of using smartphones in Singapore	We would like to understand the carbon cost of a rampant usage of mobile device in Singapore when commuting on public transport daily.	COC
G2	Christ Church Secondary School	S1-2	Comparative study of the content of caffeine, theanine and polyphenol of microwaved and non-microwaved tea.	We will investigate whether microwaving teas (Oolong, Pu er, Green tea, Ceylon tea and English Breakfast) will affect the content of caffeine, theanine and polyphenol compounds as compared to the teas that were not microwaved.	COC
G3	Compassvale Secondary School	S1-2	Usage of mealworms to breakdown Styrofoam	The team will explore various abiotic factors to determine the optimum conditions for uptake and effective breakdown of Styrofoam by mealworms.	Gold

G4	Evergreen Secondary School	S1-2	Cool the room! - Eco Coolers	To investigate the effect of size of bottles used on the cooling efficiency of eco coolers.	Silver
G5	Nan Chiau High School	S1-2	Investigation on the fermentation of white rice	It is a common sight to see "Economical Rice Stall" popping up in coffee shops or hawker centers all around Singapore. However, the amount of rice that were unsold and gone to waste is an alarming figure. Our research aims to use the product from the fermentation of rice from food waste as a source of alternative fuel. This then, could put waste to good use, as a form of conserving our environment.	Silver
G6	North Vista Secondary School	S1-2	The Corail Project	This project is to provide people with a reliable, comfortable and eco friendly mode of transport. With this transportation system, trains are less power consuming and have a lower output as well as being able to travel faster than conventional electric trains.	COC
G7	Presbyterian High School	S1-2	Investigating the use of inductive loop system to enhance hearing aids	To investigate the use of an inductive loop system to minimise background noise in hearing aids. The aim is to reduce background noise which is amplified through hearing aids when the hearing impaired listen music through speakers.	COC
G8	Punggol Secondary School	S1-2	To investigate the effect of the red wigglers' (<i>Eisenia foetida</i>) diet on the potency of worm cast as fertilisers	Red wigglers decompose organic matter to give useful fertilisers. This research aims to investigate the effect of the worms' diet on the potency of wormcast as fertilisers via plant bioassay.	Gold

G9	Singapore Chinese Girls' School	S1-2	Investigation to compare the cleanliness of disposable and non-disposable cutlery in food courts	There are many food courts all over Singapore, and many people eat food from food courts. In practice, no one brings their own cutlery to a food court. In food courts, cutlery is often left out in the open for many hours or even overnight. The cleanliness of the cutlery may be affected. Our project aims to find out if disposable cutlery is cleaner than non-disposable ones. To measure this, we are planning on swiping the different types of cutlery with a sterile cotton swab, then wiping the cotton swab on a petri dish. After cultivating the bacteria overnight, we will count the number of bacteria colonies to compare the cleanliness of each different type of cutlery.	Bronze
H1	CHIJ St Nicholas Girls' School (Secondary)	S1-2	Effectiveness of Homemade Liquids in Removing Wrinkles on Cotton Clothes	Investigating the effectiveness of homemade liquids: starch, vinegar and glycerine in removing wrinkles on cotton clothes. There are 2 parts to this project: 1) finding out which liquid is most effective in removing wrinkles 2) finding out the optimal concentration of the most effective liquid.	Bronze
H10	Yishun Secondary School	S1-2	To investigate the mechanical properties and durability corn starch based bioplastics incorporated with food waste	Food waste causes environmental problems. We aim to investigate how food waste can be recycled as additive to improve the mechanical properties and durability of corn starch based bioplastics.	Gold
H11	Nguyen Tat Thanh Lower and Upper Secondary School	S1-2	Conversion of solar energy into electricity	Our project proved an entirely new method that can generate electricity based on the circulation of bromine under the action of sunlight. Our product is easily made and environmentally friendly	Gold

H2	Christ Church Secondary School	S1-2	Evaluation of suitability and effectiveness of common waste products as materials for vermicomposting using earthworm.	Vermicomposting using earthworms is a common method of reducing household waste which has not been employed on a large scale in Singapore. This study aims to explore the efficacy of DIY vermicomposting setups as well as the selection of suitable material for vermicomposting to yield worm castings that can be used as a viable nutrient source for plants.	Silver
H3	Deyi Secondary School	S1-2	Natural Protection	To investigate the sun protection factor (SPF) of natural ingredients by ultraviolet spectrophotometry.	Silver
H4	Evergreen Secondary School	S1-2	EZ-Cleaner	A cleaning tool that is sticky and dry, so as to pick up dirt, dust, and cobwebs from everyday items, even in hard-to-reach areas like ceiling fans. Made from household ingredients, this tool is biodegradable too.	COC
H5	Northbrooks Secondary School	S1-2	Hydrodynamics - Resist water!	This project aims to find out which shapes has the least resistance moving in water. Keeping force and volume of water constant, students will measure the time needed for different shapes to move across.	COC
H7	Presbyterian High School	S1-2	Investigating the best chemical to remove fishy smell from fishes	To investigate the type of chemicals which is most effective at removing the smell of ammonia. The aim is to find the most effective way of masking the fishy smell of fishes.	COC
H8	Serangoon Secondary School	S1-2	Investigations on Effectiveness of Digestive Enzymes on Removal of Food stain on Clothes	This project aims to investigate the effectiveness of using digestive enzymes (trypsin, amylase and lipase) in removing food stain on clothes.	Bronze
H9	Woodlands Ring Secondary School	S1-2	Calcium content in different types of egg shell	To investigate the amount of calcium in different types of egg shell, thereafter to advise people, especially the elderly, on the recommended serving size of the egg shell for optimum amount of dietary calcium.	Bronze