Westcliff High School for Boys

The Westcliff Week

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WEEK BEGINNING 4 MAY 2020

CATCH-UP DAY

Welcome to the sixth edition of The Westcliff Week.

Across our community a number of pupils, staff, parents and alumni have been taking action to support the NHS, charities and their local communities. In doing so they demonstrate the values of WHSB and act as role models for the rest of the School. It is impossible for me to record the many positive deeds of people in the WHSB community, however I encourage you to view the School's Facebook page which lists some of these splendid acts of service. The latest additions include the tributes to Captain (now Colonel) Tom Moore from Jack Browning (Old Westcliffian) and Daniel Weight (Year 8), and fundraising for the NHS by Thomas Nankivell (Year 10). I also wish to thank those senior Technology students volunteering to assist Mrs Mumford and the Technology Department with the production of face visors for the NHS and local care homes.

Pupils and parents will know from my letters last month that Monday 4 May (today) is a non-teaching day, as my colleagues and I will be undertaking work in relation to GCSE and A Level Centre Assessment grades for this summer. I am also pleased to inform all pupils that Monday 4 May should be used as a catch-up day and, consequently, teachers will not be setting any new work to be completed during this day. It has come to our attention that some pupils have taken a little more time to adjust to our new methods of working. The catch-up day should give all pupils the chance to catch up and/or consolidate their work to date. Those pupils who are already up-to-date and confident in relation to their studies are advised to read this edition of The Westcliff Week and undertake the various challenges and exercises provided within it.

Finally, I would like to draw our School community's attention to an online VE Day concert which will take place on Friday 8 May. The concert has been organized by Rt Hon Sir David Amess MP as part of our town's arrangements to mark the 75th anniversary of VE Day. The online concert will involve a number of WHSB musicians including Edoardo Chidichimo, Charlie Gershinson, George Jefferson and Jasmine Margalit. Towards the end of the concert there will be a splendid rendition of The Last Post and Reveille from Mr McGee, beside the WHSB flags. Further details regarding the concert can be found on page 30 in this issue.

Headmaster

A MARATHON IN MY CLOSE

Since the lockdown began, I have found myself using my daily exercise to go for a long run or cycle (mainly to get some space from my family!) but I started to wonder how far I could run.

I decided I wanted to challenge myself to run a full marathon distance, 26 miles or 42.2K, around our close, which is around 120 laps. So I started with a 5 mile run, and then a 10 mile run, and my speed improved between the two; I finished the 10 mile run in 1 hour 40 minutes.

We set up a Just Giving page as I really wanted to raise some money for the NHS to show my gratitude for their work during this terrible time and I set my target at £50.

On the day of the race it would have been the London Marathon, which I had not planned but it seemed a fitting day to choose; it was also very hot. At the start, my fundraising had reached an amazing £620 donated from my family, friends and neighbours.

I started at 10:10am and was pretty confident I could complete the distance in under six hours.

The first 10 miles were quite easy and I completed them in 1hour 42 minutes which was pleasing. The next 10 miles were slower and, whilst I mainly ran, I had to walk a little because it was so hot. The last 6 miles were very hard; I really had to push myself to keep going, especially when I realised that I would not make my six hour goal.

My neighbours and family were great and many of them came into their front gardens to cheer me on and my sponsor money increased to £800 during the run.

I was very happy to reach the last lap and I did run for that, even though my legs felt so heavy and I had a few blisters. I finally finished in 6 hours 20 minutes.

So far I have raised over £1000, which is so much more than I thought I could achieve. I have learnt that I can push myself further than I thought, even when things get really tough. I am so pleased that I did it, but I am not in a hurry to do it again!

Thomas Nankivell, 10E

DUNGEONS AND DRAGONS CAMPAIGN

Over the past weeks I have been tackling the issue of running a *Dungeons and Dragons* campaign with other pupils after school. It has been hard, with both benefits and problems along the way. Overall though, it has been great fun, from battling with skeletons to uncovering treasure troves, and I would like to share my experience.

Our first session did not run as smoothly as it could have done, with an hour of technical issues and other problems as one of the players was unable to join our meeting. However, after this, everything went rather smoothly, except for some audio and video difficulties.

Luckily for us, all the other sessions went smoothly. We had some interesting teamwork and roleplaying taking place, as the players each adapted to the situation and explored the dungeon.

All of the terrain is made of cardboard and insulation foam; the cage below uses cross stitching mesh. I have enjoyed making and painting my terrain and look forwards to implementing the plans I have for future pieces.

Overall, I feel like our games have gone really well and the players never cease to amaze me with their quick witted, comic actions and their ideas, and I look forward to session 5 soon! Hopefully soon they will progress to the first chambers of the dungeon and uncover what has brought them through the misty catacombs they trudge.

Oliver Wood, 8C

PLASTIC POLLUTION: A PROBLEM THAT MUST BE ADDRESSED

We are living in a world full of problems, yet it is important to be aware that there are also so many things being done to combat these problems. This Earth has experienced decades of extreme pollution, but it seems as though we are only just beginning to realise the implications that we could face if we do not act.

Go to your fridge, and I am 99% sure that at least one item in your fridge has plastic packaging. I would hope that after you have used this perishable product you will put the packaging in the recycling waste and, if you do, your job is done. However, according to figures released in 2016, only 14% of plastic is recycled globally. This means that, at that time, 86% of our plastic waste was being piled into landfill or, as I will go on to talk about, in the sea.

It is estimated that an astonishing 5.25 trillion pieces of plastic is present in our oceans. We are aware that large parts of India and the Ganges are being polluted and some stretches of the water have no evidence of life, but this is something technology may help to fix.

4Ocean is a North American recycling company which sells bracelets, bottles and clothing in order to raise money to clean the water and coastline in America, as well as the region around Haiti. The employees have the tough task of attempting to use nets to pick up the surface plastic, however it is clear that this is not the most efficient way of working. It is due to the strenuous nature of these tasks that 4Ocean decided to create, arguably, the best piece of technology in 2019.

Engineers invented the 'mobile skimmer' (above) to deal with the large amounts of surface plastic. In addition, this piece of technology is not harmful to the marine life. The skimmer collects plastic from the surface of the water in between the two metal arms creating a Y-shape. Then the plastic and debris are collected by the metal belt system, which is then collected at the end of the boat so that the skimmer can continue to work efficiently and effectively. Items of technology such as this will need to be mass produced in order to save our oceans.

It has been made clear that humans alone are not able to keep the world in a good state, so it will be through technology that we hope to save our planet so we do not go over a 'tipping-point' from which we cannot return. The evolution of technology may be the only thing that can truly help us.

Max Pitkin, Year 9

THE ENVIRONMENTAL IMPACT OF THE VEGAN DIET

Veganism is a growing trend in the UK with the numbers quadrupling from 2014 to 2019, according to the Vegan Society. The vegan diet is widely regarded to be better for the planet than those diets that include animal products, but not all plant-based foodstuffs have a small environmental footprint.

The vegan diet has all the makings of a delicious smoothie – a dollop of almond butter, an avocado, a few slices of mango, a handful of blueberries, a sprinkle of cocoa powder and some soya milk.

But anyone looking to adopt a vegan or vegetarian diet for environmental reasons may also want to consider whether there are some plant-based foods that also come with a heavy price.

"Nothing really compares to beef, lamb, pork, and dairy – these products are in a league of their own in the level of damage they typically do to the environment, on almost every environmental issue we track" says Joseph Poore, a researcher at the University of Oxford who studies the environmental impacts of food. *"But it is essential to be mindful about everything we consume: air-transported fruit and vegetables can create more greenhouse gas emissions per kilogram than poultry meat, for example."*

Some prominent foods within the vegan diet include:

Avocados and Mangoes

Avocados are an important source of protein, vitamins and fatty acids. But a single California avocado tree needs up to 209 litres of water (46 gallons) every day in the summer. When grown in water-stressed regions such as California, Mexico and Kenya, this can cause huge environmental pressures and impact.

Moreover, the increased demand in the West for avocados has led to serious food shortages in countries where they are grown. In 2018, The Kenyan government banned the exportation of avocados following the severe shortage of the fruit in the country.

Mangoes require 686 litres (150 gallons) of water and are adapted to hot, moist rainforest climates, their roots are relatively shallow and poor at searching out water held within the soil. Therefore, they need to be continually irrigated if there is little rain. Mangoes are the national fruit of India and the country's citizens faced shortages in 2014, following the increased exportation demands and the significant crop damage that took place in the country.

Avocados and mangoes are sometimes bathed in hot water for over an hour to prevent infestation by insects. Their highly delicate flesh and rapid ripening (and potential decay) also means that much of the fruit exported to Europe and the US is flown by air.

Together with the amount of waste, special storage conditions and packaging needed for avocados, this gives the fruit a hefty carbon footprint – the equivalent of 2.2kg of CO2/kg for avocados imported to the UK, according to one study. It also estimated that mangoes emitted 4.4kg of CO2/kg.

Almonds and cashew nuts

Tree nuts are packed with valuable nutrients and proteins. However, arguably, they take more than their fair share of environmental resources.

Cashew nuts, almonds and walnuts are some of the most water-intensive, large-scale crops grown on the planet. Poore estimates that, between them, tree nuts consume 4,134 litres (909 gallons) of fresh water for every kg of shelled nuts that we purchase.

Poore also suggests that almonds need comparatively large amounts of water, pesticide and fertiliser, which makes their environmental impact disproportionately large. One study, funded by the Almond Board of California, found that the average almond grown in the US state requires 12 litres of water, or 10,240 l/kg of kernels.

Even though it is clear that plant-based foods and meat substitutes are potentially far better for the environment than livestock production as a whole, if we really want to make a difference to the environment, we need to take care with what we choose to replace meat.

