

May 2024

8th Edition



# BIDDENHAM



DISCOVER MAGAZINE

## READ...

about the recent developments in AI!



**COMPUTER SCIENCE**  
Learn something new!



## RELAX...

...and challenge your brain  
with a short wordsearch

**CREATIVE WRITING  
SUBMISSIONS!!**



Read about Tawny Owls!

**"EDUCATION IS THE MOST POWERFUL WEAPON WHICH YOU CAN USE TO  
CHANGE THE WORLD." - NELSON MANDELA**

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# MESSAGE FROM THE HEADS OF SCHOOL

Welcome to this edition of the Discover magazine - something that has become an embedded tradition now. In this edition you will find an eclectic range of writing by a similarly eclectic bunch of students demonstrating the diversity of thought and passion amongst our students. I hope you enjoy reading it and if you are a student reading it, you may think that you wish to contribute something to future editions.

Thanks to the Editorial team once again - keep up the good work.

Mr. Bailey.



We look forward to each new edition of the Discover Magazine with anticipation, enjoying the variety and enthusiasm evident through the different contributions. It really does encapsulate the diversity of interests and passions within our students. We are keen to expand the readership, so please share this edition far and wide and with as many people as possible.

Happy reading!  
Ms Grylls



Mr D Bailey & Ms E Grylls

# MESSAGE FROM MR EVANS

It's a regularly asked question. The "Where do you see yourself in X years time?" question. We all have musing about possible answers. I'd refer you to the infamous quote of Hans Gruber who replied "Sitting on a beach earning twenty percent". Now being based in Bedford, the closest we get to the beach is the Oasis.... Back to the point of this piece. Where will those of you in Year 12 be in two years? Starting a career? Unpacking your new Argos kitchen set in the student accommodation that you have just moved into (tip, label your milk)? Starting an Apprenticeship with KPMG? Or sitting at home playing Xbox eating a pot noodle? Alas, hopefully you are thinking it will be one of the first three options! So how do you ensure that you get where you want to be?

There are so many opportunities while you are in Sixth Form at Biddenham that will ensure you have a greater chance of successfully being where you would like to be. One such option is taking part in a week-long summer school with a University in the summer of Year 12 - all paid for, all giving you an opportunity to develop and giving you a better opportunity of getting accepted 12 months later. Or what about undertaking a MOOC on Business Management with Ohio University via Unifrog? What about setting up a meeting with Mrs Darlow about your future and some advice on next steps? You could mentor students in other year groups about subjects or social situations. There are the Prefect Team opportunities where you can play a key role in representing the school at Open Evenings, supporting local Food Banks or even decorate a Christmas tree! Or present to the year group about a topic of your choice in assembly. Fancy a career in writing? What about joining this wonderful well thumbed publication, the Discovery Society. Wherever you want to be in two years, aim high. At some stage you will be sitting on a beach hopefully looking back on your time at Biddenham Sixth Form thinking, 'I'm glad I made the most of the opportunities available.'

On a final note, good luck to all the Year 13's who have applied to University and are awaiting offers. To those in Year 11, we look forward to meeting with you in the coming months to discuss your application to join us.





# TAWNY OWLS

Tawny owls are beautiful creatures that live in British woods; they can be found in a variety of areas such as towns, gardens, and in the countryside. These owls are mostly nocturnal and very well camouflaged.

They usually live in pairs and will mate for life. They can be heard at dusk by identifying their hoo hoo-hooo-hoo-ho call. Their status in the UK is secure and they can live for up to ten years. They feed on prey such as voles, mice, beetles and small to medium sized birds.

Last summer I was lucky enough to discover, with the help of other photographers, a family of Tawny owls in Bedford Park Cemetery. There was the mother and three chicks and they stayed around for three months. Here are some of my best shots.



Written by: Dexter Ferguson

Photos taken by: Dexter Ferguson

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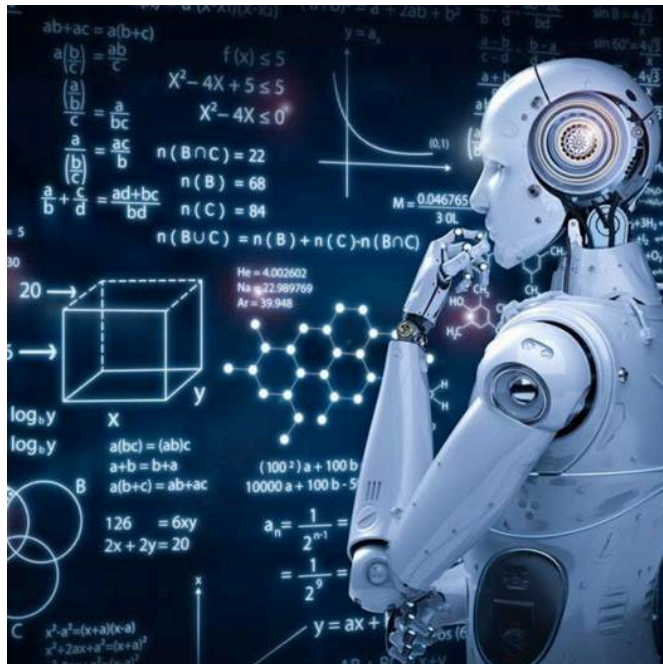
# Recent developments in AI

In recent times, AI has seen notable advancements. Progress in natural language processing enables improved communication between machines and users, impacting chatbots and virtual assistants.

Image recognition algorithms have become more accurate, particularly in healthcare applications for diagnostic imaging, bringing precision to identifying objects in images.

Reinforcement learning has also evolved, allowing AI systems to excel in decision-making and adaptation. This has potential implications for industries such as finance, where AI can optimise strategies based on market dynamics.

In summary, recent AI developments are centred around refining language processing, enhancing image recognition, and advancing reinforcement learning. These advancements carry serious implications for various industries, influencing how technology integrates into our daily lives.





