

Bright Spark Student Journal 2019-20 Northwood College for Girls GDST



BRIGHT SPARK

Volume 2-2019/20

Bright Spark

*Celebrating and sharing the learning of High Flyers at
Northwood College for Girls GDST*

Volume 2

2019-2020

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Editorial

Joanna Hughes

Welcome to Volume 2 of the Bright Spark Journal. The summer term has come to embody the learning and curiosity of the Northwood College for Girls' High Flyers community, not to mention the resilience and determination that the current situation has found our community in, ultimately culminating in the production of this fantastic journal.

This is the second volume of the Bright Spark Journal and is inspired by the work carried out by our High Flyers. The girls were issued with a Parallel Curriculum at the end of the winter term, and through their own independence and love for learning, they have written an article inspired by the subjects that interest them.

As ever, a massive thank you to all who have taken the time to contribute articles this year. It has been such a pleasure to immerse ourselves in reading your writing and each and every article has ignited a spark of interest, resulted in contemplation or made us smile (or, indeed, all three!).

We hope you enjoy reading and discussing the articles as much as we have and, remember; it is never too soon to start thinking about your article for Volume 3!

The Mongol Empire

An Introduction to how the Mongolian Empire began and what impact did they have

Faaizah Ahmad

Year 10

These days many people are more attracted to the future, when given the question would you like to go into the future or be transferred back into the past? I would want the opposite, as I would like to be transported back in time to see all the fascinating things that no longer exist; the animals that once roamed the earth, the way of living, the historical wars and battles, the politics in those times and finally the magnificent empires that ruled the lands. This brings me to what I will be exploring in this article. One of the greatest and most invincible empires the world has ever seen, the Mongolian Empire.

In the 12th Century, before the empire had formed, the Mongols were a small nomadic group scattered throughout East Asia and were led by the Khans. As well as being a nomadic group they were also egalitarians. This meant that they believed in the idea that everyone should be equal and therefore deserve equal rights. This ideology was evident as women held important roles and had a significant amount of authority when it came to the time of migrating and dealing with trade and flocks. This way of thinking makes sense as when necessities become limited

humans naturally tend to share more responsibility between the genders in order to survive.

In 1162 a young man destined to be the creator of the empire that would be the closest in achieving world domination was born. His name was Temüjin, later known as Genghis Khan. He was born into poverty and grew up under the control of his older brother as his father was poisoned to death. By the age of 19 his tribe noticed his military excellence when he went to rescue his wife, Börte who had been kidnapped. His military achievements resulted in him becoming the leader of his tribe. However, in order to unite the Mongols from everywhere required a civil war. He won their favour by promoting people based on excellence and merit rather than their position in the family. Secondly, he won the favour of the poorer people in conquered lands by inviting them to his own tribe while also stripping their leaders of their lands. One of his most excellent moves was distributing the nomads that had been captured between his own soldiers so that they were not able to rebel and go against him. Using these methods to bring people together and showing his allegiance made him unstoppable and soon after Temüjin was declared as the Great Khan and Leader of all Mongols. Temüjin was now known as Genghis Khan and his next aim was to conquer a lot of land.

Before he died in his sleep in 1227 he conquered Northern China and the Eastern Islamic lands. He created an empire that stretched from Mongolia all the way to the Caspian Sea. The generations to come, or the Golden Lineage, did not let Genghis Khan down as they

continued to conquer territory over territory. After Genghis Khan, next in line to the throne was his son, Ögedei Khan who expanded the empire even more by conquering the Turks of Central Asia and the Russian Princes.

After Genghis Khan, the throne did not automatically go to the eldest son therefore the relatives got into a civil war over inheritance and had to fight in order to gain leadership. This tore the empire Khanates formed: The Yuan Dynasty in China, the Il-Khanate in Persia, the Chagatai Khanate in Central Asia and the Golden Horde in Russia. In 1258 Genghis Khan's grandson was named the Great Khan for conquering Baghdad, the capital of the Abbasid Empire. In 1279 another of Genghis Khan's grandsons, Kublai Khan, conquered the Song Dynasty and is remembered as a golden age of science and culture in China. However, the Mongols did not always collaborate because Genghis Khan never created a political union out of the places he had conquered. Alternatively after his death in 1227, Khanates were formed: The Yuan Dynasty in China, the Il-Khanate in Persia, who initiated the development of monumental architecture and Persian miniature paintings. The Chagatai Khanate in Central Asia, who birthed leaders like Timur and his descendant Babur, who founded the Mughal Empire in India and the Golden Horde in Russia.

The Mongols also allowed the people in their conquered lands to practice their religions freely as long as they prayed for them. The Mongols were Shamanists who believed in the spirits of nature and that their ancestors

could see them from up above. Above all, their Gods emerged. The Sky God, Tenggeri. Tenggeri was thought to be the one who told Genghis Khan to conquer the world in his name. With the nomads of the Mongolian plain unified this seemed achievable.

A reason why the Mongols were so successful in conquering territory was predominantly because of their military expertise. Their army had much strength of which included speed and archery and were also incredibly adaptable. For example, they became siege experts before they had even seen what a castle looked like, doing this by interrogating their prisoners.

As well as recognised for their ability in conquering land they were also known for their trade. When conquering lands they would often capture artisans, scholars and engineers, as they valued what they were capable of creating. Subsequently they would have been settled in multiple regions across Asia and continue to work for them. The Silk Road had existed for about 1000 years but had been forgotten, fortunately the Mongols put life back into these routes and trading then prospered throughout the lands. Gold Brocade was a product of great value in the Empire which weavers from Baghdad would make using gold from Tibet and silk from China. The political unity of a lot of Eurasia meant that trade thrived along the Silk Road. Trade was managed by the use of horse messengers and relay posts and the oceans and seas were no barrier for the Mongols as they continued to trade at sea, especially in Blue and white porcelain. The Mongols could also tax trade and made sure that what they were trading reached safety

and that they could trade goods without having the fear of it getting robbed. The Yam System was also developed by the Mongols to increase communication throughout Eurasia. It was an express system using horses and riders that would relay information quickly. Their cuisine was also recognised by others and it is because of the Mongols that rice is a staple ingredient in Persian dishes.

Unfortunately not everything was as glorious as it seemed. They did tend to viciously kill whole tribes and sometimes even burn them alive! Genghis Khan's definition of happiness was, 'the greatest happiness is to vanquish your enemies, to chase them before you, to rob them of their wealth, to see those dear to them bathed in tears, to clasp to your bosom their wives and daughter.' The Mongols were barbaric conquerors which historians estimate to have killed millions of innocent people, including children and babies. Some tribes were so petrified by them that they surrendered as soon as they saw the Mongols coming.

As time went along the Mongolian empire gradually disintegrated due to many factors piling up on each other. The first of which was the death of Möngke Khan in 1259. When choosing his successor the Mongol Generals came together and one of these generals was forced to make many of his soldiers retreat from his conquests in Syria and Palestine. After many of his soldiers were forced to retreat the remaining soldiers were confronted with the Muslim Mamluks who were another conquering empire. The Battle of Ain Jalut then took place and the Mongols lost terribly. This meant that

they could no longer expand their empire in the Southwest. This was also taking place at around the same time as when the empire was being split into four. This split weakened the Empire as fighting took place within. The lack of knowledge on who would become the next in line to the throne meant there were many civil wars between them and other dynasties and took this as an opportunity to attack and retrieve places previously owned by the Mongols. The Black Death then came along and quickened the deterioration of the Empire as it spread along Mongol trade routes. By 1368 the Empire had crumbled when the Ming Dynasty overthrew the Yuan Dynasty. Ultimately the passing away of important leaders, not having clear successors and the Black Death hitting their trade routes led to their downfall.

Even though the empire only lasted a short while of 162 years, the Mongols left a bequest of world domination within only 25 years that is yet to be achieved by anyone to this day. Regardless of their own beliefs they allowed other religions and ethnicities to flourish within their lands.

References:

<https://www.youtube.com/watch?v=szxPar0BcMo&t=1s>

<https://www.youtube.com/watch?v=wUVvTqvjUaM>

<https://www.youtube.com/watch?v=45mZmUGXETg&t=7s>

The Political Art Debate *Offensive or Inspiring?*

Baraa Algobori
Year 9

Art is one of the most popular and esteemed ways of human expression, but is there a limit when it comes to what constitutes art? The fact that art is incredibly flexible in its meaning and purpose, and is open to interpretation, means that it can be seen as offensive or could be appreciated and thought provoking. Political art or protest art is a prime example of the expression that can be construed in two ways; opposition and approval.

Political art is art that serves the purpose of bringing attention to certain political or social issues. Many well-known artists across the world and throughout many centuries have made political art in order to publicly display their messages and to inspire thought in audiences. Political art can also be regarded as a medium in which freedom and liberation is preached, and to educate those who are curious about politics. It gives everyone the right to form their own opinions on endless political issues. An example of popular political art is Pablo Picasso's "Guernica" piece from 1937; this was an influential painting promoting anti-war, and was against the outbreak of World War Two. The artwork is very chaotic and features people in immense



pain, which represents all of the chaos and destruction a war would bring.

However, there are many who say political art can reach a point where it offends a certain audience, and believe that art is something that should not be tarnished by the media and politics. An example of this is the art fair that was held in Madrid protested against and artwork that features jailed Catalan politicians was removed.

Santiago Sierra, the artist who made the piece, referred to the politicians as “political prisoners”.

The operator of the art fair thought that keeping the art up would tarnish the reputation of the art fair, and did not wish to involve politics in the exhibition.



In conclusion, this demonstrates that despite politics being very relevant and having a very heavy presence in our society today, some people see it is something to only be brought up in appropriate circumstances, like a rally or a debate, and see political art as unnecessary. Those who are against political art believe that art should be aesthetically pleasing, and should induce happiness and peace, whilst those who support and

approve of political art regard art as being about liberation and freedom of speech. The intention of the artist does not always correlate with the audience's perspective, which makes art such a profound medium, accessible for all, and enables others to compile their own conclusions on any issues taking place all over the world.

All in all, political art continues to be a concern for many, who believe in censorship on certain artwork, whilst others are advocating for political art to gain more recognition.

References:

<https://www.bbc.co.uk/news/world-europe-42307201>

Virtuoso Fine Art Gallery

Techathon

Using technology to create and innovate

Ayushi Amin

Year 8

My name is Ayushi Amin and I am in Year 8. This year there have been many amazing events that I have taken part in, for example, the Gym and Dance Show. However, there is a particular event that has made me stronger as a person, an event named Techathon. Techathon lets school students engage with technology in a creative environment. This was held on Thursday 12th March 2020 from 11:00 am to 3:45 pm at The Crystal. The Crystal is one of the world's most sustainable buildings and is part of Siemens sustainable cities initiative.

Techathon invited Northwood College to participate in this event, but only 5 senior girls could go. The topic of this year's Techathon was all about Smart Cities and this was encouraging us to use technology to improve the built environment. This could have included themes such as industry, retail, society, healthcare, and even mobility. We went to this event with Mr Toesland (Computer Science teacher) and Miss Tikare (PE teacher). We got there by train, and as soon as we stepped into the building, the staff were very welcoming. Our school was then paired up with another school from GDST and this was a great experience because this taught us how to work in a team with people we have never worked with before.

The day started with a keynote on Smart Cities and talking about the task of the day. The first speech was by a woman named Julia Muir. She was the founder of the UK Automotive 30% club and also was a student in Sheffield High School, GDST. We also heard from Sarra Pardali, who is the Head of Infrastructure and Sustainability at the GDST. These speeches were an introduction to the theme of the day, Smart Cities. These women also introduced key topics for the theme. For example: What a smart environment is, what opportunities and challenges are in a smart city, and finally, what skills are needed to build and power smart cities.

Then the main event of the day was a Dragons' Den-style innovation challenge, supported by the industry mentors. Our group had a few hours to create a product, service, or application to encourage sustainability in a smart environment that uses technology to develop Smart Cities. We created a system called e-bin. This was an app that helped with the awareness of packaging and which bin the packaging of different materials goes in. We thought that this was a great way to bring awareness to this topic because many people put packaging into the wrong bin. This is extremely bad for the environment. We were then expected to pitch and showcase our ideas at the end of the day to the judges of the challenge. The winners were then selected by the mentors and other students from different GDST schools. The day ended with a panel discussion on 'Smart cities: Safe or Scary?' This was chaired by Cathryn Buckle, Head of Estates at the GDST.

Unfortunately, our team didn't end up winning however, it was okay because at the end of the day we learnt so much from this experience. It was such a phenomenal day because I got to spend it with my friends and I learnt all about Smart Cities and what we can do to make the world a better place. Finally, Amy Icke, Online Learning and Innovation Manager at the GDST, said: "The event was about empowering our girls to find their voice as change makers, to design and shape the future to make the world a better place." This was truly incredible.

The Universal Language

Different forms and languages should never be perceived as barriers to appreciating art.

Adhira Ashok
Year 10

As our world advances we begin to become more accepting of new aspects and differences due to the vast range of social platforms that we have begun to familiarise ourselves with. This allows us to explore the beauty that different cultures, places and people hold in this world and we realise that the differences, large or small, intrigue us as with differences come various meanings and values. Similarly, I have started to comprehend the diverse art forms that exist around the world using social media and the internet. As my curiosity was fuelled by the new things I was learning and witnessing I began looking for variances in order to be able to appreciate the intricacies that are carved into the core of the real meaning and the influence. All of this made me wonder why I had never explored beyond what I knew. I now know that art is everything that one sees beauty and meaning in. Now I believe that different forms, types or languages should never be viewed as a barrier to appreciating art because art seems to be all around me, all I had to do to realise this sooner was broadening my horizons.

From the beginning of our existence we have been able to connect with each other through melodies and rhythms as the tunes beat in our hearts; music became

as natural as speech, even though music for each culture differs like their beliefs. Music allows us to feel the delight, torment, resentment, and every other emotion that could fill up a dark void. I could even say that music is possibly the most moving form of art as it allows people to connect, that is once we begin to look past the differences. Music is like another universe where differences are respected, appreciated and valued, where the feeling of freedom becomes addictive and exhilarating even. Through music one can express their true identity and secrets without exposing themselves as one song, its melody and the weight-bearing words mean something distinctive and unique to every person. I think music makes us consider different sensations we could experience which we may somehow miss out on as we are constantly preoccupied by thoughts of what was, what is and what could be; music has the power to uplift those having a bad day, make people realise the value of who they are with and what they have by having an insight on the pain someone else is going through after losing their everything. Music has the power to provide hope to those who want to give up, music holds the power to change the world.

In a similar way, all forms of art can have strong influences on people around the world and be the cause for the positive changes they go through. A person that can relate to such effects of art is famous Japanese artist Yayoi Kusama, who used art to express her struggles with her mental illnesses and phobias which helped her cope through times where she felt like giving up and saved her more than once from ending her life.

Kusama's works and her identity were constitutionally intertwined as through her works of art she represented her phobias, fears and struggles and her journey to finding more purpose in life. Kusama has been called the world's most popular artist various times and has achieved well-deserved success however she didn't find this success in her own country, but in the USA. At the time it was hard to make a living as an artist in Japan therefore after months of struggle Kusama succeeded to travel to New York, except there too she faced a lot of challenges as the art industry was heavily male dominated to the point that female dealers did not want to exhibit women. In spite of the fact that she was praised and admired by many famous artists such as Donald Judd and Frank Stella, she was forced to watch her male peers, like Claes Oldenburg, Andy Warhol, and Lucas Samaras gain recognition for her ideas. Consequently, their works that were 'inspired' by Kusama's works became famous and were exhibited in prestigious galleries. These works could have been hers if only she wasn't female. In retrospect we begin to wonder as to what could have happened if only society wasn't so restrictive and allowed new art with differences to thrive. Many more female artists, like Kusama, from around the world would have had more opportunities to display their works of art and be able to gain recognition for their achievements, proving that art does not require gender approval.

I think it is crucial to understand that art epitomises freedom and that the contrasts should be cherished, instead of requiring validation. Art should be used as means to express oneself wholly and in return have the

pleasure of indulging the world in their creativity and originality. Art shouldn't have to be a guilty pleasure, art should give courage, like it did to Kusama who lost everything in order to pursue her dreams; she lost her friends, her family and at a point she lost her will to continue being resilient and gave up until she was reminded of the reason why she suffered so much, as a result she became encouraged and determined to try again and after re-establishing herself she gained a lot of acknowledgement. All or most of her works portrayed her traumas, illnesses and struggles with her own mind and challenged her to confront her fears in order to overcome them. Everything she suffered added to her uniqueness which was carried throughout her work and shown in each one. Coming from a different country, continent and culture did not stop her from eventually achieving positive results as her art works spoke for themselves; coming from Japan and not knowing English in western countries wasn't the barrier they had to overcome as her artworks did not require words to be spoken in order to be related and connected with as the feelings could be felt inside every person who took time to observe the art and give it a meaning. By discarding any prejudice one has against differences, the world would be filled with thriving artists in different fields with high potential to be successful because art does not require familiarity and comfort but acceptance and honesty as the unspoken words are disclosed for all to interpret. Art possesses the ability to change minds and translate events in one's life for as long as the art is looked upon, it allows its creators to be forever remembered through their expressions that require no

words to be discussed, these are the capabilities of the Universal Language.

References:

The Story of the World in Pictures (1934) Harley V. & H. Douglas Thomson, Odhams Press

<https://www.artsatl.org/review-yayoi-kusama-offers-an-intriguing-glimpse-into-the-infinite-at-the-high/>

<https://m.theartstory.org/artist/kusama-yayoi/>

The Latin in English

How Latin appears in our everyday speech

Eva Clifford

Year 7

In Year 5 I had found out that I was going to start a new subject - Latin. I originally wondered why this was a subject we were going to study, purely because it is an extinct language. I later learned there are many helpful aspects of Latin that I can use in later life and will help me excel in understanding different languages from their roots and why verbs have different endings for different persons. Latin influenced many countries and Romans showed them new inventions. Without it, our language and many other countries' languages would not be the same. I realised it was not just a language we were learning about, but why our language is how it is and how important the Romans were.

We can see Latin in our lives mainly from our language. Words like *dog*, which is *canis* in Latin, have direct links. Canine is a word relating directly to dogs. Another example is *laborat*, which means *he/she/it works* in English. The English word relating to this is *labour*, another word for work. Our unique language is really just based on another.

Other language examples that have done the same are Spanish, French, Italian and Portuguese. This is why Latin can be so useful. If you know the Latin word for something, it's easier to guess what that word would be

for a different language from their roots. The English word *painting* means *pictura* in Latin, *pintura* in Spanish and Portuguese, *La peinture* in French, and *pittura* in Italian. They are all so similar because they all have the same root, *Pictura*. Latin is also the reason why verbs that are plural are different to singular and gives us an idea why other countries have genders for their nouns. It shows us that sometimes the words in a sentence will be in a different order from what we are used to (like in other languages where you may say the colour before the noun, for example).

Even in this time, thousands of years after the Romans, we can still see how much it has impacted our lives. Our language could only be the way it is because of how we have used Latin, like many other countries. As well as this, learning Latin can give you insights on how they lived in that time and the sorts of jobs they would have/things they would do in their lifetime. I am so grateful to be able study this language and I'm extremely excited to see what I will be learning about it next year!

References:

Cambridge Latin Course Book I (1996), Cambridge School Classics Project, Cambridge University Press

What impact does lockdown have on domestic abuse?

Domestic abuse killings double and helpline calls surge by 50% over coronavirus lockdown.

Aleena Dewji
Year 10

The government has enforced a lockdown period over the harsh spread of Covid-19, but what impact does this have on people who do not feel safe in their own home and are being harmed by people they are isolating with? We are staying at home to be safe yet some people are not safe at their own home, and we must do something to change this.

In the first three weeks of the lockdown period, sixteen people were killed by domestic violence, which is the highest in eleven years in such a short period of time. As well as this, calls to the National Domestic Abuse helpline run by Refuge was twenty-five percent above average in the second week of lockdown and forty-nine percent higher than normal after three weeks. Male victims of abuse have also been calling for help in greater numbers, with the Men's Advice Line seeing calls rise by thirty-five percent in the first week of lockdown.

If these numbers keep increasing over however long the lockdown period lasts, 'we will be dealing with serious consequences for a generation' the home affairs select committee states. As there is not a comprehensive government strategy to cope with the consequences of violence, the increasing amount of domestic abuse

occurring during lockdown is not guaranteed to start decreasing, nor is it likely to decrease and go back to the previous levels. In addition to the surge in phone calls to helplines, the Metropolitan police said they had made four thousand and ninety-three arrests for domestic abuse offenders, which is an average of about one hundred a day since the ninth of March. If at least one hundred people are domestically abused per day during the lockdown period, surely staying at home is not the safest option for them.

Domestic violence can include, but is not limited to, the following: coercive control (a pattern of intimidation, degradation, isolation and control with the use of threat of physical or sexual violence), psychological abuse, emotional abuse, physical or sexual abuse, financial or economic abuse, harassment, stalking and online abuse.

As the majority of the United Kingdom's population is unable to leave home, that means a lot more time is spent with family, which could lead to many more family arguments and an increase in violence between family members. For example, a newspaper article was titled, 'Husband strangled wife of forty-four years to death after late-night argument in coronavirus lockdown'. In lockdown, there is no escape or respite for victims and their children outside of the home, and they cannot get away from their abuser if the law states that you may only leave the house for specific reasons.

A victim of domestic abuse from India has shared her story on how lockdown has impacted the amount of abuse she receives and how herself and her children are

not safe at their own home. She told her interviewer that her husband had come home drunk and upset. The spread of Covid-19 meant fewer people were using public transport, so as a driver, her husband's income had dropped from one thousand, five hundred rupees a day to just seven hundred rupees a day. Once he got home, she stated that he threw a bottle of spirit he was drinking at the wall which startled her children who ran behind her for protection. She said after this, her husband went to bed but she had to stay awake to calm her children down. Her children have seen their father get angry multiple amounts of times in their life but over the past few weeks it has been a lot worse. Her husband has hit her more times than she can remember, the first time on their wedding night. She has previously tried to leave him, but he refused to let her take their children.

She shares that things changed when schools closed on the fourteenth and 'the children were home constantly and they began to irritate my husband.' In addition to this, she said 'usually he saves his anger for me, but he has begun to yell at them for minor things like leaving a cup on the floor. I then say something to divert his attention so he can be angry at me, but the more time we are together, the less I can think of to distract him.' Before lockdown, she used to attend a secret class set up by community organisers where women learn to sew, read and write. She attended this class to become financially independent and move out with her children.

However, India's twenty-one-day lockdown, which began on twenty-fourth March, has put a stop to her attending these classes. She is now stuck at home with

her children and her husband. In this sort of stressful situation, there are a lot more things that trigger her already abusive partner.

This is just one case of domestic abuse during lockdown out of more than we could ever know. Stress levels are at an all-time high as people's mental health progressively deteriorates as the weeks go by. In the context of domestic abuse, the perpetrators may no longer need to worry about their victims' bruises being seen by others as they are in isolation. The UK government is increasing funding to support helplines and online services and has also called for more "safe spaces" to be rolled out where victims can access help. One of the UK's largest pharmacies, Boots, has just opened these spaces up and offered a place where victims can contact specialist services for support and advice, no questions asked. This is a great intervention as pharmacies work closely with GP practices so this will help in keeping the channels of communication open between patients and their doctors.

This lockdown is a testing time for everyone and frustration levels are high but none of this can excuse harming another person. We must be able to feel safe in our personal spaces and it is the duty of all of us to help bring this increasing amount of domestic abuse down and make this tough time easier for all the victims of domestic violence.

References:

<https://www.aljazeera.com/indepth/features/doctor-note-victims-abuse-lockdown-200505092801862.html>

[https://www.theguardian.com/society/2020/apr/27/
domestic-abuse-surge-coronavirus-lockdown-lasting-
impact-mps](https://www.theguardian.com/society/2020/apr/27/domestic-abuse-surge-coronavirus-lockdown-lasting-impact-mps)

[https://theconversation.com/coronavirus-murders-
media-narrative-about-domestic-abuse-during-
lockdown-is-wrong-and-harmful-137011](https://theconversation.com/coronavirus-murders-media-narrative-about-domestic-abuse-during-lockdown-is-wrong-and-harmful-137011)

[https://www.womensaid.org.uk/information-
support/what-is-domestic-abuse/](https://www.womensaid.org.uk/information-support/what-is-domestic-abuse/)

[https://www.bbc.co.uk/news/world-52063755,](https://www.bbc.co.uk/news/world-52063755)

<https://www.bbc.co.uk/news/uk-52433520>

Does God Exist?

Does belief in God or confidence in science help humanity most when it comes to understanding the nature of life?

Serena Ediriwira

Year 9

The question as to whether God exists or not has been speculated in almost every possible way and it has been an age old argument as to whether religion or science can pave the way for society. The existence of God has been relied on by many and would have enormous implications on your views of life, humanity, morality and destiny. However, it has never really been proven by anyone with solid evidence.

Religion is based on a belief system lead, usually, by a figurehead however science is based on evidence and proving theories. Many people, even theists, believe scientific evidence even if just to a certain extent. Many have included scientific beliefs into their own. However, there are times when both sides disagree and when it comes to understanding where we come from, the aspect of religion does take over where science can't. Many things have been scientifically proven but there are some outstanding things which even now scientists still fail to prove. Scientists, throughout history, have relied on data and observations to make sense of the world and whilst science can tell us a lot about our universe, there are still some really big questions about it that science can't easily explain, questions like: Where

did matter come from? What is consciousness? And what makes us human?

We need other methods for understanding the non-observable aspects of humanity. These unknown processes get people curious and thus require 'God' to solve the problem. Religion creates a way for those who are unsure of the purpose of life by giving them the information which science never could and still hasn't. Added to this religion provides a community for people with the same or similar beliefs to gather and outline their ideology.

Both religion and science rest on theories about the universe and claims about reality. Religion differs from science by additionally dealing with morality, purpose and meaning and those areas rest on a foundation of ethics and principles. For example, a Christian and the belief of Christ or a Muslim and the belief of the angel Gabriel's dictation of the Qur'an to Muhammad. Science diversifies here and brings in it's points on the affirmation of things before confirming them.

