

Patana

NEWS

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LESSONS LEARNED FROM ONLINE LEARNING

by Cross Campus Assistant Principal Brian Taylor

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LESSONS LEARNED FROM ONLINE LEARNING

Brian Taylor, Cross Campus Assistant Principal, Curriculum Technology Integrator

“The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it.”

Mark Weiser

This statement in Mark Weiser’s well-known *The Computer for the Twenty-First Century* (Scientific American, 1991, pp. 66–75) has been a source of inspiration for many.

The goal of making the technology ‘disappear’ can happen in a variety of ways. Disappearance can take different forms as described by Streitz (2001):

- Physical disappearance refers to the miniaturisation of devices and their integration in other everyday artefacts as, e.g., in clothes, so that you don’t see them anymore.
- Mental disappearance refers to the situation that the artefacts can still be large but they are not perceived as computers because people discern them as, e.g., interactive walls or interactive tables. Thus, technology moves mentally into the background.

Lately the predominant discourse around technology has been focussed on devices and services that entertain and engage us. They are hungry for our attention, use data to track us, target advertisements based on our digital habits; they are far from invisible. Technology should empower us, increase our productivity and creativity, even improve our overall health and well-being. Good technology, specifically good educational technology, should work for us, it should help us to achieve what we want to do, amplify our positive human traits and help us learn.

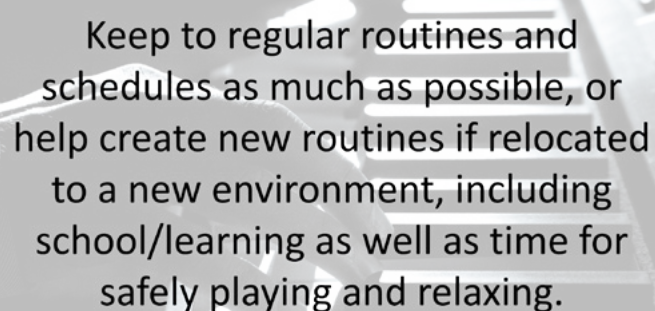
Bangkok Patana School provides financial support to teachers pursuing a Master’s or Doctorate, beyond their Bachelor degree. I am currently taking my penultimate Master’s unit online, prior to the dissertation. I have been strategic with the previous three units, selecting ones in which the content was delivered face-to-face at our school by a Bath University lecturer. We learnt with them, collaborating with fellow educators from Asia, onsite for four intensive days. For me it has been fascinating to be on the receiving end of instruction, to be the student, both in a classroom and online.

In the months following the concentrated in-person sessions, came the literature review and essay writing phase. My learning entered what is referred to as online or continuing-learning. I prefer the latter term, being online and using

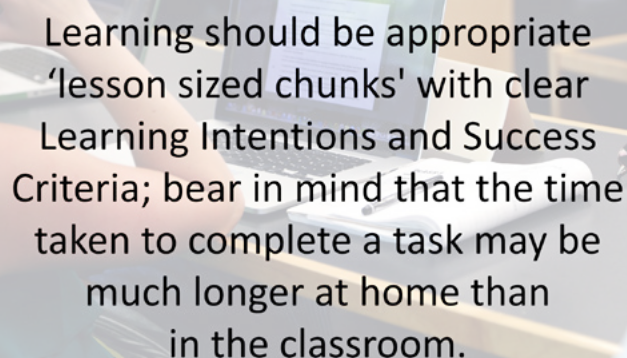
technology is merely the vehicle to access the resources, it is the relationships that drive the learning. The cohort of educators continued to dialogue with the lecturer and each other, but now over large distances and various time zones. We used various technology platforms and tools to achieve this. Over the course of the past three years on the Master's course, and the various school closures in the past eighteen years working at Bangkok Patana, I have discovered what really works when learning migrates from face-to-face. This honed experience, along with feedback and advice from many colleagues and our students facing similar situations (particularly relevant in the current climate of poor air quality and the COVID-19 virus outbreak) has informed our Continuing Learning Strategy at Bangkok Patana.

If we have to close school for any reason our priority is to enable our students to continue learning as easily and effectively as possible. Many considerations play a role in the development of the strategy, such as accessibility, type and quality of materials and the length of time that this type of learning must be maintained.

