

Arthur Mellows Memos

CONTENTS

Book review.....2/3

Film review..4/5

Music review..6/7

Arthur's anonymous ... 8

Saving the planet
9/12

Guide to Brexit...
12/14

Schrodinger's cat
15

What's Jacob Cook-
ing? 16

Almost 20 years
ago 17

School events ... 18

Welcome to this year's first newsletter. In this year's newest edition, we thought about all the good things from last year and have come together, as a team, to bring you book reviews, and news and some spooky recipes for Christmas! This is for everyone at AMVC, so we've tried to include books that are available in our library and our first print of Arthur's anonymous. As a team, we want it to be engaging and informative; we've enjoyed making it and we want you to enjoy it as well!

In this edition you can expect to see:

- Film review: Films you should be looking out for.
- Book review: Find out what our teachers are reading!
- Music: Arthur Mellow's greatest hits
- Arthur's anonymous: Our year's advice
- Environment: How can you do your bit to save the planet?
- Brexit: Our guide to what's going on
- Science/linguistics: Dead or alive?
- What's Jacob Cooking: Our first recipes to give you that Christmassy feel
- Almost 20 years ago: Something unheard of!

For our first edition we have tried as a team to bring the best we can, we really hope you enjoy as much as we have writing and editing!

Let's jump right into the articles!



Movie Review



Hello and welcome to the newsletter's termly film review! Here you will find reviews of popular films that have been released in recent years and highly rated, which I recommend you watch. I have selected them according to their genre, popularity and rating. For me, this half term's are a must-watch.

Spider-Man: Far from Home

This Sci-Fi action movie was released into cinemas in 2019 and is the sequel to the previous Spider-Man film, Spider-Man: Homecoming which was released in 2017. It is the 23rd film in the Marvel Cinematic Universe (MCU). The plot involves Peter Parker/spider-man (played by Tom Holland) trying to restore order after a 'blip' which caused a lot of people to physically disappear for 5 years. With characters like Mysterio (played by Jake Gyllenhaal) getting in his way, Peter tries to keep the fact that he is Spider-man a secret, however MJ (played by Zendaya) reckons she knows his secrets. The supporting character Happy Hogan (played by John Favreau) also works very closely at Spiderman's side, helping him face some of his toughest challenges. It cost \$160 million to make this movie and has been rated 4/5 stars by over 200k critics, which is why I would recommend it to everyone.

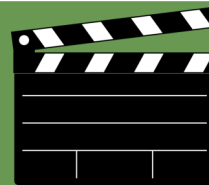


IT Chapter 2

This American supernatural horror film (released in 2019) is the sequel to the 2017 release IT. Both movies are based on the 1986 novel by Stephen King. After being defeated by the members of the losers' club, the evil clown Pennywise, also known as the dancing clown, (played by Bill Skarsgård) returns 27 years later to terrorise the town of Derry Maine, once again. Other main characters in the film include Jay Ryan as Ben Hanscom and James McAvoy who plays the character of Bill Denbrough. Stephen King is an American author of horror, supernatural fiction, suspense and fantasy novels. His books have sold more than 350 million copies, many of which have been adapted into feature films, miniseries, TV series and comic books. The iconic character of Pennywise is one of the most recognised horror characters. With his pale skin and his evil smile, he is really terrifying, and can jump out at any moment unexpectedly. This film has been highly rated and is very popular, so for me, it is a great watch.

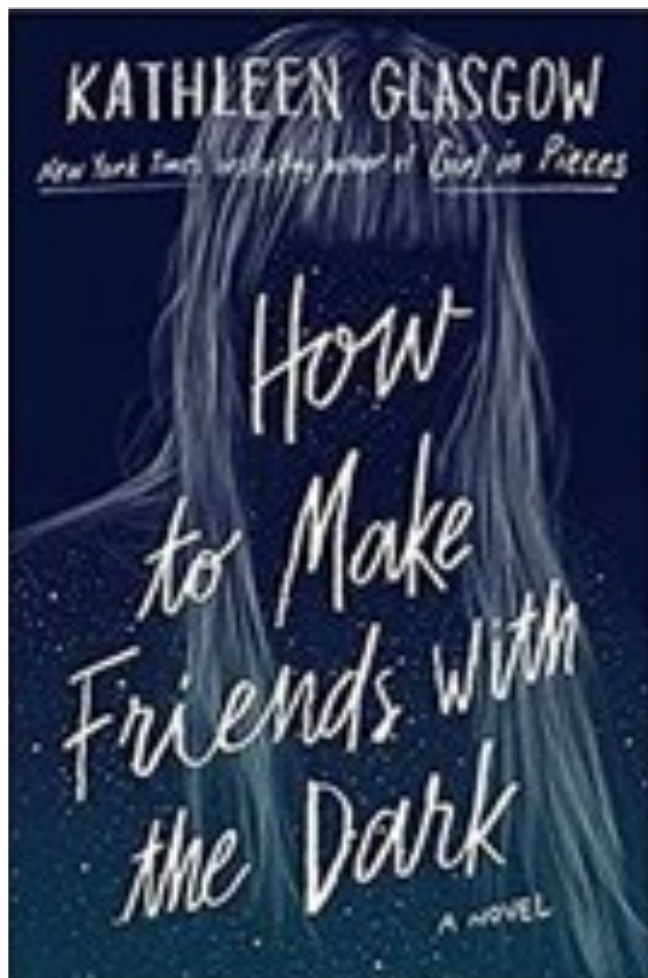


Movie Review



Wonder

This drama/family movie is based on the bestseller written by R. J. Palacio. It is a heart-warming story of August Pullman (played by Jacob Tremblay), a boy with facial differences who enters the 5th grade, attending a mainstream elementary school for the first time after being home-schooled by his mother Isobel. Whilst battling with bullies and struggling to make friends, August (Auggie) attempts to be viewed as just a 'normal' fifth grade kid. The film was released in 2017 and other cast members include Owen Wilson and Julia Roberts, who play August's parents, Nate and Isobel. There are some upsetting moments throughout the movie so make sure you have tissues at hand! The movie cost \$20 million and has been rated five stars by thousands of tough critics. It is one of the best films I've ever watched and I highly recommend it.