Though some may define religious beliefs as exaggerated or illogical, with superstitions like raising people from the dead or turning water to blood, it can also be said that scientific beliefs are almost as overwhelming with theories like the big bang or particles being invisible to the naked eye. However, superstitions and belief in the 'impossible', in religion, gives people that sense of protection and hope thinking that maybe there are things out there that would baffle

even the most intelligent minds and that it is possible to invoke miracles.

Even so, it would only be coherent to take advice from a doctor rather than an Ouija board and it would make more sense to learn about the universe from an astrophysicist rather than a priest. This wouldn't be called preference, it would just be rational, because the methods of science are quite clearly superior at finding truths about the natural world.

For most people the concept of God can come in different ways. For most it is a belief that has been drilled into them from childhood in an almost customary fashion. Their parents, grandparents and forefathers believed in it in such a way that it is not something that they would challenge or change easily. For some, it is the fear that God would punish them if they were to turn away from their religion. Since, sometimes, a fear can bring one an odd sense of security if you were to follow all rules and regulations exactly.

Others believe that God can warm their heart and mind as well as being able to comfort and perform miracles that an ordinary human being would not be able to. There have been instances where wishes and prayers come true whether it be coincidence or otherwise, which makes this difficult to back up with scientific evidence. This would naturally cause a clash between science and religion. So even in a time of bad luck or misery befalling one, due to sheer coincidence, they would fall upon the belief that it was their lack of faith in God and

so, if they were to be enormously lucky they would thank God for his kindness.

However, there are some who believe that there is no dismissing one against the other. A lot of people live very comfortably believing in both science and religion. In fact, many doctors and scientists have religious beliefs and believe in God as well. Trusting the facts that define their jobs over their religion when necessary but otherwise, mainly, keeping true to their faiths.

I think that science has also only provided another path to those who already felt agnostic towards religion and given another possibility towards the meaning of life and where we come from. Whereas religion gives people the chance to believe that there is a celestial being there to protect you and guide your way through life. Whatever one you chose to believe in, that's what differentiates the importance of it.

Aerobic and Anaerobic Respiration

Biology

Husna Gofur

Year 8

Aerobic Respiration

In order to transfer energy stored in food, glucose reacts with oxygen in a chemical reaction called, 'aerobic respiration'. This transfers energy to your cells. Carbon dioxide and water are the waste products.

Word equation:



Symbol equation:



Where does aerobic respiration occur?

Respiration happens inside the mitochondria. All cells contain mitochondria, but different cells contain different amounts. Muscle cells carry out lots of respiration, so they contain large amounts of mitochondria.

How does glucose get into cells?

Glucose is found in food as a carbohydrate. Digestion breaks down food into small molecules, releasing glucose molecules. They are absorbed by the wall of the small intestine, and into the bloodstream. Glucose is transported around the body in your blood. It dissolves in the liquid part of your blood called plasma. The dissolved glucose can diffuse into the cells that are needed for respiration.

How does oxygen get into the cells?

When you breathe in, oxygen fills the alveoli in your lungs. It then diffuses into your bloodstream. It is carried by the red blood cells which contain haemoglobin- the substance that makes them red. Oxygen joins the haemoglobin, and gets carried around the body in blood vessels. When it reaches a cell requiring oxygen, it diffuses into the cell.

How does carbon dioxide leave the body?

If carbon dioxide stayed in your body, it would build up to a harmful level. When you exhale, you get rid of

carbon dioxide. Carbon dioxide produced during respiration diffuses out of your cells and into blood plasma. The blood transports it to the lungs, where it diffuses into air sacs, and is then exhaled.

Anaerobic Respiration

Word equation:



Symbol equation:



How do you respire without oxygen?

Anaerobic is a type of respiration that does not use oxygen. The body uses this type of respiration to transfer energy from glucose when there is not enough oxygen for aerobic respiration to take place. Anaerobic respiration takes place during strenuous exercise, as the body requires extra energy to be produced quickly. The

body can transfer this extra energy for short periods of time without oxygen.

Do other organisms perform anaerobic respiration?

Other animals also use anaerobic respiration when they require a lot of energy quickly. For example, when a fox chases a rabbit, both organisms are likely to respire anaerobically. Anaerobic respiration also takes place in plants and some microorganisms when there is a lack of oxygen. For example, the roots of plants in waterlogged soils respire anaerobically.

Fermentation:

Anaerobic respiration in some microorganisms produce ethanol and carbon dioxide instead of lactic acid. This process is called fermentation. It is a type of anaerobic respiration, as the microorganisms respire without oxygen.

Word equation:



Symbol equation:



Products that are made using fermentation: bread, beer, wine.

	Aerobic	Anaerobic
Oxygen	Needed	Not needed
Glucose Breakdown	Complete	Incomplete
End Products	Carbon dioxide and water	Animal cells- lactic acid Plant cells and yeast- carbon dioxide and ethanol
Energy Released	Large amount	Small amount

References:

<https://www.kerboodle.com/api/courses/69212/interactives/33419.html>

<https://www.kerboodle.com/api/courses/69212/interactives/33419.html>

Period Poverty

So we've all heard of poverty, but have we all heard of period poverty?

Anvi Gupta
Year 10

So, we've all heard about poverty; but have we all heard about period poverty? Period poverty refers to the lack of access to sanitary products due to financial limits. One in ten girls in the UK cannot afford period products according to Plan International UK. 49 % of girls miss a day of education because of period poverty. We need to end period poverty. NOW.

When we think of what it means to be in poverty, we tend to think along the lines of homelessness and lack of food. But what people tend to forget is if the person in poverty is a woman, she has her periods and probably doesn't have the supplies she needs. When 2.3 billion people don't have access to basic sanitation, how will a woman manage her period hygienically, it's next to impossible in certain parts of the world. Do you remember a time when you started your period and you did not have the menstrual supplies and it was like the worst thing ever. That's only one occasion but when you consider girls who cannot afford it all, they go on like this for 5 to 6 days a month. So during a year that is 60 to 72 days. That equates to between 2 and 2 ½ months in a whole year. Can you imagine that is 2 and a half months without using any form of menstrual supply? Why is it so hard to get these essentials? The simple

answer is it costs money. The choice of food for 1 week or menstrual supplies and I think it's quite clear what many families would pick.

Approximately, menstrual products cost 13 pounds per month. This may not seem a lot but in a women's average life, it costs more than £8,000 for something she has no control over. We can only end period poverty by ending the taboo topics around menstruation by expelling embarrassment and shame and by simply talking about periods. This will increase awareness in society about periods, more people will understand why menstrual supplies are an absolute necessity, including men.

Many people within the UK as well as all over the world use socks and old pieces of fabric. In even poorer countries, people even use cow dung. It is not just my opinion of increasing awareness; it is a true statement that we shouldn't underestimate.

On the 3rd October 2018, new EU VAT rules that will allow the UK to stop taxing sanitary products were approved by the European Parliament. However, they will not go into effect until January 2022 at the earliest. Men need to understand that periods aren't just about blood and painful cramps, it is about the effect it has on women - emotionally and financially. They may find talking, teaching and listening about it uncomfortable. Periods to begin with, should not be a taboo subject nor period poverty. If poverty is not a taboo topic, then why is period poverty? If men do not understand how much of an impact periods have on women, it will be harder for us to break this shame and embarrassment.

What are we doing to tackle period poverty right now? Campaigns, protests and donating free products. Men will do the same. Seeing a man pick up tampons at a pharmacist should not be awkward but instead should be seen as “normal” by simply removing the stigma around periods. In fact, for every man who spends money on cigarettes, he could have used that same money to help a woman in his family from facing potential disease. It is a winning situation if you think about it, you quit smoking and save a woman’s life; saving two lives from death.

We can tackle period poverty by joining campaigns and giving sanitary products away for free. In fact, in 2017 school girls in Kenya were given free sanitary products from the government so that they did not feel the need to skip school and periods no longer interfered in their education. This is because the government understands that even though it has been a decade since they removed taxes on sanitary products, many women felt it was still too expensive, especially those who come from disadvantaged backgrounds. Arunachalam is a person who grew up in Southern India. He tackled period poverty in neighbouring villages. He made sanitary towels for a cheaper price by making his own machine out of simple grinders and every day mechanical items. He sold them for a cheaper price, an affordable price. Why? He understood the importance of hygiene. Hygiene is important and one can get many diseases due to it – especially when using dirty rags instead of sanitary towels. This is why here in the UK the NHS offer patients free tampons as they understand its necessity.

On the 8th March 2019 Tesco began encouraging customers to buy additional packets of sanitary towels. As a result the company, Always, agreed to give away 2 pads per packet to girls for free. If all companies did that, imagine the impact.

We are women and we have periods.

References:

<https://www.bbc.co.uk/news/world-africa-40365691>

<https://www.bbc.co.uk/news/uk-47430833>

<https://www.globalcitizen.org/en/content/period-poverty-everything-you-need-to-know/>

https://plan-uk.org/?gclid=Cj0KCQjwjcfzBRCHARIsAO-1_OoxMZx4UkaR34DxKDuhTvsBj1DjsoGaPLH77UDXkqVV4rKyBNUAwaAhW8EALw_wcB

https://en.wikipedia.org/wiki/Tampon_tax

<https://yourstory.com/2017/12/padman-bollywood-real-story>

<https://www.youtube.com/watch?v=KVhY3WK9zs4>

<https://www.bloodandmilk.com/the-global-implications-of-period-poverty-and-what-you-can-do-to-help/>

The Universe

The science behind it

Francesca Hawes
Year 9

Our whole solar system is part of a huge galaxy. There are billions of galaxies. A galaxy is a large collection of stars. The sun is one of many billions of stars that form the Milky Way. The sun is halfway along one of the spiral arms of the Milky Way.



The distance between stars in the galaxy are millions of times greater than the distance between the planets in our solar system. Gravity is the force which keeps the stars together. Galaxies themselves are millions of times further apart than the stars in the galaxy. The universe is mostly empty space.

Our Solar System

The Sun, the Earth's star, is the largest object in the Solar System. The Sun has a huge gravitational field that keeps many other objects in orbit around it. Anything that orbits the sun is in our solar system. This includes: Planets, moons, dwarf planets, comets, asteroids and artificial satellites. Here is a definition for each of these.



Planets: Large objects that orbit a star. There are eight planets in the Solar System (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune). The planets orbit the Sun at different distances.

Moons: Moons are natural satellites that orbit a planet with almost circular orbits.

Dwarf Planets: Planet-like objects that are not big enough to be a planet. Pluto is a dwarf planet.

Comets: They are made of ice and dust and orbit the sun. As a comet nears the Sun, it turns into a gas.

Asteroid: Asteroids are made of metals and rocky material. They orbit the sun in a very stretched out circle (highly elliptical) and can be found in the asteroid belt. Sometimes, two asteroids can crash into each other. One could knock the other towards the sun and into a new orbit - this could make the asteroid collide with Earth.

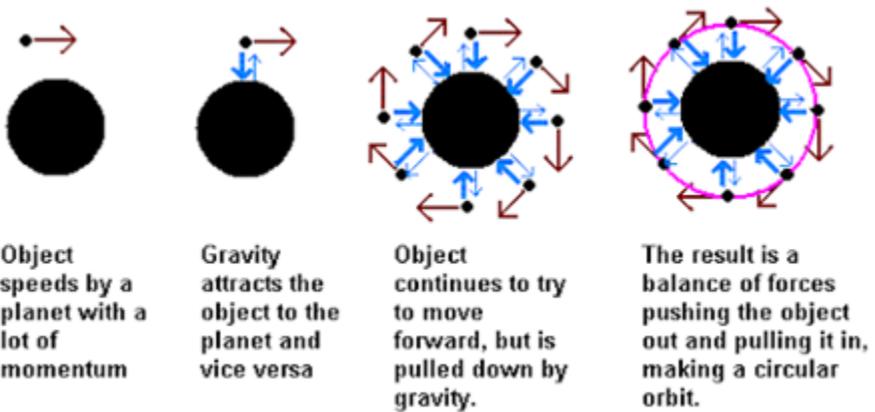
Artificial Satellites: Man-made and orbit the earth in circular orbits.

Gravity

Planets move around the sun in almost circular orbits. Objects that travel in a circle are always changing direction so there is always a force acting on it. This force is called a centripetal force (this acts towards the centre of the circle). It would cause the objects to fall towards wherever it is orbiting but because the object

was already moving, it just changes direction and is kept in a circular orbit. The force is created by gravity.

The gravitational field strength depends on the mass of the object. The bigger the object, the stronger the gravitational field. Also the closer you are to the planet, the stronger the gravitational force is.



Orbits

Gravity creates the force needed to keep an orbit of planets around a star and of moons and artificial satellites around a planet. The orbits of moons and planets are oval shaped. Comets also orbit the sun, and their orbits are very oval-shaped. They travel nearer the outer edges of the solar system so their orbits take longer than that of the Earth. Objects closer to the sun orbit faster because there is a larger gravitational pull. There are some artificial satellites that orbit the planet in

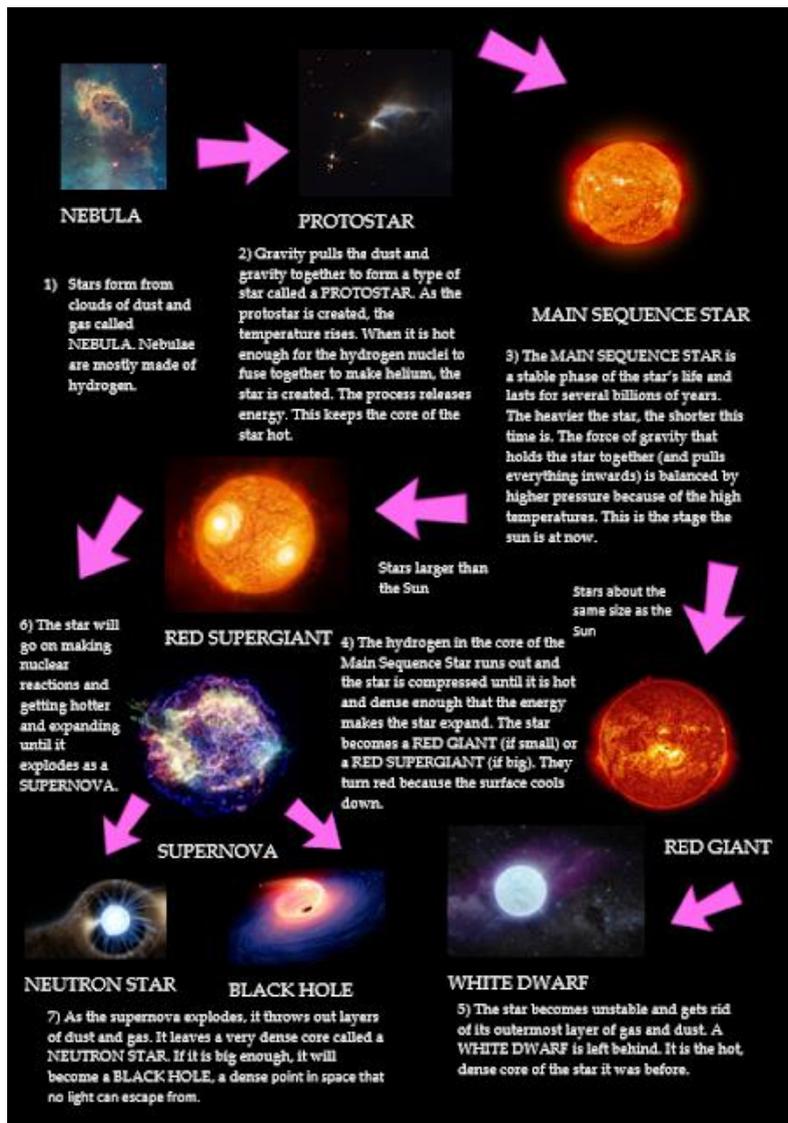
just one day. They are known as geostationary because they are always over the same part of the planet as they are orbiting it at the same speed.

Stars

The colour of a star depends on the amount of light it gives off. All stars emit light that the human eye can see (i.e. red, yellow, green, blue etc) but how much of each colour depends on its temperature. Stars can be classified by their colour. All stars that have similar temperatures will be a similar colour. The hotter the star, the more light of higher frequencies it will give off. A cooler star will give off light of a lower frequency so will be red while a hotter star will give off light of a higher frequency so would be blue.

<u>Colour</u>	<u>Surface temperature</u>
Blue	Hottest
White	
Yellow	
Orange	
Red	
Coolest	

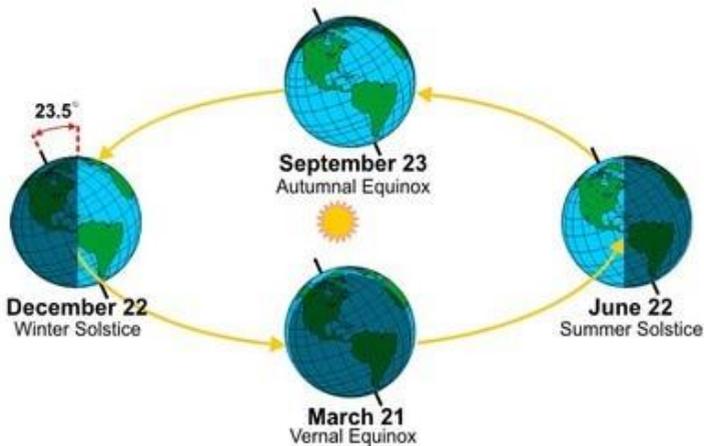
The Life of a Star



Day and Night

Planet Earth spins around once every 24 hours. The Earth turns from west to east. The sun lights the sky when we are facing it but when the sun disappears, the sky goes dark and we see the stars. The stars are in the sky all the time but during the day we cannot see them as the sun is too bright. As the earth turns the stars move across the sky apart from the North Star. It is directly above the north pole. This star does not move because the Earth spins on its axis which is a line directly from the north to south pole. All other planets have day and night but they spin around at different speeds to the earth so some planets' days are longer while others are shorter. Jupiter's day is only 10 hours while Venus' day is 243 of Earth's days.

Years and Seasons



It takes the Earth one year, 365 and a quarter days to orbit the sun. This is why we have a leap year. An extra day every four years is added on to make up for the quarter days. This day is on the 29th February. The Earth's axis is tilted by 23.5 degrees. This causes the seasons to occur.

Summer: The north pole is leaning towards the sun so in the northern hemisphere there are long days and short nights. The sun is higher in the sky so it is warmer. The south pole is facing away from the Sun so there are short days and long nights there. It is winter.

Winter: Six months after the Northern hemisphere's summer, the earth is on the other side of the sun. The northern hemisphere has short days and long nights. The sun is low and therefore gives less heat. In the southern hemisphere the south pole is facing the sun so the days are long and the nights are short. It is summer in the south.

Spring and Autumn: When the Earth is halfway between summer and winter, neither poles are facing the sun. Day and night is the same length. It is not very warm or cold.

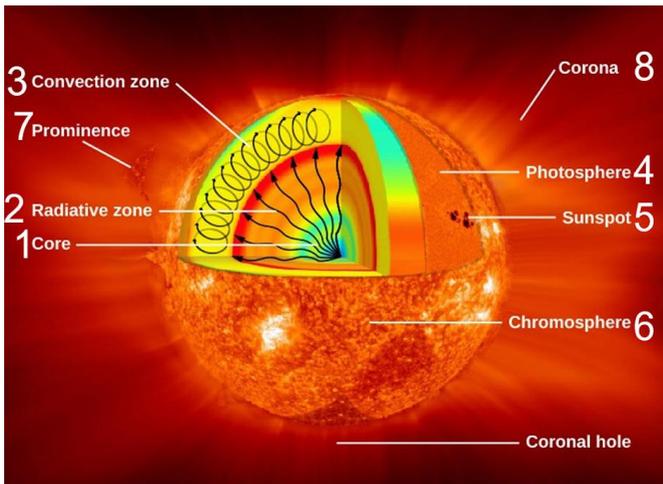
The Moon

The Moon is a huge ball of rock in space which orbits the Earth. The Moon has mountains and flat areas which are called 'seas', however there is no water on the Moon. The Moon's surface is covered in craters. These craters were made by meteorites that crashed into the moon. It

has no light of its own so the only way that we can see the Moon is when light from the Sun falls on it and is reflected back to Earth. The first landing on the Moon was in 1969 by Neil Armstrong and Buzz Aldrin.

The Sun

The sun makes up 99.8% of our solar system - it is very big compared to the rest of the planets. The sun is a star but it looks bigger and brighter than other stars because it is close to us. Light from the other stars takes years to reach us (because they are light years away) whereas the light from the Sun takes only 8.3 minutes to reach the Earth. The Sun is at the centre of our solar system with all the planets in orbit around it. It holds the planets with its powerful gravitational field. The Sun is made up of 75% hydrogen and 25% helium and is a ball of burning gas.



The Sun is made up of different layers:

1. Core: The middle of the sun is the control centre. Here, hydrogen is turned into helium in a continuous explosion. The energy created makes all the heat and light from the sun. The temperature in the core is 13 million degrees celsius.
2. Radioactive Zone: The energy from the core moves into the gas around the core. This is called energy radiation. This happens slowly - some heat can take millions of years to move through this part of the sun.
3. Convective Zone: The hot gas rises up towards the top of the sun. This takes energy with it. When the hot gas reaches the surface of the sun, it loses energy and cools. The gas sinks back down until it is reheated again. This process continues.
4. Photosphere: The photosphere is the Sun's surface and gives out heat and light. The temperature is 5,800C.
5. Sunspot: These are cooler patches in the photosphere with a temperature of 4,000C.
6. Chromosphere: This is a thin layer of gas above the photosphere. It glows red and has tiny flames on this layer.
7. Prominence: These are giant clouds of flames that leave the sun. They can be up to 125,000 miles long.
8. Corona - The corona is the outer layer of the sun. The temperature is around 1 million degrees Celsius.

References:

<https://www.bbc.co.uk/bitesize/clips/zvw8q6f>

Stars and Planets (2007), Dennis Ashton, Igloo

CGP Edexcel International GCSE Physics: Revision Guide (2017), Coordination Group Publications

<https://www.bbc.co.uk/bitesize/guides/zg638mn/revision/1>

<https://www.bbc.co.uk/bitesize/guides/zwv8xfr/revision/1>

Pictures:

<https://courses.lumenlearning.com/suny-astronomy/chapter/the-structure-and-composition-of-the-sun/>

https://en.wikipedia.org/wiki/Solar_System

<https://www.universetoday.com/106062/what-is-the-milky-way-2/>

<http://www.qrg.northwestern.edu/projects/vss/docs/space-environment/1-what-causes-an-orbit.html>

<https://courses.lumenlearning.com/earthscience/chapter/sun-earth-relationship-the-seasons/>

Procrastination

The time killer

Alekhya Jillellamudi

Year 10

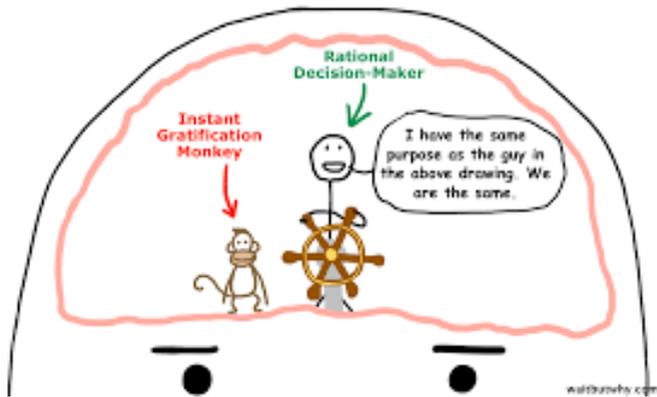
Procrastination. Everyone has been a culprit of this 'terrible deed' but in my opinion it is an art to master. Have you ever sat down to complete an unfinished task then suddenly remembered that you have to tidy your room or walk your dog or go eat lunch even if it's only 11am? Then the next thing you know it's the end of the day and it remains unfinished. There is nothing worse than the feeling of guilt after knowing you have had a month to do the assignment and you start it the night before it is due, but what really is procrastination and why do we do it?

Well, the dictionary definition of procrastination is 'the act of postponing or delaying something' and what this effectively means is that when we have a specific task or goal, we do everything we can to prolong the time to get it done. In modern society the distractions usually involve technology or some sort of media and although some people think they perform better under pressure, in reality that is just their way of putting things off. According to Joseph Ferrari, a professor of psychology at DePaul University, approximately 20% of people are chronic procrastinators as this affects all domains of life but for others, it is only in specific situations.

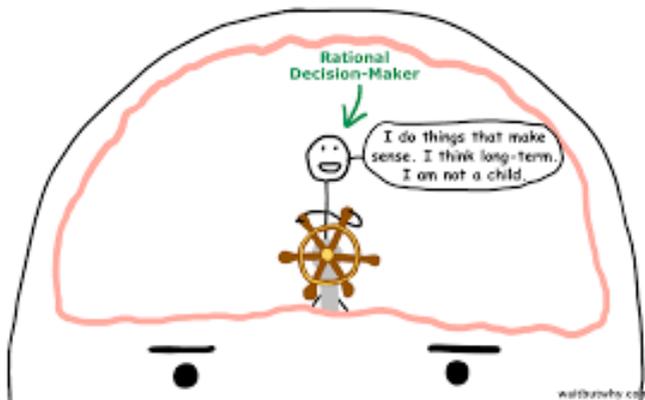
As exaggerated as this sounds there are different types of procrastinators such as: decision procrastinators who struggle making decisions in fear of what the outcome may be, avoiders who distract themselves in fear of failure of what other people think of them, or the people who enjoy the thrill of waiting till the last minute in order to get that ecstatic rush. Sometimes this could lead to health issues such as insomnia and gastrointestinal disturbances which could impact your life. To explain what goes on inside our minds when we procrastinate, psychologists use the terms 'instant gratification monkey', 'rational decision maker' and 'panic monster'. In internet writer Tim Urban's Ted Talk he explains how in every brain there is the rational decision maker but for procrastinators, they also have an instant gratification monkey which takes over the decision maker and prevents you from doing anything productive. That is when we distract ourselves by unnecessarily binge watching netflix or scrolling through the most irrelevant youtube videos just to pass time.

