

OUR WORLD

We asked students how they felt about a range of things that are happening in the world today. Here are some of their responses:



63%

of students think the government should move the date of Australia Day.



75%

of students say they are concerned by the war in Ukraine.



78%

of students are concerned by climate change.



32%

of students are concerned by the prospect of a global recession.



HAPPY DAYS AHEAD?

61% of students believed that 2022 was better than 2021, with the easing of many COVID restrictions probably contributing to that sentiment. Only 16% of students said 2021 was better than 2022, with 23% saying that neither year stood out as being better than the other.



WORLD NEWS



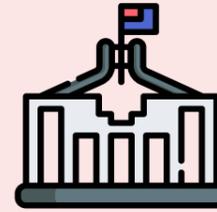
THE WAR IN UKRAINE

In February, Russian President Vladimir Putin signed a decree declaring the Luhansk People's Republic and Donetsk People's Republic as independent from Ukraine, and, despite international condemnation, began a full-scale invasion of Ukraine. In September, Putin signed treaties absorbing the occupied regions into the Russian Federation. This annexation was seen as a breach of international law by the global community. Throughout the conflict, Russia has been accused of war crimes and many nations have imposed bans and sanctions on Russia.



THE DEATH OF THE QUEEN

On 8 September, news spread across the world that our Head of State, Queen Elizabeth II, had died at Balmoral Castle in Scotland at the age of 96. Elizabeth II was the longest-reigning British monarch, and she performed her duties right up to the end of her 70-year reign. Just two days before her death, she met with Liz Truss, who took over (briefly) from Boris Johnson as Prime Minister of the United Kingdom. Elizabeth II's son, Charles III, has now succeeded her as King.



A NEW PRIME MINISTER

Aussies enjoyed a democracy sausage in May, when they went to vote in the Federal Election. The Labor party, led by Anthony Albanese, achieved a majority government for the first time since 2007, winning 77 seats in the House of Representatives to defeat Scott Morrison's Liberal/National Coalition. Every state and territory except Tasmania swung to Labor on a two-party-preferred basis. Albanese was sworn in as Prime Minister on 23 May 2022, becoming the fourth Labor leader to win government from opposition since World War II.



ATTACKS ON OUR PRIVACY

Two big data breaches highlighted the importance of keeping your information safe online – although there was very little individuals could have done in 2022 when cyberattacks on Optus and Medibank compromised the personal data of millions of Australians. In both instances, the companies' cybersecurity simply was not good enough. Now countless names, contact details, Medicare numbers, identification documents, and medical histories have been stolen and are likely to be sold on the dark web to the highest bidder.



THE SLAP

Touted as 'The Slap Heard Around the World', this incident involved actor Will Smith walking onstage and slapping comedian Chris Rock across the face during the Academy Awards in March. The slap was in response to Rock's joke about Jada Pinkett Smith's shaved head, which she had been shaving since 2021 due to alopecia areata. Later that evening, Smith won Best Actor and he eventually issued an apology to Rock and the Academy through social media the next day. Smith resigned his Academy membership and was banned from attending Academy events for the next 10 years.



DISASTER AFTER DISASTER

When it rains, it pours: a statement that was true in both a metaphorical and literal sense in 2022. It seemed like one disaster was followed by another this year, with new COVID strains, monkeypox, the encephalitis virus, tropical storms, cyclones, tsunamis, volcanic eruptions, earthquakes, European heatwaves and wildfires, and significant floods here in Australia. Was the Mayan calendar, which predicted the end of the world in 2012, off by 10 years?



TRUMP TO RUN FOR PRESIDENT...AGAIN

After months of speculation, former US President Donald Trump officially announced he would be running for the Republican nominee in the 2024 US Presidential Election. The controversial figure, who has been impeached twice and who still faces other investigations and lawsuits, announced his candidacy in November. Current polls indicate he would have a good chance of gaining the Republican nomination, but whether or not he could sway the votes of the American public in two years' time – given the way he responded to his 2020 election loss to Joe Biden – is yet to be seen.



THE RISING COST OF LIVING

In 2022, global food prices increased to their highest level since the UN's Food Price Index began in 1990, with commodities such as wheat rising by nearly 20% as a result of the Ukraine crisis and other produce affected by floods and natural disasters. The price of fuel was impacted by a ban on Russian oil (also due to the Ukraine crisis), and these costs have been passed onto consumers around the world. When you add to that inflation, rising interest rates, slow wage growth, and a looming global recession, many Australians are nervous about their financial future.



A WORLD CUP YEAR

Sports lovers had an excellent year with the wide range of events that were on in 2022. This year featured the Beijing Winter Olympics and Paralympics, the Commonwealth Games in Birmingham, the Women's Rugby Union World Cup, the Men's T20 Cricket World Cup, as well as the controversial FIFA World Cup in Qatar, which kicked off at the end of November. Australia won the Women's Cricket World Cup and both the Men's and Women's Rugby League World Cups.



OTHER NEWS IN 2022

In other news, Australians mourned the deaths of Shane Warne, Archie Roach, and Olivia Newton-John, while the former Prime Minister of Japan, Shinzo Abe, was assassinated while giving a public speech in the city of Nara. Elon Musk bought and broke Twitter, an anti-vax convoy came to Canberra, Roger Federer retired from tennis, Novak Djokovic got deported, Mahsa Amini's death led to huge protests in Iran, NASA's DART spacecraft was launched towards an asteroid, and the world population reached 8 billion.

SUSTAINABILITY

SUSTAINABLE SWAPS

Emily Rasheed looks at the things we can do in our lives to be kinder to the planet and to help conserve our natural resources.



EAT PLANT-BASED FOOD

It takes 75%-95% less water, land and carbon emissions to produce a plant-based burger than a beef burger. Did you know that up to 2,500 L of water goes into making one beef burger patty?! What's worse: fresh water is becoming harder and harder to get to people who need it. New advancements mean that meat alternatives are becoming tastier and cheaper. Maybe you might like to try a "meat-free Monday" in your house or even take on a pescatarian/vegetarian/vegan diet.



RECYCLED TOILET PAPER

Toilet paper is something we all use and creates a lot of waste. A really cool company called *Who Gives A Crap* is a subscription service that sends recycled or bamboo toilet paper to your door. Not only is their company B Corp™ certified for the highest standards of environmental impact, but they also use no dyes or scents. What's more, they donate 50% of their profits to helping to build toilets and water sanitation facilities in countries around the world. Being sustainable is also about looking out for those most vulnerable to climate change's effects. By investing in services like these, you are also helping a community less privileged than ourselves - it can't get better than that.



NUDE FOOD

Try out your nearest nude food shop. Buying food in bulk and without any disposable packaging is a great way to keep single-use plastics out of landfills. You can bring your own refillable containers and pick up all your favourite nuts, dried fruit and sweet treats. Another way to reduce plastic waste is making your own nude food and trying out beeswax wraps as a glad wrap replacement! I've even gone beyond and made my own wraps at home using recipes on the internet! It makes for a fun holiday project for all family members.



PLANT NATIVES IN YOUR YARD

Artificial grass breaks down as it weathers, putting microplastics into waterways, so it's not the most sustainable thing. Regular grass lawns require a lot of water to maintain and must be mowed often - who wants to do that when you can have a native lawn instead? Planting a variety of hardy native plants instead of lawn promotes biodiversity and pollinators and requires little to no extra water to maintain. Plus, native plants are so pretty! In fact, here at MacKillop, the Senior Sustainability Team has been working hard to create our very own native garden at school but with all-native bush tucker!