Sixth Form Book Club

How to Make Friends with the Dark by Kathleen Glasgow

The book club session looked at this book. It is available for you to borrow from the library.

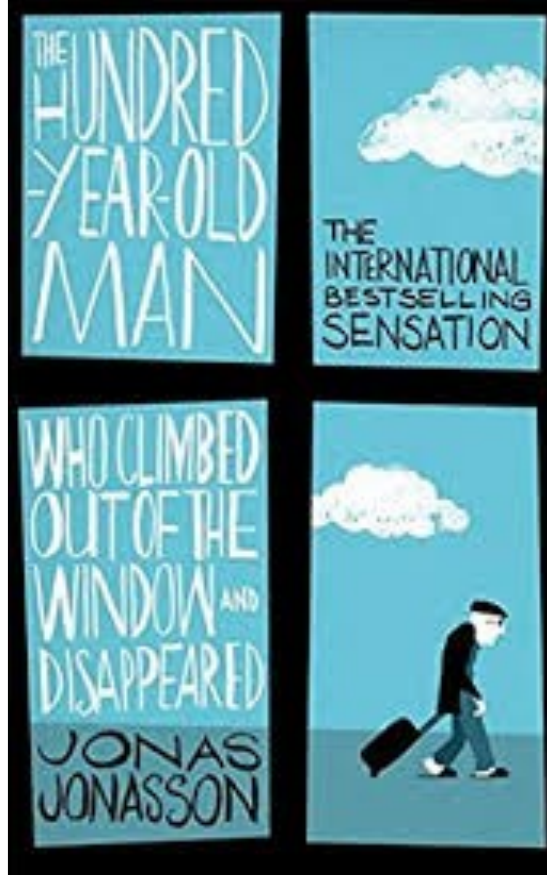
On April 9th this year this book was published, and it tells the journey of Tiger, who experiences a terrible loss when her mum dies. She struggles as she blames herself, thinking of the argument they'd had and the calls Tiger ignored from her mum. Her life changes drastically and she is desperate to stop the pain, turning to self-harm and experiencing suicidal thoughts. Things for Tiger get worse as she finds out about the secrets her mum was concealing about her dad. Tiger ends up in juvenile detention after acting out, but it's being there that puts her on the path to getting better.

Riveting Reads



Mrs Price: The Hundred-Year-Old Man Who Climbed Out of the Window and disappeared by Jonas Jonasson

This book is a novel published originally in Swedish in 2009, then released in English in 2012. It focuses on an old man called Allan who is about to celebrate his hundredth birthday, however, instead of attending his party, he decides to climb out of the window and travel as far as possible. This decision leads to him being chased by criminals after an encounter he had at a bus stop. The novel includes flashbacks of incredible events in Allan's life: such as saving General Franco in the Spanish Civil War, helping build the atom bomb in the USA, helping the Kuomintang fight against the communists in China, and travelling- from China- back to Sweden on foot, meaning he has more adventures on the journey, and even when he returns to Sweden. From there, he ends up travelling all over the world and meeting many more famous historical figures from the last century.



Mrs Norris: The Testaments by Margaret Atwood

This book is the sequel to Margaret Atwood's dystopian novel "The Handmaid's Tale", which was published in 1985. It is a story set in the near future about women being held under control in a dictatorship, set in New England, which has become a totalitarian state. The main character is a handmaid called Offred, and we hear her perspective on present events but also past events which explain how there are now no rights for women.