However, as relatable as that sounds, there is always that guilt at the back of our heads knowing that this leisure time isn't well-earned. This is why we also have a panic monster who is dormant most of the time but at the moment of realisation it gets activated and as a human tendency it is normal to panic and get anxious and that is when we decide to be productive.

Procrastinator's Brain:



Non-Procrastinator's Brain:



Everyone has probably asked themselves "Why do I keep procrastinating even though I know that it's bad for me and even though I want to stop?". This is because we

usually rely on self-control or motivation. So why do we procrastinate? Most procrastinators are good at planning and this may be because planning does not actually involve any *doing*. Therefore, when procrastinators plan, they plan vaguely and not in enough detail. As these abstract goals are highly improbable it is unlikely that anything gets accomplished in the end. For many people procrastination is seen as a failure of self-regulation or lack of self control, time management or just simply being lazy but researchers say it may have something to do with the way our brain works and deeper perceptions of self and time. They think that procrastination is linked to negative feelings and forgiving yourself could reduce the guilt procrastinating which is one of the main triggers for procrastinating in the first place and this leads to a gap in what we intend to do and what we actually do in reality.

Psychologists relate our feelings to our perception of our future self. For example, people procrastinate on tasks in the far future which they know they will be rewarded for because this means they have more time and so they wait until the deadline to complete the necessary task. This disconnect between the present and future selves can cause people to procrastinate in a variety of ways. For example, it can cause them to think their present-self shouldn't have to worry about the future, since their future self will be the one who has to handle any tasks that they postpone or deal with any consequences for failing to complete those tasks on time.

Everyone procrastinates on something or another in life but this built in defect doesn't have to always be associated with having a negative connotation. So the

burning question is, how to beat it...Well the most suitable answer to that would be to just do it. The most difficult part is persuading your brain to do it and whilst you do it, surrounded by distractions, perseverance is key to keeping on track. Make plans so you know where to start and keep reminders and alarms to stay focused. Prioritize tasks and identify when you are the most productive and prepare a reward at the end of the task to work towards because by having the satisfaction of completing something and by reinforcing our awareness of the upsides of task completion, we make it easier to get on with the task. So when you are doing the task, visualize your future self and work for the accomplishment. I hope this was relatable and has taught you more about procrastination. Make the most of life as every second counts. To conclude, I advise you to start on your unfinished tasks today. Well not today... but sometime soon...

References:

<https://www.psychologytoday.com/gb/basics/procrastination>

<https://waitbutwhy.com/2013/11/how-to-beat-procrastination.html>

<https://solvingprocrastination.com/why-people-procrastinate/>

https://www.ted.com/talks/tim_urban_inside_the_mind_of_a_master_procrastinator/discussion#t-814190

The Human Mind vs The Artificial Mind
Are Computers More Intelligent than Their Creators?

Nmachi Joel
Year 9

Who's smarter, me or the laptop I typed this on? The answer is extremely complex (if there is one).

Computers can take in and process certain types of information much faster than we can, as well as being able to calculate and solve mathematical problems within a second. As well as this, computers learn things much faster, and have better memories, so they can be fed a large amount of information and can tap into all of it almost instantaneously; however, speed is not intelligence.

As we all know, computers don't require sleep the way humans do (although they probably need to be charged every once in a while). They can calculate, analyse and perform tasks for long, extended periods of time and they have been proven to be better at visual recognition tasks. For example, there is a Chinese internet company called 'Baidu'. Their 'Minwa' supercomputer can sort approximately one million images into a thousand predefined categories with an error rate that is currently less than the average person's. When 'Minwa' was requested to tell the difference between different breeds of dogs, after applying a 'neural network' to recognise the images so that it develops a better understanding of the

properties and features that it was looking for, it had an error rate of just 4.58%. The average human would have an error rate of about 5%. Some software from Microsoft and Google has already reached 4.94% and 4.8%.

Computers do not suffer from some of the limitations that humans do, such as health problems or disabilities, although they can get viruses and can be destroyed by us at any time. In addition to all this, computers can outsmart humans at most games. Take chess, for example. On February 10, 1996, 'Deep Blue' (a chess-playing computer developed by IBM) beat Garry Kasparov (a chess world champion) with a score of 3.5 (Deep Blue) to 2.5 (Kasparov), the first time a computer had ever defeated a human in a formal chess game, and the first computer to defeat a world champion at chess in a six-game match.

On the other hand, as long as we are able to control the computers, humans are still superior to computers in many ways. We perform tasks, make decisions and solve problems based not just on our intelligence but on other natural things we are given such as common sense, instincts and most importantly, our life experiences (which computers could never have). Computers can be programmed with vast libraries of information, but they can't experience life the way we do, mostly because of birth, family, actually living, our 5 senses, past experiences, dreams and aspirations, imagination and our emotions. Computers have no (real) emotion; therefore, we are more emotionally intelligent. Computers can be taught to mimic emotions, but they will never truly 'feel' anything. They may be able to

determine an emotion, but they will never understand what experiencing an emotion means.

Humans possess quite a lot of inimitable, unique traits. For example: creativity, imagination and the ability to gain inspiration from others. We can write songs, compose pieces, write poems and stories, create paintings or even invent something new (which first exists in someone's imagination). Computers can be programmed to replicate some of those tasks, but we should remember that it was a human who programmed them in the first place.

There is a quote by Lance Whitney that says "The important thing to keep in mind is that it is not man versus machine. It is not a competition. It is a collaboration."

Both computers and humans have unique traits which the other may never be able to acquire, whether positive or negative. To truly answer the question, we must first define intelligence and then compare the different types of intelligence that humans and computers have, to see what (or who) outweighs the other. It would take a while, but it is possible. Of course, computers are constantly evolving (because humans keep improving them) and humans are constantly changing. As well as this, there is the fact that everyone is different, so finding a definite answer is very difficult, as it may not apply to every human being, and the answer may even change from time to time. For now, there may be no definite answer as there are so many different types of intelligence, and we could ask the question: 'Since humans invented

computers, does that automatically make us more intelligent?’ Hmm... Perhaps computers will be smart enough to tell us one day.

References:

Are Computers already Smarter than Humans? (2017)
Lance Whitney <https://time.com/4960778/computers-smarter-than-humans/> [accessed 28.01.2020]

What Deep Blue tells us about AI (2017), Steven Levy
<https://www.wired.com/2017/05/what-deep-blue-tells-us-about-ai-in-2017> [accessed 28.01.2020]

Computers Are Great at Chess, But That Doesn't Mean the Game Is 'Solved' (2017), Kat Eschner
<https://www.smithsonianmag.com/smart-news/what-first-man-lose-computer-said-about-chess-21st-century-180962046/> [accessed 28.01.2020]

Computers now better than humans at recognising and sorting images (2015), Alex Hern
<https://www.theguardian.com/global/2015/may/13/baidu-minwa-supercomputer-better-than-humans-recognising-images> [accessed 28.01.2020]

The mass extinction we are knowingly causing

We have to end climate change

Maansi Kalirai

Year 10

We are all aware of the imminent threat of climate change. We are all aware that our earth is heating up at an alarmingly astronomical rate this second. And yet I still question it everyday, how aware we are? I would like to trust the human race. I would like to trust they know that Global Warming is an existential threat. Nonetheless, I still prefer to believe they are oblivious to this basic science. It is far easier for me to believe that potential lie than it is for me to believe the probable truth. The fact that people in power know the situation yet nevertheless still allow the future generation to suffer at their corrupt and barbaric hands. This is wrong and we have to change.

I once asked someone their opinion about the climate of this earth and they replied the lack of change was a disgrace. Ten minutes later they got in their car for a five-minute drive. I couldn't understand it. You would assume that tackling this dilemma would be the only thing on people's minds. I'd assume that it would be the obstacle discussed most predominantly in parliament. But still I turn on the TV and to my dismay I see that the green party won an underwhelming total of one seat in the most recent election. Was this the correct decision? Is the current economy more important than the rapid

increase of temperature within our own planet's atmosphere? We have to change.

The Paris agreement of 2016 states that it is VITAL for the United Kingdom to reduce emissions by 80% in 2050 if we want to ensure a safe global future. If it were not for the Corona Virus I regretfully would have had to have said we were not heading towards our goal. 40% of all emissions in the UK comes from individuals, it comes from you and I. I'm here to tell you, we are accountable for global warming. Being human, we deflect blame onto victims in order to narcissistically abolish any guilt we feel. Political leaders of economically secure countries claim they will only change their unbelievably selfish actions after other countries do so. How can we expect nations undergoing starvation, like India and Nigeria, to care about the climate crisis when we (who have everything) do not seem to care about it for a second? We have to change.

Part of the reason why everyone is so nonchalant regarding climate change is because it is exceptionally easy to ignore the effects. But it shouldn't be. The signs are everywhere, and they're catching up with us. There are flooded cities with tens of thousands dead. There are abnormally substantial heat waves. Perhaps the reason why no one knows the imminent threat we face is because we seldom see restrictions being put in place. No one is acting appropriately, no one is acting as if we are in the midst of a crisis. Where are the articles? And emergency meetings? We need to end the unspoken taboo on climate change. We have to change.

I go to school everyday. But I don't go to become a scientist in order to one day "solve the climate crisis." I go to school in an attempt to educate you. I go to school so that I can tell you the climate crisis has already been solved. I go to school to enlighten the oblivious and inform them that we have a solution, but they're not listening. The solution is to stop. Stop using fossil fuels for trivial reasons, stop purchasing clothes that will just get deposited at a landfill. What we are doing right now doesn't work. We need action. Ninety million barrels of oil are used every single day and no one is taking action. No one is trying to change that evident issue. No one is making rules about keeping that toxic oil in the ground. So we can't save the world by playing by the rules, because the rules need to change. Everything needs to change. We need to change.

I am only a child, yet I know that in thirty years my grandchildren will ask me why no one took action while they could. I am only a child, yet I know that in forty years parents will no longer be able to tell their children "everything will be alright." I am only a child, yet I know that in fifty years no one will be damaging our earth, because there will be nothing left to damage. I am only a child, yet I know that we need to change, and we need to change now.

References:

https://en.wikipedia.org/wiki/List_of_countries_by_oil_consumption

<https://www.curbed.com/2017/6/7/15749900/how-to-stop-climate-change-actions>

<https://www.youtube.com/watch?v=KAJsdgTPJpU>

https://en.wikipedia.org/wiki/Paris_Agreement

https://en.wikipedia.org/wiki/Climate_change_in_the_United_Kingdom

<https://www.youtube.com/watch?v=oJjGuIZVfLM>

Is Anger The Ignition of A Spark For Change?

How anger can burn a fire of confidence within us

Mariam Kanji

Year 10

Anger. An emotion we all experience. An emotion we all deal with. But how? Is it wasted and buried in the sand and then washed away at our convenience, or do we use it to help us? Do we regard it as a point of weakness of an individual, or do we use it to ignite and replenish a fire of confidence and passion within us?

As I sat there, listening to various speeches from the Inspiring Change Makers online summit, my mind wandered off as I tried ever so hard to focus on what I was being told but I kept returning to thinking about what food I was going to have to break my fast. There were a lot of inspiring talks but some in particular with a long lasting impact, ones with lessons that will benefit me for a long time. In particular, there is one that has a message which has been etched in my heart. One which I will never forget, and I never want to either.

I can be irritable sometimes, and I can have a 'short temper' as they say, but I have never really known what to do with anger. I have been told to just 'walk away' when I get annoyed, but what does that do to help a situation? Everything negative can surely be put to good use, like sadness and loss for example, which provide a balance and we learn to appreciate all the happiness and abundance of things we are blessed with. So what about

anger? But then, I'm too irrelevant for that, I have had no experience of life, it takes effort to utilise such a powerful emotion that can overcome you. That is for people who are older and have experience, so I might as well just brush it under the carpet, and, 'walk away' I guess.

I listened to Vix Jensen, a lady who suffers from Cerebral Palsy, and is currently a disability activist. Anger can be productive, she said, if you have a rage which gets something done. Anger can be turned from something you do nothing with, to something which spurs action, because "anger plus confidence equals change." The rest of the day, I thought, and reflected on this. What can I do? It's easy for people to say, but I'm young and I am not sure what I even want the future to hold for me. To be a lawyer, an engineer, a teacher- you name it I'd thought of it, so how was an unsure, young person like me supposed to learn how to control and utilise something so dominant within oneself?

Maybe I should have a 'growth mindset' and then things would start to make sense, and it clicked, I reached a realisation. I have hope and there are people like me who use anger to burn the flame of passion within them to spark change, just like Greta Thunberg, a seventeen-year-old climate change activist, who strives to instil a realisation of what we are doing to our planet within the people who are oblivious to it. Beneath everything, within her, burns a flame of passion, because of the anger she once felt and dealt with. When Greta was eight, she began learning about climate change in school, and she was shown pictures of plastic in the oceans, starving polar bears and extreme weather

events and she mentions that 'they were stuck in my head, I couldn't stop thinking about them.' Then, when she was eleven years old, she became depressed. She lost ten kilograms in two months, and was later on diagnosed with Asperger's Syndrome, OCD, and selective mutism, so she only speaks when necessary, like now. But what did she do, she utilised the strong feelings she felt, the anger, to her advantage to spark change.

Greta mentioned that what got her out of depression was thinking to herself, 'there is so much I can do.' She acknowledged the anger she felt, and was in control of the way it made her feel, so she used it to lead her. She took some signs and sat outside the Swedish parliament, when some media started to write about what she was doing. The next day, she sat down to see that people had already started joining her, and since then she has never been alone. From then on, the flame has constantly been replenished because of her rage, and the way she speaks shows her passion and confidence and it almost feels like I can feel and sense her passion by just reading her words. Her anger leads her to be persistent, similar to how we were taught to 'bounce back' in junior school, which just shows how anger should not be seen as one's weakness as it initiates all of these good qualities within us. She claims she doesn't do this 'because it's easy, but because it is hard... and refuses to be silenced about our future'. She was told by people that she should 'go back to school. Run along. There's nothing to see here.' But again she did not scream and let her anger get out of control but she also did not 'brush the feeling under the carpet.' She used it to

restore her flame and acknowledge her feelings so she could use them to make a change. Her anger also burns as confidence and she isn't afraid to voice her opinion or let people know exactly what she believes in and why she does what she does. She warns people by telling them that what 'we do or don't do right now will affect my entire life and the lives of my children and grandchildren....and my generation can't undo this in the future.'

My point is not to tell you to go and fight about things you strongly believe in or that you should use your anger to let you build confidence to argue with others but to realise that we should constantly strive to feel awareness of our emotions and how we feel, because not only anger, but all emotions can be used to our advantage, and as a result we can reflect off so many good qualities that will help us to get somewhere. Our emotions are extremely powerful and we should utilise them and not waste them. Had Greta Thunberg not made use of her rage we would probably be oblivious to quite a bit of how climate change impacts us and initiatives to tackle it would definitely be of less prominence. She has inspired us all to find out more because of her fury and dedication to the topic. This leads me on to the fact that I also believe that we shouldn't feel insignificant or have a lack of willingness to change because every single person, be it on an international scale like Greta or only within a school, if you are middle aged or a teenager, everyone has the potential to make a difference. You can inspire friends, family and people who listen to you talk in assembly

which can make a difference. As they say, 'small changes eventually add up to huge results.'

I have and I will continue to try to be aware and in control of my emotions, to help me as a person, as well as trying to inspire others by showing passion and confidence and I hope I have inspired you to do so too. I would like to end with this idea, 'everyone makes a difference, and the choice is to make a positive or negative one.' Will you try to have awareness of the way you feel to inspire others by the qualities you will radiate as a result, (like Greta displaying passion) or will you remain unaware, letting them control you or ignore them, which will make no difference? A lack of control of emotions can lead to a lack of control of actions, a negative impact.

References:

Inspiring Change Makers workshop (2020), GDST

Make the world Greta again (2019) Vix Jensen,

<https://www.youtube.com/watch?v=oCVQdr9QFwY&vl=en>

School strike for climate - save the world by changing the rules (2018), Greta Thunberg, TedTalk:

https://www.ted.com/talks/greta_thunberg_school_strike_for_climate_save_the_world_by_changing_the_rules?language=en

Geography

Why Geography inspires me

Annika Khanna

Year 7

Geography is a very inspiring and meaningful subject where you are able to understand important aspects which have formed our world today. These include the structures and dividing lines of countries, past history, ethical issues and religion. Through geography we can also develop skills to gain an understanding of the world of any international matters, multicultural matters to environmental concerns. Knowing the importance of geography gives us an awareness of how to interact and better utilise our global society, as well as how to respect those with whom we share the planet with. Exploring our planet's geography led to the discovery of our beautiful global world, its diversity and its amazing resources.

Physical and Human Geography

Geography is split up into two main areas of our environment: Physical Geography looking at the nature of Earth such as climate and Human Geography appearing at the behaviour of people impacting the physical environment. There are many human and physical processes affecting our planet. Physical Geography affects human life, determining people's lifestyles adapted with available food sources and climate patterns. However, Human Geography can also alter the physical landscape from environmental issues

and changes corresponding to cultural customs. Overall, understanding the Physical Geography of Earth affects the distribution of resources and the condition of human settlement is important for us and so is knowing Human Geography. This is where humans examine world societies, how they develop or adapt in a certain area and communicate thoughts through various skills.

Regional Geography

I am certain many of us have visited exciting countries around the world and formed some sort of interconnection either physically, emotionally or digitally. A benefit of visiting a region is that you can notice specific unique characteristics of places in relation to things like culture, economy or even environmental factors such as flora and fauna. You can also be influenced by places or think about what is influencing people living in different places positively or negatively. Among the branches of regional geography, you are able to observe the beauty of nature and the way of describing spatial areas.

Cultural Geography

Cultural Geography teaches us generally about people from a global perspective and how others live in places according to their custom or religious belief. These involve things like language, religion, music, art, architectural style, traditions and other cultural features explaining how and why people function in the areas they live in and building awareness for cultural diversity. As a matter of fact, Cultural Geography is a subfield of

Human Geography as interactions with the human culture is related to the natural environment and its organisation of space. This shows that the physical landscape of a region is arranged from human activities according to their culture. Moreover, human societies change over time and introduce new ideas brought from people in other cultures.

Our World Today in Geography

Our world today has benefited and suffered from advancements and exploration of the globe, we now have tall skyscrapers, more pollution, useful technology and electrical devices. Today global citizens have harmed our environment like wasting food, throwing rubbish on the ground causing littering and plastic in the marine environment beginning plastic pollution. However, Geography allows us to understand why it is important to be global citizens and take an interest in our world. This is why we have seen the rise of groups like extinction rebellion who are encouraging environmental awareness and responsibility. Geography is a fascinating discipline combining comprehension to assist scientists and researchers to understand the planet better as well as allowing humanity to understand each other better too.

References:

<https://www.thoughtco.com/why-study-geography-1435605>

<https://www.learningplunge.org/2017/09/07/why-is-geography-important/>

Six the musical

My review

Samantha Lack

Year 8

Six the musical is about Henry VIII wives, their life before they met him and how they met him.



Each wife had their own song about their life, giving their side of the story and occasionally the other wives would interrupt with a word or two. The performance was very uplifting, the singers were amazing because they put themselves in the shoes of that wife and never broke character. Their performances allowed you to picture what happened then and how they all must have felt but they also made you laugh when they started fighting about who was the best wife. In the end they decided they were all great and all hated Henry.

When you learn about Henry VIII in history you only know his story and you only learn the rhyme about them. However, in the musical SIX it's about them telling their side of the story and they explain what it was like to be married to him.

There wasn't a huge set involved which made it better because you didn't get distracted by it and your attention was always drawn to the performers. For example at the start



they drew you in and caught your attention by making their voices echo through the room whilst it was dark and then all of a sudden lights began flashing and they started singing. When the performers started singing at the beginning they explained what they wanted to talk about and then we had to decide who was the best wife. My favourite part was near the end when they were fighting on stage trying to decide who was the best but in the end they came to the conclusion that they were all the best and that Henry VIII was the worst husband.

Discrimination: Is it positive?

Should student ethnicity be a consideration for college acceptance?

Ameeya Lad

Year 10

The drive for a change in direction seems inevitable as advocates from both sides continue to raise the issue. The issue has evolved over the years and perspectives have changed multiple times.

One of the best tools that universities and colleges have to promote themselves is diversity and to ensure that those who are shut out have the chance to earn a quality degree. Not only does it benefit universities and colleges, it also benefits the students. Having different races enhances the educational experiences of students with all different backgrounds. The Century Foundation has said having racially integrated classrooms improves self-confidence of students, enhances leadership skills and helps to reduce students' racial bias. As a result of these benefits, it prepares students to work in a diverse global economy and increase the effectiveness and creativity of teams. Many institutions have made a big priority and effort on integration and diversity of schools in recent decades. Numerous people have benefitted from these efforts. This demonstrates that methodical efforts to prioritize diversity in colleges and universities has enhanced the educational experiences, while increasing the economic outcomes of all students. Some critics are worried that universities could pass up

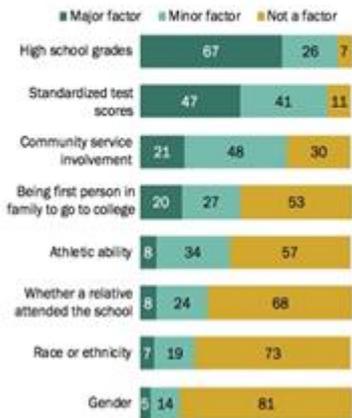
the more talented students for the sake of achieving a target regarding themselves with race.

However, as much as race and diversity in schools is important, income is also considered as a part of the applicants' evaluation. The wealth of a family helps them to move to better school areas and provide a better education for their children. Yet decades of structural inequality have created much more resources for white households than households of colour, even after income regulation. In the United States of America, students of colour that have wealthy parents or attend the same schools as white students are unlikely to be mentioned as students who are 'gifted and talented'. Some of these experiences can change the behaviour of students and that can lead to limiting their educational experiences and can affect their future life. Race-conscious admissions aim to overcome these factors by urging colleges to take a deeper look at some of the factors that might consider an applicant successful; these are factors that are sometimes ignored in practical requirements. Most universities are particularly concerned with achieving a high graduation rate. Over the years, there have been many changes made to the college admissions processes. For example, in California and Michigan in America, they have prohibited how race and ethnicity affects the decisions at public colleges. However, in private colleges and universities they are not allowed to discriminate, but compared to other schools ethnicity is sometimes viewed more closely when considering each application due to the difference in size. On the other hand, some schools use other methods to encourage candidates who

are more culturally diverse. Furthermore, admissions counsellors also try to consider certain factors beyond test scores. When colleges looked at numbers alone, students from higher income areas may have an advantage as a result of their previous school life. By not only considering numbers, more of the student's background can be brought up and known about. American colleges gave out a poll to students to get their opinion on what colleges and universities should be looking for when they are considering applications.

Grades, test scores top list of factors Americans say should be considered in college admissions

% saying each of the following should be a ___ in college admissions decisions



As we can see, the major factor that students think colleges should be considering are school grades. While 67% highly agree that grades should be the main consideration for college acceptance, 7% believe that school grades shouldn't be a factor. For a vast majority of all Americans, racial distinctions and expectations are highly controversial. 73%

opposed racial consideration, while just 7% of people believe that it is a major factor. More spread out considerations are community service involvement and being the first person in the family to go to college. As we know, there are mixed opinions about college considerations but we learn that the major factors

colleges and universities take into account are school grades and test scores.

Madison Trice, a current student at Harvard, described how discrimination had influenced and affected her earlier experiences in education. Trice begins by explaining how she wasn't recognised for being a very high academic student. Her parents wondered why she wasn't in the 'gifted' class because she was doing so well. "The teacher said that I needed to have ten 100s on tests to be able to enter the class." Soon later, her parents showed the teacher that she had scored more than ten 100s on past tests. She was able to join the class but she was "the only black student in the gifted class there". Trice also says that she does not recall knowing a policy that you had to have ten 100s in order to get into the 'gifted' class. While growing up Trice experienced stereotypes and assumptions made about her family. Most of her friends from when she was younger came from different racial backgrounds. "Often their parents wouldn't want them to come to my house or interact with my family because they assumed that we came from a very low background, or in some ways we were going to be a bad influence on their children." This was very tough for Trice because she was judged by many for her racial background. In her later years she attended a college in Houston, Texas. In the college she attended, "It was about 70 percent white, 20 percent Asian-American, and maybe somewhere between 7 and 8 percent black, like 1 percent Latino and maybe 2 percent of mixed race." She states that most of the classes were primarily white. It was likely that in the higher classes she was in, she was one of the only black

students in the room. “It was difficult. It was pretty isolating at times.” Trice also goes on to say that when she was writing her application she stated her race and if she didn’t she felt it would have affected her ability to present herself. “I think that the way that I was bullied was kind of inextricable from my race.”

We don’t know if race will continue to be a factor for college acceptance and unsure when it will end. There are still split opinions: some say affirmative action has done its job and we shouldn’t be biased on race however some continue to disagree and argue that it is still needed to suit the needs of today’s society.

References:

<https://money.howstuffworks.com/personal-finance/college-planning/admissions/race-college-admissions2.htm>

<https://www.insidehighered.com/admissions/article/2019/03/04/survey-finds-most-americans-say-colleges-shouldnt-consider-race>

<https://www.washingtonpost.com/education/2018/10/30/course-race-should-matter-college-admissions-explained-by-students-color-harvard-trial/>

Anne Frank

Why she is an inspiration for us all

Charlotte Landsbert

Year 8

Last October, I was privileged enough to get the chance to visit Anne Frank House, in Amsterdam. I can remember how my father stayed up half of the night just to get the tickets, how excited I was when I heard that we would be going, how impatiently I waited in the queue outside, longing to go in.

I must have been seven or eight years old when I first discovered Anne Frank. I was given a children's book about ten of the most important female role models in history, informing me all about them, such as Frida Khalo, who was a famous painter, and Emmeline Pankhurst, who was the leader of the suffragette movement. Another role model in that book was Anne Frank, and I have been intrigued by her story ever since. How she and many other Jews like her were thoroughly mistreated during the war, how she and seven other people spent over two years, undiscovered, hiding from the Nazis, and how she kept a diary the whole time.