# SUPER SOLDIER SERUM

Let's first start off by stating that humans have their own serum so to speak, a hormone called adrenaline. This does not give us superpowers but rather enhances our abilities, sharpens our senses and increases our heart rate. Adrenaline can boost strength and endurance similarly to the soldier serum. This works by the adrenal gland pumping adrenaline which triggers multiple responses including vasoconstriction (constriction of blood vessels) and vasodilation (dilation of blood vessels) which directs blood to the brain and working muscles, increasing heart rate, increasing lung efficiency and increasing blood sugar levels. This however is a survival response. You might have heard of the 'fight or flight' response meaning it is only triggered in situations of danger. This is the closest natural enhancement to the soldier serum. From now we'll discuss the unnatural ways that we could temporarily adjust the human anatomy and physiology to replicate the soldier serum. We will also discuss how possible or realistic Captain America's abilities are.

Starting with genetic manipulation being used for enhancing human abilities, which has been a topic of controversy amongst scientists for multiple reasons. One being the ethical considerations which we will discuss later. Additionally, this does come with the issues of Eugenics which is a whole political matter we won't discuss here, so we are assuming our participant is consensual to all of our processes. However, biologists are becoming increasingly more familiar with DNA and the components for it. For example there are certain alleles which code for strength and athletic performance meaning with these genes selected we could enhance future generations abilities. Alleles such as ACTN3 codes for the protein alpha-actinin-3 which is expressed in fast type II fibres which plays a role in fast explosive muscle contractions. To apply these traits you would have to modify an embryo's DNA rather than giving a serum to a grown adult.

Muscle enhancement has been a fascination among scientists due to wanting to increase athletes' performances and help individuals with muscle related disorders. The hormone which stimulates the growth factor of bones and muscles is GH/IGF1 which when exercise is included can cause hypertrophy (growth of muscles) which inevitably increases strength. However the drug which increases the production of HGH is steroids. However the issue comes with muscles only being able to grow to a maximum size. So we would have to increase strength with limited mass (without increasing the size of muscles). To put this into perspective Captain America's strength to the strongest humans on earth, with Captain America weighing 99 Kg and Eddie Hall (one of the strongest men on earth) weighing 164 Kg. The current strongest deadlift (a full body movement) being 502.5 Kg we can convert this to Newtons to compare force using  $E=mgh$  ( $m$ =mass,  $g$ =gravitational force, height). So to lift 502.5 Kg 1m it requires 4924 N of force. One of Captain America's feats is holding a helicopter with one arm requiring 6965 N of force. This just shows body weight:strength ratio seems to be out of reach with our current scientific knowledge and technology.

Ethical considerations, even if we could overcome the scientific challenges, the ethical implications of creating superhumans raise serious questions. Should we enhance human abilities to this degree, and what would be the societal consequences?

In conclusion, while the Super Soldier Serum remains a captivating concept, the scientific journey to replicate such powers faces monumental challenges. The delicate balance of genetic manipulation, cellular dynamics, and ethical considerations makes the creation of a real-life Captain America superhumanly difficult. As we navigate the realms of science, the boundaries of human enhancement continue to intrigue and challenge our understanding of what is possible.

# "Nature's Pharmacy: Exploring the Chemistry of Medicinal Plants and the Healing Power of Natural Compounds"

Across cultures and throughout history, humanity has taken advantage of nature's wonders to support us. Plants synthesise many different compounds that help keep us healthy. In this article we will take a journey into the chemistry of medicinal plants, uncovering the diverse natural compounds that have been used for centuries to promote health and recovery. Alkaloids, terpenoids, polyphenols and essential oils offer a diverse range of uses which continue to inspire the development of medicine today.

## Alkaloids:

Within the complex chemistry of medicinal plants, alkaloids have many different ways in which they support our bodies. From the calming effects of morphine found in opium poppies to the stimulating properties of caffeine in coffee beans, alkaloids showcase a variety of pharmacological activities. These compounds often act on the human nervous system.

## Terpenoids:

Terpenoids are compounds responsible for the characteristic scents and flavours of herbs. Terpenoids like menthol and limonene contain therapeutic properties. From the soothing menthol in peppermint to the anti-inflammatory effects of limonene in citrus fruits, terpenoids contribute to both fragrance and healing to our bodies.

## Polyphenols:

Polyphenols are crucial antioxidants. Flavonoids, a subclass of polyphenols found in fruits and vegetables, play a vital role in neutralising harmful free radicals. The rich hues of berries, the robust flavour of tea, and the protective properties of red wine are all manifestations of polyphenols contributing to overall health by combating oxidative stress.

## Essential Oils:

The essence of medicinal plants often lies in their essential oils, volatile compounds with diverse health benefits. Lavender's calming effects, eucalyptus's respiratory support, and tea tree oil's antimicrobial properties highlight the therapeutic effects of essential oils. These aromatic extracts have been used in traditional medicine and modern well-being practices.

In this exploration of natural compounds for health, we recognise the profound connection between the plant kingdom and the maintenance of human well-being.



# Video Game controversy: Balancing player feedback and Developers intentions

In order for a community to survive and flourish, law and order, and most importantly, communication is needed. The relationship of the provider and the provided needs to be built upon trust and transparency. But what if that communication is severed? What if the requirements for trust and clarity aren't met? Would the community perish? Or would that relationship of provider and provided dissipate? Or even flip? We will explore that with a poster example of this dilemma.

Genshin Impact is an immersive RPG designed by Chinese game developer HOYOVERSE. The game features an anime-style open-world environment and an action-based battle system using elemental magic and character-switching. The game is free, and can be installed on mobile, therefore it is available for all people. The game was released in 2020, dominating even the most popular apps such as Fortnite or Minecraft. Having more than a staggering 66 million player fanbase and active players in 2023 alone. The game developer has a strict policy on leaked information. Players who would leak information could be charged with a lawsuit.

From its release, there is a clear indication the game has peaked in popularity. From so many different players all around the globe, disagreements are surely going to arise...