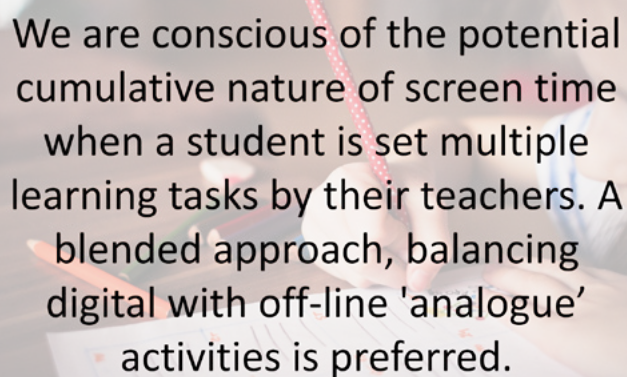
Here is a sample of salient points from the guidance given to colleagues in our Continuous Learning Strategy:



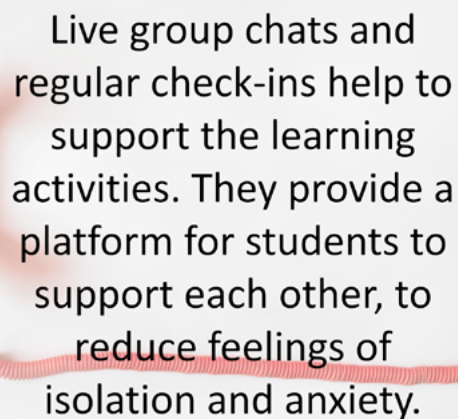
Keep to regular routines and schedules as much as possible, or help create new routines if relocated to a new environment, including school/learning as well as time for safely playing and relaxing.



Learning should be appropriate 'lesson sized chunks' with clear Learning Intentions and Success Criteria; bear in mind that the time taken to complete a task may be much longer at home than in the classroom.



We are conscious of the potential cumulative nature of screen time when a student is set multiple learning tasks by their teachers. A blended approach, balancing digital with off-line 'analogue' activities is preferred.



Live group chats and regular check-ins help to support the learning activities. They provide a platform for students to support each other, to reduce feelings of isolation and anxiety.

If you have any questions or queries please do contact me on brta@patana.ac.th.

Have a wonderful weekend.

References

Streitz, N. A. (2001). Augmented Reality and the Disappearing Computer. In: Smith, M., Salvendy, G., Harris, D., Koubek, R. (Eds.), Cognitive Engineering, Intelligent Agents and Virtual Reality. Lawrence Erlbaum, 2001. pp. 738-742.

STUDENT SAFETY AFTER SCHOOL



Dear Parents,

We shared the message below with all our students this week to encourage them to remain as safe as possible when they leave school each day. Please do what you can to emphasise these points and I particularly encourage you to not allow your child to use motorbike taxis on Soi Lasalle. We are working with the local authorities to support us in ensuring that the front of school is as safe as possible. The safest course of action for all our students and community members is to always use the footbridge when crossing the busy road and to avoid using motorbike taxis.

Dear Students,

We need your support to ensure that you are as safe at the end of the school day as you are inside school. Please follow these guidelines to keep safe. If you have any confusion or concerns, speak with your tutor in the first instance.

KEY STAGE 3

Must not exit the turnstiles unless you are attending an ECA, a fixture or school trip, are being collected by parents/drivers or are on the school shuttle bus (Year 8 and above).

Students in KS3 are not allowed to take taxis without their parents/guardians.

If you are using the school shuttle to the BTS then you should only leave school at the correct time for the shuttle. Before that time you should be in an ECA, or in the Library. If you are waiting for a 3.30pm ECA then you should be in Me Time.

KEY STAGE 4 AND SENIOR STUDIES

May leave school using taxis

If you are not in an ECA then you should be in the Library until leaving school. Senior students may continue to work in Senior Studies.

ALL STUDENTS

Once students leave school, apart from if attending an ECA, fixture or school trip, **we assume you have gone home** and you should only return in an emergency, or for a specific school event such as an evening concert or dance. In these cases, the expectation is that you go home before returning to school or stay in school where you can be supervised.

You must only cross the road using the footbridge as that is the only safe choice.



AFTER ECAS

We are aware that after ECAs/fixtures, especially 4.30 finishes, you may wish to buy food or drinks from a shop near to school before heading home, either privately or on school transport.

If you do this:

You must not keep a school bus/shuttle bus waiting

You must cross the road using the footbridge as it is the only safe option.

MOTORBIKE TAXIS

Some students, mostly in Key Stage 4 and above choose to take motorbike taxis to the BTS rather than the school shuttle or regular taxis. We strongly urge you not to do this as we do not believe it to be a safe form of transport on such a busy road.

If you choose to ignore this advice and take a motorbike to or from the BTS please ask the driver for their spare crash helmet to offer you some protection. Many motorbike taxi drivers have them so please use them.

Please note that we are not doing this to 'police' you but to ensure that you travel safely to and from school each day.