BUY SECOND-HAND CLOTHES

By purchasing second-hand clothes instead of new ones, you're reducing consumption and the chemical pollution caused by clothing production. Plus, most op-shops donate their earnings to charity, so you're also helping those less fortunate in your community! Contrary to popular belief, second-hand clothes are typically high quality! Most op-shops sort through donations before putting them up for sale, so you can trust that the clothes you're buying will last. The clothes are all pretty affordable and, if you look hard enough, there are some real gems!



INSTALL SOLAR

This one can be hard for some people, but if you can, try to get your hands on some solar panels for your house. Solar panels absorb energy from the sun and convert it into electricity for household use. Using clean energy has heaps of environmental benefits, and it saves you money on your energy bills! It's getting cheaper to go solar which is fantastic for the future. Plus, batteries are becoming more accessible in the ACT so that energy can be stored for when the sun doesn't shine.

WILL THE THINGS I DO MAKE A DIFFERENCE?

At the end of the day, it's governments and fossil fuel companies that have the most power over our climate. It's important to keep informed about environmental policies so you can go out and vote for someone who will protect our planet - once you're old enough, of course!



SUSTAINABILITY

CAPTAIN

Being the Sustainability Captain for 2022 taught me so much about leadership and teamwork. I was privileged to have support from staff right from Term 1. Sustainability faced a lot of obstacles due to COVID, meaning cross-campus activities were very limited. But I was still determined to keep my promises and drive change.

Earlier in the year, I collected hundreds of survey responses about why littering is a problem and how the students and staff feel about climate change. Year 12s tackled the School Clean-Up Day by tidying up three big bags of rubbish from around the St Peter's Campus in one lunch break to show how we can all be leaders by keeping our College clean.

From Term 3, I led an awesome bunch of seniors in the Senior Sustainability Group. Together, we worked towards the planning of the Bush Tucker Garden at St Peter's (stay tuned for that!) as well as giving Sustainability more of a presence in the College newsletter.

The group helped my vision and passion come to life. I'm thankful for everyone who has helped me along this journey. I'm so excited to see what Sustainability has to offer in the safe hands of Justine next year.

EMILY RASHEED
Sustainability Captain



Climate Action Conference.

On 21 October, Mr Bowen and some Senior Geography and Environmental Science students attended the Schools Climate Action Conference. We learnt all about the importance of grassroots organising, the future of EVs, responsible consumption, and the importance of water. We had a chance to interact with other like-minded students, and with the many different local stalls at lunch time, such as H2OK and SEE change. The whole day was a terrific experience, which left us feeling optimistic about the future.

EMILY RASHEED
Sustainability Captain

Integrated Humanities



What I liked about I-Hum.

As a member of Year 7, I got to enjoy the incredible experience that is Integrated Humanities. Over the year, I collected many fond memories of I-Hum that vary from simply learning a new and interesting topic to meeting one of my closest friends.

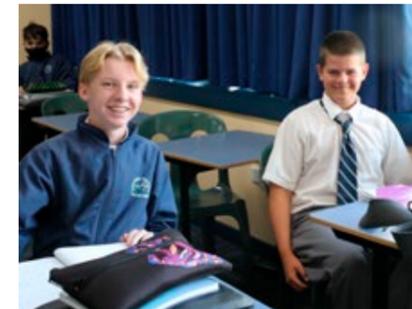
I-Hum was a fantastic way to introduce all Year 7 students to a range of topics that provide them with skills that will help them to excel in later years at the College. This year we touched on many topics that challenged us and encouraged us to ask questions and do more than what's expected. I believe that I-Hum is an incredible combination of English, HASS and Religion that allows us to combine aspects of all our prior knowledge to demonstrate our capabilities and develop new skills.

As well as being an exceptional class that has taught me so much, the teachers were more than just educators, they were mentors who were available to talk whenever you needed. As well as doing individual work, we often collaborated and worked together on projects and presentations which helped us build connections with our classmates and confidence working in a group environment.

To conclude, Integrated Humanities was an exceptional class for learning and developing new skills, creating new and strengthening pre-existing friendships, and it was a place of advice and mentoring. I will miss I-Hum next year as we move into Year 8, but we'll be better and more knowledgeable students thanks to this experience.

ALEXANDER BROOKS
Year 7

I-HUM



I-Hum Topics.

This year in I-Hum, we have learnt many different topics ranging from Human Journeys, Ancient China, Jesus' life and Economics and Business. Recently we've been practising our persuasive skills, writing five paragraph essays, making sure to remember our 'G, S, T' from our Learning Common lessons. During these Learning Common lessons, we've learnt skills such as locating books, conjunctions and short stories, whilst practising teamwork in our groups.

We have been reading our class novels, *The Dog with Seven Names* and *Millions* and we have continued to widen our knowledge with novel studies, looking at setting, conflict and resolution.

Assignments have also been a big part of our learning in I-Hum. We have had a couple of Classwork Portfolio tasks and Sustained Writing tasks. At home we've done two Inquiry Tasks, where we had to investigate certain topics in detail.

ISOBEL HALLIDAY + RUBY PARDY
Year 7



IN THE CLASSROOM



Geopolitics.

Left-wing, right-wing. No, not the wings on a plane, the ones in politics. In Year 9 Geopolitics, with Ms Tulpule as our teacher, we looked at which countries hold power; whether it be Ukraine or Russia, the United Nations, our roles as global citizens and how we as people have the power to initiate change. We wrote speeches about our beliefs and learnt about how we can be leaders. The Geopolitics course helped us to develop our critical thinking skills, it widened our horizons and allowed us to understand the political systems of countries and how these systems work for the people or against them.

Our discussions in class were vibrant and dynamic. Who knows, maybe the class will even produce a few future leaders!

RILEY MILLS
Year 9



Humanities and Social Sciences



Geography Exhibition.

Year 9 Geography students visited the St Peter's Campus on 1 September to attend an exhibition hosted by Year 11 and 12 Geography students on international cultural integration. The senior students presented visual displays as part of an assessment task on an element of culture that has been diffused, adopted and adapted in Australia and other parts of the world. This experience provided the Year 9 students with an opportunity to learn about what it is like to study Geography in Years 11 and 12 and allowed them to connect and interact with the senior students. The success of this event will hopefully open up other opportunities for cross-campus interaction within the Humanities and Social Science faculty.

TRENT WILSON + SANDHYA TULPULE
HASS Teachers



Civics & Citizenship in Action.

Year 9 students were given the opportunity to be involved in a Mock Trial as part of the Civics and Citizenship course in Semester 2. This replicated a hearing in a magistrate's court where students took on the roles of prosecution and defence solicitors, witnesses and magistrates. This was run as it would be in the courtroom and students enjoyed the opportunity to argue their case, demonstrating outstanding preparation and passion in their respective roles.

COLLEEN KAIN
HASS Teacher



Geography Field Trip.

As part of a field work study year 10 Geography students took part in an excursion to the Isabella and Upper Stranger Ponds. The reason for this excursion was to undertake research on the value of the ponds to humans, flora and fauna, analyse the improvement works that have been done, identify any current problems that exist and why and to discuss the management strategies to improve the area. As part of the excursion, we observed the storm water drains that connect to Isabella Pond and Upper Stranger Pond, the flora and fauna that inhabit the pond and the forebays of both ponds. As part of analysing the pond, we tested the water quality, moisture and humidity levels and drew field sketches of around the pond.

