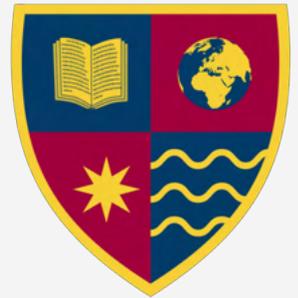


THE



BIDDENHAM



DISCOVER MAGAZINE

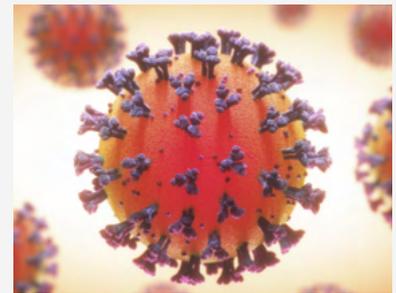
CREATIVE SUBMISSIONS

- Artistic Pieces
- A short story



DISCOVERY SOCIETY

Find out more about the Biddenham societies!



FLORENCE NIGHTINGALE

Learn about 'the Lady with the Lamp' and how she founded modern nursing.

EXPLOSIONS

Find out what makes them bang!

CORONAVIRUS PARTICLE

We've been hearing a lot about Coronavirus, but do you know what it looks like? Look inside to learn more!

ROYAL NAVY CAREERS

Interested in a career in the Navy? Read about Jake's experience.

MINDFULNESS

Increase your ability, regulate emotions & de-stress



“SUCCESS ONLY COMES TO THOSE WHO DARE TO ATTEMPT.” - MALLIKA TRIPATHI

Contents



Thank you to everyone who submitted their articles. We at the Biddenham Discover team apologise to those who have not had their submission put in this issue of the Biddenham Discover Magazine. We would appreciate more submissions for our next issue so please send them in (details in the poster). Thank you once again.

Contact:
biddenhamdiscovermagazine@mybidenham.com

Editors -

Matilda Crafter
Natasha Aitchison
Dharishna Reddy
Lucia Scozzari
Emmanuel Asare

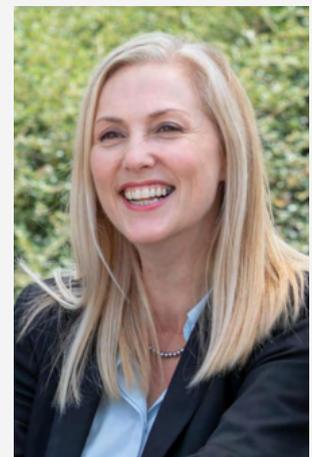
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WELCOME TO THE BIDDENHAM DISCOVER MAGAZINE!

Welcome to the second edition of the Discover Magazine! We've spent a lot of time perfecting this. We are very excited for you to read it and we hope you enjoy what the students within Biddenham have to say. To set us off, here is a message from the heads of school.

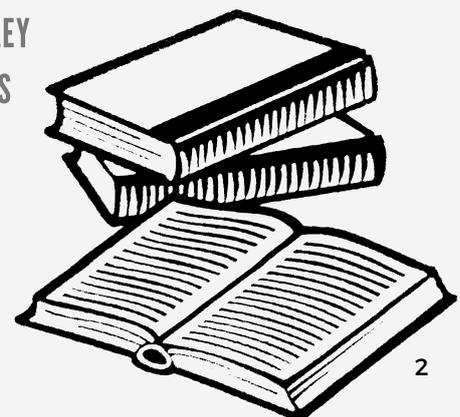
Dear Reader,

You are about to read Biddenham's second edition of 'Discover' Magazine - it is not only a magazine though as it is part of a bigger concept that incorporates workshops, speeches and wider educational learning by our students for our students. (In our view a fabulous concept that everyone gets something out of, whether you are a contributor or a participant). We gave a detailed summary of how it all fits together in our last introduction and we don't want to go over those points again. Suffice to say, it adds value to our sixth-formers' and other students' journey through life and is innovative, creative and academic. We are hard pushed to think of anything that has been introduced into the school that so successfully weaves together so many important activities and skills - from giving presentations and the importance of Oracy to the need to share academic learning in an accessible, but challenging fashion; it is a real triumph of thinking and a shows how a flexible collective can



make change happen and contribute and enrich the lives of our young people at Biddenham. Well done to all involved for a great magazine.

BY MR D BAILEY
MS E GRYLLS



MESSAGE FROM THE SIXTH FORM DIRECTOR



Mr Brown

What a year! The last 18 months has thrown up so many challenges and created such a vast array of negative issues both globally and within our own community. As I write this we are hopefully seeing the light at the end of the tunnel regards the ongoing impact of the virus. There has been one hugely positive element that has risen from the ashes of despair that we have endured and that is the fabulous 'Discover Society and Magazine'.

When looking back on the articles and the issues that were raised during the first edition, it is heart warming to know that within our school community we have such a wealth of knowledge and interest that would rival any other educational setting. The variety of articles from STEM, advice on careers and creative ideas from the student body was such a delight to read and made me feel incredibly proud of the young people that contributed to such a great success. I believe that the magazine will go from strength to strength and will without doubt create a long lasting legacy.

The 'Discover Society' has raised so many valuable issues and every student involved has benefited from the shared knowledge and experience. It will be wonderful to be able to open this experience out to younger year groups as we slowly move out of our restrictions. To see how far we have come in a short period of time is incredible and to think where this has the potential to go is spine tingling.

I hope that you all enjoy this edition of the magazine and that it inspires you to contribute towards the next edition.

THE BIDDENHAM DISCOVER SOCIETY

Anna-Ellen Kennedy

This term in our Biddenham Discover Society sessions we decided to challenge the Year 12's to think about the changes they would like to see implemented at Biddenham, or, alternatively, new ideas that could be proposed to enhance their school environment or experience. This was a great opportunity for the students to think and reflect on what they believe would benefit Biddenham going forward, and create action plans as to how these changes could be made. As many of the society's members have applied for roles within the Senior Prefect Team, it was also helpful in getting them to start thinking about the projects they could undertake if their applications were successful. There were a variety of different ideas put forward by each group, and it was interesting to hear the differing priorities and perspectives when talking to them. These included the installation of more smoke detectors, especially in bathrooms, and most notably proposed changes to the current ELS curriculum, which suggested there were to be more lessons on topics such as politics and financial advice. This idea then grew to encompass the whole group and they have now split into groups of two or three to complete a presentation on a particular subject that would be helpful to learn in ELS. Overall, the Year 12's managed to come up with some great ideas, which hopefully can be used in the future.



EXPLOSIONS

CHARLOTTE MACKENZIE

An explosion is a sudden release of chemical or mechanical energy caused by an oxidation or decomposition reaction that produces heat and a rapid production of gas. In order for there to be an explosion there must be a reagent, which is a substance used to produce a chemical reaction.

In an explosion there is a sudden build up of gas pressure and the release of the pressure causes most of the damage. The speed at which the explosive goes through the reaction determines whether it is classified as a high or low explosive.

Explosives are substances that are rapidly oxidised and produce a large amount of gas. Most explosives contain some form of carbon, nitrogen and sulfur.

There are 3 main types of classification: low, primary high and secondary high. A high explosive is a chemical that oxidises extremely rapidly to produce heat, light and a shock wave. These explosives don't need to be confined to explode. A low explosive is a chemical that oxidises rapidly to produce heat, light and a pressure wave. These explosives will only explode if they are confined.

Low explosives:

These explosives only react at their surface. They react relatively slowly and only explode if they are contained. If they are not contained they will just burn, usually quite rapidly, because the gases cannot build up. Some examples include gun cartridges, fireworks and gunpowder.

Primary high explosive:

Primary high explosives have a highly strained structure, which makes them extremely sensitive to heat shock or friction. They are generally used as primers to trigger other explosives. Nitroglycerin, which is one of the world's most powerful explosives, and mercury fulminate $\text{Hg}(\text{CNO})_2$ are some examples.

Secondary high explosives:

Secondary high explosives don't have to be contained to explode. They are relatively stable and are usually relatively safe to handle because they require something to trigger their destination, like heat or a shock. Dynamite, trinitrotoluene (TNT) and semtex plastic are all secondary high explosives.