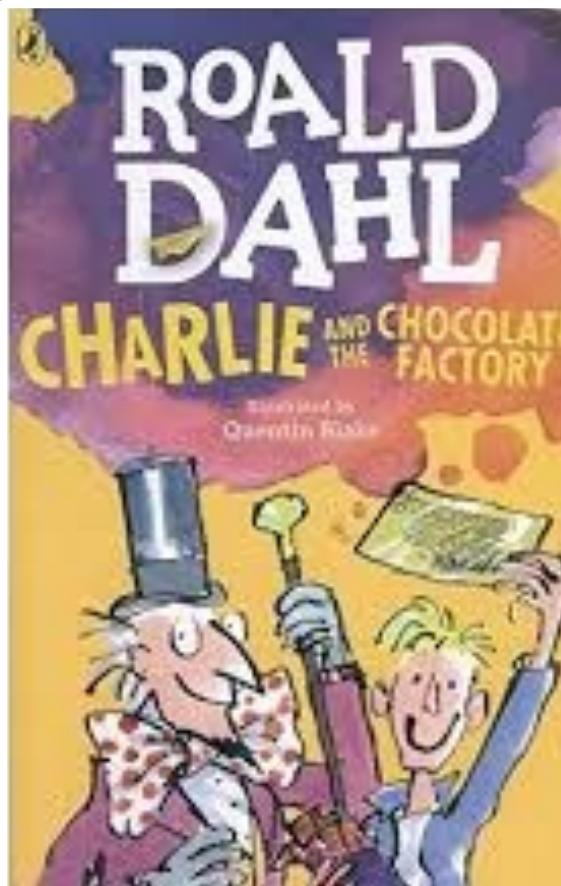
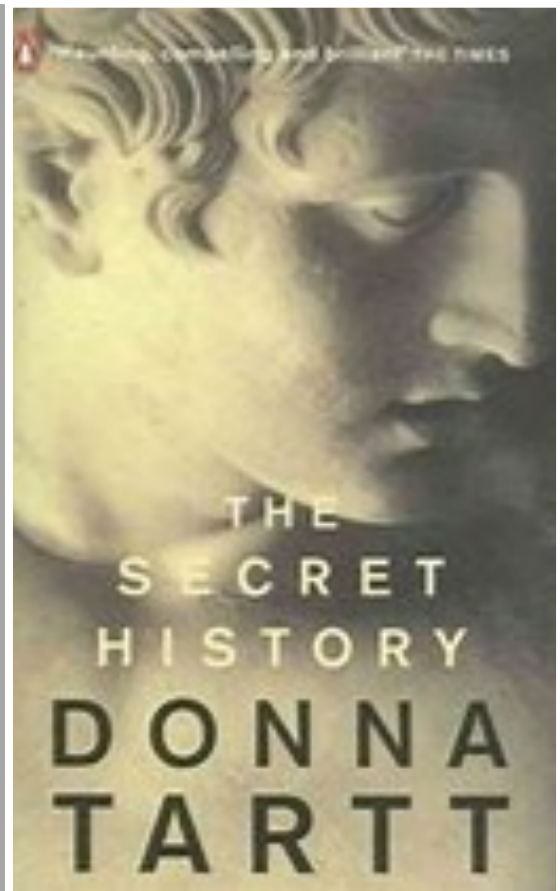
The sequel- "The Testaments"- was recently published: on the 10th of September this year. It is set 15 years after the end scene of "The Handmaid's Tale" and includes the narrative of a character from the first book called Aunt Lydia, and Offred's two daughters: one who was captured and taken from her and is now being prepared to become the wife of a commander, the other who had been smuggled out of the dictatorship therefore has no knowledge of her sister, or the dictatorship where she came from.

Riveting Reads



Mrs Rhodes: The Secret History by Donna Tartt

A thriller published in 1992, this book tells the story of a group of students at a college in Vermont. It is an inverted detective story- which is a fictional book that begins with the confession of a murder, including the name of the murderer but withholds more specific information from the reader for a dramatic revelation. This story is narrated by the main character, Richard, who committed the murder of a former friend and is reflecting on the events leading up to it years later. As the book progresses, more of the story is revealed and we learn more about Richard, who he is, and how this crime happened. The story also focuses on Richard and his group of friends at the college who become involved with drugs and alcohol, which causes problems for Richard because he gets caught in a web of lies and murders, making things increasingly difficult for him.



Mr Jones: Charlie and the Chocolate Factory

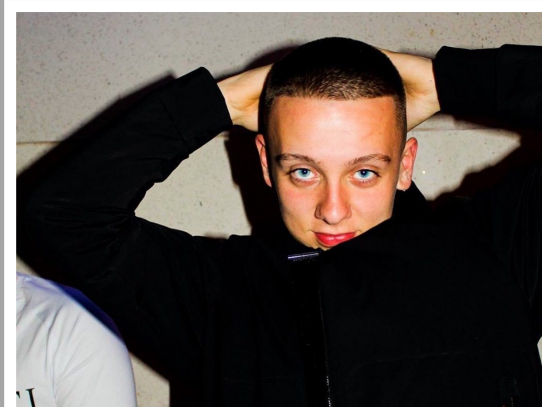
Originally published in 1964, this book is extraordinarily famous. Although it is a children's book, it appeals to readers of all ages because of the storyline, characters and imagery: Charlie Bucket comes from a poor household but one day he is given a rare opportunity when he receives a golden ticket tucked inside a chocolate bar, meaning he is one of five children that can visit Willy Wonka's chocolate factory for its reopening. The other children are eliminated from the tour in hilarious and mysterious ways which leads to more good luck for Charlie.

Music Review



Top charts:

- Dance monkey—Tonnes & I
- Buss down—Aitch (ft. Zie Zie)
- Ride it—Regard
- Lose you to love me—Selena Gomez
- Highest in the room—Travis Scott



Song title	Artist	How many weeks they were no. 1 in
I don't care	Ed Sheeran & Justin Bieber	8
Someone you loved	Lewis Capaldi	7
Senorita	Shawn Mendes & Camilla Cabello	6
Dance Monkey	Tones And I	5
Take me back to London	Ed Sheeran (ft. Stormzy)	5
7 rings	Ariana Grande	4
Old town road	Lil Nas X	2
Vossi bop	Stormzy	2
Break up with your girl- friend I'm bored	Ariana Grande	1
Beautiful people	Ed Sheeran (ft. Khalid)	1

Music Review



Throwbacks

2019 is drawing to a close and we're moving into a new decade. Here are some songs that you have probably forgotten about turning 10 years old in 2020.

- ♦ **All I do is win—DJ Khaled (ft. Ludacris, Rick Ross, T-Pain, Snoop Dog)** This song has actually been used as an anthem for various sports teams such as: the Auburn Tigers football team and the New York Knicks baseball team.
- ♦ **Replay—Iyaz.** This single stayed top for 3 weeks and the music video has over 150 million views. It was written by Iyaz with the help of Sean Kingston, Jason Derulo and sold 106,000 copies in its first week.
- ♦ **Airplane—B.O.B (ft. Hayley)** The song topped number 2 on the US billboard Hot 100 in America and number 1 in the charts in New Zealand and the United Kingdom.
- ♦ **Just the way you are—Bruno Mars.** The single topped the charts in: US, UK, Australia, Canada and New Zealand. In 2011 alone it sold over 12.5 million copies.
- ♦ **Baby—Justin Bieber (ft. Ludacris)** by 2013 the single had 3.9 million digital downloads US alone. It is currently the 35th most viewed video on YouTube and the 2nd most disliked video on YouTube.