As part of this excursion I learned that Isabella Pond, Upper Stranger Pond and Lake Tuggeranong not only provide an attractive focal point for the Tuggeranong suburbs but also have a more critical role, to filter and clean the water run-off flowing from Tuggeranong's suburbs into the Murrumbidgee River. This means that it is important that Tuggeranong residents take collective action to protect waterways so that humans, flora and fauna can all live peacefully among the waterways without the risk of polluted water, blue-green algae and flooding.

MILLY MCCABE
Year 10



Year 11 Business.

Year 11 Business students explored the way that Aboriginal and Torres Strait Islander peoples used items such as bees wax, emu feathers and naturally hollowed out trees to help create items such as emu callers, didgeridoos and head wear. They looked at innovative ways to create products to sell by using natural materials or re purposing existing items made from natural materials. Have a look at some of the great products they came up with.



Year 9 Philosophy.

One of the main focuses in Philosophy this year was the concept of justice. We learnt about many philosophical theories relating to justice such as Utilitarianism, The Veil of Ignorance and The Second Sex.

This class helped us have more confidence when it came to voicing our opinions and helped us to think more critically and ask more meaningful and open-ended questions. We took part in Socratic seminars with topics revolving around justice. The seminars had an inner circle of people openly discussing their points and ideas and an outer circle of people observing. These seminars helped develop our ability to debate and discourse, openly discuss our ideas and exercise our critical thinking all within a safe and respectful environment.

MAYA RIVERA + CAILA GUBBINS
Year 9

HASS



Duke of Edinburgh Award.

The Duke of Edinburgh's International Award equips young people for life and work and is the world's leading achievement award. Since the Award's launch nearly 60 years ago, it has inspired and created opportunities for young people to develop skills, get physically active, give service and experience adventure.

The Award can play a critical role in students' development outside the classroom. It also allows their achievement to be consistently recognised worldwide, giving young people unique international accreditation of their experiences. Young people who participate in the Award become more confident and resilient, and develop skills in areas such as communication, problem solving and leadership.

This year, MacKillop witnessed tremendous growth in the Award, with 60 registered participants engaging with the Award. In 2022, the College presented three Year 11 and 12 students with their Bronze Duke of Edinburgh Awards. To achieve the Award, each student must learn a skill, improve their physical wellbeing, volunteer in their community and experience a team adventure. Congratulations to James Vandermee, Clare Levings and Keira Fegan for their outstanding commitment to the Award.



MATTHEW SMITH

Duke of Edinburgh Award Facilitator



Tim Fischer Oration.

MacKillop sent a contingent of staff and students to Parliament House in August for the Inaugural Tim Fischer Oration on Ethics in Public and Political Life. The goal of the event was to give thanks for the egalitarian and just society that we aim to have in Australia and to call young people to protect and promote the common good through ethical attitudes and action in public and political life. The guest speaker for the event was John Anderson AO, an Australian politician who was Deputy Prime Minister and leader of the National Party from 1999 to 2005.



Election Visits.

It was an election year, so MacKillop naturally hosted a number of politicians who came to speak with the school leadership and senior students. The College hosted David Smith, David Pocock, and Kim Rubenstein in the lead up to the election in May. The visits gave MacKillop the opportunity to show our facilities, to discuss education, and to convey what our community needs from our elected representatives.

ENGAGING WITH THE WIDER WORLD



Opening of MoAD Exhibition.

A delegation of students from across the College attended the launch of the new permanent exhibition "Democracy DNA - The People, The Prime Ministers and The World" at the Museum of Australian Democracy (MoAD) located in Old Parliament House.

As part of the excursion, students engaged with former Prime Ministers Kevin Rudd and Tony Abbott. The insights delivered through their speeches encouraged the students, as young people, to work hard, speak up, get involved and engage in democracy.

The students were the first members of the public to access the new exhibition and to learn more about the history of Democracy through interactive exhibits, artifacts, stories and audio visual displays.

MJ LOGAN

Learning Commons Teacher



FOOD

MR LARKIN'S TEA PARTY

MACKILLOP'S RESIDENT TEA EXPERT, MR EDWARD LARKIN*, SUGGESTS SEVEN TEAS YOU SIMPLY MUST TRY.

CANBERRA BREAKFAST

If you're looking for a black tea that's dark and sweet, just like your personality, you simply must try Canberra Breakfast. With a tea that has oat flakes, cocoa husks, cinnamon and vanilla you'll be drinking what tastes like an ANZAC cookie! Brew for 2-3 min (time your tea brewing so you don't get anything too bitter) and add a dash of milk! If you really want a sweet treat, add a small amount of honey too! Drink this one on those cold and wet Canberra days when you need something to help you feel even more cosy!

MATCHA GREEN TEA

Not my favourite tea when it comes to flavour, but in terms of its stimulating and mood boosting effects there's nothing better! Matcha Green Tea is powdered Japanese green tea. Unlike other teas, where we are drinking water that the tea leaf has soaked in, you are actually drinking the tea leaf itself! This means that Matcha is much higher in caffeine than other teas but it releases the stimulant differently from something like a coffee or energy drink. The caffeine is released gradually from the tea, providing a prolonged stimulation rather than a spike and a crash. Also, the tea is loaded with L-Theanine which promotes relaxation and a mood boost! A great way to start the day!

HERBAL BREWS

Having trouble sleeping? You may need a herbal brew! Herbal teas have been used by humans for centuries. Do you know why? Because they work! There is scientific evidence that supports the use of herbal teas to improve sleep quality, reduce stress and fight inflammation. Certain ingredients to look for include: Valerian Root, Chamomile (don't drink by itself, it tastes terrible), Lavender, Lemon Balm, Passionflower, Magnolia Bark and St John's Wort. Get into your PJs, brew yourself a cup of herbal tea, read a book and drift into a wonderful sleep!

*YES, IT'S RANDOM (BUT TRUE) THAT MR LARKIN LOVES TEA



LEMONGRASS AND GINGER

Throat sore from talking enthusiastically at students' faces for a full hour of a history lesson? Mine too, maybe we should have a Lemongrass and Ginger Tea! As any nerdy science teacher will be able to tell you, ginger has anti-inflammatory properties which will help soothe that sore throat of yours. Caffeine-free and great to have before bed, it's hard to pass up this brew.

Mr Larkin thinks putting sugar in your tea is a mortal sin, which means 20% of our teachers are sinners.



HIGH MOUNTAIN JIN XUAN (OOLONG TEA)

When you're feeling ready to graduate to the world of high class tea, I would recommend an Oolong tea. A cross between a green tea and a black tea (in the oxidation process), an Oolong tea provides a lingering flavour on the pallet and a smooth texture for your mouth feel. Oolong teas can be brewed two different ways: 90 degrees for 5 minutes (the tea leaves will unravel slowly) or 90 degrees for 20-40 seconds for up to 5-7 infusions. In fact, it is common practice to throw away the first brew! Be brave, give Oolong tea a go; your refined pallet with thank you!