Mick Smith

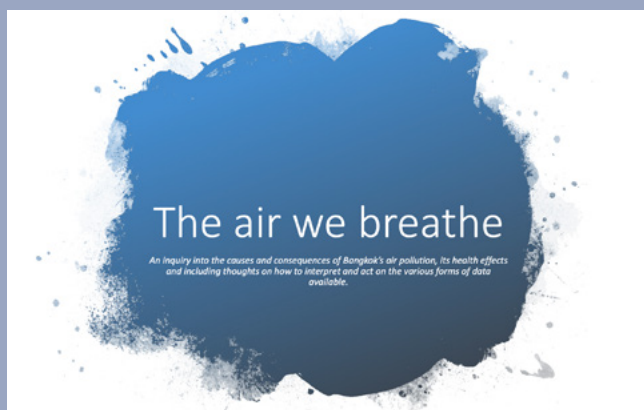
Principal, Secondary School

AIR QUALITY INFORMATION

The Air Quality levels are posted on the Students', Parents' and Staff Firefly dashboards. Links to our policies and procedures are also found on the dashboard and can be found [here](#).

The levels are automatically read three times a day: Early morning, 11.00am and 1.30pm. Students may come to school wearing masks but they are not obligated to do so.

The presentation given to parents in November about what happens when air quality levels reach higher than normal levels is on Firefly [here](#)



PATANA MARINE CONSERVATION GROUP WINS PADI RECOGNITION



In recognition of their outstanding efforts to clean oceans and beaches, create viable reefs as well as their work in educating the public about the dangers of ocean pollution and the need to clean up plastic and other pollution, the Professional Association of Diving Instructors (PADI) Asia Pacific has awarded the Patana Marine Conservation Group with a certificate recognising their outstanding contributions to our ocean planet. The first of its kind, this recognition has only been awarded to five schools in the central and eastern region, of which, Bangkok Patana is first. President Annabel Brett and Vice President Anika Kothari were on hand to receive the certificate from PADI representative Sheena Walls of Mermaid's Dive Centre, along with club members and Staff Supervisor Yvonne Brown. Cross Campus Principal Helen Thew and Teacher Simon Worrall, who have supported the club as supervisors on trips, were also on hand to congratulate club members for their achievement.

Students can find out more about the PMCG at the Campaign Days on Tuesday 25th and Wednesday 26th Feb at lunchtime in the Lounge. Qualified divers from any year group in the Secondary School can also join our next trip on 14th March to see the artificial reef first-hand. More details can be found at the PMCG Firefly Page [here](#).



ARE YOU READY FOR WASTE LESS WEEKS NEXT MONTH?



Did you know that there are lots of reusable items for sale in the PTG Tiger Shop?

Stainless Steel Drinking Straws – individual and in packs
Bamboo Drinking Straws
Bamboo Cotton Buds
Bamboo Toothbrushes
Cotton Produce Bags (sets of 3)
Stainless Steel Klean Kanteen Insulated Drinks Tumblers
Stainless Steel Klean Kanteen Water Bottles
Get your environmentally friendly products now!





BOOK DRIVE

Monday February 17th -
Friday March 6th

Bring in your second hand books
and drop them off in front of the
primary or secondary library!

SUPPORT OUR CAUSE!

We will be selling the books back to support
the education of underprivileged children
the week beginning March 9th!



D+T STUDENTS CONNECT WITH THE REAL WORLD AT TRIUMPH FACTORY

Richard Smith, Head of Faculty Design and Technology

In Design Technology, we are continually looking for ways to connect our curriculum with the real world. We believe it is vitally important to our students that they make this connection as it gives their learning context, purpose and application. To help us achieve this we are very fortunate to have support from Triumph Motorcycles, giving our Senior students an insight into the amazing world of design engineering and manufacturing.

On Tuesday 18th February we took a group of eight IB DT students to Triumph Motorcycles in Chonburi, the largest Triumph manufacturing plant in the world. On arrival we were greeted and ushered into the meeting room, where students listened to a presentation about the history of Triumph with a focus from 1983 to the present day. During this time, owner John Bloor and his team built Triumph motorcycles back from insolvency to a world leading prestigious British heritage motorcycle brand and in 2002 Triumph opened the first of its three factories in Thailand.

In a second presentation, we looked at the manufacturing capability of the three factories (3, 4 and 5). We were then taken on a tour of Factory 5. With careful planning we were able to link students' current work at IB DT directly to what they were seeing during the tour; mainly "raw materials to final product" and "commercial manufacturing". We saw high pressure die-casting from ingots of aluminium to extremely accurately finished engine cases, machining facilities, quality control, assembly, and rolling road testing of the bikes as they came off the assembly line. Our students were certainly impressed by the scale of manufacturing and the complex production systems in place at Triumph. Students saw examples of Lean Manufacturing, Mass Customisation, Kaizen philosophy, Quality Control and Value Stream Mapping to mention just a few. At the same time our students were able to see the whole range of Triumph motorcycles in production, including the famous classic "Triumph Bonneville" and the new monster "Rocket 3" with its 2.5 litre engine.

An industrial visit enables students to hear from and question engineers and manufacturing management. The Triumph staff were young, extremely informative, approachable and able to connect with our students very well. The visit will help students contextualise this aspect of theory that they have been studying and be better prepared for their exams and IA Design Project work.