Music festivals you need to visit...



Glastonbury- the line up for 2020 is still unknown but many big names such as: Stormzy, Miley Cyrus, Years & Years, Lizzo, Billie Eilish, Janelle Monae and Koffee attended last year.

Tickets = £265 plus £5 booking fee for whole weekend (not including accommodation)

Date = 24/06/20-29/06/20

Wireless (London, Finsbury Park)- the line up has not been released however artists that attended included: Cardi B, Ella Mai, Tyga, Fredo, Travis Scott, Deno and Not3s.

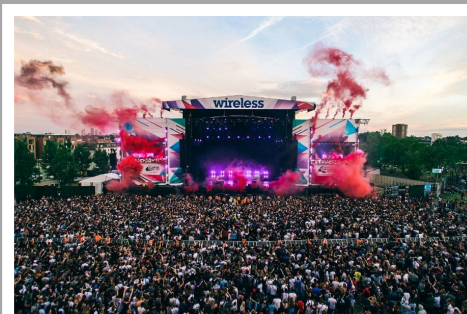
Tickets = £70 per day

Date = 03/07/20-05/07/20

Leeds (Bramham park)- the line up for 2020 is still unknown but many big names such as: Foo Fighter, Yungblud, The 1975, Juice Wrld, Charli XCX, Post Malone, Billie Eilish, Twenty One Pilots and AJ Tracey.

Tickets = £221.40 for the whole weekend

Date = 27/08/20-30/08/20



Arthur's Anonymous



Trying to settle into your new school? Worried about exams? Not sure what options to pick? Stressed about A-levels? Having trouble in school or with friends? We're here to help. At Arthur's anonymous you can email us any issues you may be having, and we will try our best to find a solution for you. Anything you tell us is completely confidential; it stays between us.

Year 7 – Starting a new school can be scary and you may feel lost & a bit alone sometimes, but everyone else is going through the same thing. Although you should be working hard all through school, year 7 is also the ideal time to make new friendships & develop skills & confidence. Talk to people in your lessons, it may make you nervous, but you have nothing to lose. Join clubs, as you'll gain new interests, meet others, & increase your confidence. Bonus tip: be nice to your teachers. You don't have to be the brightest person in the class but remember that you'll be at this school for 5+ years!

Year 8 – Year 8 is an uneventful year in terms of school stuff; however, this doesn't mean that you shouldn't be working hard in your subjects. Ask for help from teachers and peers if you're stuck, and don't leave your classroom without understanding everything you've been taught. This year can also be a rocky time for friendships because you're meeting new people in your sets, so if arguments happen or you become upset, you can go to the pastoral team or Ms Kamminga to talk. Don't keep it to yourself - it'll make you more upset.

Year 9– This year, you should aim to work your hardest. Complete homework, study for tests, & show your teachers your potential. In 12 months, you'll be studying for your GCSEs and your sets in KS4 are determined by your work in year 9 - your sets can actually influence how well you do at GCSE! You should also try to develop interests in your subjects as towards the end of this school year, you'll have to choose 4 additional subjects to study for the next two years.

Year 10–You're at the start of a two-year course and the work that you do now could be the difference between a happy or sad results day. From someone who did pretty well at GCSE, but who could have done better; make sure you understand everything as you go. If you're aiming for high grades, making revision notes as you learn will help massively in Year 11. Flashcards, mind-maps, posters, and diagrams are great resources to make because you can use them repeatedly through KS4. However, don't tire yourself out. Work hard, but don't overwork - you'll do better if you take it easy this year.

Year 11- Year 11 was by far the most stressful time for me. You'll have so many exams, so much homework, and so much pressure to do well & to know what you want to do after year 11. Mock exams are coming up and it's important to revise for them so you can see areas of weakness in your subjects. On the other hand, don't be put off by your mock exams. If you've done badly, you have a lot of time to improve - as long as you put in the proper effort. If you didn't do well in year 10, you may want to start light revision now & increase the workload gradually; it'll help in the long term.

General advice– School and friends are important, but you're the most important. Look after your health, both physically & mentally, and aim to think positive. Join clubs, become more active, and be more conscious in how you treat people. If you feel like you need to talk to someone, do it. There are many people you can talk to and if you don't want to be verbally open, contact Arthur's Anonymous and we'll listen & give advice. Remember - everything's anonymous.



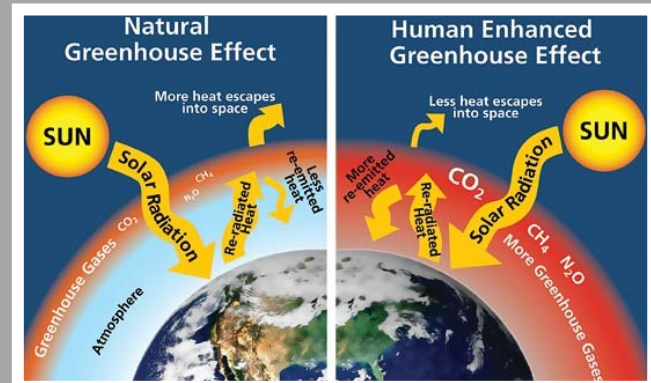
Saving the Planet



The world is changing more rapidly than ever before, however these changes have led to damaging effects on the environment. The climate crisis is growing, and it poses a great threat to life on our planet- of the environment and of people.

The science behind global warming...

Carbon dioxide levels are higher than they have ever been in the last 3 to 5 million years. The Earth has been made increasingly hotter as much less heat escapes the atmosphere than it would naturally, due to the increased amount of greenhouse gases in the atmosphere as a result of human activities, leading to more heat being re-emitted and reflected back down to Earth, and less heat escaping into space. Although the natural greenhouse effect (the same process but where less heat is re-emitted) is essential for survival as it keeps the planet warm so life can exist, this greatly enhanced



The greenhouse effect- natural vs human enhanced

The effects of global warming...