PUMPING POMEGRANATE BLENDED WITH SOUTHERN SUNRISE

A refreshing fruity brew for those hot summer days. The Pumping Pomegranate has Apple, Hibiscus, Rosehip, Pomegranate petals and the Southern Sunrise has White Hibiscus, Lemongrass and Grapefruit. Brew these two wonderful fruit tisanes together in boiling water for 8 - 10 minutes and then pour over ice for an iced tea with a fruity, citrus kick! And what a delightful colour! What's great is this iced tea has no tea leaves in it and therefore NO caffeine, so you can drink it late in the afternoon!

RUHUNA SILVER TIPS (WHITE TEA)

Ahh yes, Green Tea's more sophisticated older brother, White Tea! A common misconception is that White Tea is Black Tea with milk in it...incorrect! White Tea is actually the least oxidised version of the tea leaf drink we drink! Due to the small amount of oxidation, the tea has the smoothest texture you could imagine with VERY subtle pine and honey flavours. Try to avoid burning or overbrewing. Best to brew at 80 degrees for 5 - 7 minutes. This tea is for cultured tea drinkers like you and me, so don't waste your good stuff on the plebs who don't know the difference between a Buddha's Tears and a China Jasmine Tea! Save this one to treat yourself on a special occasion!





Food & Hospitality in 2022.

The Food subjects from Years 7-12 continue to be popular, with students studying units like 'World on Your Plate', 'Food by Design', 'Signature Dishes', and 'Café Cooking', or the senior units that look at hospitality operations, industry, and management. In the kitchens, students have cooked a wide range of dishes!

FOOD + HOSPITALITY NEWS



Senior Hospitality Dinner.

In Term 4, parents and carers, siblings, and College Board members, and some staff were guests at the Senior Hospitality Dinner. The dinner had a great atmosphere, excellent service, and quality dishes that were well presented. The guests were given the opportunity to see how the College facilities are used by students and staff to bring an authentic industry experience to learning. Congratulations to the staff and students involved.



New Kitchens.

F Block at the St Peter's Campus received a welcome renovation over the January break. The work consisted of a new (third) kitchen, a facelift for Café Bella, an extended alfresco dining area, and some fixes to the F Block roof. These upgrades will continue to support the growing interest in Hospitality studies across the school.

FOOD STATS



27%

of students voted for Food/Hospitality in their top three subjects.



49%

of students list cooking/baking as one of their hobbies.



COCO POPS

were voted to be the favourite cereal of all MacKillop students.



PIZZA

is MacKillop's favourite flavour of the iconic Shapes range.

Student Diets.



89%

of students eat anything.



6%

of students eat everything except red meat



1%

of students eat a pescatarian diet.



3%

of students eat a vegetarian diet.



1%

of students eat a vegan diet.



27%

of students say they have allergies or intolerance to certain foods.

Your Food Preferences.



52%

of students like pizza with pineapple on it.



63%

of students prefer Coca-Cola to Pepsi.



77%

of students prefer Milo cold, rather than hot.



75%

of students prefer a fruit salad to a garden salad.



62%

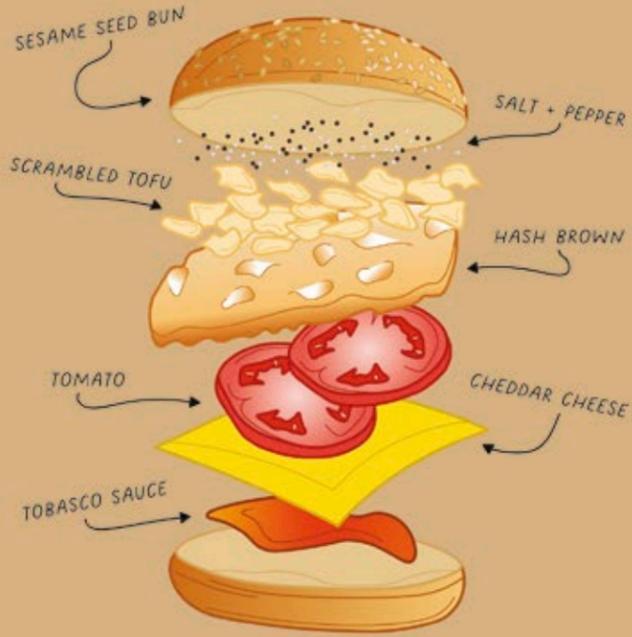
of students would choose McDonald's over KFC.



5%

of students pour their milk in before the cereal.