Perhaps it may inspire some of our students to become involved in the world of industry and design - engineering in the future?

Here's what the students thought

"The manufacturing theory is in itself a very interesting aspect of the Design + Technology course for us to learn about, however, the expedition to the Triumph factories was a great way to consolidate basic theories into real world applicable scenarios. I found this a very fruitful experience in my enhancing my learning with additional realistic contexts. Personally, I do not see myself working in such a factory however; the management segments of production planning are a very interesting field which I do see myself studying for in higher education." – Divyansh Jain, 12K.



"The journey to the Triumph factory allowed us to observe first-hand how the business operates and how they manufacture engines, frames and how these are assembled together. They walked us through their factory explaining the various stages and precautions they take while making motorcycles. This experience has showed me how time consuming and how much thought goes into one process." -Tahilia Constant 12 B

"The excursion to the Triumph factory enabled us, as students, to observe the knowledge we acquired in classrooms applied to reality. It was a fruitful experience as we saw the interwoven principles of design technology converging to form the fabric of industrial design and manufacturing. Observing these production lines and thought processes behind them enhanced my ability to integrate context into my classroom knowledge." - Ying Chi Ku, 12B

"The visit to one of the Triumph motorcycle factories was a great experience, as we learnt a whole lot about not only the company itself but also about skills that would be helpful in the curriculum of what we learn. I learnt more than what I already knew about the topic with this visit as now I know that the many different and complicated steps in manufacturing a motorbike, or any product is quite complicated. The experience taught me many things that I didn't know before and helped with what I already know." - Ethan Studdon, 12F

"The trip to the Triumph Motorcycle factory was a memorable experience. We learnt about different types of materials and processes used to manufacture motorcycles. The factory was very big and organised. It would have been even more interesting if I got to ride them after!" - Nadiv Faraz, 12T

"During the visit, we had a presentation which explained the history of Triumph. Finding out the different stages that Triumph had to go through to reach the level that it is on, made me appreciate the company even more. After the introduction, we had a tour of the factory, where a guide explained all the processes that took place. The tour helped me put some of the things that we had learnt into context, which let me understand everything much better. I could relate the theories we had learnt to Triumph and make similar realistic scenarios which enhanced my learning and understanding more. This trip was one of the most educational trips I have been on." Navnee Batwara, Year 12K

"Through my tour of Triumph, I gained quite a fair amount of knowledge about the inner workings of the factory. This was mostly gained through seeing how the factory was operated. I found the experience quite memorable, interesting, as well as insightful, as I was able to see the knowledge I learned during my classes at school being used in a real factory. Furthermore, I also found the presentation about the history of Triumph to be quite informative as it showed me the evolution of the company, from a simple start up, to a well-known, global organisation." Arisa Tuchinda, 12G

"Triumph was a very eye-opening experience, as we were able to see what goes behind the manufacturing of a product, in this case it was the production of motorcycles. Seeing how everything was organised through computer systems and how every single screw had a destination was mesmerising. It was captivating to learn about the history behind the brand, how it survived hard times and came out on top. Overall a very enjoyable trip." Caroline Vandlik, 12G



ATOMIC THEORY IN PRIMARY SCHOOL: PARENT WORKSHOP

How exciting can Science be? Find out on Monday 24th February!

Ruben Meerman, (The Surfing Scientist) and Ian Stuart, (Founder of the Atomic School) have returned to Bangkok Patana to support the development of science in the primary school.

On Monday 24th February they will provide a workshop for parents on "Why Atomic Theory in the Primary Classroom is Essential for Health Literacy."

Monday February 24th 2020. Conference Centre: Room 420 (CON 420) - 8.00am - 9.00am

This workshop will explore:

- Health Literacy
- Atomic Theory for primary students
- Practical Scientific learning

Please RSVP [here](#) to attend.



Helping children cope with stress during the 2019-nCoV outbreak



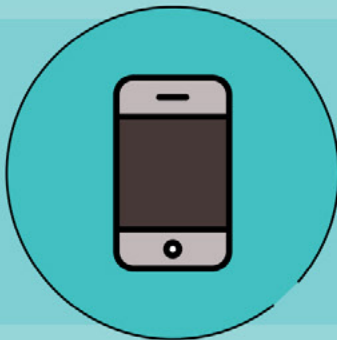
Children may respond to stress in different ways such as being more clingy, anxious, withdrawing, angry or agitated, bedwetting etc.

Respond to your child's reactions in a supportive way, listen to their concerns and give them extra love and attention.

Children need adults' love and attention during difficult times. Give them extra time and attention.

Remember to listen to your children, speak kindly and reassure them.

If possible, make opportunities for the child to play and relax.



Try and keep children close to their parents and family and avoid separating children and their caregivers to the extent possible. If separation occurs (e.g. hospitalization) ensure regular contact (e.g. via phone) and re-assurance.