Gun powder is a black powder, first made by the Chinese in 9th century China. It is made up of 75% potassium nitrate, 15% carbon and 10% sulfur ($2\text{KNO}_3(\text{s}) + \text{S}(\text{s}) + 3\text{C}(\text{s}) \rightarrow \text{K}_2\text{S}(\text{s}) + \text{N}_2(\text{g}) + 3\text{CO}_2(\text{g})$). Apparently it tastes a bit like sulfur, but is mostly bitter and has an almost "tang" and an underlying saltiness. Carbon is the fuel, potassium nitrate is the oxidiser and sulfur is an intensifier.



Florence Nightingale

Abubakar Ahmad

Who was Florence Nightingale?

Florence Nightingale, also known as “the Lady with the Lamp,” was a British nurse, social reformer and statistician who is largely known as the founder of modern nursing.

Her experiences during the Crimean War as a nurse were foundational in her thinking about sanitation. She established St. Thomas' Hospital and the Nightingale Training School for Nurses in 1860. Her efforts to reform health care greatly influenced the quality of care in the 1800s and 1900s.



Nightingale's life as a youth?

Nightingale had a tough childhood; her aspirations of becoming a nurse were not

highly respected by her parents (her parents actually rejected her decision and forbade her to pursue a nursing career.) During the Victorian Era, Nightingale was expected to marry a man who would take up a job, which was classed as lowly menial labour by the upper social classes. She refused the proposal of marriage from a decent gentleman. Her reasons explain that while he stimulated her intellectually and romantically, her “moral active nature required satisfaction, and that she would not find it in this life.” Determined to pursue her career, despite the decision of her parents, in 1844 Nightingale started her life as a nursing student at the Lutheran Hospital of pastor Fliedner in Kaiserwerth in Germany.



Florence Nightingale and nursing career

In the early 1850s, Nightingale returned to London where she took a nursing job in a Middlesex hospital for ailing governesses. Her determination made her performance stand out to her employer in such a way that she was promoted to superintendent just under a year after she was hired. Her position proved challenging as Nightingale battled with a Cholera outbreak and unsanitary conditions which accelerated the rapid spread of the disease. Nightingale made it her goal to improve hygiene practices, in turn significantly lowering the death rate at the hospital in the process. Her efforts and hardwork took a toll on her health and she had barely recovered when the greatest challenge of her nursing career arose.

The challenge of the Crimean War

In October of 1853, the Crimean War broke out. The British Empire was at war against the Russian Empire for control of the

Ottoman Empire. Thousands of British soldiers were sent to the Black Sea to regain supplies, where they quickly decreased in number. By 1854, no fewer than 18,000 soldiers had been admitted into military hospitals and during this time there were no female nurses available at hospitals in the Crimea. The poor reputation of past female nurses led the war office to avoid hiring more as they were mostly used for prostitution rather than for their profession. However, after the battle of Alma, England was in regret about the neglect of their ill and injured soldiers, who not only deteriorated due to the lack of medical attention with hospitals being understaffed, but also laid in appalling unsanitary and inhumane conditions. In late 1854, Nightingale received a letter from secretary of war Sidney Herbert, asking her to organize a group of nurses to care for the sick and fallen soldiers in the Crimea. She immediately assembled a team of 34 nurses from a number of religions and set sail just days later when they arrived at Scutari. Although being informed of the horrid conditions, nothing could have prepared them for the chaos when they arrived at Scutari, the British base hospital in

Constantinople. The hospital rested on a large cesspool, which resulted in the contamination of the water at the hospital building itself. Patients lay in their own excrement on stretchers strewn throughout the hallways whilst rodents and bugs scurried past them. The most basic supplies, such as soap and bandages were becoming rapidly scarce as the amount of wounded and ill consistently increased. Water also started to be rationed between the patients. The statistics concerningly showed that more patients died from infectious diseases like typhoid and cholera than injuries that occurred in battle.

Nightingale quickly set to work; she produced hundreds of scrub brushes and asked the least injured patients to scrub the insides of the hospital from the floor to the ceilings. She spent every waking hour caring for the soldiers. In the evening she travelled the dark hallways of the hospital carrying a lamp while making her rounds, visiting patient after patient. The soldiers, who were both comforted and moved by her endless supply of compassion, recalled her as "The lady with the Lamp." Others called her "The Angel of the Crimea." Her passion

and effort resulted in reducing the hospital's death rate by two-thirds. In addition to the vast improvements to the sanitary conditions of the hospital, Nightingale created additional patient services that contribute to improving the quality and experience of their stay at the hospital. Nightingale instituted the creation of an "Invalids' Kitchen" where special food for patients with unique dietary requirements was cooked. Nightingale established a laundry so that patients would have clean linens. She also instituted a classroom and a library for patients to accommodate their intellectual stimulation and entertainment.

Nightingale's importance
Nightingale made notes based on the time she spent in Crimea. She wrote 'Matters Affecting the Health, Efficiency and Hospital Administration of the British Army', a 830-page report analyzing her experience and proposing reforms for other military hospitals operating under unsanitary conditions. The book would start a total restructuring of the War Office's administrative department, including the establishment of a Royal Commission for the Health of the Army in 1857. Nightingale is

remembered for all her contributions and her concerns for the health of the British military, whilst also setting an example to nurses of the modern world. She was not just a hero but a saviour for the generations after her, teaching them correct healthcare and sanitation, by establishing the right services.

The messages sent by her and the work completed gives us guidance on how to treat our fellow human beings in the current world and allows us to save lives and bring lives to the world with great care.

With pandemics, we learn more and more about the health of our world and the habitats of the current generation. Following in

her footsteps allows us to alter and create beneficial decisions in terms of health and medicine in the modern world.



Interview On Travel with Miss Eckett

Firstly, where have you been?

As a child, I didn't go much further afield than the UK and a day trip to France occasionally, however I joined Air Cadets as a teenager and got to go further afield to various RAF bases, doing outdoor adventurous activities. I kayaked and canoed the Ardeche Gorge, which was incredible. It has sections of white water, you have to camp on the shores overnight, because the gorge is sheer in places and to do it all you need to camp out under the stars. I sea kayaked in North Wales and also did a lot in Bavaria, where I learnt to 'Klettersteig'. I used to climb and abseil various areas around the UK, mainly North Wales, but I also did quite a bit of the Peak District and Lake District. This led me into

Skiing, which I took up after I moved to Bedford and to Biddenham school. A group of teachers from Sharnbrook and Biddenham were skiing one Christmas, so I went along to Austria to learn how to ski. This basically entailed strapping skis on, pointing them downhill and following (falling) behind them. I picked it up quickly and proceeded to fall in love with the snow. I have skied in France, Austria, Australia and America, with America (Denver) being the coldest. We went up the mountains on a day where there were no other skiers; we felt so proud of ourselves for being the first ones out (we were the only ones stupid enough to risk it), not realising the temperatures were

insanely low, we made it down in one piece and had to sit the rest of the day out. The altitude was so high, we were breathless when climbing the stairs, it was an incredibly different form of skiing, with extreme temperatures, less oxygen and vast slopes. I attempted snowboarding, one school ski trip, which I failed epically at (spending more time on my face than feet), so I gave that up. I also tried blading, which was great fun, but insanely fast, so I stuck to skis after that! I have always loved to learn, I try and do a new course every year in something different (not always work related). One year, I took a scuba diving course, which resulted in my learning how to open water dive in the UK. I got mild hypothermia whilst diving in a quarry, but I did get to dive off a boat in Brighton, where I dived a 20 metre wreck and a drift dive where I saw all manner of sea life. The temperatures were a bit too cold, so I stopped diving in the UK. However, I had the opportunity to dive in Egypt, where I went on to get my Advanced Open Water qualification and dive to 30 metres, again on another wreck (which was incredible). I got to visit South Africa a few times, both for work and to visit my friend, who I met when I taught up in Middlesbrough. They live in Johannesburg, but through work I visited George and Cape Town, where I presented for a conference as well as visited schools in the area (include our link school Beaufort West). On our way to South Africa, we visited friends in Dubai, which was a great experience, however we got stuck in South Africa (with thousands of other people) when the volcano erupted in Iceland and grounded all air flight for a week!! I also went to the Maldives, (once you are into diving, you tend to want to do the bigger areas), there we saw turtles, dolphins, octopus

(thankfully for me no sharks!) and had some incredible dives, however we found the snorkeling to be better than the deeper diving, due to the water clarity. One interesting escapade was canoeing out to a spit of sand in the middle of the ocean, just to see the sea life around it. We got caught in a monsoon and had to be rescued by catamaran! Sailing back at the speed we got to, in a catamaran, was great fun! I've travelled a lot of Australia, seeing the vastness of the country. I also backpacked China and Thailand, which was much more culturally based, rather than adventurous. We were travelling with friends and navigated our way around China, using their trains and public transport. Each train journey could take over 24 hours to reach the next

'Be in the best places with the best people.'



destination, this was a great way to see the countryside and also have a bit of sleep. Some of the Chinese people we met along the way, especially in the smaller towns, loved to speak the British language, so we were stopped a lot, just to enable people to speak to us, which was great. We had a driver for parts of Beijing, who sang Chinese opera to us, which was one of my fondest memories of that city. We stayed in Bangkok in Thailand and then went to one of the islands for a few days break; to this day Thailand is one of my favourite places. I'd love to go back and spend more time seeing the country as we did a lot more 'tourist' attractions when we went, temples, markets etc. I'd like to see more of the islands next time. Our final big trip, prior to having child friendly holidays, (sadly they aren't into high adrenaline activities yet,) so fast rollercoasters fill that gap - until we can begin to take them on some of the more exciting adventures.