Five years later, I am experiencing the conditions that she and her family dealt with during the war for myself at Anne Frank House, and how brave Anne was, right until her death. It still amazes me how someone, who was the same age as I am now, coped with staying

confined in the same building, not being able to go outside, not being able to speak with her friends for two whole years. I am sure that I wouldn't have been able to cope as well as Anne did at all.

Anne Frank's Story

Annelies (also spelt 'Anneliese') Marie Frank was born on 12 June 1929 in Frankfurt, Germany. She was the second and youngest daughter of Otto Frank and Edith Holländer-Frank, and she had an elder sister, Margot, who was three years older. The Frank family were Jewish, along with many other German citizens at that time.



When Adolf Hitler's National Socialist Party won the federal election in 1933, and when Otto Frank found a job in Amsterdam, the family decided to move there, just as many other Jewish-Germans had done so. Anne was only four years old at the time. She and Margot were enrolled in a new school and they had to learn to speak Dutch, but they settled in quickly.

All was well until the Netherlands became occupied by Nazi Germany in 1940, and Hitler's anti-semitic policies came into place. Anne was now very restricted in terms of what she could do and where she could go. She and Margot had to leave their school and go to a Jewish Lyceum instead. Eventually, when



Anne was thirteen, the Frank family decided to go into hiding in order to escape being persecuted. They made plans to hide in the annexe of Otto Frank's office building with the Van Pels family (called the Van Daans in Anne's diary).

The secret annexe consisted of two floors and an attic. On the first floor, there was a bathroom shared by everybody, a room that served as Mr and Mrs Frank's bedroom, and another, smaller room that was Anne and Margot's bedroom. (When Fritz Pfeffer - called 'Albert Dussel' in Anne's diary - came into hiding with the

Franks and the Van Pels, Margot went into her parents' room, whilst Anne shared with Pfeffer.) On the second floor, there was a communal living space and kitchen, which was also the bedroom of Hermann and Auguste Van Pels. There was also another bedroom for the Van Pels' son, Peter. There was nothing in the attic as it was cold and damp, and not deemed fit for living in.

The eight inhabitants of the secret annexe stayed hidden there for over two years. During this time, they couldn't make any noise during the day; they were not allowed to go to the toilet during the day unless it was absolutely necessary; they couldn't contact anyone they knew; they couldn't leave the building; they couldn't look out of the window in fear of being seen. It is almost impossible to understand how they all coped.

Life in confinement continued until 4th August 1944, when a car pulled up outside the entrance to Otto Frank's office building. Out of that car came an SS sergeant, named Karl Josef Silberbauer, and a few members of the Dutch security police. They went straight to the annexe and arrested all eight people hiding there, as well as two of the helpers: Victor Kugler and Johannes Kleiman. These two helpers were held in a prison in Amsterdam for about a month, before being transferred to a camp in Amersfoort, Holland. Kleiman was released a week later due to his poor health, whilst Kugler managed to escape imprisonment six months later.

It is not known exactly what prompted the search of the building. A strong theory is that they were betrayed by

someone who knew about the secret annexe, although this is not proven. The captured people from the annexe were sent to Westerbork transit camp, where they stayed for a month, until all eight of them were deported to Auschwitz-Birkenau concentration camp. As soon as they arrived, the men and women were separated. Anne would never see her father again, just as Auguste Van Pels wouldn't see her family again either.

The conditions at Auschwitz were appalling. There was very little to eat, and diseases spread quickly. Both Margot and Anne became ill, and their mother would smuggle extra food into the infirmary for them. In October 1944, after a few months in Auschwitz, there was a selection to decide who would leave the camp. Anne, Margot and Auguste Van Pels were selected to go to Bergen-Belsen concentration camp, but Edith Frank was not. She would never see either of her daughters again.



In the Winter of 1944-5, a typhus epidemic broke out at Bergen-Belsen. Margot and Anne were two of the thousands that caught it. They grew weaker and weaker as the days went by, and although an old school friend of Anne was passing food packages over the fence for them, it still wasn't enough. Margot died of the illness in February, as did Anne a few days later. The exact dates of their deaths remain unknown.

Edith Frank would remain in Auschwitz, eventually dying of starvation. Hermann Van Pels was sent to the gas chambers following a selection in October 1944 at Auschwitz, where he was gassed to death. Auguste Van Pels was taken to and from various concentration camps. It is unknown precisely when she died, but it is thought she died on the transport to one of the camps. Her son, Peter Van Pels was taken to Mauthausen satellite camp, where the hard labour proved to be too much. He died in May 1945. Fritz Pfeffer died in December 1944 in Neuengamme concentration camp.

Otto Frank was the only person from the secret annexe who survived the war. He subsequently married a fellow Auschwitz survivor, moved to Switzerland and dedicated the rest of his life to promoting his daughter's diary. He died on 19 August 1980.

Anne's Diary

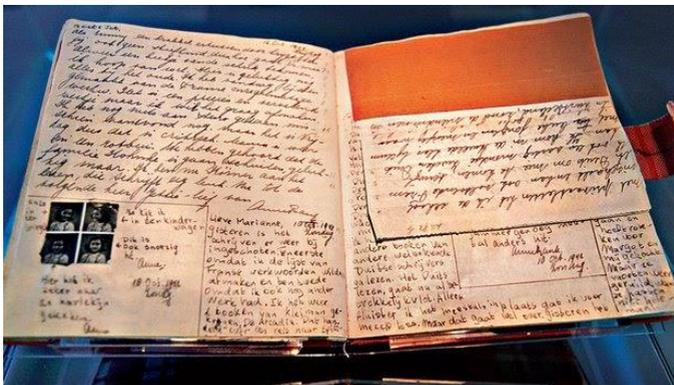
On her 13th birthday, 12 June 1942, Anne was given a diary. This diary was red and white checked, with a buckle at the front. Anne had picked it out herself, and had loved it from the start. On her birthday, she wrote:

'I hope I will be able to confide everything to you, as I have never been able to confide in anyone, and I hope you will be a great source of comfort and support.'

This statement proved to be true, as Anne wrote everything in her diary for two years, right until she and

her family were found by the Nazis. Anne wrote about all of her experiences in her diary, about how it felt to be the youngest person in hiding, how no-one ever listened to her, about all of the restrictions she had to cope with, how she didn't get on too well with her mother, how she missed her friends, and what she thought of everyone in the annexe.

She communicated most of these things through her letters to an imaginary friend called Kitty. Of course, Anne couldn't write to any of her real friends whilst she was in hiding, but Kitty served as the friend Anne could write to, and she became Anne's best friend while she was in hiding. Kitty knew all of Anne's secrets and fears, all of her hopes and dreams.



Anne's diary ended when her family was discovered and arrested. After the annexe was searched and removed of all of its valuables, Anne's diaries and notes were found all over the floor by Miep Gies, one of the helpers. She took the diaries and stored them away,

with the hope of returning them to Anne after the war. Of course, Anne never came home. But her father did, and when Miep learnt of Anne's death, she handed her diary to Otto Frank. He was amazed by what he read, discovering how little he actually knew his daughter. He discovered that it was Anne's ambition to become a journalist or a writer, and that she wanted to publish a book called, 'The Secret Annexe'. Otto carried out his daughter's wish and published her diary. He spent the rest of his life sharing his daughter's message of courage all across the world.

Since the diary was first published, there have been at least 3 editions, over 35 million copies sold, and the diary has been translated into over 60 languages.

Anne's legacy

On 4 April 1944, Anne wrote in her diary:

'I want to go on living even after my death!'

And she certainly did. Her diary is known globally as one of the best books of all time. Anne decided that she was going to publish her diary after the war when she heard a radio broadcast asking the Dutch people to send in various different accounts of their experiences and how they had suffered during the war. She edited it, removed passages and added more from memory, all while she was keeping up with her original diary entries. Ultimately, it was her commitment and dedication to her diary, which after her death, was

brought to the world by her father, that gives us an insight into her life and gives us all hope.

Anne has inspired millions of people, myself included. I think what people find particularly inspiring about her is how she managed to remain courageous, strong, and happy in some of the most challenging times our world has ever seen. She remained true to who she was whilst everyone around her was changing. She was not afraid to speak her mind in a time where people were silenced. She was her own person, and there was nothing anyone could say or do to change that.



As I look back on my visit to Anne Frank House, and the conditions that Anne and the other inhabitants of the secret annexe lived in, I realise how lucky we all are today. How we can go outside to play and no-one would say anything. How we can talk to our friends whenever we want. How we can do whatever we want at home. We are all so fortunate to live in this day and age, and to have had the amazing role-models such as Anne who have come before us, to prove to us that if a thirteen-year-old girl can cope and remain strong in the troubling times of war, then we can remain strong, no matter what life throws our way.

Her father, Otto Frank, lived with her legacy and shortly before his death wrote:

"...the task Anne set before me keeps giving me new strength - to struggle for reconciliation and for human rights the word over."

References:

The Diary of a Young Girl (2007), Anne Frank, Penguin

Anne Frank's Tales from the Secret Annex: Including Her Unfinished Novel Cady's Life Mass Market (2003) Anne Frank, Bantam USA

Anne Frank - Dreaming, Thinking, Writing (2016), Anne Frank House

Structuralisation of Race in Postmodern America

Is race a social construct? Using Giddens's structuralisation theory to understand the postmodern paradigm of racial relations in America.

Roxanne Lawson

Year 9

Racial relations during postmodern America were extremely flawed, the segregation between the white and black communities caused tension amongst the entire country. The black community was marginalised and categorized by the unfair judgement and prejudice notions of the white community who maintained privilege and dominance. Racism, many believe, is based on biased judgements based on the pigmentation of one's skin but in reality race is a social construction. Ideas which were historically built now form the body and term known as racism. It was created to be viewed as the conventional mannerism in postmodern America. So much so that the black community accepted the role of the "other" and this caused the previously disguised tension to be extremely apparent which resulted in violence and certain buildings and areas having restrictions against other racial communities. This social construct was therefore detrimental to the lives of many people and thus has shaped the way society has progressed in terms of acceptance of race and diversity.

Race was an extremely crucial factor in life in postmodern America. It had the power to dictate one's profession, income, position in society and

opportunities. This biased idea led to many talents being unnoticed and dismissed because of people's racial categorisation. The white community had a certain set of privileges upon birth because of their race therefore did not even have to work very hard for opportunities and wealth to present itself. On the other hand the black community were at a disadvantage upon birth as they would not have access to wealth nor job opportunities unlike the white community. Instead, the black community were slandered by racist slurs which became natural instinct over time. Again the black community almost had to accept this circumstance to get by in life as allowing these slurs to repeatedly affect them and their mental state would only make life harder. Acceptance of this racist prejudice almost became expected and this acceptance of the role of being in the unjust position is one aspect of what made racism a social construction. The conventional "norms" became embraced between both communities as the idea of change was not really thought of as an option. The emergence of power that the white community had achieved in that time frame allowed them to take all charge and initiative over all other groups.

The white community had a significance in the social, economic and political aspects as they were equipped to excel in all three areas all based on their race. Many sociological theorists and modern society discuss the black community as the "other" because of how they were isolated and discriminated against but not many sociological theories examine the idea that the white community were in fact in the position of the "other". Due to the given treatment and privileges that are open

to the white community many disregard how this certain attitude towards the black community also isolates them as a social group. Despite having power in all three mentioned aspects prior their expectations are also very much fixed. There is no freedom within the white community to disagree or obstruct the ideas of the community as a social body. Anyone born into the white community was straight away expected to abide by the societal standards and attitudes towards other communities.

Many sociological studies have separated and defined the two types of racism which occur and occurred in postmodern America. These categorisations are 'racism by intent' and 'racism by consequence'. Racism by intent was manifested by a specific type of hatred in the form of racial prejudice and discrimination. This type of racism isolates individuals and is presented through personal attacks and projected hatred onto members of non-white communities. The barebones of the term racism translates in the definition of 'prejudice, discrimination, or antagonism directed against someone of a different race based on the belief that one's own race is superior.' Despite many having these attitudes and reflecting them as racism by intent, racism became a social and cultural phenomenon that could not be ignored by anyone because of racism by consequence.

The conception of racism as a social construction stems from the dynamics of racism by intent. Racism by consequence operates on the macro level of society and reflects the historical evolution of racism and society. It therefore is founded on customs and traditions of

racism. This type of racism occurs because of the actions of others which then pressures other people of the community to act the same way, even if they don't have their own hatred towards other communities as mentioned before. Racism by intent is personalised but racism by consequence follows social practices that have over time been depersonalised because of institutionalisation. This is now known as institutionalised racism. Racism by consequence is what socially segregated non-white communities endured and this is presented through the lack opportunities in different social aspects such as; different educational chances, difference in economic stability, difference in the quality of housing and their residential area and less accessible health care.

Giddens' (1984) structuration examines the development of social construction. 'Structuration refers to the process of constructing, ordering and routinizing of social relations across time and space, in virtue of the duality of structure' (Giddens, 1984, p374). He therefore believed that people who were products of social constructs should also be held responsible for producing it at the same time. This meant that across a gradual period of time routines became more and more practiced and perfected in terms of racial interaction. This social development then resulted in the geographical divide between the white and black communities. The duality in Giddens theory presents the knock off-effect, as people in daily life repeat and reflect the actions which coincide with societal expectations and in doing so, they recreate the actions of this structure which means they are impacting and

reshaping the rules of the structure. "Thus individual action, interaction, and social structure are all implicated in one another." (Turner, 1991 p521)

Structural principles are "factors involved in the overall institutional alignment of a society or type of society." Giddens (1984 p376) Thus in application of this theory to racism in postmodern American society all aligned to the discriminatory prejudice and separation of the races and stuck to the rules and expectations from different communities at that time. This social hierarchy was practiced and rehearsed therefore became tradition and as this carried on for an extended period of time, the civil rights movement shook up the routine of people in America thus creating a lot of controversy. It asked people to change their attitudes and institutionalised patterns of behaviour to move forward and repair the extremely strained relationship between the white and black communities. If action was taken earlier there may have been less controversy because over time attitudes and routines became perfected because of the amount they were rehearsed.

Racism did not benefit either community. The black community was segregated and had to experience many injustices both socially and physically. On the other hand, the white community despite being in the superior position were filled with hatred and toxic views which only worsened them as people as being consistently rude to a social group with no reason does not achieve fulfilment. The Civil Rights Movement (1954 - 1968) was the foundation for change in America. Activists such as Martin Luther King Jr, Malcolm X and

Rosa Parks all made a stand to defeat racial injustice and the boundaries given to certain social groups. The structuralisation of racism was forced to change as finally people questioned their motions and realised their constant repetition of rules and sticking to standards were no longer going to be acceptable.

References:

The Social Construction of Whiteness: Racism by Intent, Racism by Consequence (2006) Teresa J. Guess, University of Missouri

The constitution of society: Outline of the theory of structuration (1984), Anthony Giddens, Cambridge: Polity Press

Social Influence (1991) John C. Turner, Brooks/Cole Publishing Company

Adoption

Should you adopt a child of a different ethnicity?

Tanya Mehta

Year 10

Many children all over the world do not have families to call home. So, adoption is thought of as a loving thing to do. Giving a child a place, they can call home and giving them a mother and/or father figure, is something that is likely to bring comfort and stability to a child's life. There are varying opinions on whether or not you should adopt a child of a different ethnicity.

Like any other adoption, adopting a child of a different ethnicity can be long and sometimes challenging but overall giving the child a caring home is all that matters in the end. Many people believe that adopting a child of a different ethnic background does not make a huge difference, they believe that just reaching out to a child who is in need of a stable home is all that a child needs to feel loved. People may feel connected to different cultures and backgrounds from personal experiences, which leads to them adopting a child of a different ethnicity or culture to themselves. I believe, if a child is placed with an affectionate family that can satisfy their emotional, physical, mental and cultural needs, adopting a child of a different ethnicity can be considered.

Adoption has an effect on both the child and the adoptive family members. Adopting a child of a

different ethnicity to the adoptive family could open people's minds for the better; although people may frown upon adopting children of different ethnicities, it is important that the child's difference is both accepted and celebrated. This raises the question of cultural needs- Is it enough to provide a child with a cultural identity that matches with their parents or should a child be raised with the cultural identity of their birth heritage? Some people may argue that providing the child with an identity like their parents would help the child to feel more at home because they would have the same values as the rest of the family. Providing a child an identity like their birth parents may make them feel more of an outcast and very different to the rest of the family. If a family can help the child feel like they belong, different ethnic adoption should be allowed. Until the 1950s adopting children of different ethnicities was heavily frowned upon, however now people in society have become a lot more accepting of culturally dynamic families.

Adopting a child of a different ethnicity will give parents and children a chance to explore different cultures, if the family helps their child to embrace their race and familiarise the child with their own identity, the adoption is likely to be successful. What is a successful adoption? In my opinion a successful adoption is where the child feels accepted by both the parents and the family. Involving the entire family with the adopted child's culture will help the child to celebrate their ethnicity and feel as if a bit of them is implanted in the family, as opposed to being tolerated or simply ignored. Parents have the ability to teach

children that difference is a good thing and that will show the child that diversity is something to celebrate. It can teach the child to be proud of where they come from. If their adopted parents are not their birth parents, it does not mean that they are not their 'real' parents. The role of a parent is to provide structure for your children, teach them the values of life and show them love. If an adoptive parent can fill this role it shows that they are the child's 'real' parents because they have put in the effort and time to try to produce a hardworking, independent child.

However, some people say you should not adopt children of different ethnicities. They believe that without having at least one parent of the same culture, the child cannot develop a strong cultural identity. Many children may feel as if they are losing their identity during adoption of different ethnicities and that can be difficult for children because they may feel as if they do not belong in a certain family and creating bonds between the child and parent will be difficult. If the parents already have their own children, the adopted child may feel as if they are different from the rest of the family because of their different ethnicity. Additionally, as the adopted child grows, he/she may feel the burden of standing out from other families. People may stare as you are walking down the street or children at school may make unkind comments to make the child feel uncomfortable. This would make the child experience discomfort about their appearance and may resent their parents for adopting them. Even though a child may be stared at in this circumstance they may also be stared at and teased in a circumstance where

there is a culturally diverse family, however in a culturally diverse family the child may not mind being stared at because their parents would have taught them that difference and diversity is accepted. If a child is open to prejudice at a young age they may be disadvantaged at school and it may affect their progress at school. Another problem the child may have to face is the acceptance of family members and friends, many older members of the family grew up during a time when adopting children of different ethnic backgrounds was frowned upon. They may not be open to adopting a child of a different ethnicity and this may upset the child and they would feel as if they are not wanted.

Overall, depending on the adoptive family, I believe that you can adopt children of different ethnicities because it can expand your cultural views and teach you more about the world. Every child benefits from a loving family to care for them no matter what they look like. *Studies show that adopting a child of a different ethnic background can provide a stable home for children because more than 75% of children with different ethnic backgrounds to their adoptive parents are adjusting well to their new homes. This shows that transracial adoption in many cases can result in happiness and children do feel “at home” in transracial adoptions.

References:

<https://www.rainbowkids.com/adoption-stories/transracial-interracial-adoption-facts-tips-statistics-you-should-know-1828>

<https://www.hellomotherhood.com/advantages-disadvantages-of-interracial-adoption-9802145.html>

<https://www.adoptionchoices.org/transracial-adoption-pros-cons/>

<https://www.parents.com/parenting/adoption/parenting/adopting-a-child-of-a-different-race/>

Climate Change

Take care of nature to see the future

Amna Mohamed Aroos

Year 8

Climate change isn't as much as a popular topic as it should be. In fact, when most people think of climate change they don't think about the dangers it will cause to the future.



What is climate change?

Climate change can be caused by various activities. When climate change occurs the temperature of the earth can dramatically increase. When temperatures rise, many changes happen to the earth such as floods, droughts or intense rain, as well as heatwaves. As these changes frequently occur, there will be challenges to our society and environment.

How has it affected us?

Climate change has already affected us in many different ways. It has made oceans warm up causing its water to expand and sea levels to rise. Rising sea levels can threaten freshwater supplies for people living in some areas. Moreover, the changes in climate also affect the habitat of different species of plants and animals.

What's already been done to stop it?

There are many things that are already being done to stop climate change such as using alternative energy. Using alternative energy such as solar, wind or tidal can reduce the use of fossil fuels. This will decrease the amount of carbon dioxide released into the air. As well as this, another strategy that is being used is carbon capture. This is the removal of carbon dioxide from the waste gases from power stations and then storing it in old oil gas fields or coal mines underground. This reduces the amount of emission into the atmosphere.

What can you do to help stop it?

There are many things that you can do to help stop climate change. Something that you can do to help is grow plants. Growing plants means that there will be more plants to absorb the carbon dioxide in the atmosphere during the process of photosynthesis. In addition, saving energy could help. You can do this by simply switching off lights when they are not being used. When you consume less energy, you reduce the amount of toxic gas from releasing. Furthermore, you could also reduce your transportation emissions.

To conclude, climate change really does exist and if we're not the people who try and prevent it from getting worse then this situation will become much harder in the future and will bring on a lot more consequences.

Alexander Hamilton
3 ways in which he changed

Ionie Morris
Year 7

In my opinion, Alexander Hamilton is an inspirational historical figure, and has done many things to help America and the World today, but I am only going to name 3.

The first way in which Alexander Hamilton inspires me is how he came from nothing and climbed the rankings to become the first Secretary of the Treasury as well as one of the founding Fathers of the United States of America.

Hamilton was born in the Caribbean (c. 1755) out of wedlock. His mother (Rachel Faucette Buck) was from a poor background and his Dad (James Hamilton) was from Scottish descent. Hamilton was orphaned at a very young age as his Mother died from a disease and he was taken in by a cousin who then ended up committing suicide. After that, he had to fend for himself, so decided to seek out work. He was able to gain employment via his Mother's old employer. His main duties were collecting sugar cane, however his boss seemed to see something in him and realised he had an aptitude for business.

His boss ended up dying and left the company to Hamilton to run. This was the beginning of Hamilton's

success and shows true-determination as his start in life would not dictate his future.

Hamilton decided that he didn't want to run the business and wanted a fresh start. He desired to leave the Caribbean and managed to become a stowaway on the bowels of a ship destined to New York. Once he arrived he became very successful very quickly. It started with him meeting Aaron Burr, John Laurens, Hercules Mulligan and Marquis de Laffayette. They became friends almost immediately, but there was still some rivalry between Burr and Hamilton.

During the American Revolution, Hamilton went with his friends to a Winter Ball where he would meet his future wife - Elizabeth Schyuler. However, he also met her sister - Angelica Schyuler- who also loved Hamilton.

Although Hamilton came from a poor background and didn't have any money, he still convinced Phillip Schyuler - Elizabeth's father- to allow him to marry his daughter.

Soon after Hamilton married Elizabeth, he was called upon to fight for America. On one particular occasion, George Washington called Hamilton into his office. George Washington who was the leader of the American revolution asked him to become his personal secretary, which was a huge opportunity for him. However, Hamilton did not originally accept this offer as he wanted to fight in the war, because he believed

that this would help his country more than writing for the country.

I think the fact that the leader of the revolution had heard about Hamilton's work and that he had refused other offers of being a secretary is amazing, as he did not have any previous relationships with any important and wealthy men.

The second way in which Hamilton inspires me is that he was always quick to put his country first despite his own opinions and interests. This is shown throughout his story but one specific example of this would be when he endorses Thomas Jefferson instead of his long time friend Aaron Burr. He knew that Aaron was not the best candidate for the presidency and was willing to forgo his relationship with Aaron to do the right thing for his country.

Hamilton and Thomas were initially introduced to each other by George Washington, however Thomas never really liked Hamilton and made it known. They had several battles against each other through public debates, often tearing each other down and for the main purpose to convince George Washington who had the better ideas in running the country. This was a continuous theme throughout their relationship, so it was a huge surprise and extremely hurtful for Aaron Burr when in the end Hamilton endorsed Jefferson who went on to win the election. This then made sure Aaron Burr became Hamilton's enemy and destroyed their relationship.

Burr's hate went on to cause the death of Hamilton in the end which is sorely regretted.

Why is this inspiring to me, mainly because as mentioned, Hamilton was not consumed or interested in purely personal relationships but the state of the country and making sure the right people were in the right positions. It was highly important to him to be true to himself and do what he thought was right, even if this meant hurting those he loved or cared about. This is a hard thing to do and not many people are willing to offend those they love and put other things above their own needs. I do think there were many things about Hamilton that were selfish, and that could be questioned about his character, however this was one of them that showed him to be focused and wanted to achieve the best for future generations, no matter what it took.

My final example of being inspired by Hamilton is the legacy in which he left behind as well as the lives he touched. He designed the financial system that made the United States the best credit risk in the western world and is still used to this day. His life and death also inspired his wife to build the first orphanage in America and she preserved many of his writings after his death and all of this had a huge impact in the world. So much so that within the US they learn about Alexander Hamilton within their own curriculum, he is acknowledged as one of the founding fathers and even within the last 5 years his life story was turned into a musical which has been critically acclaimed.

To live a life that has been so diverse, made such an impact and is still talked about and acknowledged to this day, is highly inspirational and this is just one of the many historical figures that are inspiring to the new generation.

'Those who stand for nothing will fall for anything' Alexander Hamilton

References

<https://www.biography.com/news/alexander-hamilton-eliza-schuyler-love-story-marriage>

https://en.wikipedia.org/wiki/Alexander_Hamilton#:~:text=Hamilton%20was%20born%20out%20of,the%20American%20Revolutionary%20War%20began.

<https://www.history.com/topics/american-revolution/alexander-hamilton>

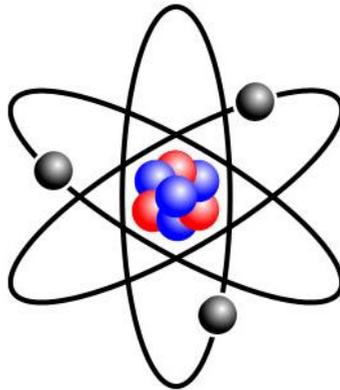
Quantum Physics

Double-slit experiment

Kayo Nozaki
Year 7

Everything around us - water, air, food, light and even ourselves - is composed of tiny things called subatomic particles. When scientists made further investigations, they discovered that in such a tiny world, the laws of physics did not apply. And they had to come up with whole new ideas and sets of theories which remain a mystery for most people. Quantum Physics, which is also called Quantum

Mechanics or Quantum Theory, describes how the universe works at the level smaller than atoms. The world of quantum physics is an amazing place, where particles can do weird and astonishing things.