Keep to regular routines and schedules as much as possible, or help create new ones in a new environment, including school/learning as well as time for safely playing and relaxing.



Provide facts about what has happened, explain what is going on now and give them clear information about how to reduce their risk of being infected by the disease in words that they can understand depending on their age.

This also includes providing information about what could happen in a re-assuring way (e.g. a family member and/or the child may start not feeling well and may have to go to the hospital for some time so doctors can help them feel better).

[Bangkok Patana's COVID-19 Advisory](#)

TRANSPORT CORNER



UPDATES FOR THE WEEK OF 24TH FEBRUARY

YEAR 5 RESIDENTIAL TRANSPORT

(5C, 5J, 5K, 5M)




- Monday morning: School transport provided as normal. If you will be bringing your child to school please CANCEL the bus in advance to avoid unnecessary delays to other users.
- Friday afternoon: All school transport home is cancelled for those students coming back from Residential Visits.
- If your child is getting a school bus home, please contact transport in advance to book a 2.30pm bus home.

BLOCK 3 ECAS BEGIN MONDAY

- Please ensure you check your child/ren's ECAs to ensure they are correct. Buses will be allocated according to their ECA schedule. If there are any changes from Monday, please ensure that you contact Transport to amend their bus if needed.
- Please remind your children about the importance of wearing their seatbelt for the full duration of the journey. There have been reports of some students putting their seatbelt on and then undoing them once the bus is on its way. Please ask your child to report any students seen doing this to the Transport Department or their class teacher/tutor.
- Students are reminded to ensure they check the bus for their belongings before disembarking.

The Transport office is staffed from 6.00am – 6.00pm Monday to Friday and can be contacted on 02 744 2470 or transport@patana.ac.th

WHAT'S NEW IN THE LIBRARY?

	Early Years' Library	Primary Library	Secondary Library	Professional Learning 
	Fiction Non-fiction	Fiction Non-fiction Oversized Books DVDs	Fiction Non-fiction Home Languages DVDs	Professional Learning

List of Magazine Subscriptions [Here](#)



Tea Room

Donations Needed

Calling all home bakers!!

We need your kind support for cakes, cookies
donuts, muffins or anything you can bake!

Please kindly ensure that all ingredients and
decorations are **TOTALLY NUT FREE (NO NUTS)**

If your baked goods are vegan or gluten free, please label as such

THANK YOU!

Further inquiries, please contact:

PTGFunday@patana.ac.th

UNI COUNSELORS' CORNER



LIFE AFTER PATANA: Will Reynolds

Six years of school at Bangkok Patana was enough to make a lasting impression on alum Will Reynolds. Although he left before graduating, he took with him fond memories of his time here, including his Australian Year 6 teacher who taught him "You're next!"

After graduating from McGill University he founded Woolly Mammoth Media where he is also the Creative Director. "We are a video production partner for the world's most ambitious companies. Some of our clients are building context-aware AI brains for cameras in Berlin, others are engineering new proteins with advanced machine learning to cure diseases in Singapore. As the solo-founder, my responsibilities range from growing our client base to expanding our talent network of independent film makers, and pretty much everything in between." Learn more about Will's journey after Bangkok Patana [here](#).

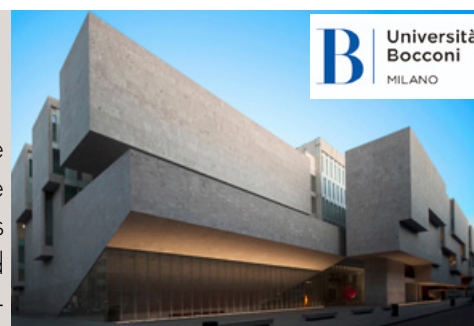


IN THE SPOTLIGHT...

Bocconi University, Milan, Italy

Set in Milan in Northern Italy – home to the famed La Scala Opera House – Bocconi University was established in 1902. Its research projects are funded by national and supranational institutions. It offers Bachelor's, Master's of Science, and PhD degrees in English in Management, Economics, Law and other disciplines. In the QS University World Rankings it came in eighth worldwide for Business and Management, 16th worldwide for Social Sciences and Management and fourth in Europe.

A diverse population of students, coming from over 90 different countries, includes 4,800 international students studying for a Bachelor's degree. Forty percent of international students are enrolled in BSc programmes at the school. Notable alumni include US economist Nouriel Roubini, former general director of the Bank of Italy Fabrizio Saccomanni, banker Alessandro Profumo, former Vodafone CEO Vittorio Colao, former Formula 2000 driver Steve Goldstein and even a few members of European nobility including the nephew of Albert II Prince of Monaco, Pierre Casiraghi and Prince Joachim of Belgium.