RECOMMENDED BY EMILY RASHEED
**VEGETARIAN
BREAKFAST BURGER**
WHEN YOU NEED TO GO MEAT-FREE

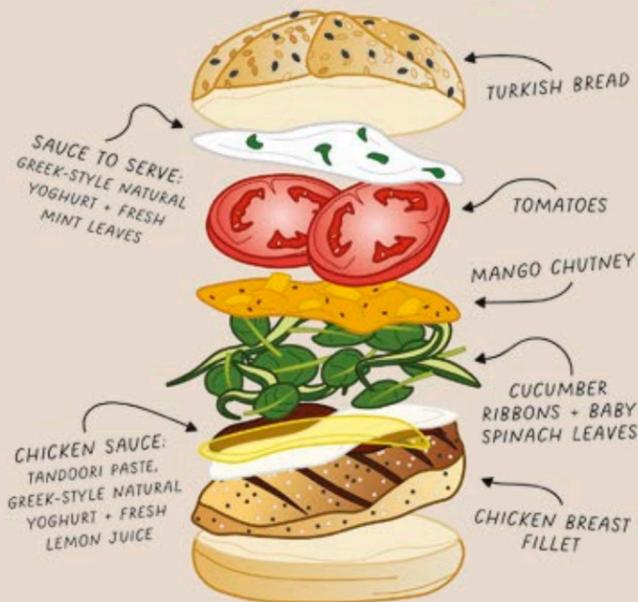


RECOMMENDED BY NEIKA HENSON
**SUMMER PULLED
PORK + COLESLAW
BURGER**
FOR A FRESH-TASTING TREAT

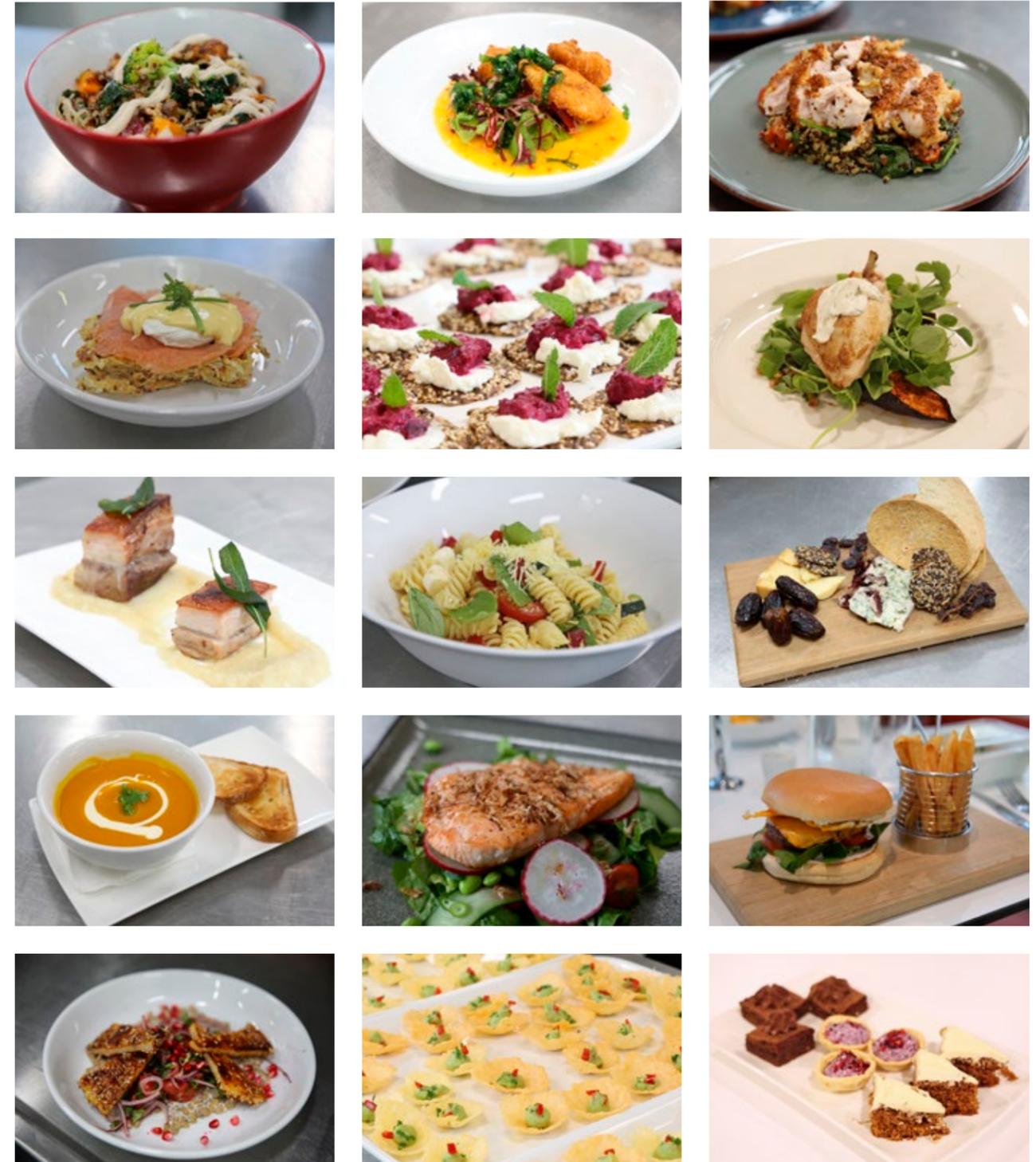
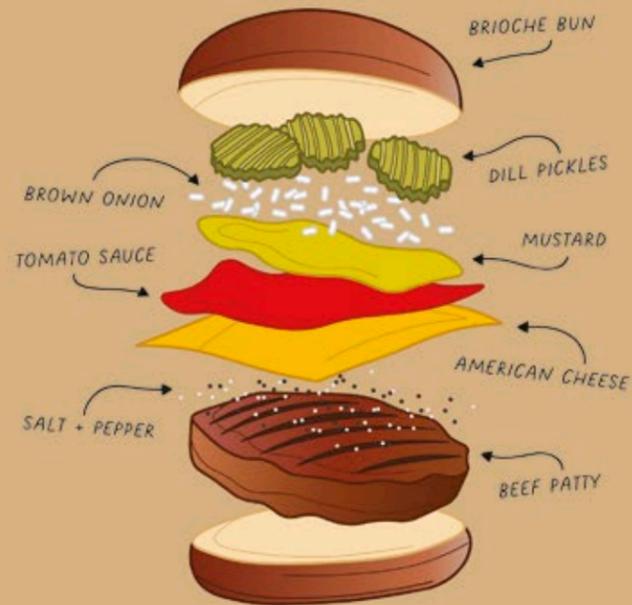


A BURGER FOR EVERY OCCASSION

RECOMMENDED BY MRS MAAS
**TANDOORI CHICKEN
+ MANGO CHUTNEY
BURGER**
IF YOU'RE FEELING ADVENTUROUS



RECOMMENDED BY MR BRUNSKILL
**CLASSIC
CHEESE BURGER**
IF YOU WANT 'TRIED AND TESTED'



DISHES OF CAFÉ BELLA



IN THE KITCHENS



FOOD AT MACKILLOP

152

153

SCIENCE & TECHNOLOGY

SCIENCE AND TECHNOLOGY STATS



25%

When voting for their top three subjects, 25% voted for Science and 25% voted for Mathematics.



12%

of students list writing code as a skill they possess.



37%

of students say they're capable of building/constructing things with tools.



79%

of students use an Apple iPhone. Samsung phones are used by 13%, with the remaining number using other brands or none at all.



48%

of students have a tablet device, but only 1/5 of that figure use their tablet at school.



94%

of students use Netflix to stream TV and movies. The next most-popular platform is Disney+ (76%).



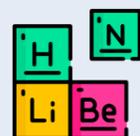
83%

of students use Spotify to stream music.



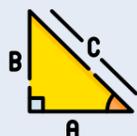
69%

of students say they can confidently use a soldering iron.



34%

of students can recite the first 20 elements of the periodic table.



58%

of students can recall Pythagoras' theorem.



12%

of students list Astronomy/star gazing as a hobby.



Design & Technology Awards.

Two MacKillop staff were nominated for Design and Technology Teacher Association ACT Awards. Jonathon Chandra was nominated for the Technology Teacher Merit Award for a teacher who has been teaching for less than four years in the Faculty and was highly commended by the selection committee. John Solari was announced as the winner of the Technology Assistant Excellence Award. Congratulations to both Jonathon and John who were presented with certificates at the DATTA ACT Awards Dinner in September.

Da Vinci Decathlon.

After a gap of two years, the da Vinci Decathlon was held on 23 and 24 March, albeit online. This year, the theme was causation and this idea was, in some way, part of every challenge. Thirty-eight MacKillop students, from Years 7-10, competed enthusiastically.

Participants were extended academically and drew on their individual strengths to complement each other in team challenges in the areas of: Science, English, Ideation, Cartography, Creative Producers, Engineering, Art and Poetry, Mathematics, Code Breaking and Legacy.

What is the cause of luck? Is it a matter of chance? In the English paper, Year 7 and 8 students wrote persuasive responses to a speech titled, "Luck is not a matter of chance".

The cartography paper presented Year 7 and 8 students with a list of significant events, such as the signing of the Treaty of Versailles, and the fall of the Berlin Wall, and tasked them with identifying what these events caused. Students also located these events on a world map.

In the Code Breaking paper, Year 9 and 10 students revealed secret messages encoded using various ciphers. Former students of Creative Maths, a Year 8 elective subject, had an advantage here. In the same paper, students performed frequency analysis on a ciphertext in order to decrypt it.

In the Art and Poetry challenge, Year 9 and 10 students examined causality through an integrated poem and artwork.

A fun experience was had by all.

NEELIMA GUPTA + MICHELLE BURG

Mathematics Teachers





SCIENCE + TECHNOLOGY

Earth & Marine Science at ANU.

On Friday 22 July, 12 students in Year 9 attended the Research School of Earth Science at the ANU for a Science Day. The day was designed to encourage girls to get involved in all aspects of Earth and Marine Sciences.

During the day, we created Earthquakes and a timeline of the Earth, studied rocks and their stories, created waves and currents/rips, learnt about the day the dinosaurs died, looked at rock cores extracted from the ocean, identified coral and were introduced to courses on offer at the ANU. The main branches of Science we participated in were Geology, Seismology and Marine biology.