Mr K James, Lower School Science Coordinator

HAPPY BIRTHDAY TO CAPTAIN (COLONEL) TOM MOORE

We are delighted to hear that Daniel Weight (8W) is using his talents as a member of WHSB's Jazz Band to lift the spirts of his neighbours during these difficult times. Every Thursday at 8.00pm Daniel plays the National Anthem in his street. Last Thursday, to celebrate Captain (Colonel) Tom Moore's 100th birthday, Daniel also played Happy Birthday, to which all of his neighbours sang along.

We are very proud of Daniel's contributions to brightening people's day during the lockdown, and you can access his musical message to Captain (Colonel) Tom Moore on the School's Facebook page.

Headmaster

THIS WEEK IN HISTORY

75TH ANNIVERSARY OF VE DAY - 8 MAY 2020

By the start of May 1945, Germany was on its knees; Adolf Hitler had committed suicide during the Battle of Berlin on 30 April and Germany's crushing defeat was all but inevitable.

Subsequently, Reichpresident Karl Dönitz (Hitler's successor) authorised Germany's surrender to the Allied powers.

So, what happened between 7-9 May?

On 7 May, General Alfred Jodl, the Chief of Staff to the German Army, arrived at the Supreme Headquarters of the Allied Expeditionary Force in Reims, France with Dönitz's authorization to surrender. One reporter who was in the room notes that the surrender was signed in less than five minutes and that the location was particularly significant: the Supreme Headquarters were just 55 miles east of Compiegne Forest where Germany surrendered to the Allies in WW1 on 11 November 1918, and the scene of the capitulation of France to the Third Reich in this war on 21 June 1940. The surrender was intended to take effect the following day, 8 May 1945 at 11:01pm

But the signature of Jodl, a relatively low-ranking General, was not enough for the Soviet Union, which had suffered by far the most casualties (27 million) among the Allies fighting the Germans. The reason had to do with the last time Germany surrendered, 55 miles to the west, in 1918. The surrender had been signed by a civilian politician who opposed the war and not by Germany's top military commander. Hitler and his allies later claimed this meant that German forces had not really lost, but had been "stabbed in the back" by their political opponents. Determined to avoid this outcome after World War II, the Soviets insisted that the head of Germany's Armed Forces High Command, Field Marshal Wilhelm Keitel, surrender personally to Joseph Stalin's representative, in Berlin.

On May 8, Keitel arrived in Karlshorst, a Berlin suburb, to ratify the surrender and formalise the end of the WW2. But there was a problem. Apparently, the Russian text was delivered incomplete in Berlin and lacked a few sentences, according to a report from 1970. The Reims surrender was due to take effect at 11:01 pm, but the final version of the document did not reach Keitel until some 75 minutes after that. The Field Marshal affixed his signature to the revised surrender in the early-morning hours of 9 May, hence the enduring confusion and controversy over when exactly World War II ended in Europe. As a result, Russia commemorates 'Victory Day' on 9 May, whereas the other major Allies commemorate one day earlier.

Take a few minutes this week to think about what a momentous and significant occasion VE Day would have been, 75 years ago, when six years of conflict which had cost millions of lives was brought to a close, even if the signing of the surrender was not straightforward.

Mr S Neagus, Teacher of History

Pi DAY

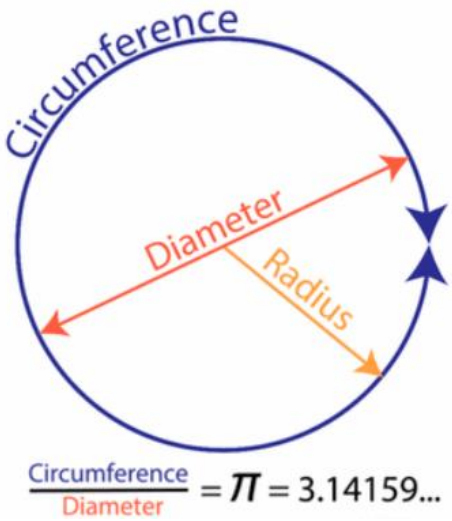
Pi day was a rather overlooked affair this year, with COVID-19 stealing all of the headlines (although I am not sure it would have got much of a headline anyway). Pi Day falls on 14 March each year, which for the majority of the world leads to the date 14.3.XX; nothing to shout about, but for the American dating system it leads to 3.14.XX, hence Pi day! *Parents - if you do not know the value of pi, now is the time to ask your son or daughter.*

2015 (or 2016 if you round rather than truncate) saw an incredibly close version of pi, that being 3.14.15 (or 3.14.16), the second closest match in our calendar system, with the closest being way back on 3.14.1592. It would be a long old way for a closer approximation, and that would come in the year 15926.

"What is Pi? Where did it come from?" – Carrie, Educating Essex

It is quite simple (but not necessarily obvious). Pi is the ratio of a circle's diameter to its circumference. That is, any circle's circumference is approximately 3.14 times its diameter. It was discovered millennia ago when some mathematicians drew out incredibly accurate circles using old versions of a pair of compasses and then measured the diameter and circumference.

Many mathematicians at the time did not believe straight away that this was true, so there was a crusade to try and find a circle that did not obey this rule. Only once was it claimed that one was found, but this turned out to be an ellipse. The ground upon which it was drawn had a very slight curvature to it and this led to the circle's value of pi to be slightly less than 3. Eventually, it was widely accepted that the value pi existed for all circles and was constant.



The equation $Circumference = \pi \times diameter$ is self-evident from the way in which pi has been defined, but the equation for the area of a circle, $Area = \pi \times r^2$ is a little less obvious and, as Archimedes found, takes a lot of work. For anyone interested in this proof, it is worth looking at Archimedes' work on the *Rearrangement of Circles (260 BCE)* where he circumscribes and inscribes circles with various polygons of increasingly large side number to get converging approximations for pi. Alternatively, for a slightly more obvious proof, it is worth looking at Leonardo da Vinci's *Rearrangement Proof*, although this has been accredited to a whole host of Mathematicians.

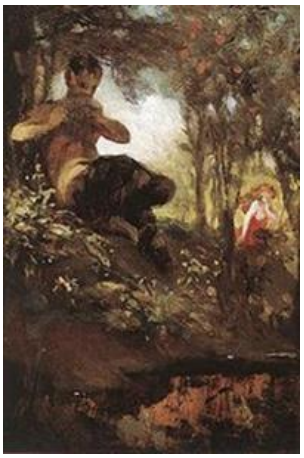
Mr M Dowding, Head of Mathematics

MUSIC BOX: A WORK A WEEK

Claude Debussy, perhaps best known for his piano works including *Children's Corner* suite and *Suite Bergamasque* (which contains the world-famous *Clair de Lune*), is arguably one of the most influential composers of the late 19th and early 20th century. However, many of his symphonic works are overlooked. Perhaps my favourite orchestral work is his 'Prelude to the Afternoon of a Faun'.

Debussy is sometimes described as the first Impressionist composer, despite him despising the term himself. Debussy describes this work as a 'symphonic poem' and based his ideas on a poem by Stéphane Mallarmé; "Afternoon of a Faun". It tells the story of a faun, playing on his pan-pipes in the forest, eventually falling asleep into a dream world. In an earlier edition, Mr Derrick gave an insight into the popularity of the classical symphony, but Debussy regarded this form as obsolete and sought an alternative in music including *La Mer* (A set of symphonic sketches). Influenced by Gamelan Music from Java, Indonesia, which he encountered at the Paris Exhibition of 1889, Debussy began to form a new compositional style, evident in this piece.

The music opens with a monophonic flute solo, which flows chromatically in a dream like pattern. This hauntingly beautiful melody underpins the whole of the work. Listening to this piece, Debussy creates a sense of timelessness, often with no clear pulse. This fluid style was lifted directly from his encounter with Gamelan music, which is smooth and progressive. Listening to this piece, you will notice the speed is constantly changing and melodies are built in ways that are not conventionally 'western'. These include the use of scales such as the pentatonic, whole-tone and more heavily the chromatic scale, as well as harmonics on the harp to capture non-Western scales and timbres.



Debussy's use of harmony is also very complex. Chords are used less as a method of

structuring the music, but instead to create musical colour, which was a very new concept during the late 19th century. This lends itself to using extended chords as well as much more chromatic harmony. This combined with the rhythmic flexibility and the lack of clear pulse helps to create a sense of freedom within the music.

Listen out for:

- The opening flute melody that outlines a tritone. This creates tonal ambiguity.
- A loose Ternary Form Structure with a Coda. This Tone Poem does follow some conventional ideas of the Classical and Romantic era.

- The Clarinet's whole-tone scale idea. Debussy is famous for his use of the whole-tone scale.

George Jefferson, Year 12

SOUTHEND YOUTH COUNCIL LOGO REDESIGN CONTEST

WEEKLY WATCH WITH MISS WILLIAMS

1536…THE YEAR IT ALL WENT WRONG?

Last week, we held the society's first online meeting to discuss the documentary 'Britain's Bloody Crown' and answered that age old question, 'how did an English King end up in a car park?' We concluded, that it was not the fault of Henry Tudor who had defeated Richard III at the Battle of Bosworth, but rather that of his son, Henry VIII who exhumed Richard's body some 50 years later… but why? To understand, we will have to delve into the world of Henry VIII's rule, one of the most infamous Kings that England has ever seen.

This week's documentary suggestion is 'Inside the Court of Henry VIII' which can be found by searching on YouTube, alternatively use the following link:

https://www.youtube.com/watch?v=4gR3nBufBCw

The documentary traces a reign which transforms English History; the political intrigue within his court, his distrust and paranoia of his subjects, the break with Rome and his quest for a male heir. The focus

question for this recommendation is '1536… The year it all went wrong?' So, watch the documentary and join the discussion. Do you think an entire reign can be defined by the events of one year?