On nature and people...

Over the last one and a half centuries, the average global temperature has increased from 13.5 degrees Celsius to 14.4. This may not sound like a drastic increase however it has had a vast effect. According to WWF, it is likely that global warming is responsible for most species extinctions this century. An example is the coral reefs, which can lose their colour- become “bleached”- if an increase of 1 to 2 degrees Celsius is present in ocean temperatures for several weeks, and if they are bleached for long amounts of time, they die. In 2016 and 2017, the Great Barrier Reef suffered from bleaching which killed around 50% of its corals. A rise in sea temperatures of 1.5 degrees Celsius would cause loss of 70-90% of all corals, and at 2 degrees Celsius would lead to the loss of all corals, which would have a negative impact on wildlife and also the half a billion people around the world who rely on fish from coral reefs as their main source of protein. Another effect on the oceans is significant warming- even at 1 degree Celsius there is a large risk because the oceans are less able to absorb carbon dioxide and therefore prevent it from escaping into the atmosphere since they have become more acidic. This has happened because of the higher temperature and carbon dioxide concentrations in the oceans than there usually is.



The Great Barrier reef- before and after coral bleaching

Saving the Planet



Global warming has caused other effects, like loss of ice and rising sea levels, droughts, heatwaves and floods, which can cause a number of serious problems that will change life for the environmental world and therefore the lives of people and also success of industries around the world. In the Arctic, over the last 100 years air temperatures have increased by 5 degrees Celsius, and in the next few decades, the WWF report that recent data shows almost no summer sea ice cover will be left in the region in the next few decades. The Antarctic ice sheet is extremely important considering it makes up 90% of all freshwater on the Earth's surface, and global sea level rise is being contributed to by parts of the west Antarctic Peninsula which is one of the fastest warming places on Earth. The effects on freshwater include more droughts and floods, and rainfall will become more frequent in areas that already experience large amounts of precipitation whereas dry areas will receive less rainfall. Glaciers are melting- this is proven because of Glacier National Park in Montana, USA: the park had 35 glaciers large enough to be named active in 1966, but in 2017 only 25 of these were left. This will affect freshwater ecosystems in mountainous regions and also over a billion people who are dependent on glaciers for their drinking water, sanitation, agriculture and hydroelectric power. The Himalayan glacier provides water to several Asian rivers, so they could be at risk of drying up.

On industry too...

Many large-scale changes are predicted to happen around the world if climate change continues. In **Europe**, this includes skiing tourist resorts in the Alps at risk of closing or having shorter seasons because of less snow. However, the agricultural industry may benefit because crop yields are expected to increase, but they will need more irrigation. Across the UK, temperatures are likely to increase which will increase the amount of people at risk from heat related diseases- such as skin cancers- and heat strokes. However, winters may be colder which means more winter-related deaths will happen. More heatwaves are predicted for Europe which will increase the number of deaths related to the heat, but the deaths related to colder weather will be at a lower number.

Africa would be likely to have higher temperatures and less rainfall- leading to drought- which will negatively affect food and water supplies in sub-Saharan Africa. The continent would also experience an increase in malaria since hot and humid areas would stay this way for longer periods of the year.

Around 70% of **Asia** could be at risk of flooding, and the fishing industry in East Asia will decline because of the higher temperatures causing more acidic waters. The agricultural industry will also suffer in South Asia: it is expected that there would be a decrease in maize and wheat. The Mekong delta would have a decline in fishing too, which would affect 40 million people.

North America would have its forests affected: the Sub-Arctic boreal forests are expected to disappear to the north because of rising temperatures. Also, pests, disease and forest fires will increase in forests in the continent.

South America will have a decrease in wheat crop yields, maize, and soybeans. In the Amazon rainforest, high levels of extinction can be caused just by small levels of climate change. Eastern Amazonia could become a savannah- and have warmer temperatures and drier soil.

In the **Arctic**, the Arctic ocean could be made more vulnerable to more shipping and extraction of gas and oil reserves due to less ice. This region will also have its polar bears and seals disappear as the ice- their habitat- disappears.

Saving the Planet



How can you help?

By making small changes to your life and thinking more carefully, you can make a large impact. Here are some things you could do to join the fight against global warming:

Spread awareness

This is actually an extremely effective method in helping the environment, because it warns others of the threat our actions pose on it and makes sure wide amounts of people are reached, encouraging them to make some changes to reduce pollution and damage to the planet.

Use energy efficiently

By becoming more energy efficient, you're polluting less and also saving money. You can do this by 1) using energy-efficient lightbulbs, 2) installing a heat pump at home, 3) remembering to unplug computers, TVs and other devices when you're not using them, 4) washing your laundry in cold or warm water instead of hot, 5) instead of tumble-drying your clothes, hanging them up, 6) having a programmable thermostat, 7) buy energy-efficient appliances, 8) keep heat in during winter and keep cool in the summer without air conditioners, 9) always turn the light out when you leave a room.

Use renewable energy

Renewable energy can be used at home- an example is solar energy from solar panels that can be installed at home, and these sources of energy are becoming cheaper. Energy will be provided to your home by this method every day and it reduces electricity bills. A house with solar panels can save 1 ton of carbon dioxide per year as it creates energy without releasing any CO₂. This source of energy can be used in the future- it is not finite.



Buy local food

Food miles are important to consider when you're buying products- always try and buy local products because it means they haven't been transported extremely long distances; therefore, they've caused less pollution. This is the same with buying products like fruit that are out of season- they've been flown by planes (a very polluting method of transport) from warmer climates into the country, so avoid buying strawberries in the winter season and don't buy exotic fruit like mangoes and pineapples too often.