It was a great opportunity to meet girls from other schools and make new friends. The staff from the ANU provided us with lots of information about future careers in Earth and Marine Science. We really enjoyed the day and hope we can participate in more opportunities.

CHARLOTTE VALOIS

Year 9



Emu Eggs in Science.

In Science, students studied how Aboriginal people use Astronomy to indicate the change of seasons or the availability of food sources. Students were learning of the story of the Emu in the Sky and how its movement indicates the time to collect Emu eggs. Students were able to handle emu feathers and eggs to understand the relationship between Aboriginal Astronomy, their stories and its application to their lives.



Forensic Science Incursion.

Year 8 Science students experienced the fascinating world of forensic Science with an incursion run by Education Interactive called a 'A Case of Conspiracy'.

Using scientific inquiry methods, problem solving and collaboration, students were challenged to act like scientists and police detectives to ultimately solve a crime. Activities included examining fingerprints, DNA and genetic traits, impression evidence, and code breaking.

KATE GOOLAGONG

Science Coordinator, Padua

Science Report.

2022 has been another busy and productive year in the Science Department.

New opportunities for Science students were offered with the introduction of two new electives – Forensic Science in Year 9 and Data Science in Year 10. Both electives have proven to be very popular and it has been wonderful to see the students engaged in their studies.

In term 3 students in Years 7-12 had the opportunity to get involved in extracurricular competitions such as the Big Science Competition, ICAS and ICQ. Congratulations to all students who participated.

This year the science staff said farewell to our amazing Laboratory Technician Janis McGettrick. This science faculty would like to extend a big thank you for her dedication and hard work over many years.

Finally, we would like to thank all the science staff for their professionalism, dedication and commitment to their students throughout the year.

KATE GOOLAGONG + MEL PERT

Science Coordinators



Science



Year 9 Forensic Science.

Forensic Science is a multidisciplinary science that has gained popularity through media exposure including television shows such as CSI. Over the course of the semester, students will enhance their working knowledge and application of a number of scientific processes and research skills, including observing, making inferences, problem solving, drawing conclusions, organising data, and measurements.

During Term 1, students conducted a number of experiments where they were required to collect and analyse physical evidence using the tools of a forensic scientist. Student highlights from the term include lifting fingerprints from various surfaces using different dusting powders, observing hair fibres under a microscope, analysing bite mark impressions and matching tyre track evidence.

Year 10 Data Science.

There is a huge amount of data in the world, and an understanding of this data can help to answer difficult questions about society. The Big Data in Science elective is designed to develop students' skills to effectively analyse and make sense of the results of large-scale scientific experiments. Students completing the elective have strong interests in science, programming and problem solving. Students were given access to large sets of data looking at Stars, Climate, Chemical Elements and Motion, with highlights of generating their own Hertzsprung-Russell diagrams and working out the average temperature of all the yellow stars visible in the night sky.

In Term 2, students used their problem-solving skills and creativity to answer their own scientific questions by designing experiments using data loggers and large data sets, which they then shared with a general audience.





Science Competitions.

In Term 3, students in Years 7-12 had the opportunity to participate in the Big Science Competition and the ICAS Science Assessment. The multiple choice competitions test science knowledge, critical-thinking and problem-solving skills. Questions are set in real-life, contemporary contexts, making them relatable and interesting.

Thank you to all students who participated and congratulations to the following students who received credit, distinction and high distinction certificates.

CREDIT

Big Science Competition: Alexander Brooks, Noa Zisman, Mary Bunt, Hima Pynadath, Aaron Nobby Rajan, Alexandra Phathanak, Freya Stanford, Jessica Lubinski, Sophia Kesina, Hannah Rose

ICAS: Cameron Jacobsen, Ruby Parady, Isabella Darcy, Liam Fuller, Aran Moody, Alexandra Phathanak, Darwin van Doorn, Ari Gilchrist, Jacob Loughlin, Riley Noble, Jack Valois, Hamish Williamson, Ryan Blundell, Dylan Neindorf, Kayla Walker

DISTINCTION

Big Science Competition: Harrison Orton, Ava Fradgley, Nathan Salvage, Robbie Crisp, Milly McCabe.

ICAS: Amelia Brown, Kyle Richardson, Lucius Stefanuti, Jasper van Doorn.

HIGH DISTINCTION

Big Science Competition: Daniel Collis, Darwin van Doorn, Oliver Wright, Aran Moody, Jasper van Doorn.

KATE GOOLAGONG + MEL PERT

Science Coordinators



Science Week.

National Science Week was held across Australia from 13-21 August. The national theme for 2022 was 'Glass - more than meets the eye'.

Students on the Padua Campus celebrated with a number of different activities and challenges. Each day, students were able to participate in an activity related to glass. Students were able to make 'edible glass', conduct experiments to make glass rods and beakers disappear, make rainbows using light boxes and participate in Science Week Kahoots. In PC classes, students were able to complete the daily PC Challenge. They had to work together to complete trivia questions and picture puzzles. Congratulations to 7E3, 8W3 and 9W1 who had the highest scores in each year group at the end of the week.

At the St Peter's Campus, students showed off their scientific knowledge through daily puzzles completed in PC classes. Some of the puzzles included:

- Naming the image shown in stained glass
- Determining the famous scientist depicted by a series of emojis
- General knowledge science trivia

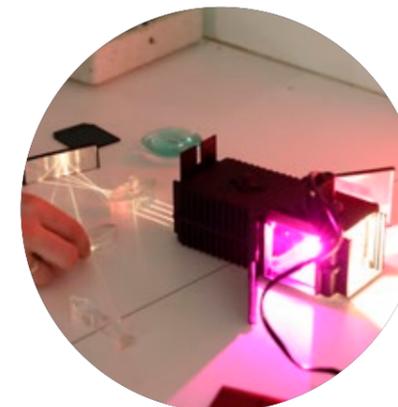
It was a close competition all week with lots of discussion generated over potential answers. 10AF, 11F2 and 12E3 emerged victorious at the end of the week as the major prize winners.

Students also had the chance to come along to the Science labs and try their hand at a series of challenges celebrating the amazing material that is glass. They solved an obstacle course using a ray of light and mirrors, explained the illusion of the disappearing beaker, made a 6-metre model of an optical fibre using nothing more than hot glue and played 'Smoke on the Water' using beakers filled with different amounts of water.

Thank you to everyone who participated!

KATE GOOLAGONG + MEL PERT

Science Coordinators



Astronomy Club.

In Term 3, Year 9 STEM students were given the opportunity to take part in the Astronomy Club run at the St Peter's campus. It gave students currently studying Radio and Radio Astronomy an opportunity to learn more about astronomy and celestial objects as well as telescopes, how to set them up and operate them. It gave us an opportunity to gain background knowledge before we started our radio astronomy projects in Term 4.

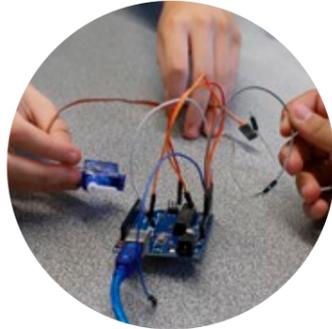


With the help of Year 12 students, the night was enjoyable and provided us with the opportunity to apply knowledge outside of the classroom. It was a fun and interesting experience for all of the students involved. Lots of thanks to all the Year 12 students and teachers involved who made it possible.