CLICK TO READ THE [LATEST CAREERS NEWSLETTER](#)

UPCOMING UNIVERSITY VISITS

UNIVERSITY / COLLEGE	COUNTRY	LOCATION	DATE	TIME
University of Toronto	Canada	Second Floor Senior Studies	02.03.20	9.15
Dalhousie University	Canada	Second Floor Senior Studies	02.03.20	9.15
Ryerson University	Canada	Second Floor Senior Studies	02.03.20	9.15
Southern Alberta Institute of Technology	Canada	Second Floor Senior Studies	02.03.20	9.15
University of Bath	UK	Second Floor Senior Studies	05.03.20	12.15
Loughborough University	UK	Second Floor Senior Studies	12.03.20	12.15
Gonzaga University	USA	Second Floor Senior Studies	18.08.20	12.15



UPDATE ON UNIVERSITY VISITORS

Kevin Keller, Head of Careers and Universities Counselling Faculty

Bangkok Patana School is happy to welcome representatives from over 300 universities from around the world each year who come to meet our students and counsellors to help them learn more about their institutions. Unfortunately, you might have noticed that the list of universities visiting Bangkok Patana has more than halved since February half term. The outbreak of COVID-19 and the resulting uncertainty of quarantine requirements, border closures and flight cancellations have caused many university administrators to cancel or postpone all recruitment-related travel to our region and throughout Asia. Many universities are planning to offer “virtual visits” to international secondary schools should the cancellations persist and we will advertise these events accordingly. Our faculty is committed to maintaining these important relationships with representatives and universities to support our students but it’s also important that Secondary students are utilising alternative tools to learn more about universities and university life, when universities aren’t coming to them directly.

For students in Grad’20, ‘21 and ‘22, Cialfo, our online university application and research tool has a plethora of information about admission rates, demographics, courses/majors and even the ability to see the historical results of Bangkok Patana applicants. University websites and social media have lots of great, interactive tools to get to know universities and courses. Many will even have a virtual tour, allowing you to “walk” around a university to get a feel for their classrooms, laboratories, and common areas. If you have questions about a university or a course/major and can’t find the answers, contact one of the Careers and Universities Counsellors and we can put you in contact with a Bangkok Patana alumni or the appropriate representative.

Students applying to North American universities should be particularly interested in communicating with university representatives, as they are often the decision makers on applications and many will keep records of communication with students at high school visits or via email or phone. This thoughtful, “demonstrated interest” can positively affect an admission decision. One question popular on applications to universities in the USA is “Why are you interested in studying at our university?” The best way to answer this question is through thorough research. No matter where you’re applying in the world, university representatives are happy answer your questions and help you learn more about their universities.

For students interested in applying to the UK and universities in other parts of the world continuing to research course choice and how these vary across different universities is an essential part of the decision-making process. Thankfully, this along with continued reading and independent research in their chosen subject area, is something students can continue to do with the plentiful resources available and will allow them to be fully prepared with key questions for representatives when university visits fully resume, hopefully in the not too distant future.

The Careers and Universities team has been delivering a presentation to Grad21 on university research, available [here](#), that can help students in many year groups start their investigation of universities. We hope that, with time, universities will return to normal visit schedules but until then, our counsellors are happy to support our students with whatever they might need for planning their life after Bangkok Patana School.



[Solution](#) for last week

Entries open: 17/02/20

Entries close: 23/02/20



puzzle
number

B5

Two teams played a series of 3 football matches against each other.
The teams are called Norwich City and Ipswich Town.

Ipswich Town won exactly 2 of the 3 matches played.
There were 6 goals scored in total.

Some examples of what could have happened are shown below:

(A)	(B)	(C)
Ipswich Town 2 - 0 Norwich City	Ipswich Town 0 - 4 Norwich City	Ipswich Town 1 - 0 Norwich City
Ipswich Town 3 - 1 Norwich City	Ipswich Town 1 - 0 Norwich City	Ipswich Town 0 - 4 Norwich City
Ipswich Town 0 - 0 Norwich City	Ipswich Town 1 - 0 Norwich City	Ipswich Town 1 - 0 Norwich City

Examples B and C do not count
as a different set of results.

They are just the same set but
in a different order.

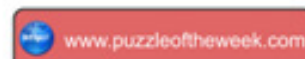
Submit your solution [here](#)

How many different sets of results could have happened?

Extension: What if there were 7 goals scored in total? Or 4 matches?



Puzzle created by Andrew Sharpe



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UPDATE YOUR CHILD'S MEDICAL RECORDS

If the school does not have accurate records your child
may not be able to take part in certain school activities.

Login to the Parents' Gateway

Click on your child's name and Update Medical Records in right hand menu.

Please immediately update if there are any changes to your child's medical
condition and check every six months that it is still current.



**Please join us for a chance to dialogue together on a
Parenting Teenagers Course starting
Monday, 24th February 2020
8:00-10:30 am at CON406**

The Parenting Teenagers Course is a DVD, discussion & workbook based FREE course for parents and anyone involved in parenting teenagers aged 11-18 years. Workbook costs 200thb, if you wish to purchase.