Use greener transport methods

Public transport like buses is better for the environment because it takes a larger group of people and reduces the number of private vehicles on the roads. When you can, walk or take your bike instead of a car. When you do need to take a car, try and car share and switch to an electric or hybrid vehicle.

Saving the planet



Waste less

Instead of throwing away food waste, it can be turned into compost and used in your garden, so this will save you money as you won't need to go out and buy compost. By getting a compost bin for the garden, you can reuse a large number of waste products like coffee grounds, old fruits and vegetables, teabags, grass clippings, leaves, eggshells, cardboard egg boxes, and more.

Action against climate change...

An Extinction Rebellion protest



Extinction Rebellion is an international movement which aims to influence government action in stopping reaching the tipping points in the climate system (when these points are passed, large changes happen in ecosystems and in the climate system), reducing loss of biodiversity, and avoiding the risk of social and ecological collapse. The movement was formed in October 2018 to rise up against climate change, influence the use of mitigation methods, protect the environment and motivate others to do the same.

Climate change mitigation methods are methods used to try and reduce the amount of carbon dioxide produced in order to manage climate change. This includes strategies that the population can use, such as alternative energy production- so using renewable energy like solar panels instead of burning fossil fuels. Other methods can be done by factories like the carbon capture and storage method where technology is used to capture carbon dioxide released by factories and power stations and pump it into stores underground, including where oil used to be. 90% of all carbon dioxide could be stored like this instead of it being released into the atmosphere. Planting trees is an ideal method because trees and plants are essential to life on the planet: they use photosynthesis to change carbon dioxide into oxygen. The world's forests such as the Amazon Rainforest are threatened by deforestation, where large areas of forests are cleared due to land required for cattle farming, growing crops, and wood for construction and the manufacturing of products like furniture. Planting trees in areas like the Amazon will reduce the amount of carbon dioxide in the air. Extinction Rebellion also encourage the government to make international agreements, similar to the agreement made by the United Nations: that global carbon dioxide emissions will be reduced.

Greta Thunberg at the UN Climate Action Summit Sep 2019

Greta Thunberg is a 16-year-old climate and environmental activist who has been striking every Friday off school outside the Swedish Parliament in order to raise awareness, and as a result millions of others around the world have done the same. Student strikes have been taking place every week after the United Nations Climate Change Conference in 2018 and Greta Thunberg has caught the attention of world leaders and has had a growth of fame in the last year: she was featured on the cover of Time Magazine in May 2019. She has given speeches to groups of world leaders and multiple conferences, recently she gave a speech at the 2019 United Nations Climate Action Summit in September 2019, highlighting the frightening reality of the climate crisis.



A guide to Brexit



What actually is Brexit?

Recently you have more than likely heard a significant amount of talk about Brexit. But what actually is Brexit and what is all the fuss around it? Brexit is the departure of the United Kingdom from the European union or EU as it is commonly known. The word Brexit derives from mixing “Britain” with “exit”, resulting in the frequently used portmanteau “Brexit”.

What is the EU?

The European Union (EU) is an economic and political organisation that consists of 28 European states. The foundations of what would eventually become the EU was founded in 1957 in the form of the European Economic Community (EEC). The EEC was purely a **customs union** which allowed free trade between its members. Britain joined the European community in 1973. The EU as we know it today was founded in 1992 at the Maastricht treaty. The EU was initially founded to be a trade committee but became political in 1992 after the Maastricht treaty.

How did Brexit occur?

The first talk of Brexit actually occurred right after the formation of the EU in 1992. Some politicians wanted the EU to stay economical and not interfere with other countries' politics. Politicians and people who began to criticise and distrust the EU became known as ‘Euro-sceptics’. In 1993 the United Kingdom independence party or UKIP was set up with the goal of trying to end Britain’s participation in the European union. After the EU was formed, Euroscepticism increased in the government and country and the notion of leaving the EU in the UK became more popular. As Euroscepticism grew, Eurosceptic parties like UKIP began to pressure Prime minister David Cameron into holding a referendum (vote throughout the country) as to whether the UK should stay or leave the EU. Fellow MP’s in Cameron’s own party who are Eurosceptics also pressured Cameron into holding a referendum. Cameron backed remain and was confident that the country would want to stay in the EU. A national referendum was held in 2016 where the country voted to leave the EU 52% to 49%.

Why did people vote to leave and remain in the EU?

Reasons people voted leave:	Reasons people voted remain:
<ul style="list-style-type: none">-To not be restricted by EU law.-For the UK to manage its own borders (EU allows free movement of all its citizens).-Controlled immigration.-For the UK to make its own laws and govern the country independently (self-governing nation).-To be free to trade with whoever we want.-General distrust of the EU and what it stands for.-Economic concern with the EU (Eurozone crisis of 2009).-Concerns of democracy in the EU (unelected commissioners)-Single currency (Euro).-Concern that Britain would become too integrated in Europe and lose its own identity, pride and heritage.	<ul style="list-style-type: none">-Concern that Brexit will affect the economy.-Unemployment concerns.-European nations united are stronger.-Stop the prevention of immigration.-Easier movement throughout European countries as an EU member.-Continuation of trade with EU countries.-Some people like EU law and restrictions (e.g. environmental protection)-EU rights (worker’s and human rights).-Security (EU countries are compelled to aid each other).-Concerns over food shortages and medical supplies.-Anxiety that Brexit will cause division and hostility between Britain and Europe.

A guide to Brexit



When is Brexit happening and why is it taking so long?