CHARLOTTE MURPHY

Year 9

STEM



STEM REFLECTIONS

STEM has really made me understand the technological aspects to life. For example, we got to design a pet feeder. We have learned how to use an Arduino board and new terminology. We might not have learned these concepts without this amazing program that MacKillop provides.

IZABELLE AOUN + TABITHA EDWARDS
Year 8

STEM is a challenge in life that is worth taking.

MADELINE WILLIAMS
Year 8



PBL this semester was a fun experience. We developed various skills that helped us improve our design and construction skills. The content was very engaging and interactive. Thanks to Mrs Campbell for teaching us.

HELEN PYNADATH + MARIANN FULOP
Year 8



In Semester 2, our PBL class worked a lot on three really fun and innovative tasks. The first task that was set for us to do was a persuasive task. We had to make a poster, presentation, letter or infographic about how to help the environment. We learn about a lot of things about business and marketing and how different techniques can help market products to different target markets. For our second task, we had to re-design an item to make it more efficient and eco-friendly. This was a really amazing task because we had to think about how to change things for the better. It was fun to try to change an item to make it use natural resources. The last task was to make a roller coaster in small groups; we had to sketch, build and use a lot of trial and error to complete it. Overall, these three tasks were super fun and taught us plenty of things that can be used in the real world. Thanks Mrs C!

CHARLOTTE MARSH + STEPHANIE SHAW
Year 8

STEM Photovoltaics was a challenging but rewarding elective. We were able to make a solar-powered miniature house and a solar-powered race car. These projects challenged our problem-solving skills but, in the end, it was rewarding to see the final product come together. We used skills such as soldering, tested our cutting skills when making the base of our projects, and learnt to use parallel circuits to ensure the integrity of the power source to each component. We did all this while learning how solar panels work. Overall STEM Photovoltaics was a fun and interesting class to test our knowledge and learn new skills.

MILLIE TERRACINI
Year 9

For my STEM project, my group and I created a hovercraft. It is fully functional, and made entirely of some cardboard, some wires, a fan and a battery. It required us to solve a lot of problems and to work quite hard on it to finish it in time. The project-based learning approach of STEM doesn't just let you make goals but also achieve them.

JASPER VAN DOORN
Year 10

I enjoyed making the roller coasters in PBL, and the programming in Digitech is challenging.

MATTHEW ARNOLD
Year 8



SCIENCE TECHNOLOGY ENGINEERING MATHEMATICS



STEM Projects.

Here's some of the projects students have worked on in STEM this year:

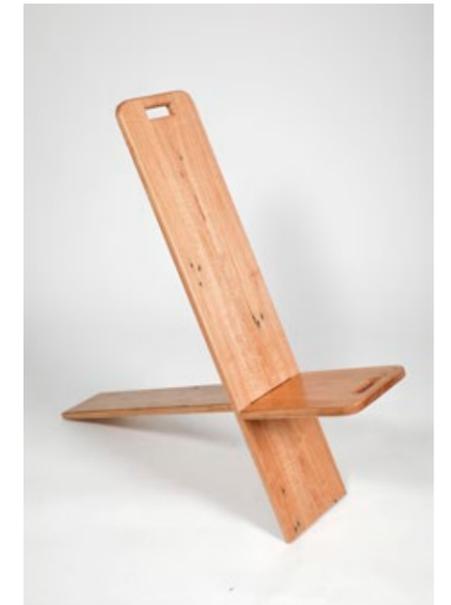
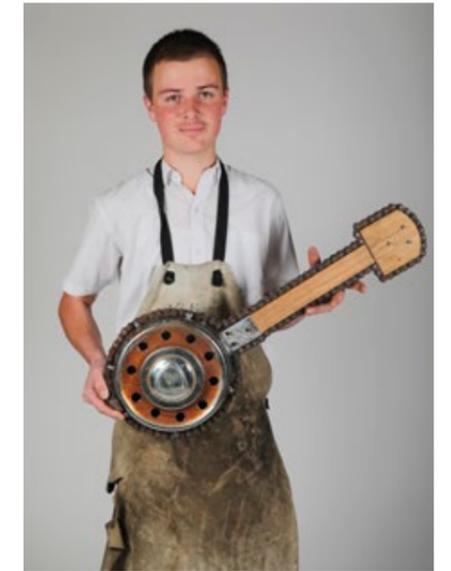
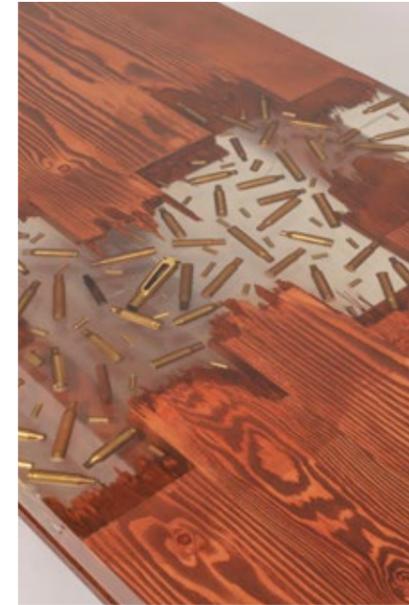
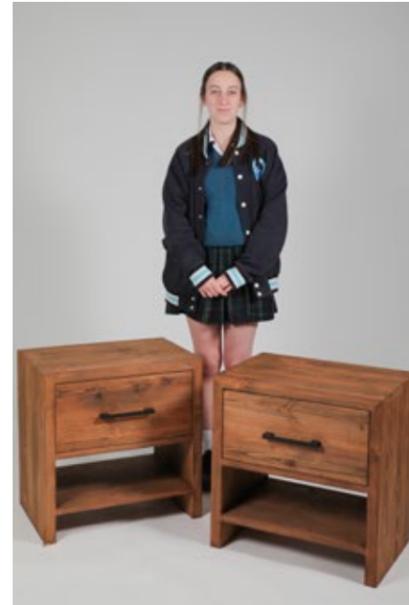
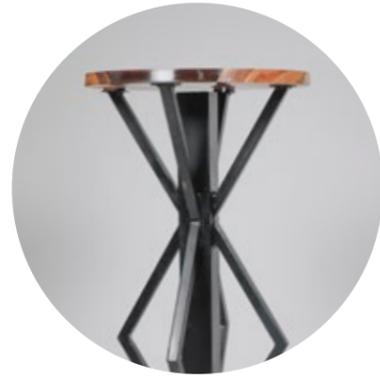
- Solar Oven
- Osmosis
- Roller Coasters
- Lolly Dispensers
- Cars
- Fire Detectors
- FM Radios
- Mazes
- Flying Gliders
- Horn Telescopes
- Helical Antennae
- Pet Feeders
- Weather Stations
- Hovercraft
- Life Straw

STEM Skills.

What skills do you develop when you take on a STEM project?

- Problem solving
- Creativity
- Team work
- Building
- Initiative
- Hands-on
- Independence
- Critical thinking
- Communication
- Digital literacy
- Computational thinking

Technology



STUDENT CONSTRUCTIONS



Year 9 Materials & Design.