Since HOYOVERSE is a Chinese-based game developer, they tend to favour the Chinese players (server) over others. This is evident with the many exclusive partnerships and rewards the Chinese players receive, whereas players in other parts of the world only hear about these benefits. Due to the relations between China and other countries, many players fear that Genshin Impact will soon become unavailable in their countries. Because of this, many Genshin players are upset at HOYOVERSE and their favouritism.



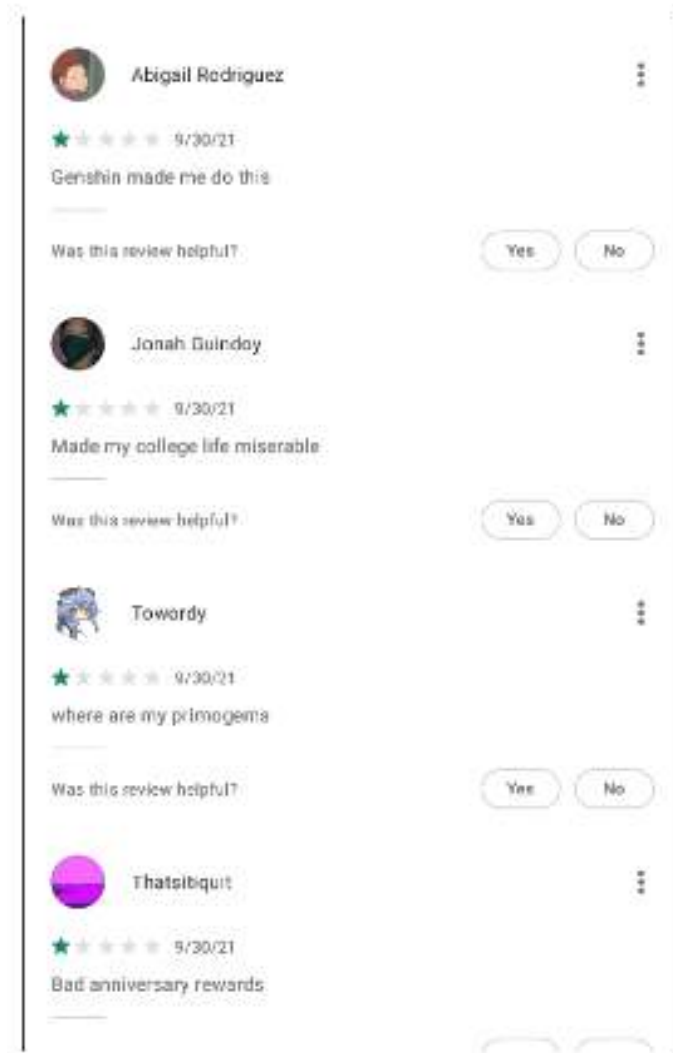
Not only does this favouritism stem from Genshin Impact itself, but even in other games that HOYOVERSE have developed. One such example of this is in Honkai Star Rail (another game developed by HOYOVERSE), and the recent rewards players have received. Recently, Honkai players had received a free character of a high rarity, a character that would've had to have been obtained otherwise through spending money or the tedious efforts of saving up in-game currency. Genshin players were furious at this, arguing that HOYOVERSE could never give that kind of reward to them. Though it is true that Genshin players had received this kind of reward before, the character in question has poor gameplay, and players cannot access its full capability. This character was made as a partnership with Guerrilla Games, another game developer.

This kind of reward was rumoured to happen again. It was rumoured that Genshin players would receive another free character of a high rarity for its upcoming anniversary. However, this rumour was proved to be just that - a rumour. It was false. It was safe to say that the Genshin community was furious.

HOYOVERSE had underestimated the community they had built. On 8th April, 2020, the Genshin community retaliated by review-bombing Google Classroom on the PlayStore. This brought many other controversies to light. For example, HOYOVERSE had promised that Genshin Impact would be playable on the Nintendo Switch in 2020. It has been 4 years since then, and they are still yet to respond to this.

The community seems to have a large consensus on banding together to get what they want, or even to retaliate. A positive example of this was back in 2022, when The Game Awards were being announced. Sonic Frontiers, a popular game of the Sonic franchise, was gaining popularity, it was seeming to be the winners. The Sonic fan base were set to win. The only mistake they had made was mocking the Genshin community, who were behind them. In retaliation, the community decided to band together and vote, making Genshin win by a landslide with 35 million votes. These stories have more depth to them, and cannot simply condense them into short paragraphs. I strongly urge you to look them up yourselves, and read the articles to gain a better understanding.

These small insights into the community shows completely how the lack of communication and trust in a relationship can destroy it. Despite this, Genshin Impact still stands as one of the most played games in the world, with a fan base much larger than the average. It is safe to say that this game has had a large impact on the gaming world.



Tarandip Singh

# BEYOND THE GAVEL

## Observing living history, Biddenham explores the halls of justice during a day at the Royal Courts.

No side quest away from double law has been as rushed as this one. Student's can't help but laugh at how going from Liverpool road boys or making an academic comeback somehow lands you at the height of the busy British legal system.

The journey there was like stepping into the life of justice away from hypothetical questions asked in the classroom and seeing just how significant of a mark each decision in the the place for the most important legal proceedings in England and Wales can make on law and society.

Quite an eventful time took place at the court hearing, with students witnessing an exciting drama scene take place in the Court of Appeal. Being at the centre of the Liverpool-cocaine case taught us a lesson - getting involved in the trap can make you seem like a serious muppet with weird usernames. Two students observed the passionless members of the court styling the same eyeglasses on their boring faces.

Although it was a serious situation, the security guards faced funny matters, both stern and jovial. They reprimanded us girls and our need for jewellery. Outside a really important meeting at the Supreme Court, a group of students shared they had a light hearted moment bringing our Biddenham unseriousness because of the jokingly steep price of a four quid single Bic pen sold in the supreme court - that caught the students by surprise.

Regarding the experience of walking up a long private stair and visiting the staff of the King's Court in the upstairs office was noted. Curious glances within the corridors provided a unique perspective that literally opened doors to witness those who shape the legal landscape. At first there is a sense of apprehension to doing things on our own but the realisation is drawn that London is a vastly different environment to be an individual in comparison to our small town.