What kind of travel do you take part in?

Nowadays, mainly tame family holidays, but previously, much more adventurous 'off the beaten track' holidays. Skiing and Diving holidays were our main holidays, we aren't 'sun lounge' people.



What is the most important lesson you learned from travelling?

Be in the best places with the best people. It is a simple mantra to live by in life! I have always travelled with people I know and met new people along the way. One day in China, we took a boat trip from Guilin on the Li River, where there were many tourist boats going in the same direction. One boat near us had some Spanish speaking girls in their group, we had a Spanish speaking member of our group. Our groups met up and got chatting at a checkpoint. We all became friends, they also spoke English, they were working at the World Expo in Shanghai. We then met up in Shanghai (which is where we were headed next) and they gave us VIP tickets to the World Expo, something that was sold out and hadn't even been on our radar to be able to see. We had the most amazing day, touring around the various pavilions, which showcased each country.

Do you believe that people should travel at least once in their lives? Why?

Absolutely yes, you get to experience different cultures, see other walks of life and widen your view of the world around you, be that in nature or through cities and towns. This doesn't need to be abroad, this could be travelling around England or the UK. There are many amazing places to visit even a few hours up the road. Taking a bus from one end of the route to the other can be a really fun day out. In some countries it is one of the best ways to see the

local area the other can be a really fun day out. In some countries it is one of the best ways to see the local area. Taking the train, Bedford to Brighton, you can have an amazing day out and discover new areas on the way, or just in Brighton! In the same way 'camping' is a completely different experience to staying in a hotel, both give you a better perspective on life. Camping most certainly makes me appreciate hot running water and showers!

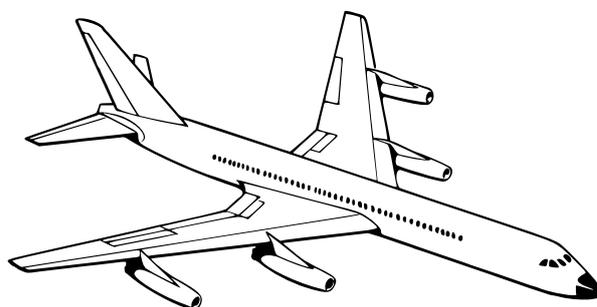
As a woman, would you say that travelling is easier or harder?

I'll go back to what I said before, you need to be in the best places with the best people. Having travelled with Gay couples, it is no easier or harder being a woman, than it is to be a member of any group who can be discriminated against, be that LGBTQ+, ethnically, religiously, culturally or for your gender. There are dangers everywhere and it is sensible to do your research before you travel. We teach students how to research, not only for education, but also for life skills. It is great to be able to 'go with the flow', but for a country, like China, we had to research before we went and ensure we were in safe accommodation and had access to support if required.

What was the thing you most struggled to adjust to culturally?

We travelled to Dubai, for a few days of sun, it is a Muslim country and all tourists and residents are expected to dress modestly. It is a conservative culture, which expects tourists to cover up rather than offend the locals. When you are visiting any country, it is always good to respect the local culture and obey their laws, researching before you travel ensures that you stay safe and

enjoy your trip more, it is that country's culture and you are a guest. There are beaches you can visit as a tourist, where you can wear bikinis and not be covered. It was difficult to get to these if you were in a big hotel complex (we weren't, we had decided to rent an apartment). Another example was China, they control internet content and social media, so that was quite an adjustment to get used to, we could only access information we were able to get hold of through their various forms of news, which were censored.



What are the negatives of travelling?

Losing time to jet lag, as I have got older it has actually become harder. I am glad I got a lot of my long haul travelling done before having children. Now we have the kids, travelling with children and also dealing with jet lag has become more of a challenge.

What was the favourite food you've eaten?

Street food in Singapore (I didn't even need to think about this), I have never had vegetable noodles like them since. A close second was Thai curry in Thailand, which was so fragrant and tasty, you just struggle to create it over here.

If you have gone for longer, how did you deal with homesickness?

I've lived through a stage where long distance calls could be made (at quite a cost), but also through the development of video calling and mobile phones. We are so globally connected now that we really don't have 'homesickness' in the same way it used to exist. If I ever needed to speak to someone I missed, I could call home or use email to stay in touch. I have missed home, but I have always really enjoyed the experiences I have had and been so busy that I haven't really had the chance to be homesick. If people are struggling with being away from home, then I would suggest that travelling for longer periods of time is not for everyone, just do shorter breaks instead.

If someone was going to travel what would be your top 3 tips

1. Be in the best places, with the best people.
2. Research before you go and plan ahead.
3. Talk to the local people, make new friends, they always know hidden places to visit, that are off the beaten tourist trails.



Careers in the Royal Navy - Live Employer Engagement Event

I have recently participated in a Royal Navy Lead Employers event, hosted by a company called Spark Careers. This event started with a brief introduction video about some of the different roles within the Navy. This was then followed by a Q&A session with 6 active members of the Royal Navy, all from different backgrounds and roles. Notably, there was a chief mechanic and surprisingly a dental nurse.



For me the most interesting person to listen to was the weapons engineer, mainly because he had taken a path quite similar to what I have been looking into and considering taking myself. He talked about his training and journey, going into details about his initial training for his electrical degree, which was funded partially for him by the Navy. He also talked about all the pros and cons of the role, including the travel

experiences and sense of community, but also the fact that being away from home was difficult when he was doing things outside the Navy.

Although personally I don't know much about the Navy I would highly recommend checking out their website and the careers page, as I found that it contains a lot of very interesting and useful information regarding the career paths that they offer. I would have advised students to look at the recording of the event I attended, but it does not seem to be available, however I have emailed the company to see if I can get access to it. If you are interested in learning more about anything that I have discussed in this article, please let me know and I'll see if I can pass on your questions.

Jake Maule

3jakemaule@mybiddenham.com



Insight into a coronavirus particle



Maria Moya Fernandez

This article is designed to give you an insight into the Coronavirus particle in the hopes that it will help you to better understand the global pandemic.

Key information

COVID-19 is one of the seven different types of illnesses from the Coronavirus family found in people, and is caused by SARS-CoV-2. The Coronavirus family (CoVs) are a series of viruses that have been causing respiratory and intestinal illnesses in both animals and humans for centuries. Even though most of the Coronavirus illnesses tend to cause rather mild diseases, they can also be the source of severe illnesses, such as the SARS (Severe Acute Respiratory Syndrome) epidemic in 2002-2004, and now the COVID-19 outbreak.

COVID-19 actually has a tendency to be milder than other Coronavirus diseases such as SARS and MERS, but more severe than the rest of the Coronavirus family. However, because COVID-19 is quite new compared to the others, and no-one has developed immunity to it, it can easily infect a large number of the population.

Recent discoveries

Researchers at Francis Crick Institute and Imperial College London have found that natural molecules present in the body, known as biliverdin and bilirubin, can strongly bind to SARS-CoV-2 antibody, binding to the spike up to a range of 30% to 50%. This would impede the effective neutralisation of the virus, explaining why some patients can develop much more severe symptoms, even if said, patients have higher levels of antibodies against the virus.

Scientists stated that the damaging of blood vessels and the rise in immune cell population caused by SARS-CoV-2 both contribute to an increase of biliverdin and bilirubin levels in surrounding tissues. This would mean that it will increase the availability of these two natural molecules, and therefore impede the binding of antibodies to the spike to a larger scale.