5 session topics/ 5 consecutive Mondays

// Keeping the End in Mind // Meeting our Teenagers' Needs //
// Setting Boundaries// Developing Emotional Health //
// Helping Them Make Good Choices //

RSVP by 17th February to Jill:
gillian_tantivess@hotmail.com



STUDENTS SPEAK

How Can You Effortlessly Improve Your Memory?

Karnsiree (Ling Ling) Chen, 13I

One of the biggest myths about studying is that the longer you work, the more you can recall later. In reality, studies have found that taking occasional breaks may actually help your memory. By 'break', this literally means to sit and do nothing, making sure to not engage your brain in any tasks. Enjoy 10-15 minutes of silence, and you may find that your memory of the things you've just reviewed is far better than if you had attempted to work for hours on end.

Although it's been understood for a while now that spreading your studies out is most effective, new research suggests that the breaks should consist of "minimal interference" – deliberately avoiding any activity that could too actively tax your brain and tamper with memory formation. Your brain needs to have the opportunity to completely recharge with no distractions. For students, this may be a useful tip, but research has also found another application for this in providing relief for people with some forms of amnesia and dementia, suggesting a new way to improve the capacity to learn and remember.

The benefits of undisturbed rest on the memory were first discovered in 1900 by the psychologist Georg Elias Müller and Alfons Pilzecker. Participants in their experiment were asked to learn a list of meaningless syllables. After a short study period, half the group were immediately given a second list to learn – while the rest were given a six-minute break before continuing. One-and-a-half-hours later, there was a striking difference between the patterns of recall of the two groups: those who rested recalled far more words than the group who jumped straight into the second list. This suggested that our memory for new information is especially fragile just after it has first been incorporated into the brain, making it more susceptible to interference from new information.

In healthy participants, studies found that resting could

boost recall between 10 and 30%, also improving our spatial memories – demonstrated through helping experimental participants to recall the location of different landmarks in a virtual reality environment. Crucially, this advantage lingers a week after the original learning task, and it seems to benefit young and old people alike.

The exact way this works is still unknown, though some scientists have formed hypotheses based on a growing understanding of memory formation. It is widely accepted that once memories are initially encoded, consolidated then cemented into long-term storage. This process is thought to happen during sleep through increased communication between the hippocampus (the location of the initial formation of memories)– and the cortex, a process that may build and strengthen the connections that are necessary for later recall.

However, Lila Davachi at New York University, found that this effect was not limited to sleep, and similar neural activity can be stimulated to occur during periods of wakeful rest. In a study, participants memorised pairs of pictures then were told to lie back and let their minds wander for a short period. Neural scans found increased communication between the hippocampus and areas of the visual cortex during the resting period. Crucially, people who showed a greater increase in connectivity between these areas were the ones who remembered more of the task, she says.

To this day, most reasons are still largely hypothetical: perhaps the brain takes any potential down time to cement what it has recently learnt and would benefit from uninterrupted time to solidify retention of the material. Being open-minded in our study techniques can be beneficial, as new research is being conducted and developed daily!



EIGHT MILLION TONS OF PLASTIC ENTER THE OCEANS EVERY DAY. WHERE IS ALL OF IT THEN?

Pon Pingkarawat, 11H

Have you ever attended or seen a beach clean up? Most of the waste picked up can be easily seen in the form of plastic straws, single-use plastic shopping bags and candy wrappers. There have been pictures on social media with wildlife getting tangled in plastic and stomachs of turtles filling up with plastic bags, but what about the so-called “microplastics” which also make up part of our 8 million ton plastic contribution? And why is it so important nowadays?

To understand this problem, we need to take a step back and find out what a microplastic actually is. Bigger bits of plastic, such as the previously mentioned straws, shopping bags and candy wrappers etc. break down into smaller bits of plastic until they become too small to be seen by the naked eye. These microplastics are able to enter our oceans more easily through drains and rivers if they are discarded improperly. Another way microplastics are formed is when some companies produce them in cleaning products, such as toothpaste, shampoos and face scrubs. Since you don’t ingest these products (I hope) these microplastic beads/microbeads enter the sewage system, which then disposes the microbeads into the ocean since the microplastics are too small to get filtered out by our water treatment systems.

When microplastics enter the ocean, they are mistaken by marine animals as actual food. For example, little organisms called plankton may eat these microplastics. When larger animals like mackerels eat that plankton, the microplastics also accumulate inside the fish. This is problematic because once we’ve eaten that fish, now there will also be microplastics inside our body!

In a recent study by the Monterey Bay Aquarium Research Institute, it was found out that there was an average of 15 bits of microplastics in a liter of seawater. This is a serious problem faced by almost every single marine organism. Once microplastics enter the animal’s stomach,

the microplastics get stuck in the animal’s stomach, making it harder for the animal to digest food. Furthermore microplastics contain harmful chemicals which are absorbed by the animal, which may be fatal for the animal, including us humans.