Many pupils expressed the desire to work in such a setting, their experience was described as fantastic and highlighted the impact of attire; the power of clothing not only visually stood out but also emphasises the weight of responsibility carried by those influencing the legal domain.

As we went through the halls and walked between the courts the statues of the prime ministers became familiar from A level history classes allowing students to see them as symbols of the past, so they were able to see academic and real life symbols. By linking the historical knowledge this shows that hands-on learning is a useful experience.

This trip allowed students to reflect on their own aspirations with passion and professionalism. When one has a passion for specific issues that affect everyone that may bring your want into studying law. First hand experiences shape us to seek out opportunities. Though we are still young, finding what we love and care about is a catalyst for the success we all aspire to. Whether it may be for our parents, our own happiness or our own beliefs it's important to keep as many doors open as possible.

Amina Yasmeen

May 2024

# MEIN ERSTES JAHR DEUTSCH

## (MY FIRST YEAR OF GERMAN)

In my first year of German, I learned many interesting things. We started with the basics, such as family names, greetings, and numbers. These basic concepts helped me engage in simple conversations and navigate the German language. Examples of greetings are:

Guten Morgen! - Good morning!  
Guten Tag! - Good day!  
Guten Abend! - Good evening!  
Gute Nacht! - Good night!  
Hallo! - Hello!  
Hi! - Hi!

One of the first things we learned about in German was European countries. I gained more knowledge about well-known countries like Germany, Austria, and Hamburg. These diverse countries and their cultural uniqueness made me curious, and I hope to visit these fascinating places one day. Furthermore, did you know that Hamburg was the inspiration for the name "hamburgers"?!

Another thing we discussed was the significance of family names. It was fascinating to learn how families in Germany carry their names and the traditions linked with them. Example for family names:

Schwester - Sister  
Bruder - Brother  
Eltern - Parents  
Mutter - Mother  
Vater - Father  
Großmutter - Grandmother  
Großvater - Grandfather  
Tante - Aunt  
Onkel - Uncle  
Geschwister - Siblings

An example of a German tradition I learned was that on Christmas day, they used to drink Glühwein (a famous drink full of alcohol).



Regarding personal information, I learned how to talk about my place of residence, origin, and birthday. This helped me introduce myself and share some background information. It was also interesting to see how similar and yet different German traditions are in these areas.

The topic of numbers helped me solve simple mathematical problems and manage everyday situations. I can now talk about my age, siblings, and other personal details with numbers. Examples of numbers is:

Null - 0	Sechs - 6
Eins - 1	Sieben - 7
Zwei - 2	Acht - 8
Drei - 3	Neun - 9
Vier - 4	Zehn - 10
Fünf - 5	

A particularly useful topic was languages. I learned how to talk about the languages I speak, and it helped me understand similarities and differences between different languages. Languages I speak: English, Bengali and Arabic (Ich spreche Englisch, Bengalisch und Arabisch.)

Gender and the differences between masculine and feminine nouns were first confusing, but now I have a better understanding of how important it is to pay attention to the gender of nouns.

Cognates and false friends were also fascinating concepts. The similarities between German and English words helped me expand my vocabulary, while at the same time, I had to be mindful of false friends to avoid misunderstandings.

Overall, my first year of German was instructive and exciting. I look forward to diving deep into my knowledge and learning more about the German language and culture. Maybe, just maybe, I can apply my new skills in a real conversation in Germany someday.



# CULTURAL CONFLICT BETWEEN CHRISTIAN WESTERN COUNTRIES AND ISLAMIC COUNTRIES OF THE EAST

## INTRODUCTION

According to Huntington's widely discussed thesis, the current state of the world can be characterised as a clash of civilisations. This conflict surpasses the boundaries of social classes and economic groups, as stated by Huntington (p.28). It is essentially a clash of cultures between two civilisations that hold contrasting ideologies. The 21st century has seen a remarkable increase in violent ethnic clashes, particularly in the Islamic nations of the East. It can be generalised and argued that the west assumes this violence is directly attributed to the 'oppressive' political system of the East. After September 11th the conflict between the East and West had taken a turn into a raging clash between one another. The assumption that can be drawn is that the cultural conflict between the West and the East is **political**.

The Islamic East is fiercely resisting the Western attempts to transform them into democratic nations. However, it may astonish both the East and West to discover that even within the Western countries, there exist numerous perspectives on democracy that align with those held by the Islamic East. These nations differ primarily in their political ideologies.

Therefore, there has to be something else that fuels the conflict between the East and West. They have numerous perspectives that align with each other, the only thing that doesn't align are their political ideologies so what could it be? Experts believe that the cause of this is conflict with **cultural differences** between the east and West for example the eastern Islamic countries are by far the most conservative\* people in today's world. While on the other hand, the Western world share more liberal\* ideologies. A culture gap may be the cause for this worldly conflict.

\* conservative - **(in a political context) favouring free enterprise, private ownership, and socially traditional ideas.**

\* liberal - **willing to respect or accept behaviour or opinions different from one's own; open to new ideas.**

## Western colonisation of the East

The western colonisation of the East in the 18th - 19th centuries left a lot of reactions amongst the Islamic colonies. The West brought ideologies such as modern education, democratic government, and Christian religion. This western experience/colonisation became an eye opener for the Muslim community. There was a general agreement that the West had come to water down their Islam identity.

It was believed that the East wanted to redefine Islam in the modern community to align with their actual values . While some Muslims denounced the west and the culture, some supported the idea of developing Islam to western culture. Others supported total Islamisation without traces of the western influence. To the West, Islam is the main bone of contention with the East, claiming there is no democracy in Islam. For the East, the issue is not about democracy or lack of it, but about the cultural differences between the two groups

## Religious differences

Religion is part of culture and has a deeper impact than what comes to one's eyes. This is the main source of conflict between Muslims and Christians. Even though both Christianity and Islam have similarities there are some differences to know. An example of this may be polygamy\*, which is accepted in Islam as men are allowed to marry up to 4 wives and is also accepted in culture . For Christianity it is condemned. In fact, the Western people view the Muslim practice as oppression to women. The western social values give women more freedom. For example, the west promotes gender equality and embraces sexual liberalisation. They demonstrate great tolerance towards the education of women, political representation, divorce, homosexuality, abortion etc.