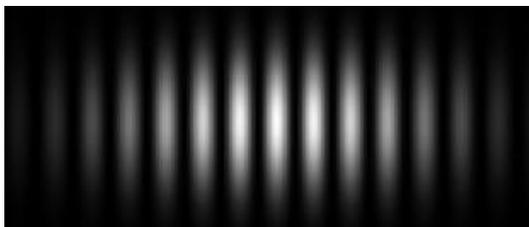


I have a book called “My first book of Quantum Physics”. That book explained that there are still lots of things that haven’t been discovered by humans yet. As I read through that book, I thought that my knowledge about science wasn’t enough at all to understand Quantum Physics. But it taught me the joy to learn, and

I started learning how to write and read the Greek alphabet and to be able to read and write equations and formulae. I also started learning how to use the abacus to be able to solve difficult calculations in my head, by now I know how to add, subtract, multiply and divide on an abacus.

A page that caught my eye was about a double-slit experiment. In the 1600s, Isaac Newton proposed that the light travels in particles, but at the same time a physicist called Huygens came up with a different idea that the light was a wave. Thomas Young was the first person to perform this experiment in 1801 to determine if light behaves like a particle or a wave. This famous experiment showed us that subatomic particles behave in an incredible way. Imagine we have a box with hole A to peek inside and hole B to let the light travel through. There is a double-slit screen by the hole B. And what I expected to see through hole A in this experiment was two straight lines in the shape of the slits. But the result was like the picture below. This shows the interference pattern that should happen with waves. It works just like the ripples of water, imagine two sources of ripples and when a peak of one wave meets up with another wave's trough it causes them to cancel themselves, which is the destructive interference and

basically
there are no
waves there.
They form
dark spots,
but when



peak with peak and trough with trough meet each other, they constructively interfere creating brighter spots, because the amplitudes get bigger. They then create the sort of bright lines and dots and dark bits like the picture above.

In 1974, this double-slit experiment was carried out again but with electrons. We already know that waves create interference patterns. So first we need to see how particles or little balls of matter, like marbles, behave. We are going to fire at a wall that has two slits, we will see that almost all of the impact of the marble opposite the slits. This is quite easy to understand, but what happens if we fire electrons? First, we are going to fire them with one of the slits closed, we see that electrons behave like marbles, the pattern of particles. Now we are going to open the other slit, well surely we will get the pattern of particles. But this is where the incredible stuff begins, we get an interference pattern! Scientists first thought that this was happening because the electrons are hitting each other and changing its direction, which is what I also thought, so they fired one electron at a time. But they still formed the wave pattern. Could they possibly be going through both slits before reaching the detector? So scientists placed a camera to observe what was happening, then the electrons behaved like particles again! I thought it was a type of light emitted from the camera affecting the electrons, but scientists confessed that that doesn't explain it. Do the electrons know that they are being observed and act in one way or another? However, this happens to photons and all the other subatomic particles, such as protons and neutrons. All these

questions are answered by accepting that the electrons are not one thing or another. This is what is known as The Wave-Particle Duality.

References:

<https://plus.maths.org/content/physics-minute-double-slit-experiment-0>

Even in hell hope can flower

Less ignorance, more change

Irem Ozdemir

Year 10

The Holocaust...the inhumane act that led to the death of 6 million Jews...the act that proved humans can be evil....is that it??? A few days ago I decided to ask my sister about the Holocaust and her answer was: "It's very sad, it took place in Germany and so many people died." The simplicity of her answer gave me chills. I came to the awful realization of the ignorance towards this incident. I am scared for the future generation. But, even in hell hope can flower.

First of all, the Holocaust didn't take place only in Germany. In Libya, where the Italians had been applying racial laws, Jews were sent to concentration camps in Europe, in Algeria Jewish people were stripped of their rights and were required to wear an identification mark and in Morocco, where Jews had civil rights, the French introduced the anti-Semitism regulation. Do people know that there is also The British Union of Fascists? The BUF was an anti-fascist group led by Oswald Mosley. Unfortunately, the younger generation believes that the Holocaust took place only in Germany as they haven't been taught otherwise at school. This makes me question the education system. Children read about the cow who jumped over the moon...Dick Whittington and the cat...but not about true history? Children are being taught about Hitler but not about the real life heroes that have

risked their lives for justice and peace. Carl Lutz, fought the Nazis with paperwork; Johan van Hultz, saved hundreds of Jewish children; Virginia Hall; one of the best spies during the Holocaust. The younger generation needs to know the sacrifices people have made for freedom, equality and....change.

Irena Sandler, a Polish nurse who served as head of the children's department of Żegota, saved over 2,500 Jewish children by smuggling them out of the Polish capital ghetto. Using her brief as a medical officer carrying out sanitary inspections as cover she would conceal the children in prams, ambulances and even suitcases. Sandler would hide the children with Polish Catholic families, giving each one a Christian pseudonym and false identity papers. She wore a yellow Star of David throughout her activities, in solidarity with the victims of Nazi tyranny, and kept meticulous records of the children's whereabouts. These documents had to be disposed of quickly when the Gestapo finally arrested her. Brutally tortured by her captors and sentenced to death by firing squad, Sandler managed to evade execution when fellow Żegota members bribed Nazi guards. She would go on to survive the war and Poland's subsequent occupation by the USSR. She died 10 years ago, aged 98. "Every child saved with my help is the justification of my existence on this earth and not a title to glory," she said. Even in hell, hope can flower.

Suzanne Spaak lived in Paris with her husband Claude, a filmmaker, and their two children. Spaak, as the daughter of a famous Belgian banker and sister-in-law of the Belgian foreign minister, was accustomed to a high

standard of living. Spaak was shaken by the Jewish children's tragedy and could no longer enjoy her personal life. In early 1943 information concerning preparations for the deportation of Jewish children in UGIF centers became known. Spaak was an active participant in an operation initiated by Pastor Paul Vergara and Marcelle Guillemot that smuggled more than sixty children to safety. She sheltered some of the children in her home until they were all taken to people willing to shelter them. With her comrades' help, Spaak, at great personal risk, provided the children with ration cards and clothing. In October 1943, she was arrested by the Gestapo and taken to the prison in Fresnes. Before she was incarcerated however, she had the presence of mind to give the lists of Jewish children and their addresses to an underground comrade, thus saving the children. On August 12, 1944, less than a week before the liberation of Paris, the Germans murdered Spaak. But she believed. Even in hell hope can flower.

In order to improve my knowledge and understanding of the incident I started reading a book called 'The Choice' written by a Holocaust survivor Edith Eger. It explores in detail the horrors and pain of the Holocaust and its effects on an individual. Edith was just a child when her mother was taken away from her to be sent to a concentration camp by Joseph Mengele, an infamous doctor who is known for his experiments on Jews, who then ordered Edith to dance for him. Over the next year, she endures relentless atrocities; a woman in labour with her legs bound shut, a young boy who is used for target practice. Only to be lifted by soldiers from a pile of corpses - weighing 70 pounds and nearly dead. She is free

but with a broken back and a broken spirit. Now what? Edith had a choice: Shut herself against the world and not be able to live the rest of her life with the memories trapped inside her head or she could open herself, reach for help and educate people to make sure that younger generations won't let this happen again. Eger changes from 'pounded by loss' to 'how people can heal' and offers a singular perspective as both a speaker and a guide. Now she's a psychologist who gets into the trenches with her patients (sometimes calling them honey) and grants the readers and her patients intimate access to her parallel quest to escape from the prison in her mind. Her cases are telling us that, though not always ground breaking in technique, illustrated with a profound understanding that no matter how varied our experiences are at the end we are more alike than different. At one point Eger is sent a 14 year old boy who arrives spewing racist venom. But instead of condemning him for her own bigotry and hatred she makes a choice "We have the capacity to hate and the capacity to love. Which one to reach for is up to us." I bet this is the most important message for the modern times. Egers book is a triumph and should be read by everyone who cares about both their inner freedom and the future of humanity. Even in hell hope can flower.

Still there is only one question...What are the lessons to be learnt from the Holocaust in order to make sure history won't repeat itself again? The history of the Holocaust provides one of the most effective, and most extensively documented, subjects for a pedagogical examination of basic moral issues. Today, with an

increasing terrorism and genocide crisis, it is critical to educate young generations about the Holocaust.

Never give up – life is precious. Throughout life you will face many obstacles, people will try to hurt you, break your spirit but you have to keep fighting because your life is worth it...you are worth it. In the words of a survivor from Siberia: “I never gave in. I was always an optimist. My spirit was not broken. I never gave up, not when I was hungry; not when I was freezing cold. I never gave in.”

Choose your attitude and choice of action when responding to situations. Although we have no control over the attitudes and behaviours of others we can choose how we react in any given situation, even in the most horrendous circumstances, as noted by Holocaust survivor and psychiatrist, Dr. Victor Frankl in his book, *Man’s Search for Meaning*: “forces beyond your control can take away everything you possess except one thing, your freedom to choose how you will respond to the situation.” Be kind, be sensitive to human suffering.

Educate yourself and advocate for human rights laws and global justice. Survivors teach us to stand up and fight for human rights, global justice and social changes that improve the quality of our lives. While some remain vigilant and speak out against injustice, others advocate social policies and human-rights legislation that benefit all of humanity. You are the future generation so bring change, bring justice, bring love.

Find meaning and purpose. Research tells us that people who have a purpose and direction in life live longer. They say they have a reason to get up in the morning because they are involved in an activity that gives their life meaning. People find it in different ways. Some find gratification in relationships with family and friends or through work, while others find it through volunteer activities, altruism, spirituality, creative endeavours and involvement in social and political causes. For Holocaust survivors there is an added dimension, finding meaning in survival. Many survivors find a sense of purpose by bearing witness to the atrocities they endured. As witnesses to history they speak passionately about their hope for a world that is free from racial intolerance, bigotry and hatred. A world that you will create.

Always remember; Even in hell hope can flower.

References:

Man's Search for Meaning: The classic tribute to hope from the Holocaust Kindle Edition (1946) Viktor Frankl, Ebury Digital; New Ed edition (2013)

Anthropomorphism of Deities and the Apotheosis of Powerful Figures

Why we should never stop questioning.

Elina Patel

Year 10

The traditional Judaeo-Christian and Islamic perception of God is an omnipotent Protector, a transcendent Judge, a guiding Father who at the same time, is unfathomable to the human mind. How does this make us feel? Some feel comforted and protected, others feel tainted and sinful in comparison to the immaculate image of God. Mankind is the microcosm to the macrocosm that is the ideology of a God. This has caused some people of faith to find God believable yet unrelatable, he is simply too perfect.

This inspired me to combine my undying passion for classics and philosophy in order to discover instances throughout history where gods have been portrayed to have human qualities. I began to analyse Greek mythology. The Greeks explored the anthropomorphism of deities through their tragedies and comedies. Zeus, the King of the gods, was portrayed as notoriously promiscuous and much to the dismay of his wife, created offspring with mortals - demigods. These hybrids of celestial and human beings embodied the tilted balance of deific anthropomorphism; Hercules is an excellent example of this. His epithet was "the lion-hearted", he was gifted with extreme strength and courage. However, he was weak enough to succumb to Madness (which was

personified as a goddess in Greek mythology) that drove him to murder his wife and children. This anthropoid side to Hercules is portrayed as weak but when the demigod performs the renowned 12 labours to rid his guilt, his godly strength combined with his human compassion is what led Hercules to excel in tasks that were supposedly impossible...leading him to become one of the most puissant mythological figures in history. In Roman mythology, when Hercules was poisoned by his third wife, his father decided that he should be made a complete god. This created a deity upon which Roman civilisation could reflect themselves upon. They celebrated the fact that a man was deified for human properties such as self-improvement, loyalty, faith and love. In these Classical civilisations the gods were respected for being shamelessly flawed; when did this change?

I turned my search to the Bible in order to find instances of God displaying any anthropomorphic qualities. The Ten Plagues of Egypt is one of the many biblical passages that interested me. This episode in the Bible can be perceived as God justly punishing the Egyptians for enslaving the Israelites, but the plagues are the antithesis of an omnibenevolent God. They can be viewed as a filicide, for even the Egyptians were God's children. A parallel of this punishment from God emerged in World War II, when the Jews put God on trial. Throughout the Holocaust many rabbis deliberated whether the killing of approximately six million Jews was a punishment for the slackening of their commitment to reading the Torah. Others perceived their suffering as a result of God's negligence as they could have never brought such a

rancid evil upon themselves, no one was deserving of this. Many survivors claim that they saw God in the form of a boy who was hanged inside of Auschwitz; there were many different ideas of what this symbolised. People believed that they had witnessed God's death as a result of such societal destruction. They were contradicted by those who took comfort in the fact that God appeared to them. Elie Wiesel a Nobel Laureate and Holocaust survivor confirms that God was found guilty; the conclusion was that God owed them something. It was believed that God had neglected them, which is a human mannerism. Others argue that he was broken by the malicious abuse of free will that was enforced by Hitler and the oppressors he both collaborated with and employed.

The potent power amassed by Hitler made him dangerously close to holding the gravitas of a god. This inspired me to pivot my focus onto powerful figures whose hubris and abuse of others could have unethically alleviated them to a god-like glorification.

Philosophical arguments such as Pascal's Wager and Feuerbach's Argument state that a God is heavily reliant on faith. In order to gain the faith of German citizens, Hitler actioned a long and manipulative scheme that acted upon deep-rooted stereotypes surrounding the Jewish community by introducing the prejudiced Nuremberg Laws which forbade Jews from multiple privileges which included owning a pet or riding a bike, alongside a curfew. He exercised his power by segregating entire minorities into ghettos and later death camps; this revealed the true extent of his powers and

acted as a thinly veiled threat to those who dared to oppose him. He had a sinister ability to indoctrinate younger generations through the Hitler Youth and he held the fates of millions of lives in his hands. The most chilling fact of all is that he wanted to create an Aryan race by condemning everyone who was not blonde haired and blue-eyed to extinction. The apotheosis of Hitler can be seen in the many unsettling oxymorons between himself and God.

A modern day apotheosis is Vladimir Putin. The President of Russia has complete control over every Russian television station, thus creating a dystopian omnipresence. This enables Putin to alter the viewpoint that Russians have on the rest of the world; it robs media workers of their creative liberty and represses them to conform to his image. This leads people to question the credibility of Russian news outlets and the true extent of Putin's power. The most striking factor that provides Putin with deific connotations is his ability to be above scrutiny.

This topic has greatly fascinated me and led me to observe how people seem to be asking less and less questions. It has opened my eyes to the nuanced dominance that certain public figures have over our lives and how fear is the tape over our mouths that smothers us into silence. Religion is an interesting societal construct that has the unique ability to create bonds and break them. It requires faith in a benevolent God as well as something that is often lost - faith in others. Celebrate the flaws that we all have, applaud the success of others

and do not be a bystander in a time where people need a God.

References:

OCR GCSE (9-1) Religious Studies (2016), Lorraine Abbott, Steve Clarke and Gordon Kay, Hodder Education

Year 9 RPE Curriculum (2018-19), Northwood College for Girls

Bible Gateway: <https://www.biblegateway.com/>

Mental and Physical Health *How do they affect us today?*

Kiera Macy Patel
Year 9

For my article, I have chosen to do it on a very modern topic that interests me in many ways. Mental health is affecting the population more than it used to, so I wanted to explore the concept behind why and how the change could have occurred and why it is becoming a bigger problem in society. I find this intriguing because I understand that mental health cannot be taken away from a person but different methods can be used to deal with the issues. I also chose to write about the topic, physical health. I really enjoy exercising and doing lots of sport however I realised there is so much more to physical health than staying fit. There are so many bad consequences that happen when we don't keep up a good physical health so I wanted to research the methods that help us to stay physically healthy. Finally, I wanted to compare the two topics to see their possible differences and similarities.



What is mental health?

Mental health is a person's level of psychological well-being. This can refer to emotional, behavioural or cognitive well-being. It is about how we feel, think and behave. Sometimes mental health can cause a mental disorder. Examples of these are:

- Depression
- Anxiety
- Anger
- Schizophrenia

These are all very different from one another and are caused by different reasons. The quote below highlights that mental health is a problem that can be managed or gets resolved. It is like a journey, it can be tough at times but once you reach the end you feel great. You have to be willing to try to sort it out, otherwise you won't get rid of the root problem.

What are the factors that contribute to mental health issues?

Biological factors can contribute to mental health. These include:

- Uncommon performance of nerve cell circuits that link to certain parts of the brain.
- Genetics - transfer of the DNA passed on from generations who suffer from mental health issues can result in the recipient suffering.
- Specific infections that are connected to the brain can cause mental health issues.

- Particular parts of the brain getting damaged from injury.

Another factor that contributes to mental health would be psychological. Some examples of this are:

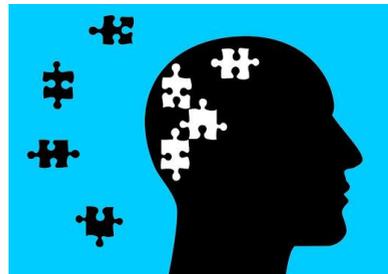
- If someone has experienced trauma, as a child or an adult, from verbal, physical, emotional or sexual abuse. That trauma might be hard to get rid of and therefore affect their mental health.
- A loss of someone close.
- Being neglected.
- Influences from others with mental health issues can cause a person to get them as well.

The last factor that contributes to mental health is environmental. These include:

- Feeling anger, sadness, anxiety or isolation.
- Constantly changing schools/jobs as it would be hard to settle down.
- Cultural or social expectations that can potentially be pressurizing.
- Flawed family life.

How do you deal with mental health?

There are many methods that are used to deal with mental health. It depends on the person and what their issue is.



One method is radical acceptance. This means to completely understand something from the bottom of your heart and mind and no matter what, you are unable to adjust to a circumstance. You can accept that something is happening and you can't change it, however you can act upon it to prepare yourself for it and therefore not get affected by it. For a mental health illness, you can't change the fact that you have it, but you can change what you do next by accepting it and trying to find different ways to change the situation.

Another method would be deep breathing. This is the best way to calm down anxiety. There are lots of different breathing counts for example, breathe in for five seconds, hold it for three seconds and breath out for seven seconds. Once you decide your breathing counts you repeat them. By doing this your heart rate begins to slow down and without realising, you start to relax. Meditation uses similar techniques to calm and empty the mind so you are at peace with yourself

The 'five senses' technique is also a solution that can be used. Instead of focusing on one precise object, you focus on what is happening at that moment in time in the space around you. You do this using all five of your senses; smell, taste, sight, touch and listen. Furthermore, mental reframing is a key technique used to deal with mental health issues. A lot of people look at certain things in negative ways. For example, 'There is so much traffic, we are never going to make it there on time. Why does this have to happen to me right now?' This statement is only negative. Instead of thinking in this way, you can reframe the thought into something more

positive. In this instance you could say, 'The traffic is bad however I will eventually get there and in the meantime I can listen to music.' This is a lot more optimistic and is a useful method to deal with anxiety and frustration.

How does mental health affect society today?

Mental health is increasingly affecting society more and more because everyone has started to realise that mental health is so much more than they thought. In the past mental health issues had a stigma where people used to think that having a mental health issue meant you were mad. That is completely untrue. People experience mental health every day, it is thought that everyone has some sort of frustration or issue that may be linked to mental well-being causing reactions that may not be the norm and out of character. Mental well-being affects everybody and it can't be wished or ignored so it will go away. Most people will experience some form of mental health during their life but that doesn't make them a mad person. Approximately, one in six people in the past week have experienced a common mental illness health problem. This goes to show that mental health is something that may be experienced but can be managed if the individual is willing to recognise the behaviours and use the different techniques that would help them, these can be from breathing exercises, physical activity to maybe just talking through the problems and feelings. Ten percent of young children have a clinically diagnosable mental health problem. It is fortunate that society and schools are investing in time, money and effort to recognise problems early on in a child's

development to help children manage and talk about problems instead of holding things in, isolating themselves, probably causing more damage in the long term.

What is physical health?

Physical health is the state of your body taking multiple things into consideration, from the level of fitness to the amount of times you are ill. Physical health is so important for our well-being because it can severely affect our everyday lives if we don't invest in looking after our bodies. Having a good physical health can reduce the risks of developing diseases such as type two diabetes, heart disease and cancer. It has long term health benefits and can also improve your quality of life. The quote by Gandhi illustrates that the greatest wealth a person can have is good health. Wealth is not about money but about having good health. I think that physical health is really important because it can make a person feel more positive about themselves, as well as everything around them which can prevent mental health issues from developing.

How do you keep up good physical health?

There are ways to keep up good physical health. Some of these include:

- Getting regular exercise. This is so important because it not only helps to maintain a healthy weight, but also decreases a person's risk of getting certain diseases. There are so many forms

of exercise that everyone should be able to find something that they enjoy doing. This could vary from going on a bike ride, dancing, to walking or just simple housework or gardening. Doing physical activity also causes the body to release a chemical called endorphins. These endorphins interact with the receptors in the brain that reduce your perception of pain. Endorphins also act like a good feel factor for the body, providing more energy and a positive, happy outlook.

- Eating healthily. Having a balanced diet has many advantages.

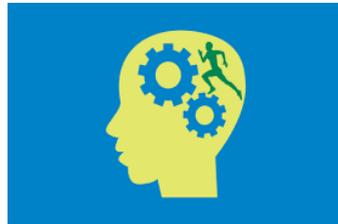
Healthy food choices can prevent some conditions which include diabetes, stroke and heart disease.



- Don't smoke or use tobacco. Tobacco is very harmful to the body causing, heart disease and lung, throat and mouth cancer. Smoking is the main factor that causes lung disease.
- Protect your skin. Skin cancer has a link to sun exposure. Some sunlight is good for you as it gives you vitamin D however too much can cause problems. You can prevent this by using products like sunscreen, wearing suitable clothing in the sun and not going outside during the hottest parts of the day.

What are the effects of not maintaining good physical health?

Having poor physical health can lead to many problems linked not only to the body, but also the mind. Firstly, not having good physical health makes a person feel unmotivated and therefore there is a large lack of energy. This affects you because you would be unwilling to do everyday things such as brushing your teeth, getting dressed or eating sensibly. Small things you don't do all add up and become a bigger issue resulting in further problems. Lack of energy causes laziness which can also affect others around you in a less positive way. This is because you would be influencing them to not be productive and they would eventually become lazy. Having bad physical health also leads to many body problems. These include obesity, poor posture, osteoporosis, stiff joints, flabby body, breathlessness, high blood pressure, strokes and heart disease.



What is society's physical health like today?

There are some people who exercise, eat healthily, get a good amount of sleep and look after themselves. They are the people who maintain a healthy body weight and also feel productive and energetic. On the other hand, there is an increasing amount of people who either already have bad physical health or are starting to get physical. This is happening for a few reasons. Firstly, social media is becoming more and more popular every

day. Society is starting to get attached to it and therefore spend a lot of their time staring at a screen. The time used for social media could have potentially been used to exercise. Another reason why this is happening is because of food choice. There are lots of treats we can have but for some people, they have multiple treats which can make a person obese and unhealthy. Getting a good amount of sleep is so important but sometimes it is hard for a person to do this. This could be because of an overload of work to do, bad time management or just using technology for a long time. Sleep is major because it allows the body to repair and be well and ready for another day.

What are the differences and similarities between mental and physical health?

The main difference between mental and physical health is that our feelings, our capability to work and our relationships with one another, are the principal things that are influenced by our mental health. Also, mental health is all about the mind whereas physical health is about the body. Research has proven that if you have a bad physical health then you are likely to have a low mental health. This goes to show the fact that having good physical health helps to not get mental health issues and having good mental health can help to maintain good physical health. Both topics bounce off each other.



What can we learn from this?

Mental health and physical health are two completely different topics however they both affect one another. Mental health has affected physical health as people with the highest levels of self-rated distress were thirty-two percent more likely to have died of cancer. Also an increased risk of coronary heart disease has been found to have a link to depression. The consequences of the mental health issues have been to do with physical health which shows the impact of mental health on physical health. On the other hand, physical health affects mental health. For example, exercising not only keeps a person in shape, but also improving someone's mood and reducing the amount of anxiety someone feels. To have a healthy mind we need to have a healthy body and to have a healthy body we need to have a healthy mind.



References:

<https://ssnmentalhealth.co.uk/mental-health-and-physical-health/>

<https://www.medicalnewstoday.com/articles/154543>

<https://www.webmd.com/mental-health/mental-health-causes-mental-illness#1>

<https://nami.org/Blogs/NAMI-Blog/January-2019/Self-Help-Techniques-for-Coping-with-Mental-Illness>

<https://www.mentalhealth.org.uk/a-to-z/s/stigma-and-discrimination>

<https://familydoctor.org/what-you-can-do-to-maintain-your-health/>

https://www.bbc.co.uk/worldservice/sci_tech/features/health/healthyliving/exerciserisk.shtml

<https://www.medicalnewstoday.com/articles/325353>

<https://www.mentalhealth.org.uk/a-to-z/p/physical-health-and-mental-health>

<https://www.mentalhealth.org.uk/a-to-z/p/physical-health-and-mental-health>

Space Exploration

3D Printing

Daniella Phillips

Year 7

When planning a mission to the International Space Station, NASA's traditional approach has been "bring everything, 'cause we're not going home." To support spaceflight missions, in fact, NASA sends up about 7,000 pounds of spare parts to the ISS every year. There are 29,000 pounds of hardware spares/replacement units on ISS and another 39,000 pounds on the ground ready to fly when needed. When you're 200 miles from Earth, after all, you want to make sure that you have all of your necessary supplies, from bolts to cable mounts. NASA's "better to be safe than sorry" approach, however, means that a vast majority of parts stored on ISS are never used. To lighten the load and reduce costs, NASA is using the ISS as a testbed to demonstrate a way of manufacturing the necessary parts in space: 3D printing.