The withdrawal process from the EU is known as **article 50**. Article 50 takes two years for any given state to detach itself from the EU from when it is triggered. Over these two years a period of negotiation takes place to discuss the country's withdrawal from the EU. The UK triggered article 50 in March 2017 so why didn't we leave in March 2019?



There are two viable forms of Brexit, a Brexit with a deal from the EU and a Brexit with no deal from the EU. A Brexit with a deal from the EU would mean that we would still be able to trade with EU countries and still have associations with the EU. A Brexit without a deal or a so called 'hard' Brexit or 'clean break' Brexit would mean the UK would not have a trade deal with the EU and have no ties with it either. When article 50 was triggered, Theresa May was the elected Prime Minister. In the months leading up to March 2019, May tried to get a deal from the EU. Any deal that the EU proposes must be voted for by parliament. Every deal that May proposed was rejected by parliament as many MPs viewed the terms as unacceptable. As May couldn't secure a deal, she sent a letter to the EU asking for an extension. The new deadline for Brexit ended up being on 31st October 2019. May wasn't seen as the appropriate leader to try and deliver Brexit by parliament and there were calls for her to resign. She did resign in June and Boris Johnson was elected to be the new Prime Minister.

Over the next few months, Johnson entered negotiations with the EU and managed to obtain a deal that was considered to be more acceptable than May's. However, on October 19th Johnson's deal was disapproved, and he was legally obliged to request an



extension from the EU due to the **Benn act**. The Benn act states that Johnson is compelled to request an extension from the EU if a deal isn't secured by 31st October. The new deadline for Brexit is 31st January 2020 but it's highly debatable whether the UK will actually be leaving... A general election (vote) will take place on 12th December

to decide over the leadership of the country.

Deal or no deal

Many people who voted to remain in the European Union will want to see the UK leave the EU with a deal. This is effectively because we will still have ties with the EU and because they are worried about trade and a poor economy as the result of a no deal Brexit. Many leavers or Brexiteers as they are known will want to see the UK leave without a deal because they want no ties with the EU and no agreements, they just want nothing to do with the EU full stop.

Also, the EU have declared that as part of any deal they will give us, there will be a so-called **divorce bill** of 39 billion pounds. However, if the country leaves without a deal we won't have to pay any money to the EU. Many Brexiteers will not want 39 Billion pounds of the country's money going to the EU. All deals that have been proposed by the EU have all been labelled as unfair and unacceptable by leavers so many of them want a no deal Brexit.



Schrodinger's Cat



Ever heard of that story about a cat locked in a box, which is somehow both dead and alive? You usually hear it in a sci-fi film when the scientist or designated smart person is talking about some phenomena that's happened. What does it actually all mean though? It just seems to sound like a bunch of jargon doesn't it? Well give me a few minutes of your day and I'll tell you exactly what they mean when they talk about "Schrödinger's Cat"

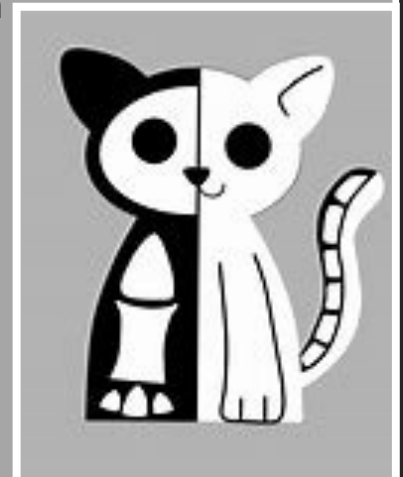
First thing I want to address is what the whole concept is. Schrödinger's Cat is an idea that a physicist called Erwin Schrödinger came up with. It aims to show that, in its simplest sense, you can never be sure of anything unless you see it. How does it show this? The setup for the experiment is this: you have a cat (or any other living animal) in a box with a truly random number generator linked to a vial of poison. If you press a button linked to the generator it will make it generate a random number, let's say if this number is even the vial doesn't break, but if it's odd it will.

What will happen if you leave the box open and press the button? The cat would either live... or die. You would see what happens every time you press the button so you know if the cat was dead or alive. What if you closed the box though, so you couldn't know what's happening inside the box? You wouldn't know if the cat was alive or dead.

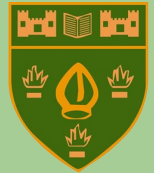
The odds of the cat being alive or dead would be 50/50 in this case. Scientists and philosophers classify the cat as being both alive and dead at the same time because we don't have any way to know if it was alive or dead. Until we open the box and look inside, we wouldn't know. If we did then open the box we would know, it would either be dead or alive. That's Schrödinger's Cat.

Why bother coming up with something like this? It doesn't prove useful to not know whether a cat was alive or dead, but when it's applied to small objects like for example a transistor (small "switch" in processors) you get some interesting phenomena, in principle you have a transistor with three states, as opposed to two, just with one state you can't actually look at.

This is basically what a quantum computer is. You know binary? How it's made of 1s and 0s? Each of those numbers is called a bit, it represents a transistor being on or off. With this third state makes each bit something called a qubit, which is either 1, 0 or a mix of both. This basically creates very, very powerful computers. That's a whole different topic, however.



What's Jacob Cooking?



It's coming up to festive season, so you know what that means? Maybe you don't celebrate it, maybe you're an all-out fan, maybe you're going out for the night, but the team for the newsletter has got you covered! We've got 2 delicious recipes lined up for you to truly bring that Christmas feel! This year we have Cake pops and Oreo cheesecake parfaits.