The researchers will continue to work on this issue and proceed with testings on haem metabolite levels, and whether it is possible to find new ways to target the virus by seizing the biliverdin binding site.

Structure:

Coronaviruses have four different structural proteins which form an envelope:

- S-proteins (in the form of spikes) - allow the virus to attach to uninfected cells and enter them, although they also allow our immune system to distinguish and recognise the particle as a virus. These proteins arrange in groups of three, creating the distinctive crown shape typical of coronaviruses.
- M-proteins - give the coronavirus particle its shape and integrity. They are thought to have a role in the assembling of new virus proteins in the final stages of infection.
- E-proteins - are involved in the virus' cell cycle, including envelope formation and pathogenesis. They have the ability to manipulate the properties of the membrane of the host cell.
- N-proteins - bind RNA (a single-stranded molecule carrying genetic codes in some viruses), forming a spiral that coils around the genetic material and provides structural support. N-proteins also contribute to the early stages of infection, reducing the host cell's natural defences against the disease.

Beneath the protein coat is a lipid membrane (known as the envelope), which surrounds the virus' genetic material. Coronavirus genomes are made of RNA instead of DNA. RNA viruses are known to suffer constant change, or mutations, which help the virus adapt to different host species and, therefore, infect them.

The viral RNA, proteins and envelope are held together by bonds that can be broken open by detergents and alcohols—hence the current encouragement to frequently wash our hands with soap and hand sanitisers—causing the virus to collapse and disrupting its infectious nature.

Scientists have suggested that SARS-CoV-2 might also contain proteins from the host cell, which are picked up by the coronavirus particle as it leaves the cell after infection.

How it works:

It has been proven by scientists that the S protein in SARS-CoV-2 binds to the cell membrane to enter human cells. The S protein splits into S1, which allows the virus to attach to the surface of a host cell by binding to ACE2 (a protein found in the surface of many cell types), and S2, which is responsible for the fusion of the viral and host cell membranes, causing the entry of the virus into the cell.



Short story

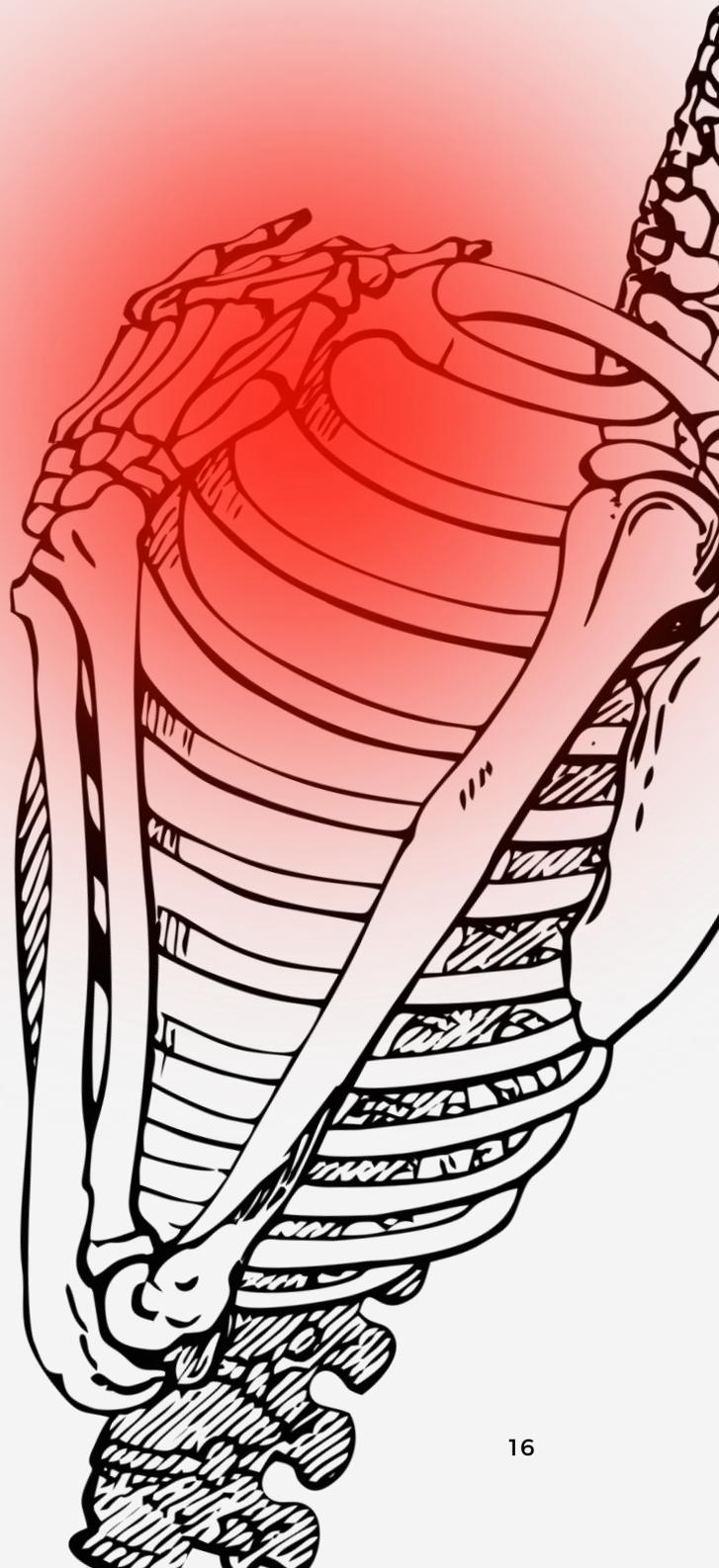
My eyes open to the hazy sky above. A sharp pain burns my cheek and I bring my finger up to touch it; deep red liquid oozes out and coats my finger. I look at myself in its reflection and see gashes of flesh across my face. Suddenly, my head whips up in response to the screams of people being eaten alive by... what is that? Black flying objects zoomed across the dome and then darted at the people in cages ripping off skin with every pass. I tried to stand but the gashes in my body said otherwise. A black blur came right at me but it was then I realised there were crows, tearing the flesh off the dead bodies and the tied up people screaming in torture.

I looked down to see what I was lying on but to my horror bones and skulls cracked under my weight. I knew I had to get out of here, but I wasn't sure how...

The next thing I know, ten minutes later (it could have been an hour - time is difficult here) I hear the sound of screaming, but not just any scream, a child's scream like me.

I look down to see two skeletal monsters with blood red, glowing eyes hauling a screeching girl out of an archway heading towards another cage. I see her thrashing and kicking and flailing her arms, tears dripping down her muddy cheek. I knew that if I got out I would be taking her with me, I had to, a nagging voice in my head would make me.

Noah Maynard



Abdallah Akour

MINDFULNESS

"With mindfulness, you can establish yourself in the present in order to touch the wonders of life that are available in that moment."

- Thich Nhat Hanh



Hi there, I'm Abdallah Akour and I'm currently a Psychology student at Biddenham International School. Why be mindful, you may ask? Well, mindfulness practices can help us to increase our ability to regulate emotions, decrease stress, anxiety and depression. Furthermore, it can also help us to focus our attention, as well as to observe our thoughts and feelings without judgment.

What Is Mindfulness?

Mindfulness is a type of meditation in which you focus on being intensely aware of what you're sensing and feeling in the moment, without interpretation or judgment. The benefits of it is that it includes lowering stress levels, reducing harmful ruminating, and protecting against depression and anxiety. Research even suggests that mindfulness can help people better cope with rejection and social isolation. Further evidence shows that mindfulness has been shown to affect how the brain works and even its structure. For example, people who have taken mindfulness training showed an increase activity of positive emotions in the brain as well as in the pre-frontal cortex. Where on the other hand, people who suffer from depression have low activity in their pre-frontal cortex. The evidence for different types of mindfulness is promising and research has grown in recent years.

Informal Practices of Mindfulness

Informal practices is about making a conscious decision to focus on one single task and it simply involves paying attention to your surroundings. Once learned mindfulness can be practised throughout our daily life. The benefits of informal practices on an individual is that they will experience a high level of positive emotions and more feelings of social integration than people who spent less time engaged in the informal practice. It also improves physical health, such as relieving stress, treating heart diseases, improving sleep and reducing chronic pain.