Currently, NASA's manufacturing efforts for the International Space Station have focused mostly on the 3D printing of polymers or plastics. The fused filament fabrication (FFF) process, the technique used by many desktop printers, works well in microgravity, is safe to operate in a crewed environment, and meets the International Space Station's power, volume, and mass constraints. Some plastics used on ISS are also recyclable – an important feature when considering efficiency and cost savings. One day the foam and films used to package

cargo could potentially become the feedstock for manufacturing. With the demonstration of successful 3D printing efforts on the International Space Station, NASA hopes to eventually apply the manufacturing approach to long-duration missions like Mars exploration or sustained human operations on the moon – scenarios where cargo resupply is not as readily available.

Because many of the parts needed on space missions are aluminium, titanium, and steel, NASA is also working with small businesses to develop metal printing capabilities for ISS. On Earth, the preferred metal 3D printing method for aerospace is selective laser melting (SLM). In this process, metal powder is fed from a hopper onto a build plate. Each printed layer is about the thickness of a human hair. A laser then carefully melts the powder and welds it together. These systems, however, are very large and have high power demands. Additionally, the powders are flammable, a breathing hazard, and would be difficult to manage/control in a microgravity environment.

Such restrictions have urged NASA to consider other processes beyond SLM for adaptation to space: ultrasonic techniques that use force and vibrations to join neighbouring layers of metal foil, wire+arc technologies that employ a welding process to deposit and fuse subsequent layers of metal wire, and bound metal deposition-type methods that use filament or pastes of metal particles packed in a polymer binder. Still in the research phase, companies are developing ground-based prototypes of metal printing systems.

Many of the components which malfunction or need to be replaced on ISS are electronic. Currently, NASA's printed electronic team is assembling sensors for various applications, such as CO₂, humidity sensing, and crew health monitoring, which will be 3D-printed on the ground at first and then tested on ISS, perhaps in the next couple of years.

The Akrasia Effect

Why we don't follow through on what we set out to do and what to do about it

Zahra Rajwani

Year 7

In the summer of 1830, Victor Hugo was facing an impossible deadline. Twelve months earlier, the French author had promised his publisher a new book. But instead of writing, he spent that year pursuing other projects, entertaining guests, and delaying his work. Frustrated, Hugo's publisher responded by setting a deadline less than six months away. The book had to be finished by February 1831. Hugo concocted a strange plan to beat his procrastination. He collected all of his clothes and asked an assistant to lock them away in a large chest. He was left with nothing to wear except a large shawl. Lacking any suitable clothing to go outdoors, he remained in his study and wrote furiously during the fall and winter of 1830. *The Hunchback of Notre Dame* was published two weeks early on January 14, 1831.

Human beings have been procrastinating for centuries. Even prolific artists like Victor Hugo are not immune to the distractions of daily life. The problem is so timeless, in fact, that ancient Greek philosophers like Socrates and Aristotle developed a word to describe this type of behaviour: *Akrasia*.

Akrasia is the state of acting against your better judgment. It is when you do one thing even though you know you should do something else. Loosely translated, you could say that *akrasia* is procrastination or a lack of self-control. *Akrasia* is what prevents you from following through on what you set out to do. Why would Victor Hugo commit to writing a book and then put it off for over a year? Why do we make plans, set deadlines, and commit to goals, but then fail to follow through on them?

One explanation for why *Akrasia* rules our lives and procrastination pulls us in has to do with a behavioural economics term called “time inconsistency.” Time inconsistency refers to the tendency of the human brain to value immediate rewards more highly than future rewards. When you make plans for yourself – like setting a goal to lose weight or write a book or learn a language – you are actually making plans for your future self. You are envisioning what you want your life to be like in the future and when you think about the future it is easy for your brain to see the value in taking actions with long-term benefits.

When the time comes to make a decision, however, you are no longer making a choice for your future self. Now you are in the moment and your brain is thinking about the present self. Researchers have discovered that the present self really likes instant gratification, not long-term payoff. This is one reason why you might go to bed feeling motivated to make a change in your life, but when you wake up you find yourself falling into old patterns. Your brain values long-term benefits when

they are in the future, but it values immediate gratification when it comes to the present moment. Understanding how to resist the pull of instant gratification – at least occasionally, if not consistently – can help you bridge the gap between where you are and where you want to be.

References:

<https://jamesclear.com/akrasia>

Atomic Habits (2018), James Clear, Cornerstone Digital

Flying Higher
My journey as a High Flyer

Anjum Ramasamy
Year 7

Being a High Flyer has provided me with plenty of opportunities to extend my learning further and to take my learning to the next level. It has helped me find a passion for a subject that I didn't know I had, as well as helped me understand topics in a deeper way; this is my journey as a High Flyer.

When I was chosen to be a High Flyer, I felt extremely excited and privileged to have such an opportunity, I couldn't wait for the first meeting! Once the day finally came and I was introduced to the Parallel Curriculum, I was very eager to try out some of the activities on offer. This is when I tried my first activity, which was about Drama. I always had a small part of me that had an interest in the Performing Arts, and consequently, I went to see a play called "Dreamgirls". This play was about three women, who were discriminated against for their race, as well as gender. Racism is a very pressing matter and shows how some people are made to feel as if they are a burden to society; when in fact this play shows the complete opposite. It showed how these three women had pushed through all their difficulties and turned their lives around; from a disaster into something truly extraordinary. The play portrays the three sisters as if they were living three different lives, when truly they were all living the same story - that was a story of

happiness, sadness and especially controversy. This play inspired me and showed me that no matter what others think of you; you are still capable of amazing things.

From a young age, I had always loved Art, I loved drawing pictures when I was small and had always been drawing eye catching pictures and cartoons. When I received an email that there was an Art competition going on, I knew that I had to join. The competition was for Turner's Art Supplies and the task was to create a front cover for their catalogue. I entered the Turners Art Cover competition as one of my Art projects and I found it a really interesting subject to work on. I tried many different approaches, some of which turned out better than others, and went through several pieces of paper whilst doing so; my final product involved shaving foam and many different colours of paint - which I used to create a marbled effect. I also tried the task of painting something "loud" without words, this was an interesting topic as it led me to think about what really makes something stand out and bold. I came to the conclusion of bright colours and something that stood out from others, so I painted a lion, using bright, bold oil colours and I chose this animal as it is sometimes thought to be "the king of the animals", which would make it stand out amongst others. I also entered this piece of artwork in The Royal Academy's Young Artists' Summer Exhibition 2020.

One of the range of activities I completed was looking at how English words have developed from older languages, in this case Latin. I learnt how many words have still kept some of their Latin counterparts and

during my research I found out that over 60% of the English language has derived from Latin or Greek roots. This taught me more about how our languages have progressed through the years and how different languages are connected by older ones that are not used commonly anymore. We see an example of this in the word “derivative”, which came from the Latin word “derivativus” and then formed into the French word “derivatif” along with the English word “derivative”. This knowledge helped me understand the history of the English language and culture to a higher standard.

Maths has always been one of my favourite subjects and I have always been extremely interested in it, so when I saw the opportunity to discover more about a certain topic in Maths, I took it! I looked into the Golden ratio and how it was related to the Fibonacci sequence, I learnt how these numbers are related to many different things in nature, this includes: spirals, leaves, petals, branches, seed heads, pinecones, fruits, the human body and so on... It was exceptionally interesting to see how many everyday objects are related to these particular numbers and how everyday life is linked to Mathematics. Learning how this subject is tied to my love of wildlife and animals made me even more engrossed in the subject and took my love of Mathematics to the next level.

Those were some of the activities that I learnt quite a lot from, but when I tried my first Science-related activity I found it particularly fascinating. I started off with Biology, when I watched some of the documentaries that were recommended. They taught me about how different animals are affected by the actions that we take as well as

how many of them are suffering and are on the brink of extinction. One documentary showed the struggles different species go through in the process of gaining and protecting their territories. Since I found those very intriguing I thought I would try another activity related to Science and I decided on looking into that specific subject in more detail, and eventually that grew into my passion for Chemistry and Biology, which were founded by the activities on offer.

All of these gave me the chance to develop my learning even further and in addition, enabled me to understand these topics in greater depth; while also giving me chances to form key bonds with these subjects. I am so privileged to be a part of this programme and to be able to try some of the amazing activities on offer. Being a high flyer has helped me to widen my knowledge and even find a hidden interest that I never knew I had, and never would have known I had, without this experience.

The habit loop

Changing how we act and think

Jessica Rudyceva

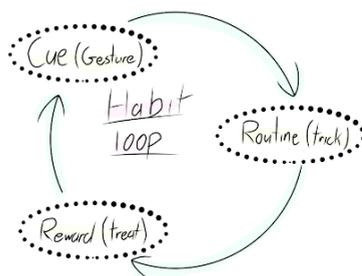
Year 8

Psychology is the exploration of thoughts, feelings and behaviour and tries to explain why we do this. There are many branches of psychology such as behavioural psychology that explores how and why behaviours are impacted by experiences, social forms and other conditioning.

Habits and habit loops are an automated behaviour that is repeated, meaning it requires little focus to do. Every day we perform many habits without even realising, for example, many people start their morning with some hot drink like tea which requires us to turn the kettle on. A lot of people would walk into their kitchen and switch on the kettle without giving it much thought, this is a habit. The most common habit we use is keeping types of postures like standing or walking which are known as motor habits. Intellectual habits are the processes we make psychologically including logical thinking and having good or bad observations. The last type of habit is the habit of character. This is what gives us some of our personality like being able to manage time or being kind and helpful. We can thank our basal ganglia for the ability to make these habits. The basal ganglia are a group of subcortical nuclei located near the centre of the brain.

When teaching a dog a new trick you start with a command, it can be a specific word, hand gesture, noise or anything that will correspond to the trick. Then comes the action the dog needs to perform such as sitting or giving paw. And lastly comes the treat, the best part for the dog that helps it learn. The first time you try to teach the trick the dog won't do much because it doesn't know what you want it to do. But after many times of repeating this cycle, it eventually learns how to do the trick. This forms a habit loop for the dog. The gesture is a cue, then is the routine which is the trick and finally, it gets a reward which is the treat. If the dog likes the reward it would remember that cue and routine that goes along with it to get the reward. If we draw that out in a cycle this is what we get.

In the image, I have included the example of teaching a dog to do a trick in the brackets. If we use the example of turning a kettle on I mention earlier the cue would be



walking into the kitchen or just getting up and out of bed, the routine would be turning the kettle on and the reward would be getting the warm beverage to start your day. We are constantly creating these loops of habits without realising most of the time. Of course, they are not all good for example a bad habit loop could be smoking or over-eating which may have a small

instant reward but over a long period of time have a bad impact.

Habit loops are so prominent in our daily lives because they use very little brain power and energy to do. The impact this makes on humans and animals is extraordinary because the quicker these habits are made the more we are able to use our brains on more difficult or new tasks. Going back to teaching a dog a new trick, when it is first starting out it will need to use a lot more brainpower to understand and remember what it needs to do but later it will barely use any. On a larger scale, this allows species to evolve psychologically faster as being able to use more of our brain allows creativity and more intelligent decisions to be made. Habits also give people more time to do other activities which if harnessed correctly can greatly benefit someone's health, social life or financial state. This is because if we take the area of finance as an example, being able to spend more time on your craft meaning you would become better at it and consequently earn more money.

Habit loops may be formed accidentally - like waking up and going on your phone straight away, as many people don't physically make an effort to go get their phone as it is already beside them. Habit loops can also be made purposefully - like when someone is trying to break an addiction or improving their work or school life by doing work straight away and not leaving it until the very end. An inspiring example of purposefully creating good habits is Tony Dungy when he took over the American football team Tampa Bay Buccaneers in 1996. In this year the team beat the odds and won their

match against the San Diego Chargers who everyone was expecting to win. In 1997 the Tampa Bay Buccaneers won their first season since 1982.

To make this new habit loop Dungy changed their cue. Originally they responded to the other team's actions and attacks but after Dungy realised this he changed the cue. The cue may have been a player with the ball in a specific area or a formation created by the opposition. Nevertheless, the team responded to these habits within milliseconds saving them their games. In this example, Dungy changed the cue of the habits because the routine was already a useful play and formation but the cue happens at the wrong time or place meaning he changed the habits to make an even better and more successful habit.

So what did Dungy do to change 15 years of failure?

He made the most basic formations a habit for them and made them quick. The 1996 match, the Buccaneers were losing but after half time everything fell into place, at first they got close to scoring but soon afterwards they started scoring more points which also lifted their spirit. At first, no one noticed the small changes but in the end, they could clearly see the results. In 1997 their season win was a very clear improvement which demonstrated what a few seconds of spare time can create when built up.

To break a bad habit especially ones formed and used for many years will take a lot of hard work and dedication as we always want the easiest way to do

everything. You first need to identify your cue as the routine would be obvious to you. Then you can choose what part of the loop to break or replace, the cue or the routine. The reward is harder to break because unless you physically give yourself a treat like you give the dog a treat for a trick it comes from the routine, for example, the feel of smoke when smoking. If you choose to try to break the cue then try to get rid of it, like seeing a packet of cigarettes and getting rid of it instead. Instead of breaking the routine, you could choose to replace it with something positive for example exercise. People usually give themselves larger rewards when they start to change their habits to motivate them to get that reward and when it gets easier to do that habit they ease out the reward to something smaller.

After dedicated efforts, many people are able to break through their previous psychological process to make a better less self-destructing habit.

References:

The Power of Habit: Why We Do What We Do, and How to Change (2012) Charles Duhigg, Cornerstone Digital

<http://www.psychologydiscussion.net/habits/habit-formation-basis-types-and-measures-for-effective-habit-formation/638>

https://productiveclub.com/tony-dungy-the-habit-loop/#How_to_break_out_of_the_habit_loop

What is a dream?

The question that is still unanswered

Prianna Shah

Year 10

Why do human beings dream? What causes them? What do they mean? This is the debate that still remains one of the greatest unanswered questions. Whether it's because of stress, aspirations, phobias, or even the desire to venture into the unknown, why have we not found an answer? Maybe it's because there will never be one; maybe the subject is beyond our current knowledge or capabilities or maybe we are thinking too much and need to accept that dreams could be images exceeding our imagination.

So what do we know so far? Dreams are stories and images that our minds generate while we sleep. Normally, the average person will dream 3 to 6 times during their sleep, each one getting gradually longer as their sleep comes to an end. However, around 95% of the dreams are forgotten by the time the person wakes up. There are many possible assumptions for dreams but they are still a mystery for scientists and psychological doctors.

Scientists believe that dreams occur when the person is in the REM (rapid eye movement) stage of their sleep, when the brain activity is at its highest and closest to being awake. The REM is part of the sleep-wake cycle which is controlled by circuits that go through the brain

stem through the thalamus to the medial prefrontal cortex. The REM stage of sleep is the most memorable dream that takes place during the night. We do not dream as often in non-REM (NREM) sleep, which is more common than REM stage, and dream reports from NREM stage are normally less unusual. Scientists believe that the frequency and content of our dreams differ for everyone. For example, if you are woken up unnaturally then you are more likely to remember the dream as it's still fresh. On the other hand, if you wake up by yourself, then you are more likely to not remember the dream as you would have been through a few stages in sleep and consequently you lose your memory of the dream.

Recalling dreams also changes with age and health conditions. The older you are, the less likely you are to remember. Elderly people most likely do dream, yet because they have a weaker memory it is harder to report dreams when they awake. A part of the brain called the medial prefrontal cortex is related to dream recall and the content of dreams, this includes the people we meet, the monster we fight or run from, or the magical world we discover. The cortex is also responsible for memory and decision making so if this area of the brain is damaged, fewer dreams are recalled which could lead to less dreams or none at all. The importance of the cortex, memory and brainstem is shown when a person is asleep or awake, implying that dreams enhance our cognitive abilities.

However, psychologists believe that our dreams are due to the brain processing experiences we've had during

the time we were awake. These could be emotions, memories or the people we met. According to a study made in 2008, most people who are seen in dreams are known to the dreamer. The study found that 48% of characters were known by name to the dreamer, 35% were recognised by their social identity or relationship towards the dreamer, whereas only 16% of the people were not known. Psychologists also believe dreams are caused by other possibilities such as, calming the host, for protection and healing of the body (where dreams prepare the body for any unpleasant experiences the person may face) and even for conveying our desires or wishes. Another study found that dreams create amazing experiences for people whose desires are beyond their capabilities. Research shows people who had congenital diseases - e.g. paraplegic and deaf-mute - had dreams similar to non-handicapped persons. Meaning that what these people wouldn't experience during their waking they experienced and felt in their dreams: those who could speak, spoke; those who couldn't hear, heard; those who couldn't walk, ran. These results contributed to the theory that dreams are part of a 'protoconscious state', where they are in a virtual-reality model of the waking world.

There are five psychological approaches to dreams: 'psychodynamic', where it is believed that the behaviour shown is due to little control when unconscious so the dreamer's true feelings and desires are exposed; 'humanistic', where the dreams are more about the human being and how they deal with the waking environment; 'behavioural', this approach focuses on the visual observations; 'cognitive', this

focuses on the individuals analytical abilities and mental state; and lastly 'neuroscience' which concentrates on the internal conditions and processes of the body. Sigmund Freud was a psychologist who strongly believed in dreams. He said they were due to the experiences and desires one had. Freud believed there were two parts to dreaming, 'the manifest' and 'the latent'. The idea of 'manifest' describes the images and thoughts encountered in the dream, whereas the 'latent' describes the hidden meaning to what was experienced. Freud used his theory, that dreams represent our hidden desires, to help his patients and find out their wishes and deal with their undealt emotions. His idea massively contributed to the interpretations of dreams. Nonetheless, these are just theories and they had no scientific evidence to back them up.

Most of the time when you hear the word 'dream', you imagine something pleasing or unusual, but we also have 'nightmares'. These are also dreams but they are unpleasant, scary or unthinkable. For young children it might be a massive roaring lion chasing them in the jungle and for adults it could be falling off a building. Everyone can get them and it can be about anything, even about the movie you watched last night. They create feelings of terror, anxiety, fear or despair, which could lead to distress and depression therefore creating sleeping problems like insomnia. Some research says that extreme nightmares could either be caused by posttraumatic stress and anxiety, or they can happen to anyone, with any degree of scariness. Nightmares trouble children more often than adults. This is because

young children will find it harder to separate fantasy from reality when they are unconscious and believe more easily as they are naive.

In addition, many people wonder whether they can control their dreams and think what they want. This is possible. A 'lucid dream' occurs in the last stage of REM sleep where the dreamer knows they are asleep but has slight control of their dreams. How much you can control differs for each lucid dream. Most of the time it happens randomly but there have been some cases where people have reported that they are able to increase their ability to control their dreams. Cool, right?

In summary, 'What is a dream?' is still an unknown question that has aroused many theories from psychologists to scientists. It occurs in the REM stage of sleep and could be turned into nightmares or even be controlled to an extent. It is even possible that dreams could be part of a parallel universe! Isn't that amazing? This question has been around even before the 17th century and is still not fully answered. I believe that although dreams could be our desires and experiences, I also believe they might not be comprehensible to this world. So I leave you with the questions: why do we dream?; what causes them?; and what do they mean to you?

References:

<https://www.psychologytoday.com/gb/basics/dreaming>

<https://www.psychologytoday.com/gb/blog/sleep-newzzz/201501/why-we-dream-what-we-dream>

<https://www.medicalnewstoday.com/articles/284378>

<https://kids.frontiersin.org/article/10.3389/frym.2019.00140#KC1>

<https://en.wikipedia.org/wiki/Dream>

<https://www.sciencefocus.com/the-human-body/what-happens-when-we-dream/>

https://en.wikipedia.org/wiki/Rapid_eye_movement_sleep

<https://owlcation.com/social-sciences/Dreaming-Minds>

<https://www.ncbi.nlm.nih.gov/pubmed/25297479>

<https://onlinelibrary.wiley.com/doi/full/10.1046/j.1365-2869.2000.00213.x#b2>

<https://www.sciencedirect.com/science/article/abs/pii/S1053810010002394>

Plastic Oceans

How plastic affects our oceans

Serena Shah

Year 8

Plastic, what an amazing invention. Amazing, but deadly. Plastic is a major crisis today with catastrophic and lasting effects and that is why I have chosen to research and experiment about this topical crisis.

Almost everyone has some sort of plastic item in their house, and I have to admit, I use it a lot but I try not to use single-use plastic. Plastic is used to make wondrous and helpful things like containers for food, packaging for almost anything, medical equipment and it is even in most clothes. Most of us think, "what is the point in changing my ways? - one person won't make a difference". But, if you think about it, everyone has this mindset. If one person changes, then the people around them will change and so forth.

Why does this interest me?

A few years ago I went on holiday to Crete and saw a turtle conservation on one of the beaches. At first, I didn't know what all this was about but I wanted to find out and



soon learned it was a protected area for turtles to lay and hatch their eggs safely. Small wooden or metal structures were placed on top of the nest indicating to the public not to disturb it. One of my favourite animals is the turtle so I wanted to find out more about the harm that turtles face.

Hundreds of thousands of marine life and more than 1 million seabirds die each year from ocean pollution, ingestion or entanglement in marine debris. Marine debris is man-made waste



that is directly or indirectly disposed of in the world's waterways. This is based on the parts of the oceans and seas that researchers have discovered. How would you feel if I told you that we have explored less than 5% of the oceans? Frightening isn't it? The reason for this is because researchers have not been able to create equipment that is able to go down deep into the oceans.

Most rubbish reaches the seas via rivers and 80% originates from landfills and other urban sources. This waste, which is also consumed by fish, can entangle sharks and damage coral reefs. It tends to accumulate in areas of slow spiralling water and low winds along coastlines.



There are 5 major oceans worldwide. In the Pacific Ocean, the North Pacific is home to the “Great Pacific Garbage Patch”, a large area that is approximately the size of Texas with debris extending 6 meters down into the water column. It is estimated that this “plastic island” contains 3.5 million tons of rubbish and could double in size in the next 5 years. Just so you can visualise, Texas is the size of approximately 3 United Kingdoms! Now can you start to imagine the epic size of the problem.

Researchers have also estimated that for every 1 kilogram of plankton in this area, there are 6 kilograms of plastic. Common marine debris items include things like cigarette butts, tin cans, plastic bags and bottles, styrofoam, balloons, lighters, and toothbrushes. Discarded or lost fishing gear such as lines, nets and buoys are especially dangerous to sea life.

Plastic bags are petroleum-based and do not degrade. Sea turtles and other marine creatures mistake plastics and other rubbish as food (such as jellyfish) and ingest it. This mistake causes blockages within their digestive system and eventual death. Worldwide, as many as one trillion plastic bags are used each year. This equates to 100 million barrels of oil! Plastic toxins end up in fish, which end up on our plates, which end up inside our bodies.

Many turtles, that have been killed by consuming debris, had plastic bags or fishing line in their stomachs, some as small as half of a



fingernail. Sea turtles are especially vulnerable to the effects of consuming marine debris due to their bodies' own structure. They have downward facing spines in their throats which prevent the possibility of regurgitation. The plastics get trapped in their stomach, which prevents them from properly swallowing food.

Also, many sea turtle rehabilitation facilities commonly deal with "bubble butts," - you may think this is funny but actually it is very serious. What this means is that turtles float as a result of trapped gas caused by the harmful decomposition of marine debris inside a turtle's body. The gases cause the turtle to float, which leads to starvation or makes them an easy target for predators.

For several years I have developed an interest in plastic pollution and how it affects the world we live in and especially our oceans. I also have an interest in marine life and how plastic affects them. Turtles can experience the worst of this catastrophe.



I wanted to do a project, firstly, for my own benefit to really find out for myself how serious this situation has become. Secondly, it is important for me to make people aware so we can tackle this problem together.

It's the small acts that make big changes. Changes such as buying metal water bottles and reusing them daily, ensuring you have bags for life when you do your shopping, looking for plastic-free packaging and just always being mindful of your actions.

In CREST (CREative Science Technology) club, I carried out an experiment to prove that there is plastic present in water. I used felt to represent plastic because it degrades in the same way but just quicker. In the plain water, there were no 'plastic' particles whereas the felt water contained three 'plastic' particles. This was only one drop of the 100cm cube of water I tested. As you can imagine there would have been many more particles in the water proving that there is plastic present in our oceans, seas and also the water we drink.

These plastics are microplastics – plastics we cannot see with the naked eye.

What can we do to help?

It is important that our generation learn how to take care of our marine wildlife by learning how to:

- Reduce, reuse and recycle plastics;

- Use reusable cloth bags instead of plastic bags when shopping;
- Support local, regional and nationwide bans on plastic bags;
- Don't litter;
- Make sure to properly secure your rubbish to prevent any fly-away plastics;
- Don't release balloons into the air. They travel far and end up in our oceans being consumed by sea turtles that mistake them for food.

When I am older, I would like to become actively involved by helping marine conservation organisations to bring awareness of the dangers of plastic pollution. I would like to visit primary schools and show young children the dangers of losing precious marine life because of our actions.

If we don't fix this crisis now, it will become irreversible. This won't happen in a few centuries; it will happen in your lifetime.

Make the change.

References:

<https://www.crestawards.org/>

What Are We Made Of?

The Creation of Elements: Stellar Nucleosynthesis

Dilsha Shanmugarajah

Year 9

What is Stellar Nucleosynthesis?

Stellar nucleosynthesis is the common term for the nuclear reactions taking place in stars to form the nuclei of the heavier elements. It is the formulation of elements within stars from nuclear fusion reactions, through the combination of the protons and neutrons together from the nuclei of lighter elements. It has occurred since the original creation of hydrogen, helium, and lithium during the Big Bang. All of the atoms in the universe originated as hydrogen. Fusion inside stars transforms hydrogen into helium, heat, and radiation. Heavier elements are produced in diverse varieties of stars as they die or explode. This process investigates the natural abundances of the chemical elements within the cores of which stars change due to nuclear fusion reactions in the cores and overlying mantles of stars. These nuclear reactions are where fresh atomic nuclei are integrated from pre-existing nuclei or nucleons. Those stars evolve from the changes in the elements within. Those stars also lose most of their mass when it is ejected late in the stellar lifetimes, thereby enhancing the interstellar gas in the abundances of elements heavier than helium.

The History of the theory:

The idea that stars are able to fuse together the atoms of light elements was first proposed by Arthur Eddington in the 1920s. However, others could consider that the real credit for developing it into a comprehensible theory should be given to Fred Hoyle for his work during the aftermath of WWII. Hoyle's original theory included some notable differences from the present theory, most prominently that he had no belief in the big bang theory, and certainly did not agree with it, but rather that hydrogen was constantly being created within our universe.