Ingredients 400g/14oz Christmas cake,
100g/3½oz dark chocolate, 100g/3½oz white chocolate, sprinkles, to decorate



Cake Pops

1. Break the Christmas cake into pieces then blend for a few minutes to turn into crumbs.
2. Divide the mix into 12 and shape into balls. Place in the fridge for a couple of hours to firm up.
3. Melt the chocolates in separate bowls, over pans of simmering water or in a microwave.
4. Make a hole in each ball with a lolly stick, then dip the end of the stick in the melted chocolate and place back in the hole. Repeat with the other sticks and leave to set for about 30 minutes.
5. Re-melt the chocolate if necessary, then, using a teaspoon pour the chocolate over a cake pop, holding it over the bowl. Work quickly to get a smooth finish. Tap the cake pop on the side of the bowl to get rid of the excess chocolate, then stick into a piece of polystyrene or upturned colander while you coat the rest of the pops.
6. Once the chocolate has set slightly, but is still sticky, coat in sprinkles then leave to set completely.

Oreo cheesecake parfaits

18 Oreo Cookies

2 8 oz cream cheese blocks, 440g

¾ cup powdered sugar, 90g

½ tsp vanilla extract

Roughly crush or chop one-half of the cookies and finely crush the other half. Set aside.

Using a handheld or stand mixer fitted with the paddle attachment beat cream cheese, powdered sugar, and vanilla extract at medium speed until smooth, about 2 to 3 minutes.

Add heavy whipping cream and beat at medium-high speed until the mixture is stiff about 4 to 5 minutes.

Fold in the roughly chopped/crushed Oreo cookies.

To assemble the parfaits: Using a pastry bag, add layers of the cheesecake mixture and finely crushed Oreo cookies as you see fit, finish with any remaining cookie crumbs on top.

Chill parfaits

For 2-3 hours before serving.



Almost 20 years ago...



The year was 1975, the first personal computers had just been released and they were taking over markets, however they had shockingly small memory for their size. As a result of this, programmers had to save all the space they could; their solution: to make the date only two digits as opposed to the customary 4, similar to the colloquial shortening of decades to the '80s etc. This was a perfectly fine solution until people realised: dates can go past 1999...

What would happen if a computer program was told the date was '00? Would it take it as an impossible date and crash? Nobody really knew. This may seem silly "just turn it off and on again" right? But apply the issue to banking transactions, flight scheduling, and GPS and you start to see the issue, these systems could fail. Even water systems, military bases, the power grid... This was Y2K.

Companies began to get together to spend their way out of this potential disaster with the US alone spending almost \$134 billion fixing bugs. This was little aid however as their deadline was immovable and by 1999 only a fraction of the bugs had been uprooted. This could lead to massive lawsuits post-2000 against companies whose systems failed and the government was getting worried, leading to President Clinton passing the Y2K bill to protect against such suits.

So, the problem was fixed? Wrong, this was only the beginning. Government was happy but the media began to report on the problem in louder and more outrageous terms; this sowed the seeds of panic. A nervous population would likely fill a bathtub for reserve water, and naturally most would do this last minute, creating massive strain on the water system. So, the water fails and voilà people now think Y2K is on for real, riots in the streets, looting, that would cause a real disaster. Particularly gullible people even built bunkers, seeds and "survival kits".



Unimaginable destruction surely followed the new year. Well, not really; the new year arrived over the weekend quite peacefully, and without any computer driven meltdowns. Yet some interesting things did happen: some vending machines stopped working, trains in France said 1900 instead of 2000... That was it. Post 2000, interviews with Microsoft officials and computer technicians in fact revealed that they knew all along "nothing was going to happen", some understandably just found it amusing. An estimated total of \$400 billion was spent on preparations: money well spent.



School Events



The annual Arthur Mellows Village College (AMVC) careers fair took place on Tuesday the 24th, September and as always, there was an excellent turnout from a broad range of year groups. A variety of different universities and companies were present at the event and were more than happy to discuss courses and potential career options with interested students. The establishments present included a wide range of universities such as Loughborough University, Cambridge Regional College, New College Stamford and the University of Bedfordshire. Also attending the fair were several sports camps and associations such as Norwich FC regional football program and UCFB, which offered wonderful advice and discussed upcoming sports opportunities with aspiring athletes. For those who currently are in the Cadet force at school, the Royal Navy and Royal Air Force were there to help them understand their future career prospects.

It was excellent that such a wide variety of universities and institutions were present, as it allowed students to take a closer look at colleges which offered courses specialising in subjects they enjoy and/or are good at. For example, if a student was interested in a career or university course focusing on sports, they were able to approach one of the many friendly representatives from Loughborough University or UCFB. By having colleges that specialise in particular fields, it helps students gain a better understanding of the subject and gives them more insight into whether or not this career is for them. Similarly, there were also universities who offered a wide selection of courses including engineering, theatre, medicine, law and history; to name a few. This is a wonderful opportunity for students to collect more knowledge regarding these subjects and the careers they can lead to and give them more time to consider their future options before having to make any decisions.

A large group of students from AMVC partake in weekly Cadet training and for many of these students enrolling in the navy, military or air force is the next step. Representatives from both the Royal Navy and Royal Air Force were present at the event, ready to offer advice to keen students and help explain what their careers would entail should they enlist in these institutions in the future.

Holding events such as these is a wonderful way for students to engage with field experts about their goals for the future and to help those struggling, to narrow down their options and help them gain a better understanding. Even for those who already have a clear idea of what their future career will be, it is still important they attend, in order to understand which universities or colleges offer the best courses regarding their interests. It is important that students have access to information like this, as it helps them set targets for their futures. This in turn gives them something to work for and drives them to work hard in order to achieve the future they want. Whilst these decisions are understandably very important and not easy for many to make, it is incredibly worthwhile for them to be introduced to these courses early on, so they have time to truly consider all the options available to them.

Many members of AMVC staff also attended the careers fair, to make sure things were running smoothly and to ensure there was no confusion for attending students and parents.