For further information about mindfulness please get in contact with either:

Abdallah Akour

3abdallahakour@mybiddenham.com

Abigail Speight

abigail.speight@mybiddenham.com

Examples

Informal practices of mindfulness can include:

- Breathing: Your breath is always with you and you don't need a formal practice to benefit from breath awareness. Pausing at any time throughout our day to connect to our breath and noticing ourselves inhaling and exhaling is an important part of informal as well as formal mindfulness practice.
- Movement: While walking out of your home, going into your workplace, walking down the road or during any other movement throughout your day, bring your focus to the sensations in your body.
- Washing dishes: Notice the water and feel the sensation of the warmth, the bubbles and your hands on the dishes. Slow your movements down and pause for a moment and pay attention to each piece you're washing.

There are plenty of other ways to practice mindfulness such as colouring, meditation, art, Lego or jigsaws. This all varies from one person to another, depending on what they enjoy the most.

Shark reproduction

Sharks are a very ancient species; scientists predict they have been on Earth for over 400 million years. There are over 400 species of sharks, ranging from the deep ocean Goblin Shark (*Mitsukurina owstoni*) to the infamous Great White (*Carcharodon carcharias*). Something that is little known about Sharks however, is the way they reproduce. Unlike most other fish species, sharks have evolved some weird and wonderful strategies to reproduce, and some are just bizarre.

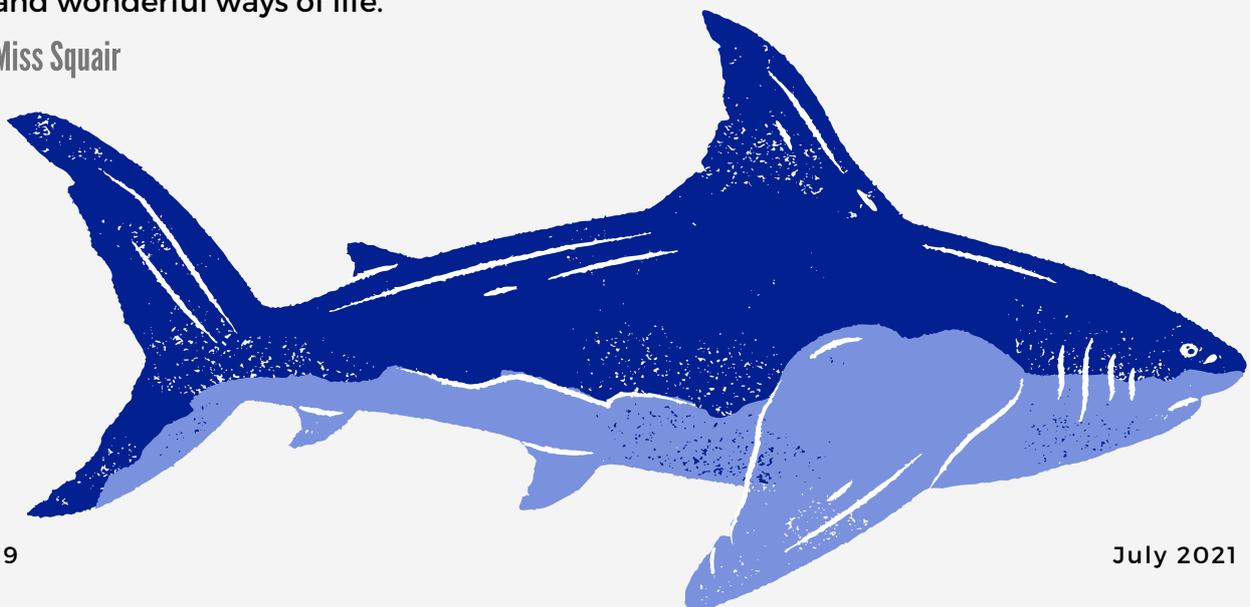
Oviparity is when female sharks deposit their eggs into the ocean, after they have been fertilised by a male. These eggs can be very large, up to 30cm long, and are often referred to as 'mermaid's purses' as they resemble the shape of a purse! The baby shark develops inside the egg case and when it's ready, it bites its way out!

Viviparity is more akin to the reproduction method of humans, whereby a female becomes 'pregnant' with her babies, which develop inside her placenta. The female shark can carry hundreds of pups (that's the technical term for baby sharks) at one time, and they are nourished by her placenta. When all the pups are developed, she will give birth to her live young.

Ovoviviparity is a slightly more strange strategy, used by some sharks including the Tiger shark (*Galeocerdo cuvier*). Once fertilised by a male, the female's eggs hatch inside of her, but this time, they are not nourished by the placenta. The pups will eat any of their mother's unfertilised eggs, and when these run out, they turn on each other as a food supply. A mother could start with many pups, but may give birth to only one or two, as they have been the strongest and have eaten their siblings to survive.

Sharks have long been villainised by the media (*Jaws!*) and although they can seem like brutal monsters, I believe they are truly a majestic and intelligent group of animals. I have admired them since my childhood, and will continue to learn about their weird and wonderful ways of life.

Miss Squair



Social Mobility Fund

I applied for the social mobility foundation for Accounting. After a short period of time, they contacted me and informed me that I was successful with my application.

The application process involved answering different types of questions in a lot of detail using my prior experience and knowledge. One of the questions I recall answering is, 'Why did you choose this particular program?', as there were also many other subjects to register for like Medicine or Psychology. I chose Accounting because I believe it will help me gain the experience I will need for my future as an Accountant. I aim to go to university and study Economics where I can then use this degree to enter the world of Accounting.

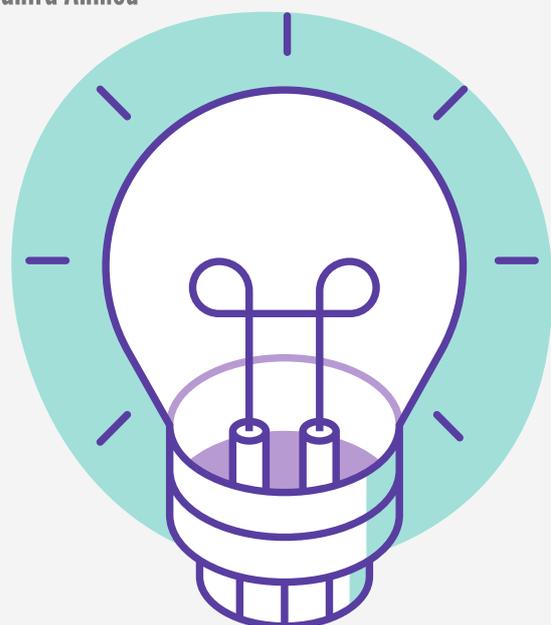
The social mobility fund is currently helping me get there through the mentoring I am receiving from someone who is currently working in this industry as a professional. This is very beneficial because it allows me to gain work experience in an Accountancy firm and offers many more opportunities that can improve my abilities. It also will help me when I am writing my personal statement in year 13, as I can put down that I have received Accountancy work experience which will take place in August this summer. This will get me closer to being able to pursue the degree I am aiming towards.

The program also offers me support all the way through my degree until I actually get a job in the career I want. I can then also choose to become a



social mobility fund mentor and help someone like me in the future in a similar way. This is an amazing opportunity for me and is currently taking place via Zoom calls, as a result of the current COVID situation, but I hope to be able to actually meet them in person soon.

Mahira Ahmed



Art Submission

I have recently been experimenting with different art forms and my current favourite is anything to do with digital art. I've only ever done a few attempts but this piece is my latest. Although there is still room for improvement I can say that I am slowly getting better.

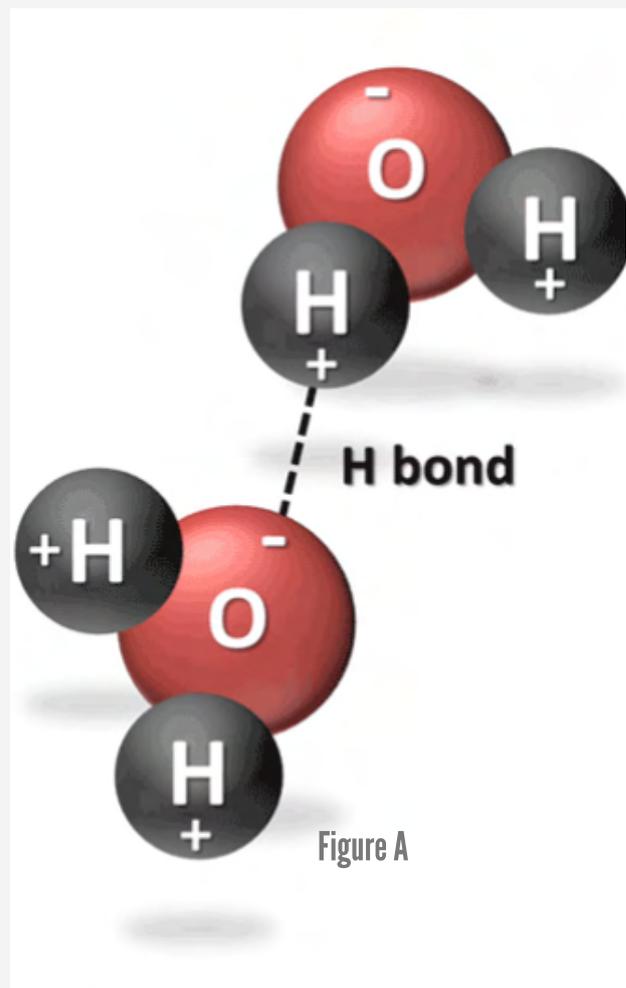


Dharishna Reddy

Why does water expand when you freeze it?