SO HOW DO WE STOP MICROPLASTICS?

One common answer is to just stop using them. In 2015, President Obama introduced a series of bans which “Prohibits the addition of plastic microbeads in the manufacturing of certain personal care products, such as toothpaste”. By passing this law, this has certainly helped in reducing the numbers of microplastics in US waterways from a study by the FDA.

Another way to help is to simply get involved. Partaking in events like local reef beach clean ups can help clear out plastic before it develops into microplastics. In Bangkok Patana, the Patana Marine life Conservation Group (PMCG) take students on trips to help clear up the ocean and beach. If you are interested in helping prevent this problem from worsening, then you should consider joining the group or attending these trips. It is not necessary to be a diver to attend these trips, there are activities for snorklers where they help clear up the beaches: it is actually here where we find a lot more plastic.

More on [Scientia](#)





DESERT ISLAND DISCS

With Dan Ahl

Cross Campus Head Tennis Coach



This column follows in the style of the famed BBC podcast which features a celebrity every week – here we feature our own Bangkok Patana celebrities! What eight songs, one luxury item and one book would you take with you if you were stuck on a desert island?

Today Dan Ahl, Cross Campus Head Tennis Coach is stuck on a desert island.

COACH DAN, IF YOU WERE STUCK ON A DESERT ISLAND WHAT EIGHT PIECES OF MUSIC WOULD YOU WANT TO HAVE WITH YOU?

Driving in my Car - Madness

Kiss from a Rose - Seal

Perfect Day - Lou Reed

Cowboys and Angels - George Michael

Piano Man - Billy Joel

Come On Eileen - Dexys Midnight Runners

Summer of 69 - Bryan Adams

Down Under - Men at Work



Listen to Coach Dan's playlist [here](#)

PICK ONE LUXURY ITEM YOU WOULD WANT TO HAVE WITH YOU. THIS ITEM MUST BE INANIMATE AND OF NO USE IN ESCAPING THE ISLAND OR ALLOWING COMMUNICATION FROM OUTSIDE.

Lilo

WHICH ONE BOOK WOULD YOU WANT TO HAVE WITH YOU?

Wisden Cricket Almanack

Catch the real Desert Island Discs on [BBC](#). Have a list of your own? Let us know! Contact SHKN with your favourites.

DATES
for your
Diary...

Saturday 7th March - Fun Day

Thursday 12th March - Patana Jazz and Blues Concert

Thursday 12th March - IB Art Exhibition Opens

Thursday 2nd April - Patana Unplugged Concert

Volunteers Wanted

If you have a spare
hour or two on
Saturday, 7th March
and can contribute your time
please email Melissa at ptg@patana.ac.th



Vendors Wanted

If you are interested in showcasing your products
and wish to become a vendor
at the upcoming Fun Day,
please contact ptgfundayvendors@patana.ac.th

Sponsors Wanted

If you are interested in supporting Fun Day by means
of corporate sponsorship, please contact Cheryl Rego
at chre@patana.ac.th
for further information on sponsorship packages.



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10.30am - 2.30pm
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*New Orleans Mardi Gras
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to book tickets or a table of 10, contact
mardigrasbkk2020tickets@gmail.com

Bangkok Touch League



It's time to
sign-up!!

Bangkok Touch League is now seeking interest from teams of 6 – 14 players who would like to be part of Thailand's first organized league, which will be affiliated with the 'Federation of International Touch' (FIT).

Each MIXED team will play 40 min games at either of two times (your choice);

- Wednesday evening (between 6-9pm in central Bangkok or at a mutually agreed location)
- Sunday morning (between 11am – 1pm at Bangkok Patana School, BangNa)

The League will commence early March and coincide with the International school dates, finishing with finals in mid-June

(Team managers meeting in February to provide ALL details)

**** All Teams will pay a seasonal 'Team Registration cost'. This will cover venue hire, referee costs, compulsory insurance and trophies (It will be a seasonal team payment, NOT a weekly cost).**

INTERESTED TEAM's – register NOW with: BangkokTouchLeague@gmail.com

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Theatre

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(Abridged)

by Adam Long, Daniel Singer and Jess Winfield


19th & 20th March
(7.30 PM)


21st & 22nd March
(2.30PM & 7.30PM)

Creative Industries,
New Petchaburi Rd.

Adults: THB 800
Students: THB 600
Early bird & group
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Recommended age 12+





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www.bangkokcommunitytheatre.com



LEARN ABOUT THESE EVENTS AND
MORE AT BANGKOK COMMUNITY
THEATRE [HERE](http://www.bangkokcommunitytheatre.com)

For *daily updates,*
snapshots and *news* on life
at school you can find us here...



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