In 1920, Arthur Eddington, with the support of the definite measurements of atoms by F.W. Aston, was the initial person who primarily suggested that stars obtained their energy from the nuclear fusion of hydrogen in order to form helium. In 1939, Hans Bethe analysed the different possibilities for reactions by which hydrogen is fused into helium, in the form of a paper entitled "Energy Production in Stars". He chose two processes that he considered to be the origins of energy in stars. The first one, the proton-proton chain, is the dominant energy source in stars with masses up to about the mass of the Sun. This proton-proton collision ultimately drives the fusion process that warms our planet. When one proton smashes into another, a few things can happen. For example, one of the protons in the new deuterium nucleus becomes a neutron. The second process called the carbon-nitrogen-oxygen cycle, or CNO Cycle, was also analysed by Carl Friedrich von Weizsäcker in 1938, and is more important in larger

stars. The CNO cycle is a catalytic cycle in which stars fuse hydrogen into helium in a six-stage sequence of reactions. These processes concerned the energy production with the capacity of keeping stars warm.

However, they did not address the creation of heavier nuclei. In 1946 that theory was introduced by Fred Hoyle with his argument that a collection of very hot nuclei could form into iron. In 1954 Hoyle matched that with a paper outlining how advanced fusion stages within stars would manufacture elements between carbon and iron in mass. It provided the idea of how the most adequate elements on earth had been synthesized from the initial hydrogen and helium atoms, making it apparent how those adequate elements increased their galactic affluence as the galaxy aged.

The Creation of Elements:

The first stage of nucleosynthesis occurred in the hot ancient universe where the presence of hydrogen, helium and traces of lithium were the outcome of the Big Bang which formed our universe. The explosion of a star has the ability to create elements, this is commonly referred to as supernova nucleosynthesis. The simplest kind of atom in the universe is a hydrogen atom which only contains a single proton in the nucleus along with electrons orbiting that nucleus. These protons are now believed to have formed when the astonishingly high energy quark-gluon plasma of the very early universe had lost enough energy that the quarks (which make up protons and neutrons) began bonding together to form protons and some neutrons. Hydrogen formed instantly

and even helium containing two protons in the nuclei formed in moderately short series (part of a process associated with Big Bang nucleosynthesis). As the hydrogen and helium atoms began to form in the early universe, there were some regions where it was denser in comparison to others. Gravity conquered such areas and ultimately these atoms were drawn together into massive gas clouds in the vastness of space. Once these clouds became large enough, they were carried together by gravity with enough force which caused the atomic nuclei to fuse, in a process which we now refer to as nuclear fusion. The result of this fusion process is that the two one-proton atoms (hydrogen atoms) have now formed a single two-proton atom (helium atom). The energy released through the duration of this process is what causes the sun to burn (the fusion tends to occur at a minimum temperature of 3 million kelvin).

Creating Heavier elements:

It takes almost 10 million years to burn through the hydrogen before things heat up and the helium begins to fuse. Stellar nucleosynthesis proceeds to generate heavier and heavier elements until iron is made. The burning of helium in order to produce heavier elements can continue for about 1 million years. It is largely fused into carbon through a triple-alpha process in which three helium-4 nuclei (alpha particles) are transformed. This process then combines helium with carbon in order to produce heavier elements. However, this process only applies to elements with an even number of protons. For example, the combinations would go in the order:

1. Carbon + Helium \rightarrow Oxygen
2. Oxygen + Helium \rightarrow Neon
3. Neon + Helium \rightarrow Magnesium
4. Magnesium + Helium \rightarrow Silicon
5. Silicon + Helium \rightarrow Sulphur
6. Sulphur + Helium \rightarrow Argon
7. Argon + Helium \rightarrow Calcium
8. Calcium + Helium \rightarrow Titanium
9. Titanium + Helium \rightarrow Chromium
10. Chromium + Helium \rightarrow Iron

Other fusion pathways are able to create the elements with an odd number of protons. Iron has such a tightly bound nucleus that there is no further fusion once that point is attained. Without the heat of fusion, the star collapses and explodes in a shockwave. Physicist Lawrence Krauss states that it takes around 100,000 years for the carbon to burn into oxygen; 10,000 years for the oxygen to burn into silicon, and only one day for the silicon to become iron and signal the collapse of the star.

What are we made of?

Astronomer Carl Sagan expressed that "We are made of star-stuff." Krauss agreed and announced that "every atom in your body was once inside a star that exploded; the atoms in your left hand probably came from a different star than in your right hand, because 200 million stars have exploded to make up the atoms in your body." Subsequently, through these ideas, we are assured that each atom which makes up every part of

our body and every part of our surroundings originated from the stars. Moreover, through the fusion of such stars, each element was formed.

References:

<http://philosophy-of-cosmology.ox.ac.uk/stellar-nucleosynthesis.html>

<https://www.thoughtco.com/stellar-nucleosynthesis-2699311>

https://space.fandom.com/wiki/Stellar_nucleosynthesis

Human rights

Women and Feminism

Sima Shokri
Year 9

Women's rights are rights that promote a position of legal and social equality of women with men. It formed the basis for the women's rights movement in the 19th century and feminist movement during the 20th century. Issues commonly associated with notions of women's rights include the right to bodily integrity and autonomy; to be free from sexual violence; to vote; to hold public office; to enter into legal contracts; to have equal rights in family law; to work; to fair wages or equal pay; to have reproductive rights; to own property; to education.

There are core concepts such as natural rights, equal employment, right to vote, property rights, right to health, right to education, reproductive rights, birth control, abortion, abuse during childbirth, child marriage, forced pregnancy, freedom from violence and many more. Even though many women are understanding and realizing the unfair treatment we are getting, many women in developing countries have a lack of legal knowledge so this is a major obstacle in the improvement of women's situation. We need to all help vulnerable women who do not know the existence of such laws. Therefore, states must popularise the laws, and explain them clearly to the public, in order to

prevent ignorance, or misconceptions originating in popular myths, about the laws.

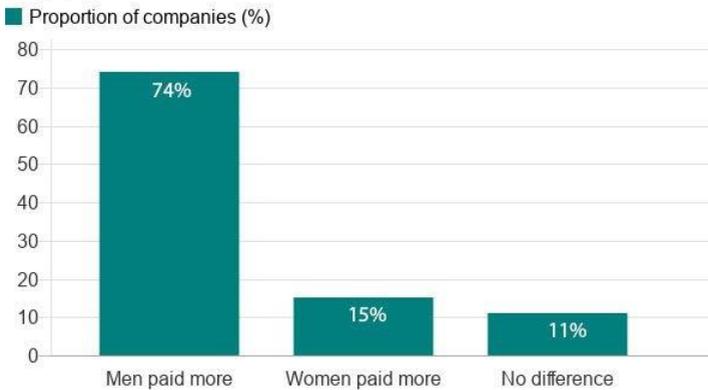
Some men say they need someone to make them their food, clean their house and clean their clothes- this is outrageous and barbaric! We are not robots; we have emotions and rights. We are not asking to be above or better than men, we want equality, this is feminism. Some also say if we have equal rights, there would be terrible trivial wars. Nearly all the documented wars were started by men. Additionally, men say we are emotional. Anyone can be emotional. This is bad towards men too. All men should be able to cry without being ashamed; we should not have stereotypes for any gender. Men can be just as emotional as women and being emotional is not a bad thing. We should be allowed to express our emotions out without worry. Men are four times more likely than women to kill themselves, and 77 percent of U.S. suicides are by men. Could this be because society expects them to be strong and tough, but they have too much pressure on themselves? Anyone can go through anything. All that is separating us is a couple chromosomes.

We have contributed a lot to society. Women played a HUGE role in the creation of the modern-day computer and especially in World War 1. Gradually, people started noticing the big impact women had on society. We all have a brain. It may work differently than a man's but it can give something valuable to humanity. Until we can work together and respect each other, the world will burn. We have the same abilities as men and should therefore have the same rights as men.

Women's rights help empower women. Women can access the same educational facilities as men through their rights. Women's rights help the society evolve. Women can advance through women's rights and as a result the larger society too is able to advance and evolve. Women's rights have protected women from torture, violence, sexual assault, inequality and without doubt there was and there still is a great need for women's rights.

74% of firms pay higher rates to their male staff, 15% of businesses with more than 250 employees pay more to women and only 11% of firms said there is no difference between the rates paid to either gender. The gender pay gap or gender wage gap is the average difference between the remuneration for men and women who are working. This was recorded in 2018.

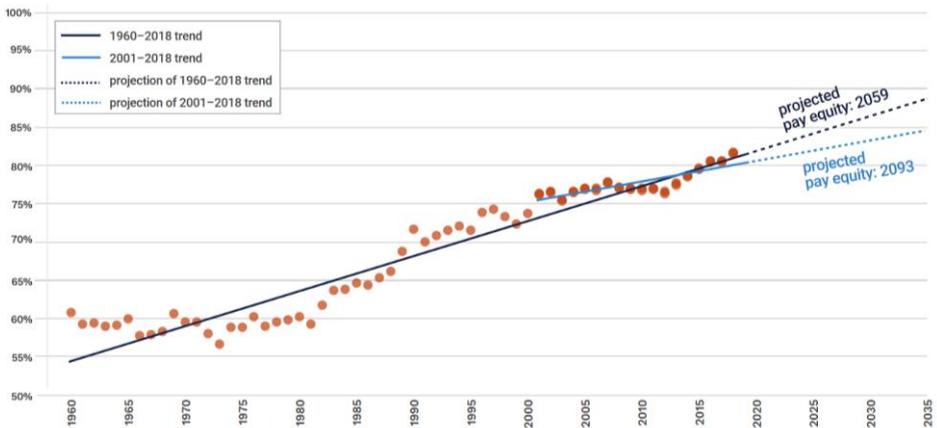
Almost three quarters of UK companies pay men more than they pay women



Source: Government Equalities Office data for the 1,047 companies with more than 250 employees that have reported so far.



It is the result of many factors, such as occupational segregation, bias against working mothers, and direct pay discrimination. Furthermore, such things as racial bias, disability, access to education, and age come into play. Consequently, different groups of women experience very different gaps in pay. It is also the result of many factors including race and ethnicity, disability, access to education and age. It is said that women make 82% of what men earn and at the current rate of progress, the gender pay gap will not close until 2093- we cannot and will not wait that long!



Gender inequality is a massive problem but there is also discrimination of women with certain races or ethnic backgrounds. We need to all support each other but women need to especially support other women, as we do not have equality with men. Men are higher in

society and women are not, across the globe and especially in developing countries. That is why we need to empower other women and tell them that they are not alone, this crisis will be solved. Where we are from or what colour we are should not affect our pay, what we do in our workplace and how much we try, support, and contribute in our workplace should affect our wages instead. We are all human and we have no differences between us.



Many influencers that are not white say they are treated differently on brand trips. In an event, non-white influencers have said that they arrived for the trip and were “separated” and assigned to a different wing of the house of white influencers. One of them said that they

were “excluded” from activities and photo shoots. Some people disagreed and said that they should be grateful for attending the event, but that doesn’t mean there aren’t very real inequities for people and it doesn’t mean that even ambiguously structured, fast-fashion companies should not be held responsible for these inequalities. Perhaps brands should feel grateful their clients are still coming on these trips. This is also another example of inequality, instead of women empowering other women as they are going through gender inequality, some bring each other down.

Technology is advancing, which means social media is a big part of our life these days. Social media has positive sides but negative sides too, possibly changing the way we think. Society can have an influence on many people and their lives, and social media helps this to happen. What I am trying to imply is that social media is in our daily life now, and sadly expectations are increasing. Body image, self-esteem and the influence of society has many negatives. Social media has rapidly become a platform that portrays strong views on how we should look, that we as individuals often validate and perpetuate. The more we look at “perfect” images of others and then find “imperfect” features in ourselves, the more unsatisfactory and awful we feel. The more negative our body image, the higher the risk for extreme weight or body control actions occurs. Such as:

- Extreme dieting
- Extreme exercise compulsion
- Eating disorders

- Extreme or unnecessary plastic surgery
- Using steroids for muscle building

Physical appearance says very little about our character or value as a person. Intolerance of body diversity has a lot to do with prejudice of size and shape in our culture. Being thin, toned, and muscular has become associated with the hard-working, successful, popular, beautiful, strong, and the disciplined. Being fat is associated with the lazy, ugly, weak, and lacking in willpower. This is wrong! There is no "perfect" body because every body type and shape is different and has its own balance. Being fit and healthy is important. Real beauty comes from within. Character, values, and skills are attributes one must seek to acquire or develop. If you feel good about yourself on the inside then, no matter what, you - are - beautiful! The media must recognize that size prejudice is a form of discrimination. Shape and size are not indicators of character, morality, intelligence, or success. The media persistently presents faultless, slim women in commercials that children grow up with the idea that that is how every girl and woman should look. Society should not create these assumptions especially on children (adults too), who might believe this and think this is correct.

"Teach your daughters to worry less about fitting into glass slippers and more about shattering glass ceilings." –
Unknown

I love this quote. It screams feminism and how women should challenge society.

“While living in Tanzania for a year, I watched the women and girls in my home collect water from the stream every day, go to school, wash the laundry by hand, go to the market, spend hours cooking meals and hold a job. These were some of the strongest women I have ever met, yet they were weak in the eyes of Tanzanian society because they lacked a Y chromosome – and for this, women are not given equal chances as men”

This paragraph is from a website by Kristen Fuller, M.D. It conveys how women do so much, even more than men, but they are still treated worse and they still do not have equal chances. We are all human, why are women treated differently and so much worse?

Another paragraph that makes me feel furious and sorrowful is:

“While working in India, I witnessed the house girl undergo reconstructive surgery because she was lit on fire by her husband for disobeying his orders”

Men cannot do this, nobody can. This is torture and completely unfair. How is the world not seeing this and not acting? The only things we see a lot in the media are about celebrities and their drama, things we do not need and are a waste of time. There are desperate and suffering women who need our help, why is the media not doing anything to help?

Girls today are not taken seriously, and they are seen as an object. In society women are overlooked when

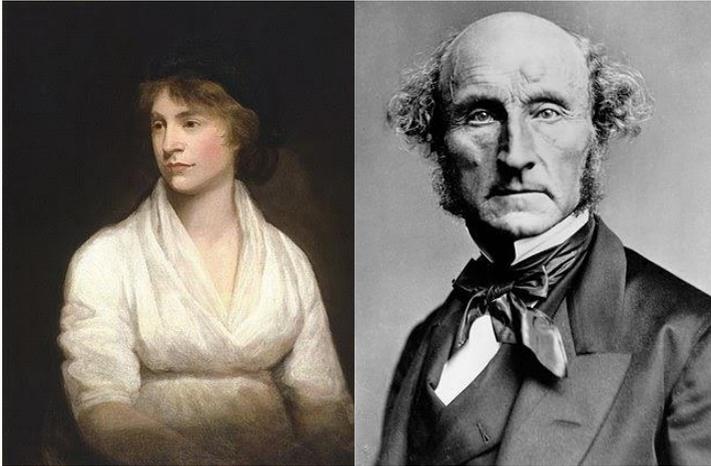
talking about politics, important issues, or sports. We have the same capabilities as men, so why not see us equal? Girls and women are portrayed as fragile, weak, and delicate creatures. Women are held back, whereas men are given all these chances to shine through all the women. Women currently hold 4.6 percent of 500 CEO roles, and only 14 percent of women are executives. This is an example that shows how we are capable to take ANY role, but we are just held back and put down in society, especially on social media (or on any type of platform). It is vital that women's voices are heard, they cannot – and should not – be silenced. If one woman uses her voice, more will feel confident and join in, we can do this together.

Women are low in society because they do not get the same chances as men in jobs. For example, in developing countries they must stay at home, cook, look after the kids, and make food. In some countries women still do not get to have an education, therefore the majority of the world's poor are women, it is not their fault, it is society's fault. Even if women get to work, they get lower wages. 75 percent of women in developing regions are in the informal economy, where they are less likely to have employment contracts, legal rights, or social protection, and are often not paid enough to escape poverty. This is unequal and should not be happening. Women do at least twice as much unpaid care work, including childcare and housework, as men – sometimes ten times as much, often on top of their paid work. The value of this work each year is estimated at least \$10.8 trillion – more than three times the size of the global tech industry. Women work longer

days than men when paid and unpaid work is counted together. That means globally, a young woman today will work on average the equivalent of four years more than a man over her lifetime. Increasing women's economic equality would reduce poverty for everyone. Countries with higher levels of gender equality tend to have higher income levels, so we can reduce poverty globally too! We need to support women's access to resources, raise women's voices, end violence against women and girls and strive for gender equality in emergency response. Why have we come to a point where women struggle to use their voice whereas men are naturally heard, and they do not have to even try to use their voice? Women are put down so much in society. We do not need to "find" a voice because we already have one, we need to find a way to use it and make our voices be heard. Also if a man does something to a woman, the woman is blamed and gets asked "What did you do?" instead of "Are you ok?" and the man gets away with it, but nobody considers that the woman has emotions! There are so many examples of men getting away with things they should not be doing and women getting blamed for things they do not even ask for (men treating them badly).

Equality benefits everyone, feminism matters because it is fighting for equal rights for all genders. Women should be treated equally to men not because they are better than them but because they are humans. Women need to be given the same opportunities men are given and to be protected fairly. Human rights should be given to women; this is how feminism started. This idea was put forward by some philosophers in the 18th and

19th centuries such as Mary Wollstonecraft and John Stuart Mill.

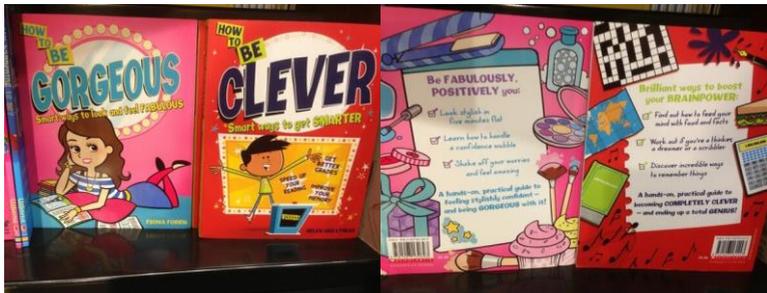


"Women's rights are human rights" is a phrase used in the feminist movement. On September 5th, 1995, Hilary Rodham Clinton, the First Lady of the United States, gave a speech at the United Nations Fourth World Conference on Women in Beijing and the name of the speech was this quote. In the speech, Hilary Rodham Clinton used the phrase within the longer, bidirectional refrain, *"human rights are women's rights and women's rights are human rights."*

Education for girls is still a big problem around the world. The following statistics were recorded in 2018: There are currently 31 million girls of primary school age that are not in school. A girl in Sierra Leone is more likely to be sexually abused than to attend high school and 1 in 9 girls in the developing world are married

before the age of 15. There are 4 million more girls out of school than boys and 3 countries have over a million girls not in school. There are 774 million illiterate people in the world and two-thirds are female. To see how unlikely it is for a girl to go to school, is devastating. We should all have a right to education.

Society plants images into children's brains, even with toys and books! I found some sexist toys and books that may influence the way children think and see genders:





These items are very stereotypical because for example the books are suggesting that girls are supposed to be pretty and perfect, which is a physical feature, whereas boys are supposed to be clever and hardworking, which is a mental trait. Can't girls also be clever? Is this book telling girls that looks are more important than skills because that is undoubtedly wrong! The cleaning toys are also bad because the toy box says, "it is girl stuff/ girls only!" which already sets an incorrect mindset for children. How can our future generation be better if they grow up with these sexist toys and have the wrong mindset without even realising? It is the same idea with the cooking toy, these children grow up thinking only girls should cook (as it says "girls only" on the toy box). Finally, the last photo is basically implying the laptop for boys is better as it has more functions, even though it is three euros more. The laptop for girls has half of the functions that the other laptop has. It is also pink which is stereotypical because some people think pink is the only colour girls like whereas, we can like any colour we want, and boys can like pink too. Children get affected naturally and companies should be more careful about what they sell. They should not be selfish and greedy for

money (if they make two versions of a product, for example one for girls and one for boys, the company obviously would earn more money than just selling one product, which should be unisex).

Stereotypes affect people as it lowers their self-acceptance because they may not feel comfortable in their bodies. This can lower your self-esteem and result in health problems as people might starve or push themselves too hard. This puts your entire wellbeing at risk. This may cause violence as physical ability is crucial for the stereotypical male. They might feel pressured to prove they are “real” men, which may lead to violence. To fight gender stereotypes, we need to support each other, speak up and we need to all be educated, especially on the topic of gender stereotypes and gender roles. Gender equality can lead to worldwide peace, but we need to act! Why are women viewed weak and men viewed strong? We have different physical features but mentally, we are all capable of being strong, clever, and hardworking. We are all human! We all have emotions. We should all be equal. We should all have rights. We should all have the same opportunities. We should all be treated with the same respect.

It is weird how people think pink is the colour for girls and blue is the colour for boys. In the beginning of the 19th century blue was considered the more feminine colour, while pink was considered a more masculine colour due to its perceived power. This is also stereotypical because they wanted the “masculine colour” to still be more powerful, decided, and stronger.

Blue was seen more of a feminine colour because people saw it as dainty and soft, just “like a girl”. We should not label genders with colours because there are so many colours to choose from and we should be allowed to like whatever colour we want! Some girls naturally like pink, some boys naturally like blue, but if they do not there should not be a problem and they should not be forced to like any colour or play with what their gender “should” play with. Children should be able to play with any toys, like any colours and like any jobs they choose to desire, this is a right anyone should have. At the start of the women’s liberation movement, girls started wearing more masculine clothing and stopped wearing pink. Feminists believed that clothing constricted women from being equal to males. This might have been when pink became more associated with females, since they refused to dress their daughters in pink clothing. Gender stereotyping starts the moment the gender of the child is known, for example buying pink clothes for girls and blue for boys. Hopefully raising awareness of stereotypes like these can help eliminate rigid gender roles in future generations.

A thing that really concerns me is something we normally do not even realise, as we are so used to stereotypes- which is very bad. I was looking at the meaning of woman and the meaning of man. I came across quiet sexist meanings and examples.

woman

[ˈwʊmən] 

NOUN

women (plural noun)

an adult human female.

"a jury of seven women and five men" · [More]

synonyms: lady · girl · member of the fair/gentle sex · female · matron · dowager · lass · lassie · colleen · yorga · chick · girly · filly · biddy · bird · bint · popsy · besom · wife · [More]

• a female person associated with a particular place, activity, or occupation.

"one of his sophisticated London women"

• a peremptory form of address to a woman.

"don't be daft, woman!"

• a female worker or employee.

• a female who is paid to clean someone's house and carry out other domestic duties.

"a daily woman"

synonyms: cleaning woman · cleaner · domestic help · domestic · maid · charwoman · char · daily · Mrs Mop

• a man's wife, girlfriend, or lover.

"he wondered whether Billy had his woman with him"

synonyms: girlfriend · girl · sweetheart · partner · significant other · inamorata · fiancée · wife · spouse · helpmate · helpmeet · consort · lover · mistress · paramour · [More]

man

[mæn] 

NOUN

1. an adult human male.

"a small man with mischievous eyes" · [More]

synonyms: male · adult male · gentleman · youth · guy · fellow · geezer · gent · [More]

2. a human being of either sex; a person.

"God cares for all men"

synonyms: human being · human · person · mortal · individual · personage · soul

3. *informal* (the Man)

a group or person in a position of authority over others, such as a corporate employer or the police.

"they've mastered their emotive grunge-pop without haggling with the Man"

4. a figure or token used in playing a board game.

VERB

1. (of personnel) work at, run, or operate (a place or piece of equipment) or defend (a fortification).

"the helpline is manned by trained staff" · [More]

synonyms: staff · crew · occupy · people · operate · work · use · utilize

2. *archaic*

fortify the spirits or courage of.

"he manned himself with dauntless air"

EXCLAMATION *informal* NORTH AMERICAN

1. used, irrespective of the sex of the person addressed, to express surprise, admiration, delight, etc., or for emphasis.

"wow, like cosmic, man"

As you can see, in one of the definitions of woman, it says:

A female who is paid to clean someone's house and carry out other domestic duties.

“A daily woman”

Why is this even a thing?

Why is this in the definition of woman?

Is this how low we are in society, that one of our definitions is maid while one of the “man definitions” is something high in society? For example:

“A group or person in a position of authority over others, such as a corporate employer or the police”

Furthermore, another illogical definition is:

A peremptory form of address to a woman.

"Don't be daft, woman!"

This is another purposeless definition nobody needs.

Is this implying that men can be dictatorial towards us?

Nobody should address anyone like this but directing it just towards women is sexist- especially as the quote is rude, calling a woman daft! People might think this is ok because it is in the definition of woman, but it is not because it is disrespectful.

Not to mention, in the last definition, it sounds like women are a property of men and we are just an object:

“A man's wife, girlfriend, or lover”

We do not belong to anybody! Also, a similar definition is not even in the man meaning which may make people think that only are independent, but women are only man's wife, girlfriend, or lover. This should not even be in the definition of a woman!

Moreover, in one of the man definitions it says:
(Of personnel) work at, run, or operate (a place or piece of equipment) or defend (a fortification).

"The helpline is manned by trained staff"

Also:

Fortify the spirits or courage of

"He manned himself with dauntless air"

This creates an impression that only men are strong, good at business skills, independent but women are daft, cleaners of houses, objects, property of men and can be treated badly.

I wanted to include these definitions, which was an idea that made me wonder how we are letting people get away with these sexist comments that we might not even recognize. We need to be careful, without any changes, we cannot expect society to change. Things like this change the way women are viewed and treated. We need to all respect each other and treat each other equally.

Women are important and can make a big impact on society. For example, the suffragettes and suffragists really helped Britain in WW1. They went through so much agony for women to get the vote. They were tortured, force fed and beaten to death. Why? Because they just wanted the right to vote. They just wanted one thing, one right, equality, freedom and they were treated like aliens. This shows how low women were, especially then, in society.