When you freeze water you may notice that it expands quite dramatically, which can ruin a can of drink or a bottle of water that you have filled up too much and forgot about. Many times I have had to defrost the whole fridge because I've left a can of coke in it when I just wanted it to be a little cooler.

There is a good scientific explanation as to why this happens, which relates to the way that water forms its bonds between molecules. In water, as many students will know, there are two hydrogen atoms and one atom of oxygen (H_2O). Between these atoms there are covalent bonds, which is the electrostatic force of attraction between a bonded pair of electrons and two nuclei. However, in this covalent bond, these shared electrons are actually more attracted to the oxygen molecule. Atoms of oxygen are more electro-negative than hydrogen atoms, and so attract the shared electrons in their covalent bonds more. Consequently, the electrons in the water molecule spend slightly more time around the oxygen atomic centre and less time around the hydrogen atomic centres. This causes the hydrogen to have a partial positive charge and the oxygen to have a partial negative charge. These partial charges result in smaller forces of attraction, which create hydrogen bonds between



molecules of water (as shown in Figure A).

This does however cause there to be a gap between them where the partial charges repel each other. This is what causes ice to have a lower density than water (liquid) form as these bonds do not form.

Jake Maule

Year 7 German

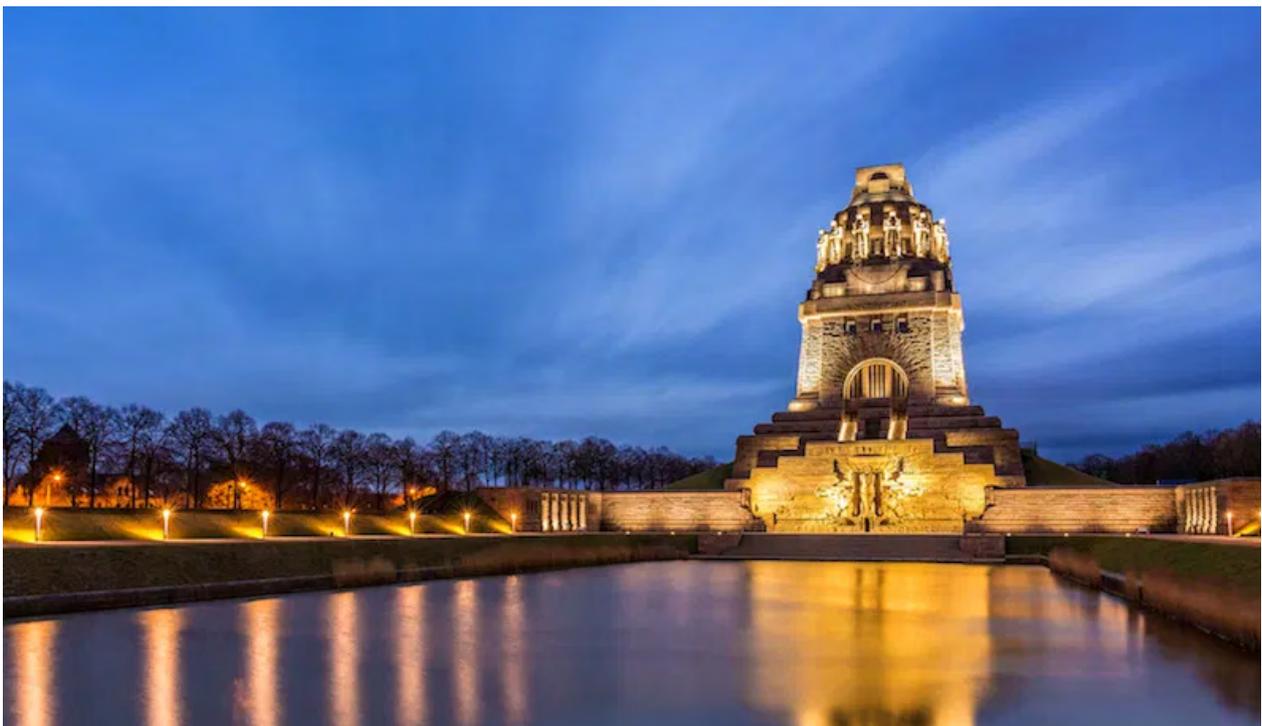
Madeline Aitchison

I am a year 7 student and have been studying German since September. I love my German classes because they are fun and I feel like I learn a lot considering the sessions are only an hour long!

Currently in German we are learning how to tell the time, which is super interesting because in Germany, time is said very differently! If you say 'halb sieben', it doesn't mean "half past seven", as most people would assume. Instead it means "halfway to seven," which would be 6:30.

Last term, we learnt how to count in German numbers up to 100, how to pronounce the German alphabet, how to introduce yourself and how to say the names of different animals. One of my favourite animals to say is kaninchen, which is rabbit!

I think that languages are very important because it means that if you meet someone who's from a different country you can speak their language; languages also come in very useful in life, maybe if you're asking for directions in Germany or applying for a job.

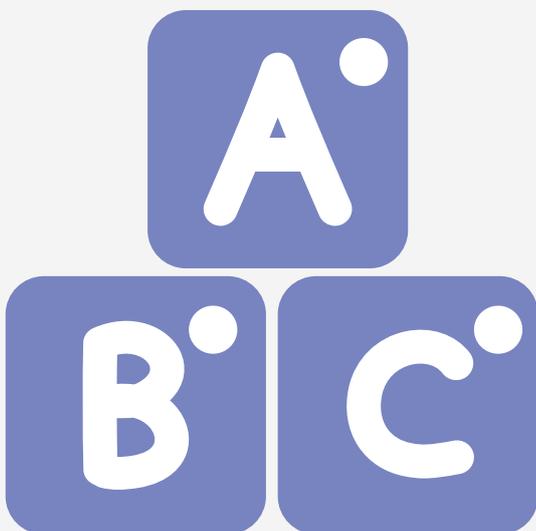
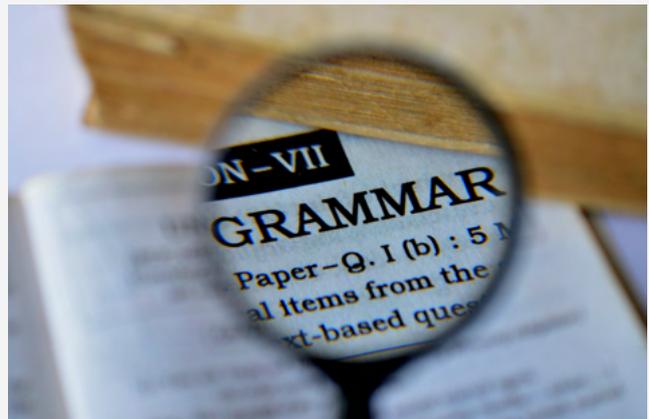
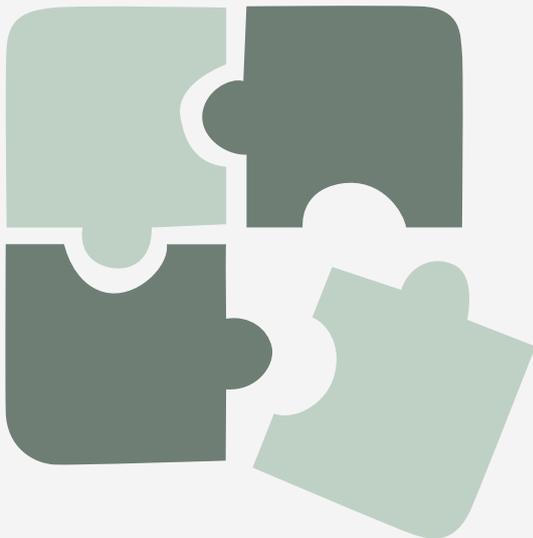


Grammar challenge

Can you spot all the incorrect grammar ?