**\*polygamy, marriage to more than one spouse at a time.**

All these freedoms of the West for women are an abomination to the conservative Islamic east, the Islamic east deemed it important for the East to shun the western values. **The Sharia law**, which is adopted by Islam states as the rule of law, is based on the ruling and teachings of the holy book, the **Quran**.

For Muslims, all aspects of their lives are based on religion as social rules and behaviour are provided in the Quran. As a monotheistic religion that believes in one God, Allah, Islam believes that all rules and laws were set by God. Therefore, it is an accepted amongst Muslims that the laws, even those which govern their politics, are **based on religion**

Christianity deviates from this in various ways.

The reformation of Christianity in the 16th century led to the formation of many breakaway factions of the church. The church and politics were separated, and the search for freedom and democracy. Therefore, the rules of law that govern the western world are **not based on religion** in the least. Rather, they are based on a merger of the rights and freedoms of individuals. This is one of the aspects of the western world that **Islam cannot agree with**. Their law is not based on religion. Muslims believe that Christians are misguided for creating their own regulations that are not grounded in the Bible. Conversely, Christians perceive Muslims as misguided because they derive their laws and rules from the Quran.

Christian democracy vs. Islam authoritarianism

In terms of politics, the clash between the West and the East is just going on . The Christian West runs on democracy.. Democracy is seen as the height of civilisation and goes hand in hand with freedom. The Muslim interpretation of Islamic law reiterates that all human actions are determined by Allah.. The independence of Muslims is curtailed by this very reason and explains why most Islamist states have authoritarian-hierarchical types of leadership in government.

The leader, regarded as a divine instrument by Allah, is unquestionably followed and typically holds authority over the people. This is perceived by the Western world as oppressive or dictatorial. Islamic societies, on the other hand, advocate for a form of leadership where religion exerts a significant influence on the community. On the other hand the Western world separates religion from governance, resulting in religious leadership playing a minimal role in the lives of individuals. While the Christian West values freedom, the Islamic East prioritises justice and adhering to the principles dictated by their religion. Muslims perceive themselves as justified in resisting the influence of the West. Economically, the West is viewed as a formidable power that infiltrates weaker markets, exploiting their potential through the utilisation of inexpensive local labour while reaping substantial profits.

Many Eastern Islamic nations are behind in terms of technological advancements and struggle with the consequences of high unemployment rates, which they attribute to the Western model of education. This type of exploitation by the West further strengthens the belief among Islamic states that they must combat the unjust practices perpetrated by the West, leading to acts of terrorism such as the September 11 attacks or the ongoing war in Iraq.



# WHALE SOUNDS

Ever wonder why whale sounds are so calming? Well, it's like having a gentle, underwater lullaby. Whales communicate with each other using these deep, melodic sounds, and it turns out, we find them really soothing too.

Picture this: you're near the ocean, and beneath the waves, whales are chatting away with their low-frequency tunes. These sounds are like a peaceful underwater orchestra. The slow, rhythmic nature of the whale calls creates a calming effect on our minds.

Scientists say that the low pitch of whale sounds are crucial. Unlike high-pitched noises that can be annoying, whale sounds are more like a gentle hum. It's like nature's way of saying, "Relax, take it easy."

There's something magical about the way these sounds travel through the water. They're like musical vibrations that wrap around you, creating a sense of tranquillity. It's almost like the whales are sharing their secret to staying calm in the vastness of the ocean.

People who listen to whale sounds often report feeling less stressed and more at ease. It's as if the whales are sharing their serene vibes with us. Maybe it's a reminder of the vast, peaceful ocean, and we can't help but get lost in its soothing waves.

So, next time you hear those whale songs, think of it as an underwater lullaby that nature is playing for you. It's a melody that speaks to your soul, helping you find peace in the deep, mysterious symphony of the ocean.



# A POEM ON THE EXPLOSIVE TANTRUMS OF 'AZIDAZIDE AZIDE' (A very dangerous chemical)

By Alisha Namakula

A Silver-white, lustrous metal  
Azidoazide azide  
joins the family of antimony in 2011

14 nitrogen atoms  
Crammed onto a heterocyclic ring  
Is loosely bound  
Barely holding itself together

Its ability to break down easily  
Is ancestral  
A dangerous lineage of sensitive metals--  
leave a fiery history

Antimony's brother hasn't quite aged yet  
Temper Volatile and...volcanic.  
Emotive and expressive but--

Weak and brittle  
This is the description of the reminiscence  
Of a violent child  
who can never actually live  
Because even in its existence  
All alone  
It throws what can only be described as  
*An explosive* tantrum

A single ray shines on him as he's birthed  
A sliver of warmth embraces him  
Without warning  
And he mistakes it for a raging fire

A disturbance in the force has ruins his cage of isolation—  
And the warmth unleashes an animalistic cry of terror and horror  
This is the extent of our knowledge  
The answers consumed in an ominous  
Dark grey cloud  
Accompanied with a deafening crack.

Antimony's brother wails  
He shows his riches with  
An overwhelming wealth of energy  
Tangling with his explosive screeching  
Along with the scattered parts  
Of the curious, unwelcome hand  
Who had picked at it with his tweezers.

And even in its smaller doses  
The scream's energy rips through your lungs  
A poisonous faucet of ga runs wild through walls of cells  
And the scream erupts back out of you  
And the death cloud entangles in your organs  
And the birth of your cries

Other poems: "The 'Me' in Melanin" in the last discovery magazine!