To join the discussion on Wednesday at 13:00, contact Miss Williams who will add you to the Microsoft Teams group page.

Miss R Williams, Teacher of History

YEAR 9 AND 10 HOUSE FIFA 20

A House FIFA 20 competition will take place in the week commencing 11 May between 1.00pm-1.30pm. This will be open to all pupils in Years 9 and 10 and we require two pupils per House per Year group to participate in a knockout-style tournament. This will take place on PlayStation 4 and entrants are required to be available to play during their lunchtimes in this week. If you wish to represent your House, please email me with the following information: Full name, Year group, and School House. This will operate on a first-come, first-served basis.

Congratulations to Drew Johnson in Year 12 who won the Sixth Form House FIFA 20 competition last week for Osprey. The results of the tournament are attached below.

Mr J Yeo, Head of House (Harrier)

MR DERRICK'S FILM CLUB

Each week a film is selected for the club to watch. It can be watched at any point in the week but every Thursday at 7.30pm a 'watch-along' takes place, where members of the club can discuss the film as they watch. After the film, dialogue and analysis is welcomed before a new film is selected.

In our odyssey through the film genres we have yet to come across an out-and-out comedy. This week, members of the club were given the option between the modern and the classic, and they opted for the latter. Thursday 7 May's 'watch-along' will take place at 7.30pm and will feature Monty Python's charged and surreal 1979 movie, *Life of Brian* (15), streaming on Netflix.

After being banned in several countries following its release due to accusations of sacrilege and blasphemy, the film eventually became a cult classic, telling the story of Brian of Nazareth who unwittingly gets caught up in one of the most important events in history. Staff and students (aged 15 and over) may join the group by using the code **db1v6ym**.

Mr T Derrick, Director of Music

HALLWAY GYM CLUB WITH MR MOORE

Join me each morning for some light warm up exercises before the day starts.

These classes, which I hold each day for pupils in Form 9S, is now open to anyone in our School community who would like to join us. The Hallway Gym Club invites Teachers, Support Staff, Pupils and their families to share our sessions at 8.45am each morning, Monday-Friday.

This is not a strenuous fitness regime, but is ideal to get you in a positive mood to start your day.

Hallways are not provided, bring your own!

Mr A Moore, Teacher of Technology

KEEP CALM AND CARRY ON COOKING WITH MR MCGEE

This tasty lockdown recipe takes a little work but it is not too complicated if you take your time. Mr McGee came up with this recipe while staring into his fridge and wondering what to do with odds and ends that needed to be used up.

RECIPE 6: MARGARITA PIZZA CHICKEN

Ingredients

1 chicken breast fillet per two people
Mozzarella (or any cheese will do)
Pepperoni or other cured meat slices (4/5 per fillet)
Breadcrumbs
Two eggs
Dried or fresh Oregano or marjoram (optional)

Method

Wrap a chicken fillet in cling film and strike it with a rolling pin or similar until it is flattened and is about 1.5 times its original size.

Lay the flattened fillet on a new piece of film and season with salt, pepper and the herbs. Then add a layer of cheese and cured meat.

This is the only tricky part. Role the chicken length wise and tightly wrap in the cling film. This is technically called a ballotine, and there are lots of online videos you can watch to help. Place the ballotine in the fridge for at least 30 minutes. The longer the better.

Then you are ready to cook heat the oven to 200 degrees and heat enough oil in a frying pan to cover 1/4 of your chicken. You can use a deep fryer but be careful and ask for help if you have not used one before.

Crack the eggs into a bowl and put some breadcrumbs in another. Unwrap the chicken but keep the film handy and coat in the egg, then the breadcrumbs. It will work best if you repeat this. Place on the film to stop it sticking.

Fry in the oil until golden, turning occasionally. Then place the oven for 15-20 minutes. Cut into slices and serve.

YOUNG ENTERPRISE COMPANY PROGRAMME NEWS & UPDATE 2020

Westcliff High School for Boys is proud to have supported and hosted the Young Enterprise Company Programme for many years, attended by Lower Sixth students at the beginning of their academic year. We will continue to offer this opportunity and it will be included in the Wednesday Afternoon Activities for the foreseeable future.

It is a unique experience which supports the crucial development skills and attributes that prepare young people for the future, by developing their employability skills. Encouraging an enterprising mind-set establishes a positive approach to new and potentially challenging situations. Over 3,500 schools within the UK take part each year and compete in the ongoing competitions throughout the process. Attending local Trade Fairs, through to taking a finished product to the general market place, hopefully making a shared profit along the way, the Young Enterprise Company Programme supports everyone, from beginning to end. Team work is the key factor to success every time.

For the teams of 2019-2020, it has been unexpectedly halted due to the current COVID-19 circumstances. However, we stay hopeful that each team may conclude their hard work at some point in the very near future and I wish them continued success with their product choices.

We look forward to welcoming new interest in the 2020-2021 programme in September. Meanwhile, if

anyone has any questions, please do not hesitate to contact me on wellern@whsb.essex.sch.uk.

Mrs N Weller, Careers Adviser

MR DOWDING'S MATHEMATICAL PROBLEM OF THE WEEK

Lower School Problem of the Week

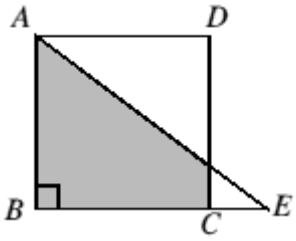
The diagram shows a square inside an equilateral triangle. What is the size of angle JMC?

Middle School Problem of the Week

Simplify $\big(x \div (y \div z)\big) \div ((x \div y) \div z)$

Sixth Form Problem of the Week

The diagram shows a square ABCD and a right-angled triangle ABE. The length of BC is 3. The length of BE is 4. What is the area of the shaded region?



WHSB CLUBS AND SOCIETIES

Students and pupils will be aware of a variety of clubs and societies through the articles in The Westcliff Week, however there are more which you may wish to join. To see the clubs on offer, join the Clubs and Societies Team using code **xkzlh2s**. There you will find a brief description of a variety of clubs, with links you can click if you wish to join any of these societies.

At the time of writing, the clubs on offer here are:

Astronomy Club	Film Club
Aeronautical Society	Weekly Watch (historical documentaries)
University Preparation in Physics, Maths and Engineering	CCF Army Section
Maths Societies for KS3 and KS4	Well-being Club
Maths STEP Club	

I am sure that more will be added soon!

Dr A Machacek, Senior Master Academic Studies

ROUND ROBIN CHALLENGE

Many WHSB pupils will have played in sports tournaments set up as 'round robins'. Suppose there are eight teams in a league. A schedule is drawn up so that every team plays one match each Saturday so that over the course of seven weeks each team has played every other team once, and once only.

The challenge is to devise an elegant method of scheduling such a contest. The method needs to be able to be scaled to any even number of teams without much extra effort. You may also like to think what organizers of such contests do if there is an odd number of teams in the League.

Send any elegant methods to Dr Machacek using Teams, and the best will be featured in a subsequent issue of The Westcliff Week.

Dr A Machacek, Senior Master Academic Studies

CENTENARY HOUSE CAMPING: THE RESULTS

It has been fantastic to hear from those of you that participated in the House Camping competition. House Points have been awarded to all who participated. First place goes to Osprey House, second to Merlin, third to Harrier and fourth to Kestrel.

I would like to specifically mention Daniel Weight (8W) in Osprey House. Daniel extended this challenge to his

Scout Group, 2nd Southchurch, which links towards the 'collaborative and supportive' and 'open to opportunity' aspects of the Learner Profile. This also helps connect WHSB to the wider local community. While camping in their garden Daniel and his sister, who is also a Scout, shared their experiences with other members of their scout troop via a *Zoom* video conference call. In the morning, Daniel cooked breakfast, which looked very tasty, using a camping stove.

Daniel camping with his sister

I would also like to mention Oliver Hibben, in Year 7 (Merlin), who had to improvise makeshift pegs and overcome the challenges of inclement weather.

Oliver's sister enjoying his tent in the garden

Once again, thank you to the many of you that participated. It looks like you have all had great fun and learned a great deal.

Daniel cooking breakfast

Mr R Barber, House Coordinator

MIDDLE SCHOOL & SIXTH FORM HOUSE FIND THE CONNECTIONS

A quiz based on Round 1 of the TV show *Only Connect*.

Concept: to find what connects the 4 clues.

Example:

Blackburn Rovers	Manchester United	Arsenal	Leicester City

Connection: **Champions in the Premier League era**

1

Sun	Sloth	Spectacled	Grizzly

Connection:

2

Nobel Prize in Economics	A shooting star	Tin foil	Koala bear

Connection:

3

The Silures	Devon	Jura mountains	Cambrian mountains

Connection:

If you are in Years 10 to 13 and wish to participate in the House event, please e-mail me with your answers and the House which you represent.

Mr G Rayment, Head of House (Osprey)

MATHEMATICS AROUND THE HOUSE: ROOM PLANS

A good task for pupils to try while they are at home is to create a scale drawing of every room (including the garden if you have one). I remember measuring using Pigeon Steps (i.e. the size of my feet if they were placed once in front of another) and then creating an accurate plan from there.

I know that there are a multitude of different apps one can use to measure distance nowadays, although engaging in a practical approach can be both enjoyable and satisfying. Of course, accurate measurement remains vital and it always interesting to find out how some pupils think that 100m is an acceptable length for a room! This could lead to a good conversation in the household on the need to double check and evaluate answers in the context of the problem, thus developing vital skills for the budding mathematician.