This year's Material and Design class was truly an enriching experience – from design to physical product, every moment was wonderful. We were told to make a kitchen knife and that was it, with full creative freedom over every other aspect. We fully designed our whole project in CAD (Computer Aided Design) before our knives were laser cut at a forge. We then grinded down the edges and sent them back to the forge to be heat treated. While this was happening, we were designing our presentation cases in CAD and had them cut by a CNC router at the St Peter's Campus. When we got our knives back from heat treatment, we sharpened them down and stood back at the wonder of our finished product. One of the best schooling experiences I have ever had!

ETHAN HITCHENS

Year 9

Year 12 Furniture Making.

Furniture in 2022 was good fun. The Year 12s were given an open task where we had the opportunity to design and construct individual projects. The skills we have learnt expanded on what was taught in previous years. The workshop is always a positive environment and the teachers are always up for a laugh.

RACHEL CORKERY

Year 12

Year 11 Engineering.

Engineering in Year 11 is all about creative thinking, using some simple physics and math to build structures like bridges and chairs. In Semester 1, we built a bridge out of wood and it had to hold immense weight. This was a very difficult task, but it was still fun. In Semester 2, we built a chair out of cardboard that had to support our own weight and we only had four sheets to use! This task was very fun and rewarding.

BAILEY CHAPMAN

Year 11

Year 9 Applied Metal Engineering.

The class is mostly practical and an overall great experience. Learning to use the machines was the best, especially welding in the metalwork class. We have worked with different types of tools to create our projects.

HARRY MUNOZ + ETHAN PICKER

Year 9

Year 11 Furniture Making.

Year 11 Furniture Making has allowed us to delve deeper into our own furniture designs and also select types of timber we wanted to use, such as hardwoods like ash, blackbutt or even red gum. We had the opportunity to use reclaimed timber from Thor's Hammer and from building projects within our school. You can appreciate the added value and effort that goes into using reclaimed timber rather than new wood. This opportunity is one that I'm very grateful for, as I was able to use Vic ash that was reclaimed from St Mary MacKillop in my Semester 1 project.

MYLES MURPHY

Year 11

Design & Emerging Technologies.

Getting the opportunity to take part in Design and Emerging Technologies has been an absolute pleasure. Over the past two years, we have learnt a variety of different topics and skills that have helped us develop in our work. The skills and knowledge I have obtained over the past two years I will take with me outside of school as I venture into my future career. During the last semester, doing architecture has been my favourite part of the class and I have learnt a lot. I would highly recommend this class because it is so beneficial to improving skills and tactical thinking.

DONELLE O'DONNELL

Year 12

Year 11 Furniture Making.

Furniture in Semester 2 was well planned and gave me the opportunity to make a piece that was practical and unique. Mr Longo, Ms Hennessy and Mr Solari helped me along the way to make a great furniture piece and end the year well.

ALEC TOMPKINS

Year 11



STUDENT REFLECTIONS

Emu Caller Activity.

In Term 3 in Maths, we learnt about measurement. This included learning about the total surface area of objects. In one lesson, we were given the opportunity to practise the skills that we have acquired by finding the total surface area of emu callers. Emu callers are wooden hollow cylindrical tubes and were used by Aboriginal peoples to distract emus from their eggs. We were challenged to find the total surface area of this object and compare our findings with our peers. This was a fun and engaging way to learn and use Maths in the real world.

ANNA, AVA + CHARLOTTE

Year 9



Mathematics



Maths Support Program.

In Semester 2, 15 Year 7 students began the new Maths Support Program at MacKillop. And the results were impressive! Congratulations to all the students who have committed their time and effort to come to Maths Support before school, after school and during the day. Your hard work has paid off.

All students who have been attending Maths Support sessions have improved their grades from an E-grade in semester 1 to a C grade (or better) since beginning the program. Teachers have noticed the difference in class. Some of the notes from teachers include:

"[Student] chooses to sit in the front, great confidence increase, offers answers voluntarily."

"[Student] is more confident, engaged and enjoys doing Maths."

"Improved work habits, answering questions and asking questions to the teacher if unclear... Works independently and confidently."

MICHELLE BURG

Mathematics Teacher

Many students have gaps in their knowledge that make it harder for them to engage in learning new knowledge and skills in Maths. The Year 7 Mathematics Support Program addresses the problem by teaching students the knowledge and skills that they need to keep up in class. It also introduces topics that students are about to learn in class early. This provides a head start on the learning to build confidence.

The Maths Support Program is MacKillop's very own. It was designed and written by Dr Burg and implemented by Dr Burg and Mr Agnew. The program applies the High Impact Teaching Practices which are the focus of Catholic Education's Catalyst initiative.



Year 11 Essential Maths.

Year 11 Essential Mathematics students put their paper plane making skills to the test! In their unit on Data Collection, students created paper planes using papers of different thicknesses for their assignment. These were thrown multiple times with results recorded. Once data was collected, they analysed it and decided on which paper thickness was the best for a paper plane!

DYLAN WATT

Maths Coordinator, St Peter's



Australian Maths Competition.

In Week 3, a number of MacKillop students in Year 7 through to Year 11 participated in the Australian Mathematics Competition in their respective Junior, Intermediate, and Senior divisions.

This year we had 89 students participate in the competition at Padua, with 59 students participating at the St Peter's Campus.

The Australian Mathematics Competition is an engaging problem solving competition where students can demonstrate and apply their knowledge to solve unconventional Mathematical problems. Students are presented with 30 problems of increasing difficulty designed to enhance their reasoning skills and interest in Maths.

Huge congratulations to Alexander Brooks in Year 7 who achieved a High Distinction/Best in School result in the recent 2022 Australian Mathematics Competition. Alexander scored in the top 1% of students, Australia-wide, who sat the Junior (Year 7/8) section. His outstanding achievement was acknowledged at an Awards Ceremony on 1 December.

ANNA KEPPEL + DYLAN WATT

Maths Coordinators

Maths Quotes.

Quotes often open the eyes and the mind to understand truths and acknowledge things you otherwise would have missed. They let you see life from another, wider perspective, and in this sense, they expand the mind and the awareness. With this in mind I have some famous maths quotes for you below:

"Film is one of the three universal languages, the other two: mathematics and music." – Frank Capra

"The only way to learn mathematics is to do mathematics." – Paul Halmos

"Obvious is the most dangerous word in mathematics." – Eric Temple Bell

"Life is a math equation. In order to gain the most, you have to know how to convert negatives into positives." – Anonymous

"Go down deep enough into anything and you will find mathematics." – Dean Schlicter

"Mathematics is the gate and key to science." – Roger Bacon

"There should be no such thing as boring mathematics." – Edsger Dijkstra

"Mathematics is, in its way, the poetry of logical ideas." – Albert Einstein

"Sometimes the questions are complicated and the answers are simple." – Dr Seuss

"If you stop at general math, then you will only make general money." – Snoop Dogg

"Nature is written in mathematical language." – Galileo Galilei

"Mathematics is not about numbers, equations, computations, or algorithms: it is about understanding." – William Paul Thurston

"Mathematics is the most beautiful and most powerful creation of the human spirit." – Stefan Banach

"The beauty of mathematics only shows itself to more patient followers." – Maryam Mirzakhani

"Math is the only place where truth and beauty mean the same thing." – Danica McKellar

"First rule about maths club is talk about maths club with your friends at school. Second rule about maths club is attend when you can" Mrs Keppel

ANNA KEPPEL

Maths Coordinator