# HOW DO DIATOMS SHOW ENVIRONMENTAL CHANGE?

## What are Diatoms?

A diatom is a type of photosynthesising algae that lives in houses made of glass. They are the only organisms in the world whose cell walls are composed of transparent opaline silica. Diatom cell walls are ornamented by intricate and striking patterns of silica. They are found in almost every type of aquatic environment - whether it is marine water or freshwater. They live in almost anywhere that is moist. They turn the sun's energy into chemical energy through photosynthesis using chlorophylls a and c. Diatoms are extremely important for us as they produce around 20-30% of the air that we breathe. They also produce long-chain fatty acids and these are an important source of energy, rich molecules that are food for the entire food web, from zooplankton to aquatic insects to fish to whales.

## How do we use them to know about our environment?

Diatoms only live in areas with specific requirements such as the quality of water or the pH of the water. Diatoms have ranges and tolerances of other environmental requirements such as nutrient concentration, suspended sediment, flow regime, elevation and different types of human disturbance. Diatoms are indispensable for the assessment and monitoring biotic condition of waters. When sampling a depositional landform such as salt marshes. The deeper you go, the older the materials because salt marshes are depositional landforms, so sediment is added to the top. If you find a specific species of diatoms, then you can get an idea of what that environment was like. Another way we use them is to measure changes to water. As diatoms rapidly reproduce, they can provide us with early warning signs of physical and chemical changes to the water. Since some species are more tolerant to pollution than others, by collecting and sampling diatoms, we are able to get an idea of how polluted a body of water is.

AIMAR NASSOR

# A TRIP TO AUSCHWITZ

As humans, we are born, perhaps condemned, to speak and to tell stories. It's our very construct as social animals. For some, it's even a career, as journalists or as writers. Auschwitz was derived to silence these stories, to silence the voices of sense. The Nazi war machine had little use for intellectuals, after all its very sweep to power was based on the opposite of truth. As I walked under the iconic gates of terror on Tuesday 5th March 2024, this silence was still retained. Other than the brief twitter of birds, the woosh of the wind and the crunch of the gravel under my boots, the site seemed dead. It bore no atmosphere. Only solemn silence. To me, who had visited various graveyards and cemeteries, this site of mass murder bared no sense of soul. Seemingly the horror that occurred here was so great, that souls feared return. Each tour group we passed bore the same senseless expression. Everyone seemed distressed- unsure how to feel or act in the face of such brutal evidence.

For me, the most shocking thing was visually associating the German language with such acts of gross terror. Previously, every single time I'd seen its writing, it would give me a sense of nostalgia. A familial, homely feel. After all, the only time I would see it written on signs, buildings and paperwork, was when I was on holiday or visiting my grandmother. But now, to see this very language, that meant only comfort for me, to be adorning the most horrifying of buildings, that was what hit me.

As we continued on our tour of this notorious death camp, I couldn't help sense an eerie feel of normality. On your immediate left as you pass under the infamous gates, you'll find a large camp building. Unlike the others you come across, a large sign marks 'no entry, for staff only'. Inside employees diligently type away at their desktop computers- in a building that once marked the end for so many. The sense of normality was only suppressed by the sincere voice of our tour guide that crackled its way through our headsets. As we reached the first of our stops, all sense of normality was lost. For inside, the story of horror began.

An urn the size of a car tyre sits atop a minimalist grey stone, ingrained in its centre are the numbers 1940-1945 - the years the camp was active. Its place in block 4 is all too necessary, for the upstairs fills you with an intense feeling of disgust, forging the question- 'how could people have done this to others?'. The unfortunate truth is yes.

The meticulous planning that saw 6 million men, women and children murdered in an industrial scale is put to a visual, and very real, display. We see the images taken illicitly by the 'Sonderkommando', Jews forced to help keep the deaths of their own, run smooth.

I cannot begin to describe the feeling that these photographs placed on me. The images seemed so alive, so brutal, so real. Hundreds of bodies piled high, doused in petrol and lit up into an inferno of hell. Women herded toward their death, their clothes left waiting, for an owner that would never return.

Round a pillar you see a large 3d model of the system, the various stages of the gassing. Groups of hundreds of people moved from locked 'washrooms' to locked 'washrooms' until they eventually ended up in the gas chamber. 2,000 people crammed into a space barely the size of a proper swimming pool, in darkness, screaming, crying as the pellets of Zyklon B rained down on them. These very pellets are placed just next to the model. Their turquoise hue masks the true nature of their creation.



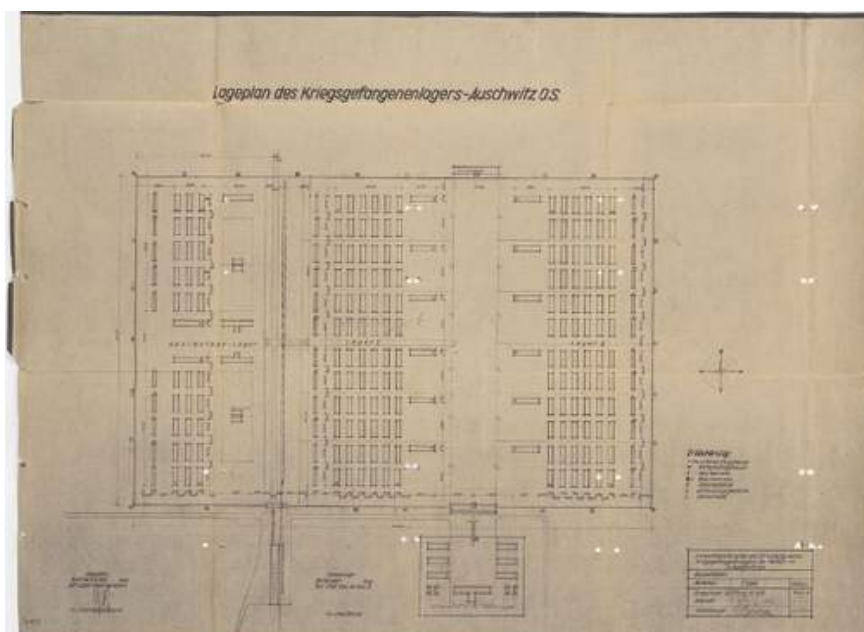
Just behind this 3d model, we find the tins that held the Zyklon B, created to kill pests such as rats and insects, the Nazis found purpose in using it to kill innocent lives. The next room is dark, protected from the sun by foil that covers the windows. Here, 2 Tons of human hair resides. The only remains of over 40,000 people. I have no words. Outside, we read a poem. A poem of hope, a hope for a future away from this darkness.