Mr M Dowding, Head of Mathematics

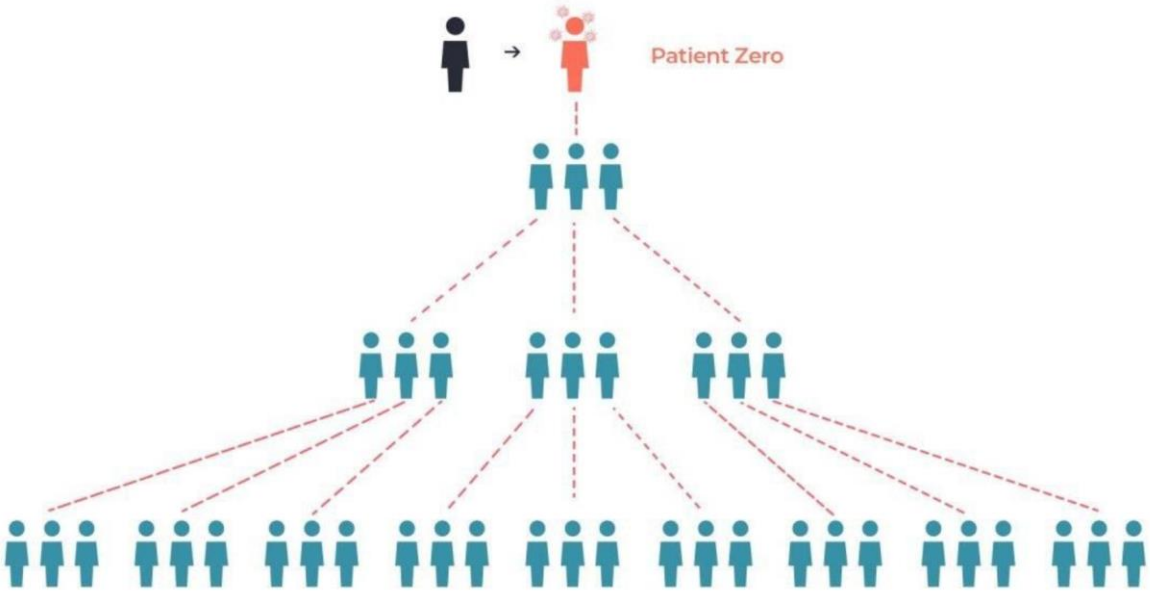
MATHEMATICAL MODELLING: THE R NUMBER AND COVID 19

Firstly, it is very important to realise that this is a real life situation that involves real people and real families. Every number is a person that has been affected by this deadly virus and this is most upsetting. However, it is mathematical modelling and scientific research which will lead us back into normality and help us understand the consequences of not taking this situation seriously.

The mathematical model used below is very simplistic, but has been chosen so that it uses mathematics with which all students will be familiar to some extent.

THE R NUMBER (RATE OF TRANSMISSION)

This r (rate of transmission) is the same r (common ratio) that GCSE and A level students associate with geometric progressions. In fact, this is a geometric progression in simplistic terms and we can use this as our mathematical model.



1 transmits to 3, they then transmit to 9 more who then transmit to 27 and so on.

With r the rate of transmission equal to three we can see how quickly the virus can spread. The rate of transmission was said to be equal to this before lock down.

So what are the implications of this and why was everyone so worried?

The mathematical model tells us that if it continues at r=3 we would have:

$1+3+3^2+3^3+3^4+\ldots\ldots$ a geometric progression starting with only one person with the virus with a spread rate of r=3.

So how quickly is it adding on the next term in the sequence? If one person transmits to 3 other people it is important to understand the time frame of this as it will affect how quickly the numbers will rise.

In a worst case, let us assume 1 day to transmit, then by day 10 we would have $1+3+3^2+\ldots..+3^9$. For A level students, you can calculate this with S_{10}. Lower school can calculate directly. You would have 29,524 cases. By day 20 you would have 1,743,392,200 cases of people that have been exposed to the virus. Fortunately, the transmission rate is not 1 day. If it took 2 days to transmit these would be the figures for day 20 and day 40 respectively and so on. In reality, a person may only have the virus for 21 days in total before recovery, or sadly not, and only a 21 rolling total would be used to estimate capacity needed for NHS beds and other resources. *Continued on page 13*

COMING OUT OF LOCKDOWN (R LESS THAN ONE)

So why is it so important for r to be less than one? A Level students will be able to understand this well. If r<1 then the series will no longer be increasing exponentially. It will tend to a limiting value which can be prepared for. To understand this we can use Sum to Infinity.

Currently, r is approximately equal to 0.7. Let us say that the current amount of people with the virus is N. Then the series would become N + 0.7N+0.7^{2}N and so on. It would only add a small amount each time, the limiting value of this would be $\frac{10}{3}$N. So as the Government have stated, it really depends not just on r<1 but also the value of N, the current number of people carrying the virus, as with r=0.7 we would be multiplying N in simplistic terms by $3\frac{1}{3}$. If r=0.5 for example, the limiting value would be 2N so doubling the current number and so on. The smaller r becomes the better the overall situation.

Please note that, in reality, the mathematical modelling that is done on this is far more complex and will no doubt be involving complex differential equations and statistical modelling which will be feeding into these values.

SO WHAT AFFECTS R?

Probability will have much to do with the value of r. How likely will it be for the virus to be passed on?

There are obvious ways that this can happen:

The value of r can increase when people are standing too close to each other, for example, and the Government might worry that people will forget basics like washing hands, keeping 2m apart and coughing or sneezing into a tissue which is then immediately thrown away.

It can decrease too, by test and trace for example, which could limit the amount of time someone is carrying the virus without knowing. This would reduce r because if the person can quickly self-isolate and have a test they will be less likely to pass the virus on.

We all look forward to school starting again and getting on with business as normal. But, for now, we all need to stay safe and try to keep r as low as possible. **Stay at home - Save lives - Protect our NHS!**

Mrs E Wimsett, Teacher of Mathematics

PUPILS' WELL-BEING

Over the past six weeks, there have been many changes for us all. Our daily routines have changed significantly, many of us are learning and working from home and many people will be missing the usual daily interaction with friends, teachers and colleagues. Looking after our mental health and well-being have always been imperative, however this may be the first time that some people are feeling a little out of balance in this area.

There are many different strategies designed to support with maintaining mental wellness, ranging from promoting habits which can maintain a positive state of wellbeing, to those which address feelings of anxiety or stress. Whatever it is that you or your family needs, there is something for everyone.

Earlier this week, the School's Well-being Club posted about an initiative created by the Educational Psychology Reach-Out Project. This is a space that has been created to offer something of interest to educational psychologists, school staff, parents and carers, children and young people and other professionals.

Live stream webinars are taking place at 8am each day, for 30 minutes. These are delivered by experts on a wide range of topics from yoga and breathing techniques through to how to have a successful home-school experience. These sessions are also being recorded and made available to watch again on their YouTube channel.
Continued on page 14

Details of these sessions and how to sign up for the live stream webinars can be found here: http://www.southendlearningnetwork.co.uk/educationalpsychology

Their YouTube channel containing all the previous sessions can be found here: https://www.youtube.com/channel/UCLhV-d1BFLFCLvCsgY8WlVA/featured Here, you can view a recent, very informative session about using breathing techniques to calm any stress or anxiety.

Mrs Holley, Sixth Form Pastoral Assistant, has also kindly passed on this beautiful calendar from Action for Happiness, which suggests daily activities to maintain a positive mind-set.

However you are feeling, remember to reach out and stay connected. If you would like to join the WHSB Well-being Club, please use the code **u997n6b** to join.

Ms L Price, Teacher of Art

PUPILS' CONTRIBUTIONS TO THE WESTCLIFF WEEK

We encourage pupils to continue to continue to send in contributions for The Westcliff Week. We would be grateful if contributions could be made using a Word document(s), with any pictures also copied into that same document.

Pupils who wish to contribute to The Westcliff Week should do so by sending curricular articles to their relevant subject teacher for checking in the first instance. Contributions associated with an activity, for example Wargaming, CCF or Drama, should be sent to the teachers who have oversight of those activities.

THE LOCKDOWN GALLERY 2020

Students have continued to send me some lovely art and we have been hanging it in the Lockdown Gallery.

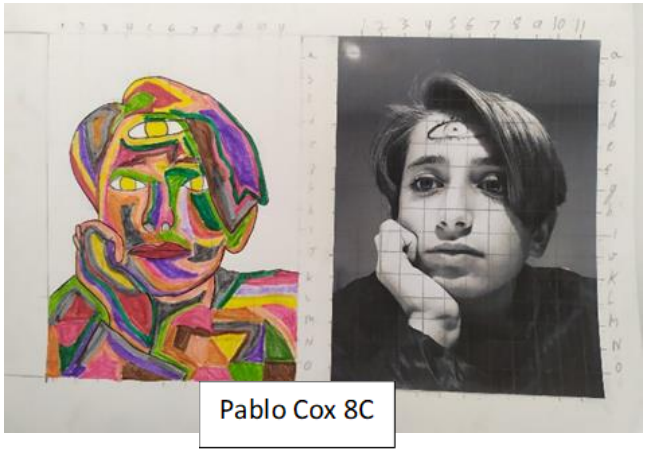
https://sinnottt.wixsite.com/whsb-student-gallery

You will see work from all Year groups in the Lockdown Gallery, which is updated daily by Mr Sinnott, who has also created some work as well! The Student Gallery is virtual resource that is not just for exhibiting work; it also has units of work and learning guides. This week, Year 7 pupils are starting to explore the magical work of the Pop Artists, and they are being creative in producing a learning resource such as a POP art board game or quiz. Below are just a few of the pieces on show and I urge you to take a virtual tour; it is free to get in!