Yuki Turner

in school I like many subjects Especially ones with practical work. Although I enjoy lesson like maths which is all written work I like art and P.E the best.i like art because it involves me being creative and I just like drawing and designing in general.I see it as something fun and calming. I also like pe because it is something that I can take part in a long side friend's and classmates' I like competing against others and it helps me keep healthie. That is why I like these subjects.



Answers at the back

Hello Biddenham Students

We just wanted to introduce ourselves as your new prefect team of Biddenham school. All of the new senior prefect team wants to make your experience at Biddenham the best it can be, we hope we do you proud:

Head Boy



Matthew Brown

Head Girl



Matilda Crafter

Deputy Head Boys



Abubakar Ahmad



Ahmed Elabd

Deputy Head Girls



Lucia Scozzari



Natasha Aitchison



Anisha Begum



Areeba Raja



Cameron McLeod



Charlotte McKenzie



Dharishna Reddy



Emily Hall



Jake Maule



Jasper Kellett



Saima Shenwari



'An Inspector Calls'

Review

Elizabeth Aitchison

Title: An Inspector Calls

Author: J.B Priestley

J.B Priestley was a socialist. He believed that whether we acknowledged it or not, we are in a community and have a responsibility to look after others. He wrote "An Inspector Calls" to highlight these beliefs and share them. The play An Inspector Calls was written in 1945 within a week of World War Two ending but is set before World War One. J B Priestley wrote this play intentionally as he saw an urgent need for social change and used the play to express his desire for social equality. Priestley hoped his play would give society the chance with hindsight to look back on the past and not just carry on life in the same way as before.

In the play, the unsuspecting Birling family are visited by the mysterious Inspector Goole. He arrives just as they are celebrating the engagement of Sheila Birling to Gerald Croft. What follows is a tense and uncomfortable investigation by an all-knowing Inspector through which the family discover that they are all in fact caught up in the horrible events that the Inspector reveals.

I think this play deals with some important things about society. It shows how someone deals with guilt and accusations. The text shows class segregation and how the malice towards the lower class affects them. I think that we can learn a lot from this play. We can learn about responsibility, pride, blame, wealth and power.

I would definitely recommend this play. It is such a gripping play and it constantly keeps you thinking. However, there are lots of adult topics in this story, so I think I would only suggest reading it to ages 14 and up.

I think that this is an extremely good read, yet, I wish that the ending had been more conclusive.





How psychology explains complex behaviour

Saima Shenwari

Ever wonder why people become killers? Or how stress is inflicted onto many people's lives? Or even how to tell the difference between depression and sadness? Psychology answers all these questions and more, providing valuable clarifications on the questions that arise regarding human behaviour.

Psychology allows for many different behaviours to be explained, and causations can be understood. For example, Bowlby (1944) explains many children grow up to become criminals such as thieves due to having no consistent parental figure during their early years of development. Due to this, many institutes that foster children or parents who adopt children ensure that they are present throughout the child's life, as changes of parenting can be extremely harmful towards child development.

Psychology also allows for many cures to be found for different mental and physical health conditions. For example a cognitive approach of psychology
July 2021

allows therapists to use Cognitive Behavioural Therapy for those struggling with conditions such as anxiety, OCD, depression, etc. The biological approach allows for understanding of the anatomy of the brain and the physiological processes that occur within it. For example depression is caused by a blocking of serotonin receptors. With this knowledge, scientists prescribe antidepressants that allow for the efficient absorption of serotonin, reducing the effects of depression in patients.

Psychology can explain many phenomena that are not usually touched on in our everyday lives. If you would like the answers to your questions Psychology is definitely the A-Level subject for you.



Star students

June 2021

Year 7

Aleena Najjuma

Noah Maynard

Both have worked very hard this year and are kind and respectful to peers and teachers.

Year 8

Rahima Khanom - consistently working hard in lessons and an excellent ambassador for the year group.

Melissa Ariza Dias - focused in lessons and supportive of other students.

Tayeb Ali - consistently receiving lots of house points every week and is showing an excellent work ethic.

Year 9

Irina Gherghelas - for her constant positive attitude, the way she always helps others and her determination to always do her best.

Michael Patel - for his perseverance to always succeed whilst trying to encourage, motivate and support the achievements of others.

Year 10

Congratulations to the top 3 people with the most house points this term in year 10

Khady Niang - 183 hp

Chloe Steele - 179 hp

Fazel Hussaini - 173 hp

Year 11

Papa Agyapong - he stands up for his friends and school issues that he feels are unjust, he is honest and has huge amounts of integrity. His grit and determination to do better in school and as a person has never faltered.

Sameena Hamid - shows our core value of friendship and compassion, she supports her friends when they need her, her relationships are built on trust and honesty.

Year 12

Khadija Ali - Her friendly and positive attitude towards others.

Emily Hall - Constant politeness towards teachers and other students as well as her attendance thought the year.

Samuel Ellis - Good attitude towards learning and attainment throughout the year.

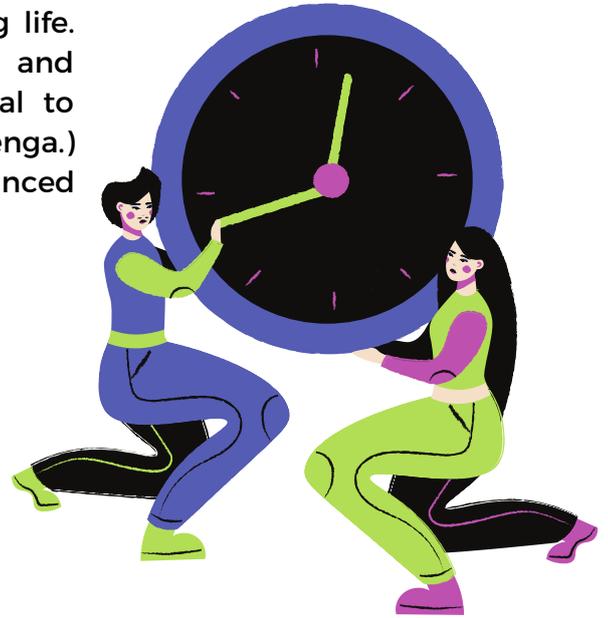
Balancing Your Time

Ahmed Elabd

Balancing your time is vital for living a promising life. "Balance is a feeling derived from being whole and complete; it's a sense of harmony. It is essential to maintaining quality in life and work." (Joshua Osenga.) There are a lot of things that need to be balanced including studies, sports, and of course, gaming.

Studies

Study and revision time has to be balanced. Doing too little revision or studying leads to a lack of remembering information which leads to underachieving academically. Underachieving academically has a negative effect, especially in year 12 as it is a key year where students apply to universities which are really competitive and will not give offers to underachievers. Studying hard and doing lots of revision has a positive effect as it can guarantee the student a good grade. However, doing too much steals a student's social life and can make the student feel pressured leading to problems with mental health.



Sports

Sports also have to be balanced. Playing too little sport or not going to the gym could lead to a lack of fitness and increased chance of obesity as there are not enough calories being burned off, leading to more stored fat. However, playing too many sports can cause injuries which can be problematic and stop us from participating in activities.

Gaming

Gaming definitely has to be balanced. There is no harm in playing on your console for a while as it eases the pressure of the day. However, people tend to game for much longer than needed, to the point where they are not aware of their surroundings and not focused on anything. Moreover, a long time of staring at screens can cause eye strain and repetitive strain injury (a general term used to describe muscle, nerve and tendon pain). This can be easily avoided if you have set times for gaming at the end of the day when you have carried out all your studies.

.....
"Live a life that is well balanced; don't do things in excess." Daniel Smith
.....