Our tour continues, leading us to the newest museum block, funded by the Yad Vashem. It is a stark contrast to the past blocks we'd visited, a continuation of Block 4- extermination. Here we see the depiction of those affected. Hebraic music beckons you into the heart of the exhibition, where the pre-war Jewish life is cast onto the black walls. We see people, laughing, dancing, singing, praying- as any other, normal human would. I stood there, lost in a trance, as the music overwhelmed my senses.

Melancholy is the best word to describe the feeling that crept into every corner of my mind. To think that normal humans, who laughed like us, danced like us and were happy like us, were struck with the greatest accounts of misery ever. Almost surreal. The next room helps bring these ideas of surreality back down to earth. The infamous book of names, comprising 4,8 million, is filled with names, stories and the lives of the very people we viewed in the room before.

That was Auschwitz 1, a former Polish military barracks transformed into an expanse of death. Auschwitz-Birkenau in contrast was designed to kill. Built in a forest of birch trees, therefore the name 'Birkenau', the camp's sole purpose was to exterminate all life. At the southern end of its site 'Kanada' was found, a complex of buildings that held all valuable possessions were taken off the prisoners as they exited the cattle carts. For prisoners, it was a symbol of hope, which is why they named it 'Kanada', for it held all possessions they would never see again. For an Auschwitz prisoner to be given work in these complexes was a high honour. Prisoners would often exchange what little goods they had left with the workers in 'Kanada', in return for some of their own prized possessions. Contrastingly, the barracks in which the SS men and their families lived were called 'Mexiko' as the nation was regarded as lawless, just as the SS mens actions were within the camp.

It's unimaginable to believe that a change was possible, a new Jewish life in a world that had caved in on them, was possible. But as our Rabbi proclaimed, Jewish life was reborn, Generations have existed, and so the very goal of the Nazi machine, to exterminate Jewish life, culture and history, had failed. To this very day, Jews across the world are writing history, riding the wave of darkness as it pushes them to a world of refound light.





# SPRING ACTIVITIES



X L N A T U R E W A L K S G P R M U R O  
 X Y P H O T O G R A P H Y N I O R R E B  
 H G N I M M I W S H L M D I C A E M C S  
 M L G J C Q A Y F Z N L S D N D T N C R  
 C N N T A D E X F L E J Y I I T S H O T  
 T T I N M P C I S I O T E R C R A F S G  
 G G N U P Z A S F E P G L E F I E Y N F  
 N N E H I V R D I S M C O K U P P I Q C  
 I Y D G N K N K C G W A C I N U H T F G  
 H T R G G A O H L I H F G B R C Y K V N  
 S Y A E K E O B E G Z T K R T Q L G O I  
 I A G C Y R P A A T N D S A O O L I J X  
 F B A R I B S S N E X I W E Y O T M E A  
 C R R I M G D E I N Y D K O E A D B G L  
 T T U C Q N N B N N R M S I C I K T C E  
 H N M M F I A A G I S E W A H R N I U R  
 E D F S G R G L B S K D V F J L I G N O  
 A N X K F P G L P L A N T I N G G X L G  
 T J U G T S E P H G N I Y L F E T I K V  
 U X F A R M E R S M A R K E T C Z R J I

## WORD LIST

BASEBALL  
 BIKE RIDING  
 BIRD WATCHING  
 CAMPING  
 CLEANING  
 EASTER  
 EGG AND SPOON RACE  
 EGG HUNT

FARMERS MARKET  
 FISHING  
 FUN  
 GARDENING  
 GOLF  
 HIKING  
 KAYAKING  
 KITE FLYING

NATURE WALKS  
 OUTDOOR GAMES  
 PHOTOGRAPHY  
 PICNIC  
 PLANTING  
 RELAXING  
 ROAD TRIP

SIGHTSEEING  
 SOCCER  
 SPRING BREAK  
 SWIMMING  
 TENNIS  
 TRACK AND FIELD  
 VACATION

*Homemade*  
 GIFTS MADE EASY



# RELAUNCHING THE DISCOVER SOCIETY

We are very excited to announce the relaunching of Biddenham's Discover Society! We are aiming to bring this society back to its roots, giving the students what they want and need for later on in life.

## **What does the discover society have to offer?**

The Discover Society aims to provide a super curricular opportunities for students to meet and learn collaboratively through social events and informative sessions. It is not a repeat of PSHE or skills sessions, although there might be some overlap. It is to provide information beyond what the school are required give. It is nothing to do with science!

## **What kind of sessions could be on offer?**

Previously our society has ran:

- Presentations
- CV writing
- Post-18 application support
- Careers in different subjects
- Writing personal statements
- Interview skills for jobs, university and apprenticeships
- Debates

The society are also looking at incorporating sessions on general life skill (for example adult finances) and any other sessions you think would be helpful. We want to place emphasis on accepting any contribution. Culture, interests, personal journey, tips - we want to hear it!

## **What's in it for you?**

For every conference you attend, or for any contribution, it is logged, ready for you to put on your CV. After 5 sessions you will gain the 'member' status (through a certificate), which will look amazing on any application after school!

## **How to get involved?**

The roles being launched for the discover society are: chair of the discover society, part of the discover committee, leading sessions/presentations and subject leads. However if none of these roles appeal to you, the most important way to get involved is by just showing up (and gaining your member status)! We meet every Tuesday lunchtime in N3.

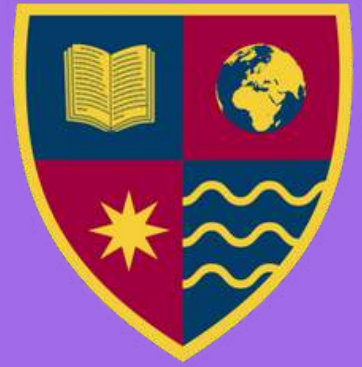
Join our classroom to know what sessions are being run in advance!