Mr T Sinnott, Head of Art

George Cove 7 w

Bartholomew Ray-Smith 7S



Pablo Cox 8C

Alexander Smithyes 8C

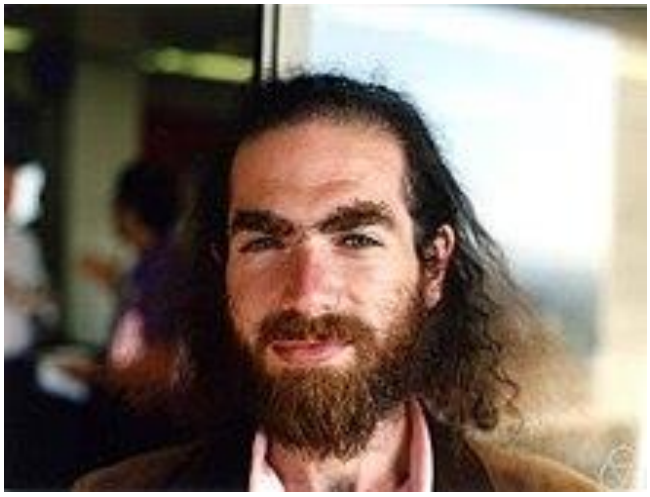
Joseph Delaney 9N

Seb Lambert 9N

THE MILLENNIUM PRIZE PROBLEMS: POINCARÉ CONJECTURE

The Clay Mathematics Institute stated the Seven Millennium Prize Problems on 24 May 2000, collecting a series of problems that had puzzled the mathematical community over the previous century, offering a $1million prize pool for anyone who solves just one of them.

The only one to have been solved so far is the Poincaré conjecture, solved by work from Richard Hamilton and ultimately Grigori Perelman in 2003.



This conjecture relates to a topic in mathematics called topology. This is the study of surfaces (or manifolds) and how they can be deformed to create other shapes. In 2 and 3 dimensions it is all rather trivial, because it is very visual and we have a very good idea of the way in which shapes can be deformed. Essentially, two shapes are topologically the same (homeomorphic) if you can deform one shape to create another, and these deformations can include stretching, shrinking, remoulding and flattening, but cannot include cutting, sticking or punching holes in the manifolds.

For example, a cube is homeomorphic to a ball, because we can easily deform (by rounding) the cube to turn it in to a ball, but a donut (torus) is not homeomorphic to a ball because it has a hole in it but the ball does not. In fact, the number of holes in an object is one way in which manifolds can be categorised in topology.

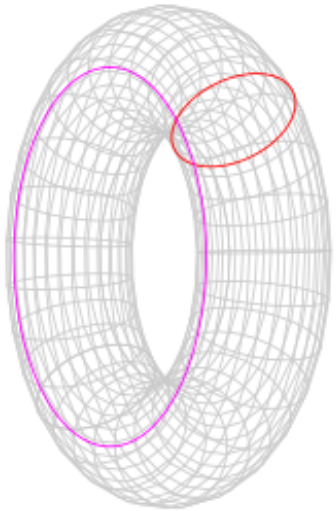
A good amount of work had been done on this problem before the Clay Institute announced it as one of their Millennium prize problems. It has been proved for one, two and three dimensions trivially, and a complex proof had shown it was true for 5 and above dimensions, so the only case left to prove it for was in 4 dimensions.

Thus, the Poincaré conjecture stated:

“Every simply connected, closed 3-manifold is homeomorphic to the 3-sphere.”

Keep in mind that a 3-manifold can be thought of as the surface of a 4 dimensional object, in the same way that a sphere can be thought of as the surface of a ball – this makes a sphere 2-dimensional because it is simply a surface of a 3-dimensional object.

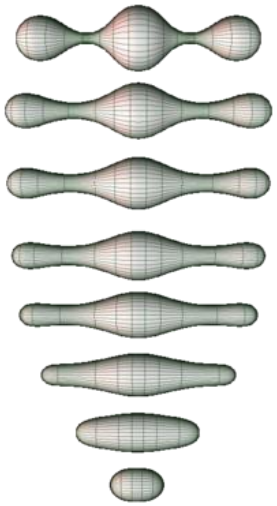
In essence, this conjecture states that if we have the surface of a 4 dimensional object and, on that surface, any point can connect to any other point such that each path can be manipulated in to every other path (simply connected) and the surface is finite (closed) then it is topologically equivalent to the surface of a 4-dimensional ball.



Simply connected is so important here because this is what searches for holes in the manifold. Imagine a torus and you wish to connect a point on that torus to itself. In the image, let us take that point to be where the blue and red line cross. The blue line and the red line cannot be manipulated (in the topological sense – no cutting, sticking etc) to each other because of the hole. If this was a sphere, any paths connecting a point to itself can be manipulated it to any other path.

Since its first statement in 1900, many mathematicians had claimed they had a proof for this theorem. It is the most mis-answered theorem in the history of mathematics, and many solutions, especially in 1960 to 1980 had been withdrawn swiftly when subtle errors has been realised.

Continued on page 17



Grigori Perelman finally managed to prove this was true for 4-dimensional objects as well as a lot more beyond that using Hamilton's idea of a Ricci flow. The Ricci flow is a process by which a manifold (in this instance, it applies to a lot more fields on Mathematics then just topology) can be deformed bit by bit to make it more uniform. The idea of uniform here is to turn it in to a sphere, and it does so by shrinking areas of positive curvature and expanding areas of negative curvature to turn a shape in to a pill shape and then to a sphere.

Across 2002 and 2003, Perelman posted three papers online which introduced the Ricci flow in this context and thus proved the conjecture, and in doing so proved a newer and more generalized conjecture called Thurston's Geometrization conjecture. Up to 2006, this paper was still being peer reviewed, and although some errors were found in Perelman's work, these were easily patched up by his peers. Often, errors were by omission so several amendments were simply his peers offering more information on how he might have gone from step to step.

The story of the Poincaré conjecture caught so many headlines, not because a Mathematician solved a problem, but because of what came after. Perelman was offered both a Fields medal (Nobel Prize for Mathematics) and the $1million but refused both on the grounds that he deserved the money no more than Richard Hamilton or any of the other instrumental mathematicians who proved it was true for 2, 3 or 5 or more dimensions.

As far as his stardom went, Perelman spent the 2003 to 2004 travelling around Mathematical institutes to explain his work and his theories, but then once again went back to his work and away from the media. He is quoted as saying "I'm not interested in money or fame. I don't want to be on display like an animal in a zoo. I am not a hero of mathematics. I am not even that successful; that is why I don't want to have everybody looking at me." He left the field of Mathematics because of the attention that was drawn to him. A strong moral and ethical code led him to grow a distaste for the dishonesty that he found in some other Mathematicians, such as the Clay Institute refusing to acknowledge the role in which Hamilton played in the proof, and the Fields Medalist Shing-Tung Yau downplaying Perelman's role in the proof, instead assigning the credit to Cao and Zhu, who did that majority of the fixes for Perelman's original proof.

Mr M Dowding, Head of Mathematics

LOCAL WORLD OF WONDER

Geographers are obviously interested in the world around them and this often includes many sites of awe and wonder such as the Grand Canyon, Uluru, Antarctica or the Amazon rainforest. However, there is also much of interest in the local area's physical and human environment.

The Geography Department wishes to encourage pupils to observe and appreciate their local world during this time of uncertainty. Last week's learning time for Years 8 and 9 was devoted to pupils studying a location of local interest, where possible visiting it during their socially-distant exercise time. The result was some really excellent work.

Thank you to Jack Tapp, Malachi Dowling, Alex Lipski, Mohammed Khan, Shourish Subramaniam, Shaan Mahil, Nathan Miribidi, Max Wyles and Michael Toumbas (all 8L), Anushan Kugathasan, Sebastian Lambert, Luke Read, Chris Parkinson, Muhammad Saad and Patrick Maynard (all 9N), Samin Afshari and Sam Kasakaitis (9E) for all the excellent work shown in the following pages.

Dr M Shepherd, Head of Geography

Southend seafront

The sea

The eastern sea is a shallow basin with considerable tidal flow which stirs up all the silt and mud on the sea floor, which usually ends up at Southend seafront.

Old Beach Huts

The first beach huts were built back in 1909, and some of them are still standing.

Long, rocky beach
Stretches 2.14km from the shore.

Local World of Wonders

A pier- why was it built? Are there any negative consequences of building a pier? Development can crowd beaches. As more buildings and other facilities are built, beaches become narrower and narrower. The natural, seasonal movement of beach sediment may be disrupted.

The sea- the water is quite far out. Why is that?

Shore- why does the shore look so "dry"?

Sand- Why does the sand have pebbles in it? Most beach materials are the products of weathering and erosion. Over many years, water and wind wear away at the land. The continual action of waves beating against a rocky cliff, for example, may cause some rocks to come loose.

Bewley Courts- my local world of wonder

Although these may just look like a normal set of flats, these are social housing, and have some very interesting backstory.

key features:

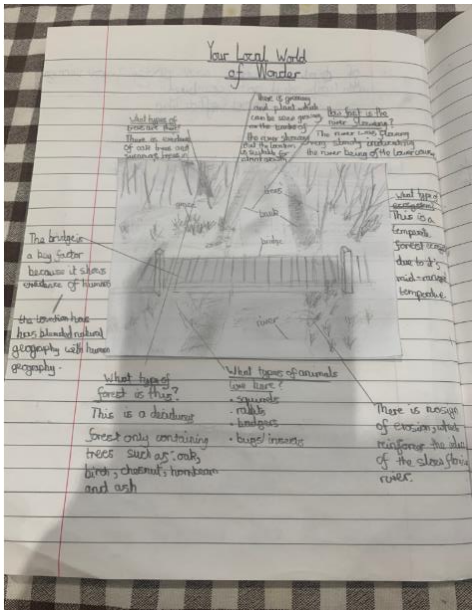
Small windows. These are very cheap to install and are good value for money. These let in little light and can sometimes open. These are a very common sight in social housing.