Our time at Biddenham

Dear readers,

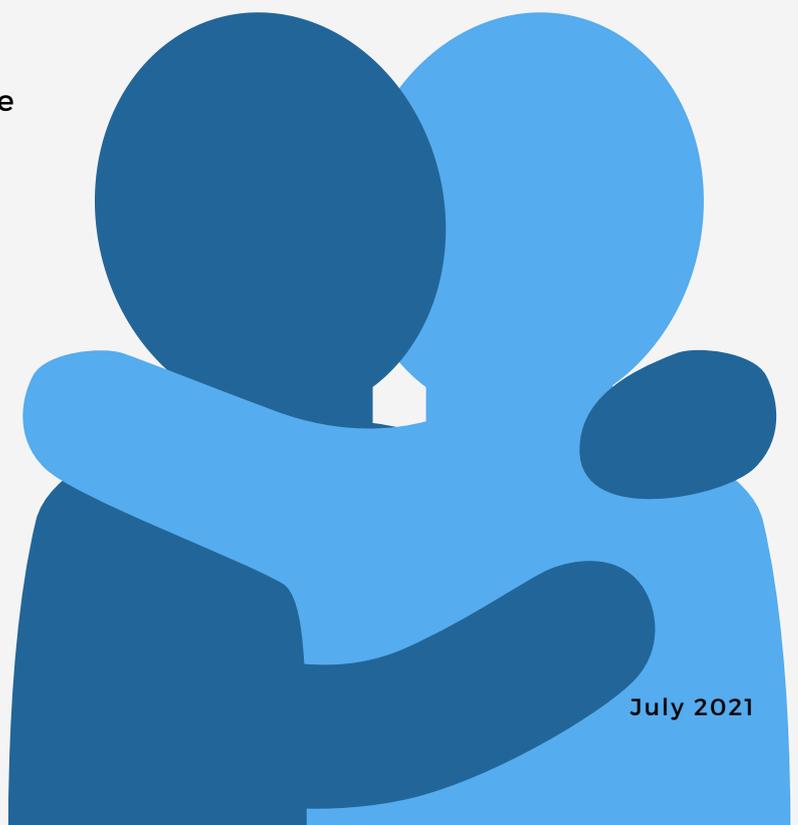
Our time at Biddenham has sadly come to an end, but our journey has just begun. We can confidently say that the past five years have been nothing short of phenomenal. The whole Biddenham community allowed us to thrive and better ourselves. We both can't thank all the teachers enough. They've shaped our community into what it is now and we're grateful to have been a part of it.

We're also thankful to have had the honour of leading such a great Prefect team. Although we weren't able to achieve as much as we'd aimed for, we are extremely proud of what we did manage to achieve. It was really unfortunate that this year limited our abilities, but we really broke through as a team.

Biddenham for us both was a source of inspiration and has immensely aided us in narrowing down our career pathway. Through creating these societies we intended to inform others of the careers and opportunities available and enable them to fulfil their utmost potential. Not only did this allow us to educate others but it also helped us further develop our own interpersonal skills. The greatest aspect of the society is that it can be continued and expanded as it is run for the students by the students. Despite the covid regulations and restrictions we all managed to achieve so much. It has been an honour to have played a part and we wish you all the best and hope you can be the change you wish to see.

Finally, We would like to thank the whole 6th form for putting up with us - along with the 6th Form Leadership Team we're thankful for the opportunity you gave us.

Kind Regards
Sahar Housaini & Emmanuel Asare
Head Girl & Head Boy, 2020



Farewell, Biddenham!

My story in Biddenham began in September 2016. I was a little girl, with big dreams, entering a new world that I was so unfamiliar with. From the beginning, the environment was so friendly and welcoming and little did I know that some of the most remarkable, amazing and unique memories would be created during the course of these five years. I vaguely remember my first day at Biddenham; I was introverted, quiet and had not met some of the most amazing people who have left a huge impact and legacy in my life. Some of the funniest memories were created during Year 9 Chemistry lessons with Mr Shakoor (of course, I have to give a shout-out to the best Science teacher). Halfway through Year 9, I was selected to be in the Student Forum team alongside Ellaha Ahmadi. Little did I know, five years later, Ellaha is now my closest and dearest friend and the person I share everything with. Year 10 Biology lessons had created the best memories, from the weirdest conversations to the funniest moments, to Year 11 Maths where I was failing miserably and just somehow managed to pass (I never paid attention). I remember our GCSE exams; how we'd all meet up upstairs in H Block every lunchtime to hold debates about our lives (yes, that was mine and my friends' ways of bonding, what weirdos!) I remember the last day of Year 11 and I remember thinking nothing of it at the time.

Fast forward two years to the end of Year 13, I barely speak to some of the people I had created the most amazing memories with. Some faces I haven't seen since Year 11, some people I have

lost contact with entirely. Some people I have created the deepest, long-lasting friendships with, some people I have lost along the way.



The truth is, we believe we have all the time in the world. We believe the world revolves around us. Some of the pettiest things hold the most importance in our hearts when we're children. Unfortunately, you begin to see the world differently as you grow older. Your perception of life does not, and should not, remain the same as it did when you were 14. The things that you wished for dearly at 14 are not the things you wish for at 18. The life you wish you can create at 14 is not the life you are guaranteed at 18. You begin to understand the meaning of sacrifice when you lose friendships that

were dear to you and you begin to understand why adults laugh at our (somewhat) huge problems that appear miniscule in their eyes. I - too - was that girl who was petty, immature, who laughed at anyone and anything. I thought I was owed this level of position. The truth is, we are owed nothing. The hardship you are facing will pass. When we are young, we have a tendency to be mean. We believe we can say anything, we can spread rumours and we can judge people. People are mean to you. They talk



and gossip and you talk and gossip too. As you grow older, you begin to realise the opinions of others should have no value on your life. You realise you are in control of your destiny. You realise you are in no position to make comments about other people's lives. You realise the importance of education and you begin to understand why others are bitter, or what is making you bitter. You should also realise this level of toxicity within yourself too, so you can adapt and change to become a better person. Perhaps I would not have made the mistakes I made if someone had told me this advice at 14, perhaps those mistakes were learning curves that taught me the lessons I needed to learn. I guess everything happens for a reason.

My A-Level subject choices have deepened my thoughts about the world and my understanding of myself. Equally,

just finding out I had achieved the grades I wished for during GCSEs, learning about myself and getting my first job have caused me to mature in unexpected ways. I will never see most faces again, but I will never forget some of the memories we had created.

We gained a lot of memories and we lost a lot of friends. Some faces I remember seeing at primary school, playing hopscotch in the playground or hiding behind the hills of Queen's Park Academy, are now going on to become activists, lawyers, teachers, artists, doctors, politicians, the list goes on. Some faces, who I never expected, who perhaps have not had the best pasts, have been given offers by Russell Group Universities, and I wish them all the best for the future. This does not exclude those who may choose to not go to University, because at the end of the day, all that matters is that you have a good heart with empathy, a pure conscience and a content soul.

These faces are mere faces ingrained in my memories. I - too - am just a face to some people. In 10 years time, as blunt as it may sound, I may not have a name to attach to these faces, and they won't have a name to attach to my face either. It is a part of life.

If my five years at Biddenham have taught me anything (besides from achieving 9 GCSEs and 3 A-Levels), it's that all that you experience, from the worst, to the best is natural. It is natural to mess around, it is natural to regret your past and it is natural to want the best for yourself. It is natural to have to leave people behind. It is natural to gain new people as friends. As Miss Badman told us, 'some friends are friends you gain for life, some friends are friends you gain for the season'.

Remember to always be good, have good intentions and be around good company. Pay attention to your teachers in lessons (but don't forget to be mischievous - don't be as boring as I was). I have only focused a little on academics within this article, only because I believe the value of education manifests itself in different ways to different students. However, the company you keep is a key determinant of the person you are - so always make sure you have good company.

With the greatest loss of them all, it is time to say farewell to the school that taught me the best and worst lessons (lol). I will miss how carefree we were at

14 and I will miss the jokes we would make when we were supposed to be paying attention in our lessons. I will miss the expressive personalities who made our lessons the funniest (and the most traumatic too). I will miss the way life felt when we had nothing, but felt we had everything with our friends, laughing about anything and everything. The culture at Biddenham is inclusive, welcoming and friendly and I will miss it dearly.

If this is it, then this is my goodbye.
Farewell, Biddenham!
Sana Iqbal.

Answers to the Grammar challenge :

In school, I like many subjects. Especially ones with practical work. Although I enjoy lessons like **Maths** which is all written work, I like art and P.E the best. I like art because it involves me being creative and I just like drawing and designing in general. I see it as something fun and calming. I also like **P.E** because it is something that I can take part in **alongside friends** and **classmates**. I like competing against others and it helps me keep **healthy**. That is why I like these subjects.



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