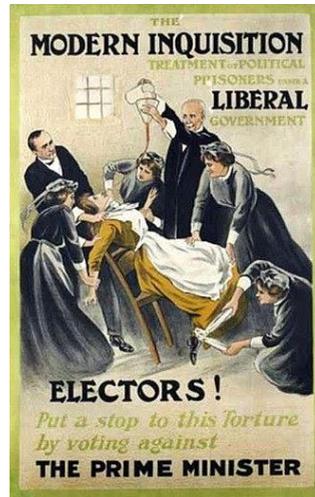
A 1910 poster by Alfred Pearce for the WSPU showing a suffragette being force-fed.

Some amazing feminist role models that got their voice heard and helped society are: Sylvia Plath, Beyoncé Knowles-Carter, Audrey Hepburn, Aung San Suu Kyi, Katharine Hepburn, Malala Yousafzai, Margaret Cavendish, Princess Diana, Emma Watson, Maya

Angelou, Elizabeth Garret Anderson, Michelle Obama, Emma Thompson, and Oprah Winfrey. It would be amazing if you could re-search at least one feminist who changed the world and learn what they did- they are very inspiring.

Women and men should have equal rights in the areas of respect, education, speech, and the right to vote. The only way we can overcome the gender gap in both developing and developed countries is for our societies to start teaching men, from a young age, how valuable and how strong women are.

Men need to overcome their ignorance and chauvinistic ways, but men are not the only culprits. Women are also guilty of allowing this. So many young girls believe beauty is in the man's eyes and that we must marry and have children to be successful in society. So many



women use their bodies to be accepted and will go to extreme lengths to obtain this beauty. Women need to stop allowing other women to act like this. We also need to stop competing with each other and start lifting each other up.

Our new generation can help change the world, make it fairer and more equal. For this to happen everyone needs to be educated correctly and get taught about these important topics to make the future better. Thank you.

"Feminism is not about making women strong. Women are already strong. It is about changing the way the world perceives that strength." –G.D. Anderson

References:

https://en.wikipedia.org/wiki/Women%27s_rights

<https://hubpages.com/politics/why-should-women-have-rights>

<https://www.bbc.co.uk/news/business-43129339>

<https://www.aauw.org/resources/research/simple-truth/>

<https://www.buzzfeednews.com/article/tanyachen/in-fluencers-of-color-say-they-are-treated-differently-on>

<https://livelifegetactive.com/blog/body-image-self-esteem/>

<https://www.psychologytoday.com/us/blog/happiness-is-state-mind/201805/feminism-changing-the-way-our-society-views-women>

<https://medium.com/@622840/how-women-are-portrayed-in-todays-society-cd0b5881e479>

<https://www.oxfam.org/en/why-majority-worlds-poor-are-women>

<https://simple.wikipedia.org/wiki/Feminism>

https://en.wikipedia.org/wiki/Mary_Wollstonecraft

https://en.wikipedia.org/wiki/John_Stuart_Mill

https://en.wikipedia.org/wiki/Women%27s_rights_are_human_rights

<https://inspiredadventures.com.au/blog/why-girls-the-importance-of-girls-education/>

<http://therepresentationproject.assemble.me/blog/details/5880/harrods-removes-sexist-childrens-books-in-response-to-tweets>

https://www.huffingtonpost.co.uk/2014/01/09/it-s-girl-stuff-cleaning-set-is-the-most-sexist-toy-in-town_n_7353062.html

<https://www.anorak.co.uk/379575/reviews/gender-neutral-marks-and-spencer-introduces-the-most-sexist-childrens-toys.html>

<https://genderspectrum.weebly.com/the-history-of-pink-and-blue.html>

<https://en.wikipedia.org/wiki/Suffragette>

<https://www.psychologytoday.com/us/blog/happiness-is-state-mind/201805/feminism-changing-the-way-our-society-views-women>

<https://www.lifehack.org/articles/communication/12-best-female-role-models-everyone-should-look.html>

Coordination and Response in the Human Body and Living Organisms

The Nervous System and Responding to Stimuli

Kaya Shrestha

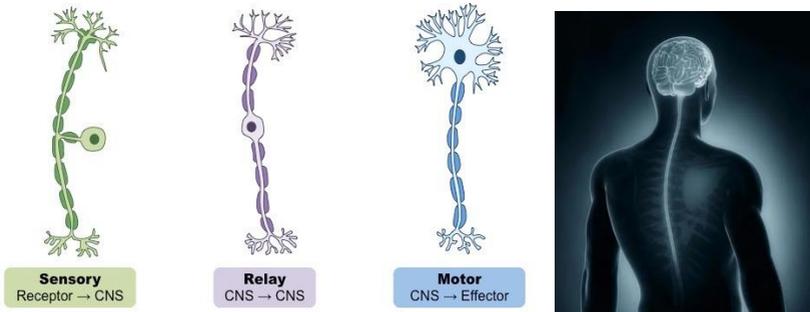
Year 9

Animals increase their chances of survival by responding to changes in their external environment, for example by avoiding places that are too hot or too cold. They also respond to changes in their internal environment to make sure that the conditions are always right for their metabolism (all the chemical reactions that go on inside them). Plants also increase their chances of survival by responding to changes in their environment. Any change in the internal or external environment is called a stimulus.

Receptors detect stimuli. Receptors in the sense organs (the eyes, ears, nose, tongue and skin) are groups of cells that detect external stimuli. For example, rod and cone cells in the eye detect changes in light. Effectors are cells that bring about a response to stimuli. They include muscle cells and cells found in glands, for example the pancreas. Effectors respond in different ways - muscle cells contract, whereas glands secrete hormones. Receptors communicate with effectors via the nervous system, the hormonal system or sometimes both.



The nervous system is made up of all the neurones (nerve cells) in your body. There are three main types of neurone - sensory neurones, relay neurones and motor neurones. The central nervous system (CNS) consists of the brain and spinal cord only. When receptors in a sense organ detect a stimulus, they send electrical impulses along sensory neurones to the CNS. The CNS then sends electrical impulses to an effector along a motor neurone. The effector then responds accordingly. The job of the CNS is to coordinate the response. Coordinated responses always need a stimulus, a receptor and an effector. Because neurones transmit information using high speed electrical impulses, the nervous system is able to bring about very rapid responses. Without receptors, neurones and effectors you won't be able to respond to your environment.

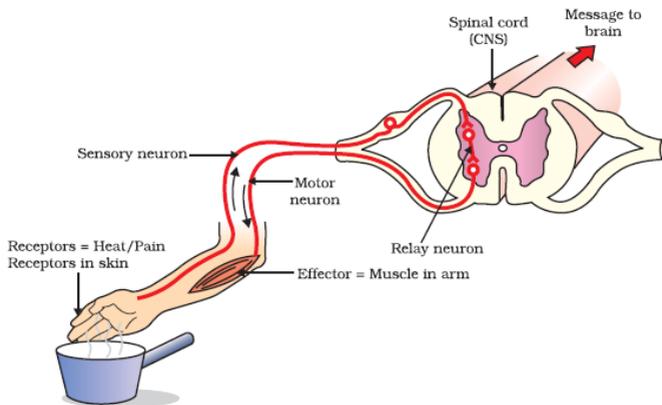


The connection between two neurones is called a synapse. The nerve signal is transferred by chemicals called neurotransmitters which diffuse across the gap. These chemicals then set off a new electrical signal in the next neurone.

The brain can decide how to respond to stimulus quickly, but sometimes waiting for the brain to make decisions is too slow - this is what reflexes are for. Reflexes are automatic responses to certain stimuli - they can reduce the chance of being injured. For example, if someone shines a bright light in your eyes, your pupils automatically get smaller so less light gets into the eyes - this stops them getting damaged. Or if you get a shock, your body releases the hormone adrenaline automatically - it doesn't wait for you to decide that you are shocked. The route taken by the information in a reflex (from receptor to effector) is called a reflex arc.

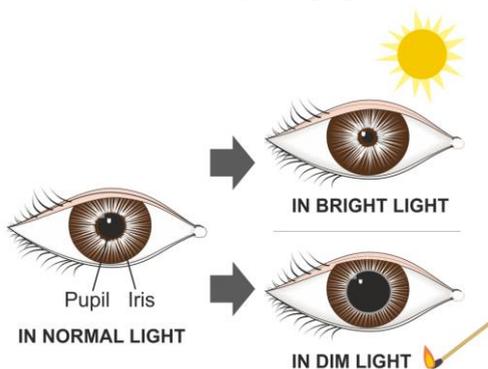
The neurones in reflex arcs go through the spinal cord or through an unconscious part of the brain. When a

stimulus (for example, touching a hot object) is detected by receptors, an impulse is sent along a sensory neurone to the CNS. In the CNS the sensory neurone passes on the message to another type of neurone - a relay neurone. Relay neurones relay the impulse to a motor neurone. The impulse then travels along the motor neurone to the effector. The muscle then contracts and moves the part of your body touching the hot object away. Because you don't have to think about the response (which takes time) it is quicker than normal responses. Reflex arcs don't involve the conscious part of the central nervous system - this is what makes them very fast and highly effective.



Very bright light can damage your eyes, in specific, the retina - so you have a reflex to protect it. Very bright light triggers a reflex that makes the pupil smaller, allowing less light in. The light receptors detect the

bright light and send a message along a sensory neurone to the brain. The message then travels along a relay neurone to a motor neurone, which tells circular muscles in the iris to contract, making the pupils smaller. The opposite process happens in dim light. This time, the brain tells the radial muscles to contract which makes the pupil bigger.



The other way to send information around the body (apart from along nerves) is by using hormones. Hormones are chemicals released directly into the blood. They're carried in the blood plasma to other parts of the body but only affect particular cells (called target cells) in particular places. Hormones control things in organs and cells that need constant adjustment. Hormones are produced by glands. They travel quite slowly and tend to have relatively long-lasting effects. Each different hormone in the body has its own job. For example, adrenaline is a hormone that readies the body for a 'fight or flight' response, it increases the heart rate, blood flow to muscles and blood sugar level.

Conditions in your body need to be kept steady so that cells can function properly. This involves inputs (substances going into your body) and outputs (substances leaving). Homeostasis is what keeps conditions balanced, it is the maintenance of a constant internal environment.

All enzymes work best at a certain optimum temperature. The enzymes in the human body work best at about 37°C and so this is the temperature your body tries to maintain. A part of the brain acts as a thermostat. It's sensitive to the blood temperature in the brain and it receives messages from the temperature receptors in the skin that provide information about skin temperature. Based on the signals from these receptors, your central nervous system can activate the necessary effectors to make sure your body temperature stays just right.

The skin plays an important role in maintaining body temperature. When your body becomes too hot lots of sweat is produced - when it evaporates it transfers energy from your skin to the environment cooling you down. Blood vessels close to the surface of the skin widen - this is called vasodilation. It allows more blood to flow near the surface, so it can transfer more energy into the surroundings, which cools you down. When you're too cold very little sweat is produced. Blood vessels near the surface of the skin constrict (vasoconstriction), which means less blood flows near the surface, so less energy is transferred to the surroundings. You also shiver, which increases your rate of respiration, which transfers more energy to

warm the body. Exercise does the same. Hairs stand on end to trap an insulating layer of air, which helps keep you warm.

References:

<https://medicalxpress.com/news/2017-03-nervous-tumor-growth.html>

<https://ib.bioninja.com.au/standard-level/topic-6-human-physiology/65-neurons-and-synapses/stimulus-response.html>

<https://informativoscrisolos1.blogspot.com/2016/06/clasificacion-de-los-nervios-segun-su.html>

<https://www.medicalnewstoday.com/articles/284152>

<https://quizlet.com/425619945/biology-gcse-reflexes-diagram/>

<https://www.scienceabc.com/humans/what-is-the-pupillary-light-reflex.html>

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Coordination Group Publications Ltd*

Inspiration and equality

History

Anushka Srisuthan

Year 8

I have always looked up to Emmeline Pankhurst. She was a British activist who was born in 1859 (Manchester). Emmeline Pankhurst had always believed that men and women would have equal rights. She did not like the idea of men only being able to vote and women not having the same respect as men did. When men had more prestige than women, it was commonly known as the Patriarchal Society.

Patriarchal society was a society which was controlled and ruled by men. Men had control and power. In the Elizabethan era, when it came to acting men dominated women. Whilst men were supposed to go to work, women were expected to stay at home and manage household duties in the family. When it came to acting women were not allowed on stage during the Elizabethan era. Since women were forbidden from acting on stages, young men would have to perform female roles.

This led Emmeline Pankhurst to start a Political Union and a Women's social with her daughter. She urged women to join her organisation and stand up to those who disagreed with them. She encouraged women to apply for jobs in factories so men could compete for

their places. The suffragettes knew that it was necessary to take action so people would listen to them.

Emmeline Pankhurst's actions were inspiring as she cared about women and how they were treated. Emmeline was imprisoned many times but that never stopped her from fighting for women's rights. She was resilient and was determined to make her point clear. Equality is about ensuring that every individual has the same opportunity to make the most of their life and talents.

Nowadays, women can speak freely without being criticised for their gender. Women such as Malala Yousafzai had dreams that girls would be able to have a chance to read and write. A few later she became well-known when a Taliban gunman shot her in the head when she was promoting education which was not related to religion. Her story has inspired many people and shows how she was determined and not afraid to fight for what she thought was right. Seeing these women protest and fight shows me the passion and confidence they must have had to show people what gender equality really means.

'I'm not fine.'

It's time to start a conversation.

Simran Varia

Year 10

(Disclaimer: the following article contains some experiences (none of which are my own) which can be difficult to read due to the references to mental health, depression, eating disorders and anxiety so if any of these topics are a trigger to you, please read with caution or with a trusted adult.)

What I have learned is that usually when someone says everything is okay, it isn't. When they say they do not need help, they do. When they say they are fine, they're not. I have one question for you. Do you believe them? If you answered yes, I think you should think again. As a society it is our moral obligation to *stop* believing them because it is easier that way and to acknowledge or at least realize the pain behind that mask and more importantly; do something about it. We have to stop sitting around watching those we love disintegrate without us even knowing. They are crying out for help but we are all too blind to notice it. We have to stop ignoring the evident problem that more and more people are succumbing to societal pressures. They're giving up whilst putting up a strong, almost too strong, front. I ask you now, do you still believe them?

Mental health. Everyone has it. And it's fragile. Very fragile. One comment and it could break, one insecurity and it could shatter. I don't understand why we as a

society, a community, a family avoid such an apparent matter. Are people ashamed? By avoiding the matter, we make it a forbidden subject when what we need to be doing is normalizing it; talking about it. People need to know it is okay to be sad. It is okay to be lost. It is okay to feel misunderstood. It is okay to feel nothing. As a community we should be lifting each other up not letting each other drown. Let me ask you something. Do you believe we all have a purpose, a reason? I do. I think we are all here to make the world a better place. That is my goal in life- I want to improve the lives of those around me. You know why? We only get one. One life. That's one chance to make a difference. This is how I want to make my difference; I want people to stop being afraid of talking about depression, eating disorders, anxiety and PTSD. It's killing us and we are letting it; we have to take a stand. It is time to fight back... if anything, it's long overdue.

One word- empathy. According to the Oxford dictionary empathy is defined as 'the ability to understand and share the feelings of another.' In our society it seems as though we are unable to grasp this concept because if we were then we may not even need to be having this discussion. But we are. And the problem is that we do not understand, we do not understand what it feels like to have depression unless we have it. We do not understand what it feels like to have an eating disorder unless we have one. But that is not because we are incapable of understanding; it is because we are incapable of trying. And that has to change right now.

What does it feel like to have depression? It feels like you're drowning when every single other person is breathing. Depression is losing yourself... to yourself. It's being numb, numb to emotions, life, and everything else. You experience so much pain that you can no longer feel it although you know it's there. You lose the will to live because you have nothing to live for anymore. Or do you? It certainly doesn't feel like it. That's the thing about depression and unlike other hardships as long as you have a will you can find the strength to get through it, but depression eats you inside until you cannot see the end let alone find the will to get there. You cannot get out of bed in the mornings. Why? Because when you do you have to endure another meaningless day in your permanent state of exhaustion. And the one thing more exhausting than depression is pretending you don't have it. Why do people pretend? Is it fear of not being understood? Or accepted? Is it a shame? I'll tell you what I think it is. They don't want to burden the lives of those around them. It's selfless but it's killing them inside. And you know, I think it's okay to be a bit selfish sometimes. Sometimes, it's even necessary.

Back to the word empathy. Imagine yourself feeling all those things, imagine if it was you. Sounds hard does it not? That's because it is. We have a duty to be empathetic and to walk in the shoes of others to help them. Not just them too, anyone who needs it. Anyone and everyone. And we have to fulfil that duty. There are people out there, people you know and love, who are assaulted. Bullied. Tormented. Some to the point that they no longer care for their own life, to the point that

they don't even want it. What are you going to do about it if you cannot understand what that feels like? If you do not attempt to realize the pain it causes them? People need help. They need your help. They need my help. They need *our* help. And we have no idea how to help them if we do not understand them. Why? Because it has to come from a place of love, of care, of understanding. And it's hard. There is no point in sugar-coating it; getting help for someone else is hard which is exactly why you have to care- you'll only do something for someone if you do. It's hard because they deny their need for help either because they don't want it or they don't think it'll work, but it's *always* worth a try. No matter what. Someone you love may have confided in you because you earned their trust, and getting them help breaks that trust. You cannot avoid that. But I have a question. What would you do for someone you love? I know I'd do anything. Anything. And often the right thing to do is the hardest. Think about that, if you ever have to make this decision.

Help; It's a confusing subject. Most people who need it don't want it and most people who want it won't ask for it. Sometimes help hurts people, it feels like a violation of privacy and to be truthful it is. It's invasive. It's unwanted. It's rejected. But you know what else it is? Vital. Answer this- what's more important, life or privacy? Recovery or trust? Happiness or secrets? You may think protecting someone else's secret is helping them because it's what they want but it isn't. It doesn't help at all. What are you doing for someone by allowing them to suffer alone? By letting them feel like no one cares enough? Keeping their secret and protecting their

trust is *not* what makes you a good friend. Helping them get better makes you a good friend. Showing them you care enough that you would sacrifice their trust in you for their life makes you a good friend. That raises the question, how? How can you help them? *Listen*. This is key, they need to be ready to talk and they need someone to talk to. *Be calm*. It's upsetting, it's heart breaking, to find out someone you love is struggling. But if you are not strong, how can they be? *Be patient*. They need you. And they need your time, your understanding and your love. It's not easy opening up, so give them the chance. *Don't assume*. You may think you know how they feel but you don't. You may think you have it all figured out but you don't. You can't. But what you can do is be open to their emotions and give them reassurance not judgement. *Be loving*. They are desperate for love. And you have to be there for them no matter what. Show them you love them; show them you care. You may be asking, is that enough? Only you can be the judge of that. But let me tell you, often it isn't and we as a society need to be less afraid of seeking professional help. There are people out there who dedicate their lives to helping people. To help you. Me. Us. People need that and we all know it so let's stop being afraid of saving lives. Once and for all.

Mental health is a topic people avoid. People even try to avoid it. And that has everything to do with the fact that it's complicated. Sometimes all a person needs is to be told they are loved. And sometimes it takes a lot more. But it doesn't matter how lonely, sad or insecure you are because mental health *can* be fixed. But only if we have that mindset- only if we want to fix it. As a society we

can only make a difference if we take action, but the point is we *can* make a difference. We can be the change we want to see. So let's do so. I encourage you to remind those you care for that you love them. I encourage you to tell them that they are enough. I encourage you to make them smile. Because you have no idea how much it can mean to someone to hear that. So be kind. And be aware, because people around you, need you. *You* make a difference. Remember that.

If you are struggling with depression, an eating disorder or any other mental illness please do not be afraid to contact one of the following helplines suggested by the NHS:

Anxiety- <http://www.anxietyuk.org.uk/>

Mental health- <http://www.mentalhealth.org.uk/>

OCD- <http://www.ocdaction.org.uk/>

Young minds- <http://www.youngminds.org.uk/>

References:

<https://www.psycom.net/depression-what-depression-feels-like?slide=8#slide>

<https://www.mind.org.uk/information-support/guides-to-support-and-services/seeking-help-for-a-mental-health-problem/helping-someone-else-see-help/>

Meaningful Marketing

A Utopian World

Deaana Varsani

Year 8

Definition of a utopian society: Utopia is the name commonly given to an imaginary land where everything is supposed to be perfect. The name utopia refers particularly to a society with ideal economic and social conditions. It is a land where all men and women are equal, prosperous, educated, wise and happy. In utopia there is no poverty, crime, tragedy, etc... The name utopia comes from the Greek words meaning *no place*. People often apply the word *utopian* to plans or reform that they consider impractical and visionary.

To sum it up... *A Utopia is a perfect place where nothing bad happens.*

Characteristics of a Utopian Society:

- Information, independent thought and freedom are promoted.
- Citizens live in a harmonious state.
- The natural world is embraced and revered.
- A figurehead or concept brings the citizens of the society together , but not treated as singular.
- Citizens embrace social and moral ideals.
- Individuality and innovation are welcomed.
- Citizens are truly free to think independently.
- Citizens have no fear of the outside world.

- Society evolves with change to make a perfect world.
- Society is an illusion of a perfect world.

Utopia isn't just idealistic fantasy - it inspires people to change the world and take it into a new direction!!

Climate breakdown, mass extinctions and extreme inequalities threaten the Earth's rich tapestry of life and leave our own fate increasingly uncertain. At a time of such social, political, economic, ecological upheaval, it's natural to dream of a utopian world in which these problems are non-existent, in fact, people have been doing it for centuries.

Such visions are often dismissed as nothing more than pointless flights of fancy yearnings for impossibly perfect societies. Nevertheless, these assumptions are largely incorrect. Utopianism is the lifeblood of social change and has already inspired countless individuals and movements to change the world for the better.

Utopianism is in fact a philosophy that encompasses a variety of ways of thinking about or attempting to create a better society. It begins with the seemingly, simple yet powerful declaration that the present is inadequate and that things can be otherwise. Present in communities, social movements and political discourse, it critiques society and creatively projects futures free of the strongholds of the time. It simply embodies a longstanding human impulse towards self-improvement.

This idealistic world manifests in countless historical examples of those that have dared to challenge the status quo and assert that things can - and indeed, must - change. Take Martin Luther-Kings's dream of a world free of racial segregation for example, or the strivings of the suffragettes for gender equality. Malala is a warrior of words; she has demonstrated how one girl really can change the world. Hypatia's writing and teachings were important, showing the world for the first time that women could be great mathematicians. Noor Inayat Khan was a truly international person - Indian, American, British and French - who fought not for one country, but for a cause: to bring freedom to Europe. Along with so many others, including you!!!



*"If people were silent,
nothing would change."*



"I have a dream"



"Reserve your right to think, for even to think wrongly is better than not to think at all."



"We are here, not because we are law-breakers; we are here in our efforts to become law-makers."



"I wish some Indians would win high military distinction in this war. It would help to build a bridge between the English and the Indians."

In shattering the perceived rigidity of the present, utopianism paves the way for change. Perfect worlds may not be realisable or even desirable but that doesn't mean we should shy away from imagining and striving for a better future. Societies without extreme inequality and environmental degradation are surely within the bounds of possibility. Whether in the form of a creative novel, a social movement or a political proposal, dreaming can help us achieve beyond the imaginable.

This is not just the Future... It's our story to tell: It will be the story of brave leaders, talented artists, gentle healers, committed teachers and gifted problem-solvers. It will be the story of people who bravely face everyday challenges, overcome difficulties or danger, and give up their lives to follow their dreams and aspirations in making the world a better place.

The picture below is a painting I created for my English subject. I have given this illustration the title of Meaningful Marketing because, I have this conception that every individual across the world should have free access to all the luxuries that one acquires, for example (YouTube, Beats, Google, Virgin, Nike, McDonald's and many more). This is a perfect illustration of the world we now live in, we are surrounded by all these diverse renowned brands and modern technology has evolved in so many different ways. This illustration connects brands with a positive mission to improve the quality of one's life. This can have a positive impact on the environment, societies and communities, as well as how

they improve an individual's quality of life (such as happiness, health, mood, self-esteem etc).



References:

<https://studylib.net/doc/7328170/dystopian-fiction--article-for-notetaking>

My High Flyers Journey

What I learnt from it.

Thumara Wanniarachchige

Year 8

When I first became a High Flyer I was filled with excitement and inspiration. It was a completely new experience for me, and I thoroughly enjoyed it. Becoming a High Flyer pushed me out of my comfort zone and encouraged me to do things that I had never done before. Everything in my High Flyers journey taught me new things.

When we received the parallel curriculum there was so much to do, it was slightly overwhelming, but I was determined to do as much as I could. This taught me how to manage my time and to try and be more organised. At first, it was difficult to balance homework and the High Flyers work, but after some "Practice" I did it. Being a High Flyer isn't just about doing the work, but it's also about learning new skills, becoming a better student at Northwood College and becoming a better person. High Flyers helped me grow out of some of my bad habits. It also taught me that I have to push myself, and that failure is never the answer. I was supported through every step of the way. I also learnt to work cooperatively and individually. I tried loads of new things on the curriculum, and even if it didn't work out, I still continued to try over and over until I got it right. We will never learn without making mistakes and errors.

Mistakes are only learning curves, building blocks to success.

This journey with all the High Flyers has opened up endless opportunities for us to see the subjects we do from many different views. It also helps us learn outside the classroom and encourages independent learning. It has taught me a lot of new things about each subject that I do. It also taught me to try new clubs and sports. It taught me to think outside the box, to push myself out of my comfort zone. It taught me to think in ways I might have never thought before.



NORTHWOOD
COLLEGE

FOR GIRLS

GDST

BRIGHT SPARK

At Northwood College for Girls, we believe that hard work and perseverance, more than any innate gifts or talents, is the main driver for success and happiness.

We use the term 'High Flyers' at Northwood College for Girls to recognise that our girls all have the ability and potential to achieve.

By adopting a growth mindset, all students can improve and develop their abilities.

The High Flyers programme is designed to challenge our students to demonstrate their effort by engaging in extracurricular projects outside of the direction of their subjects.

Bright Spark is a compilation of the extracurricular work which High Flyers at Northwood College for Girls have completed this year.

This book showcases the love students have for a wide range of subject areas and should serve to inspire any girl at Northwood College to believe that anything is possible if you put your mind to it.