Small height between floors. This makes it so that there can be more floors which means more capacity.

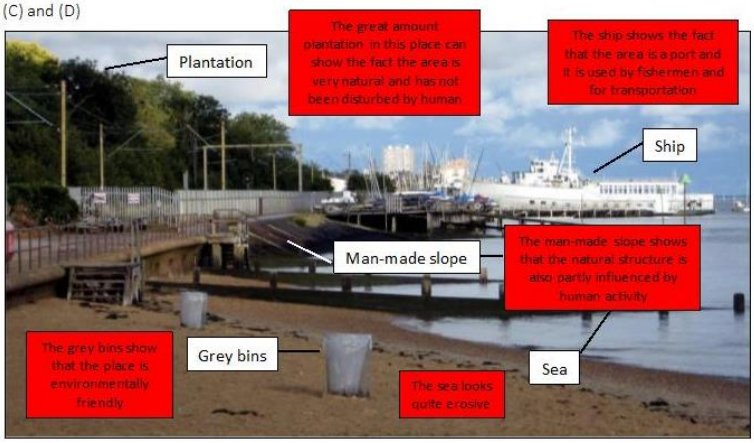
Roof bars hide satellites for TV and other electronic services such as phones.

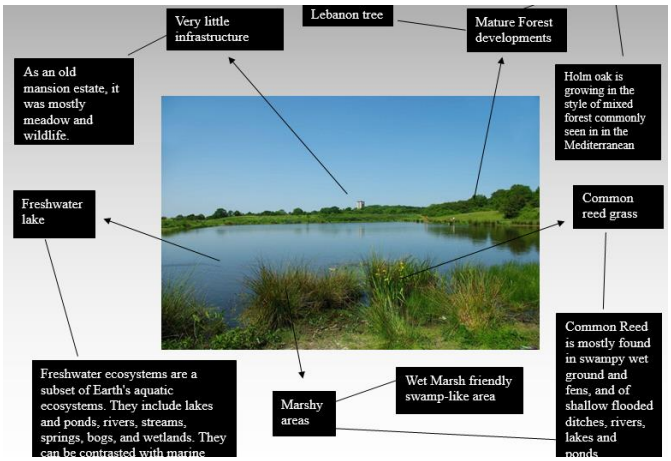
A brief history of social housing:

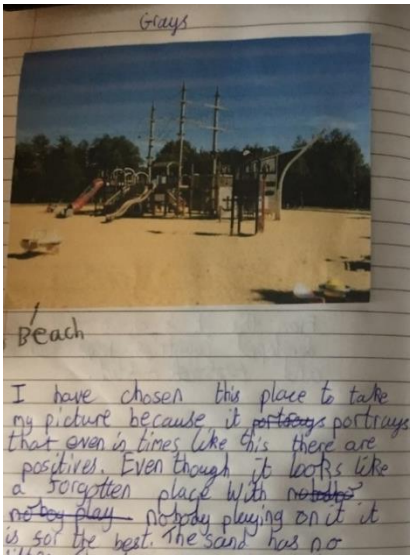
Social housing began to become a more common sight after World War II, in which millions of homes had been



(A), (C) and (D)







Local world of wonder

PERSONAL, SOCIAL, HEALTH AND ECONOMIC EDUCATION CENTENARY HOUSE BUTTERFLY SURVEY COMPETITION

Whilst sitting in your garden or looking out of your balcony or window, you might have spotted several butterflies on the wing. The Butterfly Conservation Society are running their annual citizen science project and are asking for members of the public to identify the species of butterfly that they have seen and log this on their website.

To join this project, please visit https://gardenbutterflysurvey.org. Here you will be able to download a photo identification guide of the most common species in the UK, as below. You will be asked to create an account where you can save all of your sightings and they will be submitted to generate a nationwide database to try to get some idea of how different species are fairing this year. To make this data robust it is important to log every sighting for as much of the year as possible.

If you contribute to this project I would love to know, and I will be awarding House points for those that do, proving that you are intellectually curious and pursuing academic interests beyond the confines of the curriculum. Tell me what species you have found and there will be extra points available if you can manage to take a photograph of a butterfly that stays still for long enough!

When identifying butterfly species, you need to firstly look at the primary colour and any markings. Some butterfly species can look very similar so try to take note of the underside colour and the position of markings, as this will help discern one from another. Other clues to aid identification will be the shape of the wings and how they position them whilst at rest, and the overall size of the butterfly.

If you are lucky, you may find some which are not on the image below, in which case I recommend using the identification area of the website https://butterfly-conservation.org/butterflies/identify-a-butterfly and applying the filters to narrow down your search.

Happy spotting, and remember to keep me updated!

Mr R Barber, House Coordinator

WHERE IN THE WORLD?

Congratulations to all those who correctly identified last week's location as **The Skeleton Coast, Namibia**. House points have been awarded to those who submitted correct answers.

I would like to thank those students that have been contributing to the Department's weekly student newsletter. These newsletters have been emailed out to Lower School pupils and those studying Geography at GCSE and A Level. Please check your inbox and take a look!

Your clues for today's *Where in the World?* are:

- This is an example of a large caldera; the centre island is a volcano and one of world's largest volcanic eruptions created a huge crater around it that has since filled in with water.
- Due to its fine cuisine, excellent wines and beautiful sunsets, this place is very popular among tourists, particularly those on their honeymoons!

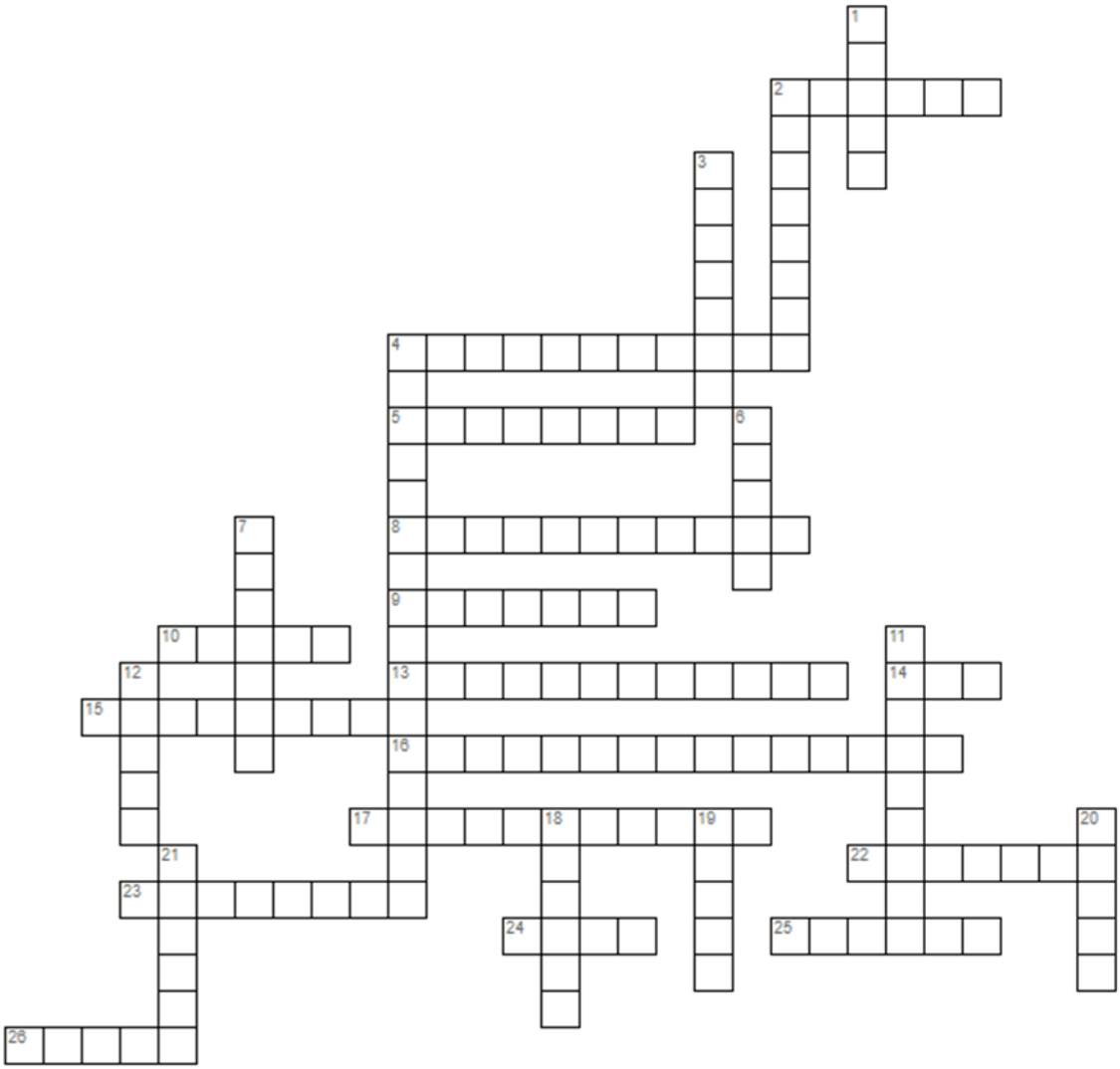
Please submit your answers via this Microsoft Form by Thursday 7 May:

https://forms.office.com/Pages/ResponsePage.aspx?id=N6W6gucuok-3-qnXxLzq5cGrPAnzzsFDiqmfUFjxEshUQTc4Sks4RU5TT1dRSVUzRkRPUEo2Q1dSMS4u

Mr L Norman, Teacher of Geography

MR JEFFREYS' HISTORY CROSSWORD 6

Answers next week!