**Code: vp6fpkd**

Lily Aitchison

May 2024

# Student Safeguarders



I wish I had someone to talk to about this..

Do you want someone to talk to?

Do you need some help?

This is hard to handle on my own..

"I actually can't do this..."

Someone who could help you with school, emotional support or just an ear to listen?

Come to:

**A3 any lunchtime** and speak to a Safeguarding Lead or...

email us

[studentsafeguardingleads@mybiddenham.com](mailto:studentsafeguardingleads@mybiddenham.com)



December 2021 Vol 3 - 3rd Edition

THE  
**BIDDENHAM**  
DISCOVER MAGAZINE

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**CREATIVE SUBMISSIONS**

- Artistic Piece
- Posters
- A Short Story




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Find out how best to prepare for exams by reading Evie's article!




**Thinking of studying medicine?**

Read about the application process for medicine, written by a student who has gone through it!



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A fascinating article on the different vaccines that have been developed this year.



**INCLUDES A WORD SEARCH**

Test your skills by attempting to complete Hanifa's word search

**Ready2Lead**

Learn about an opportunity you could get involved with in the future

**"THE BEST PREPARATION FOR GOOD WORK TOMORROW IS TO DO GOOD WORK TODAY." - ELBERT HUBBARD**


April 2022 Vol 2 - 1st Edition

THE  
**BIDDENHAM**  
DISCOVER MAGAZINE

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**CREATIVE SUBMISSIONS**

- Textiles Work
- Poems



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Read about The Equality of Period Cramp Simulators




**INCLUDES A WORD SEARCH**

Test your skills by attempting to complete an Easter word search


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A little insight into an eye-opening career...




**ROLES OF PARLIAMENT**

Check page 16 for the Ins and outs of Parliament as well as some of the major roles played



**DINOSAURS**

Find out the connection between dinosaur DNA and birds



**"THERE ARE NO SECRETS TO SUCCESS. IT IS THE RESULT OF PREPARATION, HARD WORK AND LEARNING FROM FAILURE" - COLIN POWELL**

September 2022 5th Edition

THE  
**BIDDENHAM**  
DISCOVER MAGAZINE

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**CREATIVE SUBMISSIONS**

Some great pieces, including poems and art work



**FIND THE TEACHER!**

Find this teacher hidden in the magazine. Can you guess who it is?



**LANGUAGES**

Learn a few new phrases in Ndebele




**HOW IT ALL BEGAN...**

Read about the famous "big bang theory"



**DONUTS!**

Only the best finger donut recipe out there - tried and tested!



**MEDICINE**

Gain an insight into how you can start a career in medicine



**DO THE DIFFICULT THINGS WHILE THEY ARE EASY AND DO THE GREAT THINGS WHILE THEY ARE SMALL. A JOURNEY OF A THOUSAND MILES MUST BEGIN WITH A SINGLE STEP. -LAD TZO**

CHECK OUT PREVIOUS EDITIONS OF THE DISCOVER MAGAZINE

# ANSWERS!

## SPRING WORDSEARCH

J V Q J G H F R L R G S N L A D Y B U G  
 R O P E K X Q S R A A T N W Y B Y U B K  
 I E I Q C B C H A H O L A X B U A M E M  
 B N I D I V O L J T F P O M T S B E A  
 U I Y V H D L W L V J R B K A T Z R B R  
 Z H D X C U V E I O U Q E O L E Y E Y C  
 Z S O N A C U R P T R B Y V G R B L E H  
 I N H G V K U S R K N F P Y O F L L N Q  
 N U N E W L I F E U A F U M U L K A O D  
 G S W E N I O K T J L E P L M Y C W H S  
 M Y W X H N S U A L R V R O J X H V F U  
 A Z N J E G C R C P T E V B Y P S D U B  
 Y F F N B M D F E S E E T L G M I F G D  
 I S B V U G O I E W N G F S E N J Z F I  
 R Y D L P B E N C U O N G A A Y I I Z T  
 T H A T C H L I N G O L D X P E K R H S  
 W O B N I A R F B G I O F U D S N Y P Q  
 E P J E X R F L A C W E R P B X E T J S  
 D K N M U T E R N K D P N Y B F Y J Q R  
 V U U D Y U D M A P R I L T E L G I P E

### WORD LIST

APRIL  
 BUNNY  
 BUTTERFLY  
 BUZZING  
 CALF  
 CATERPILLAR  
 CHICK  
 CLOVER

COLORFUL  
 DRAGONFLY  
 DUCKLING  
 EASTER  
 EGG  
 FLOWERS  
 FOAL  
 HATCHLING

HONEYBEE  
 LADYBUG  
 LAMB  
 MARCH  
 MAY  
 MEADOW  
 NEST

NEW LIFE  
 PIGLET  
 RAINBOW  
 SHOWERS  
 SPRING BREAK  
 SUNSHINE  
 UMBRELLA

*Homemade*  
 GIFTS MADE EASY

April 2024

8th Edition



# BIDDENHAM



DISCOVER MAGAZINE

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Thank you to all of the people who contributed to the magazine. We always love reading your articles and sharing them with the school! We at the Biddenham Discover team, apologise to those who have not had their submission put in this issue of the Biddenham Discover Magazine.

If you would like to share something you are passionate about, please contact us at:

[biddenhamdiscovermagazine@mybiddenham](mailto:biddenhamdiscovermagazine@mybiddenham)

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**Editors -**

Lily Aitchison

Alisha Namakula



THE  
BIDDENHAM  
DISCOVER  
MAGAZINE

"Success only comes to those who dare to attempt." - Mallika Tripathi

WE'RE LOOKING FOR CONTRIBUTIONS!

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best in the year  
group!!

WE WANT:

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- PICTURES
- ART
- SUBJECT INSIGHTS

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YOUR ARTICLES!**

**KEEP SENDING US YOUR  
SUBMISSIONS!**