Across

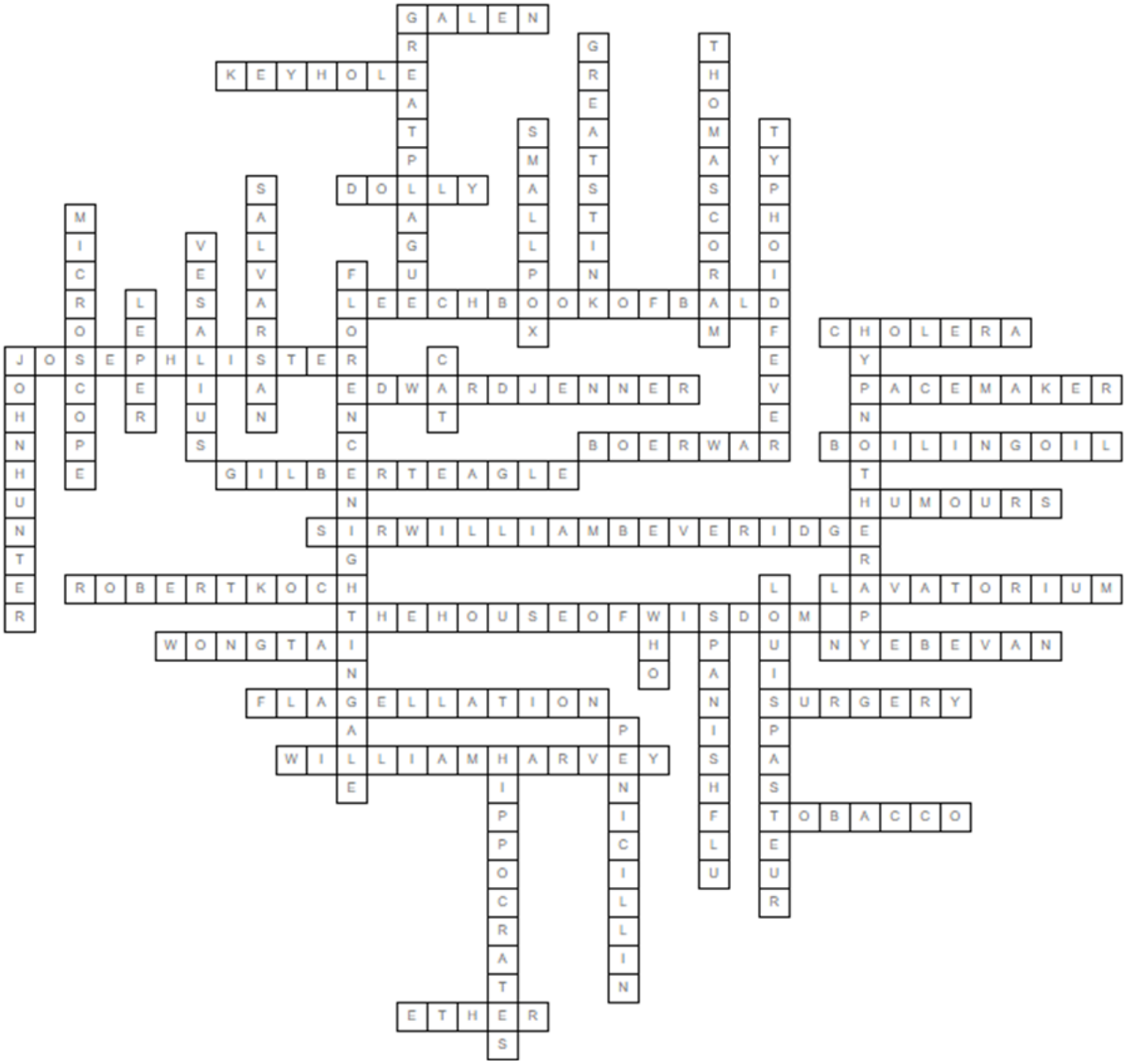
2 By the Golden Horn, a Rum Sultanate that's all aflap? (6)
4 Blackbeard (6,5)
5 A Magnificent ruler and Qanuni (8)
8 Emerged from Ice Age to challenge Home Sapiens but not successfully (11)
9 Land of Brian Boru, Turlough and the Patrician? (7)
10 Region established by the East Saxons after c552 (5)
13 When William I's present was his own coronation? (9,3)
14 Symbol of Athena and animal featuring on Greek four drachma piece (3)
15 Venetian merchant who brought back stories from the court of Kublai Khan (5,4)
16 English assembly of 1290 where membership was in fashion? (5,10)
17 Discoverer of sea route from Europe to India in 1497 (5,2,4)
22 Knights who believed in the bushido (7)
23 West European settlement established by Rollo in 911 (8)
24 City of Jarslav and the chicken? (4)
25 Bundle of rods and axe blade used by Roman Kings as symbol of power (6)
26 Animal first domesticated 5,500 years ago in Kazakhstan by the Botai (5)

Down

1 Egyptian sky-god whose eyes were the Sun and the Moon (5)
2 Sandy Back pig or Manifesto of 1834? (8)
3 Leader of Native American revolution in 1763 (7)
4 Trading company founded in 1600 that led British conquest of India (4,5,7)
6 Country of the Ainu, the Yayoi and the Yamato (5)
7 A capital place to find a Minotaur? (7)
11 Fiery French peasant girl who played for high stakes? (4,2,3)
12 Venue for witch trials of 1692 (5)
18 Nebudchadnezzar's story-book? (6)
19 Berbers from Africa or hatless high ground in Ilkley? (5)
20 Basic number for Babylonian mathematicians and scientists (5)
21 Prince Charles, Langford or friend of Clyde?

ANSWERS TO HISTORY CROSSWORD 5

Rafi Gamma completes the hat-trick by sending in the first correct answer for the third week in a row. Well done Rafi!



CAREERS WORDSEARCH

To keep your mind active, I have devised a fun Wordsearch puzzle for all year groups to attempt. It is a little light relief, but learning in any capacity and using your brain in different ways should always be fun and enjoyed as much as possible.

I hope you find all the hidden words, which are focussed on careers and your future employment. Let me know how you get on, and if you find this fun, I would be pleased to include a Wordsearch in future editions of the brilliant Westcliff Week. Best of luck!

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

Internship

Interview

Application

Appointment

Contacts

Teamwork

CV

First Impression

Success

Work Experience

Resume

Preparation

Networking

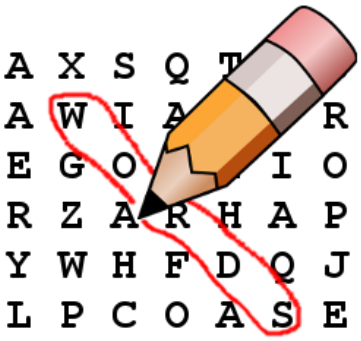
Volunteering

Initiative

Research

Qualifications

Timekeeping



Mrs N Weller, Careers Adviser

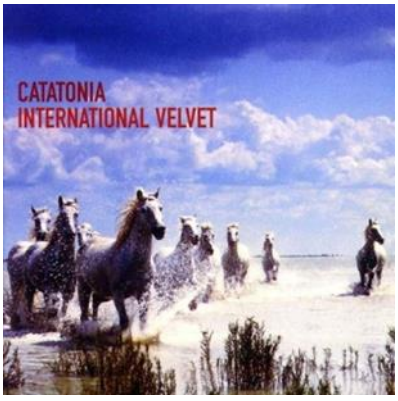
MR MCGEE'S ALBUM OF THE WEEK

Catatonia

International Velvet, 1998

Every once in a while a genre emerges that defines its time and place of birth. From Rock n Roll to Disco, Punk to Grime, these genres become a sound track for something bigger than themselves; they are the backing track to the zeitgeist.

Those of us who lived through the mid to late 1990s will be familiar with 'Cool Britainia', a second British Invasion of pop culture around the world and a new confidence in the country's identity. Just before this new societal trend gained real traction the young people of the UK were either listening to soft rock, power ballads or, in the case of the alternative charts, grunge music. In the wake of Kurt Cobain's untimely passing there was a void to fill. Cue Britpop.



Britpop was a truly broad church, in that all constituent parts of the national were represented. A line up of Britpop bands would look a little like your average Lions team. A strong showing from England; Pulp, Oasis and Blur. A touch of Irish flair provided by Ash and The Divine Comedy, with the Welsh arguably doing all the work; Manic Street Preachers, Stereophonics, Feeder (I could go on), and a token Scot - Idlewild.

I joke of course. There were hundreds of Britpop acts from across the four nations and they all shared a desire to produce catchy melodies, singalong choruses and memorable guitar riffs.

I have chosen an album from this time that might be a little more 'left field'; Catatonia's 1998 International Velvet. Female fronted acts were not uncommon during this time. Bands such as Garbage and Sleeper sold more records, but I believe Catatonia's album, for me at least, has a little more depth and substance.

International Velvet was released in the United Kingdom on 2 February 1998. It was awarded triple Platinum status by the British Phonographic Industry on 12 November 1999, meaning that in 22 months it had sold over 900,000 copies. The album was Catatonia's first release in the United States by the Vapor label owned by Neil Young, but it did not chart and, according to *The Washington Post,* it was "overlooked".

It is an album of contrasts through which the band demonstrated a talent for producing a catchy melody *(Game On)*, a singalong chorus *(Road Rage*) and the memorable riffs *(Game On & Mulder and Scully,* to name just two). But there is so much more to this album. *Strange Glue* is hauntingly beautiful with its insistent 12/8 time, almost waltzing you through terribly bitter sweet lyrics. All of these tracks are well worth listening to, although you must listen to title track; it will make the most ardent critic of devolved power want to follow in the footsteps of Glyndwr and march on London.

Mwynhewch!

Mr A McGee, Director of Sixth Form

UPPER SIXTH 2020 SIGN-UP TO THE SCHOOL'S ALUMNI COMMUNITY

We would like to remind all Upper Sixth students of the opportunity to sign up to the WHSB Alumni Network and the Old Westcliffian Association before they move on from the School this year. All we need are some basic contact details and your permission to be contacted by us following your departure from the School. To ensure that we hold the correct details for you, please visit the *Wufoo* form below and input your details, as requested. The form takes a couple of minutes to complete and we should be grateful for your responses no later than Friday 22 May 2020.

https://whsb.wufoo.com/forms/alumni-network-signup-form-2020/

Providing us with a contact email address will enable us to invite you to attend an informal get-together in December, date to be advised. This event will take place in the Sixth Form Centre and will enable you to catch up with members of staff and your contemporaries, whom you may not have had the chance to meet up with since leaving School. Complimentary refreshments will be available.

In addition, you would be welcome to attend the Old Westcliffian Association (OWA) Annual Reunion Dinner which is, at present, scheduled to take place in School on Friday 25 September 2020. Tickets for the Reunion Dinner are priced at just £17.50 for all those either leaving the School this year or those who are in full-time education, and can be purchased at https://whsb.ticketsource.co.uk/

Lifetime membership of the WHSB Alumni Network is, and always will be, free and ensures that you are kept up to date with day-to-day news about WHSB and its pupils, and opportunities to become involved and attend our networking events. Lifetime membership of the OWA normally costs £20.00, However, by signing up now (while you are still at the School) you will benefit from free membership for life.

Please contact the Community Development Office by email for further information.

We look forward to welcoming you to the School's Alumni Community and keeping in touch!

community@whsb.essex.sch.uk

Mrs J Clarke & Mrs N Weller, WHSB Community Development Office

YOUNG PEOPLES' MENTAL HEALTH AND WELL-BEING

Lots of young people in the UK have had their GCSEs, A Levels or other examinations cancelled because of the coronavirus (COVID-19) pandemic, causing lots of uncertainty and anxiety. For advice on how to deal with this issue, the charities **Young Minds** and **Childline** provide useful sources of information for both students and parents. Additionally, young people living in Southend can access **ChatHealth**, which is a secure and confidential text messaging service for young people aged between 11 to 19 years. It allows young people living in Southend to easily, and anonymously, get in touch with a School Nurse for advice and support. Young people aged 11 to19 can text 07520 649895 for advice regarding mental health, sexual health, bullying, drugs, alcohol, self-harm, relationships and smoking.

https://youngminds.org.uk/blog/how-im-coping-with-exams-being-cancelled/

https://www.childline.org.uk/info-advice/school-college-and-work/school-college/exam-stress/

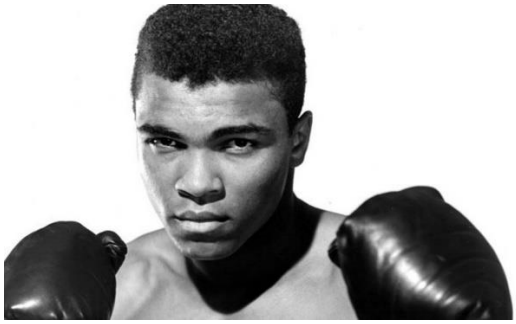
Mrs J Clarke, WHSB Community Development Office

ANSWERS TO MRS WELLER'S CAREERS QUIZ (WEEK BEGINNING 27 APRIL 2020): FIRST JOBS HELD BY FAMOUS PEOPLE

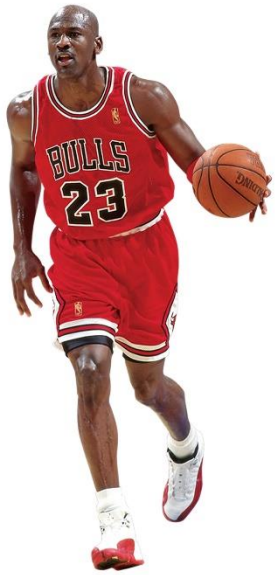
1. 'Student' magazine
2. GAP Customer Service Adviser
3. TV cereal commercial
4. Computer Programmer
5. Lawyer
6. TV Actress
7. Theatre Actor
8. Singer
9. YouTube 15 second recipe videos
10. TV Actor
11. Pirate Radio DJ
12. Pastry Chef
13. Emptying ashtrays, local dog track
14. Adventure Island assistant
15. Quality Assurance Apprentice
16. BBC TV Producer
17. Advertising Executive
18. Aerials & Lighter Salesman
19. Real Estate Salesman
20. Waiter
21. TV Actor in 'Thunderpants'
22. Search & Rescue Pilot
23. Engineer
24. TV Researcher
25. TV Actor

THE GREATEST SPORTSPERSON EVER?

I am sure that most people will have their own opinion on who they think is the greatest sportsperson ever. Obviously, some athletes will have had made a greater impression on some individuals than others, depending perhaps on an individual's sporting preferences and generation. In any event, it is important to consider that popularity alone does not determine who is the greatest. Perhaps the criteria for the greatest sportsperson needs to be much broader.



It is almost inevitable that Mohammed Ali is going to feature in any conversation regarding the greatest sportsperson. His irrepressible personality has made him arguably the most famous and quoted athlete of all time. Not only did he say he was the best, he also proved it, winning 56 out of his 61 professional fights after winning Gold at the 1960 Rome Olympics. Many say Mohammed Ali was robbed of his best years having been effectively banned from boxing for three years, after refusing the draft for the Vietnam War, on both religious and race grounds. He also became a key figure in the civil rights movement. He was awarded the Martin Luther King Award in 1970, where Coretta Scott King describes Ali as "a champion of justice and peace and unity". After he was able to return to boxing, he fought and won two of the greatest boxing matches in history (both for a world title); these being *The Thrilla in Manilla* against Joe Frazier, and in *The Rumble in the Jungle*. There are other boxers with better records than Ali, but arguably none have had the same impact on the public and society.



For many, Michael Jordan would be a person worthy of the greatest sportsperson accolade. Almost superhuman in his prime, Jordan led the Chicago Bulls to six NBA (National Basket Ball) championships, whilst

his series of individual awards have made him the most decorated player in the NBA's history. An icon of basketball, he struck a deal with Nike, which originally saw him earn $500k per year for the first five years, although subsequent deals have earned him as much as $150m per year. The *Air Jordan* is the most iconic shoe across both basketball and pop culture, with the brand being mentioned in songs, music videos, and even appearing in other sports (notably on Paris Saint-Germain's kit in the Champions League). Jordan himself has also dabbled in Baseball and the film industry, playing in the Minor Baseball League and featuring in a leading role in Space Jam. Arguably, Jordan, both as a person and a brand, would be difficult to overlook when considering the greatest sportsperson.

Finally, the amazing Serena Williams must be considered a serious contender for the greatest sportsperson title. She has a record 23 Gram Slam singles titles, spending a total of 319 weeks at world number one (including one stretch of 186 consecutive weeks holding the top place), 14 Grand Slam doubles titles (all with her sister Venus) and 4 Olympic Gold Medals. Her dominance has seen her become a world star and a role model for women everywhere. She has been awarded the Laureus Sportswoman of the Year award four times and was voted Sportsperson of the Year by Sports Illustrated in 2015. Serena Williams has broken the mould in the sports world, being the only woman in the 100 top paid athletes in 2017. Her list of achievements goes on and on, none more so than her victory at the 2017 Australian Open. On the face of it, this was a routine Serena performance. However, when a few months later she announced that she was 20 weeks pregnant, simple mathematics from fans worked out that she must have been 8 weeks pregnant at the time of the final. To win one Grand Slam is an unbelievable achievement, but to win your 23rd whilst you are two months pregnant is incredible.

There are, of course, many other serious contenders for the title of greatest sportsperson ever and I hope that this article will whet your appetite and encourage you to investigate a range of sports (especially those not familiar to you) to learn about the sportspersons, past and present, who have dominated their sport and led it to new heights of excellence.

Mr H Morrant, Sports Coach

QUICK NUMERICAL RECIPES: VEDIC ADDITION AND SUBTRACTION

In this week's 'quick numerical recipes' article, we move from Trachtenberg's Europe to ancient India, and a method perfected by Hindu scholars over the centuries. The ideas do not translate easily into Western language however, a scholar by the name of Jagadguru Shri Bharathi Krishna Tirthaji formalized them in the period between 1911 and 1918 for use worldwide.

There are techniques for a wide range of calculations, however I want to show a particular trick which is useful in addition and subtraction. Western scholars have also used it, and call it the *vinculum*, which is effectively a way of using negative numbers, and is written as a bar (or negative sign) above a number.

Let us illustrate this in use. Rather than writing 398 = 300 + 90 + 8, we write it as $40\overline{2} = 400 - 2$. Similarly we might write 329 as $33\overline{1} = 300 + 30 - 1$.

Thus if we were to add 398 to 329, that is $40\overline{2} + 33\overline{1}$, we add 400+330 = 730 to get the positive part, the negative parts sum to -3, and so the final answer will be 730-3 = 727.

We are doing the calculation normally, just making good use of negative numbers to prevent carrying.

When dealing with more complicated numbers, it is useful to note a trick for writing the vinculum quickly. For example, we want a rapid method of writing $657 = 7\overline{43}$. When working out the vinculum, note that the final digit of

Continued on page 29

the vinculum is the final digit of the original number subtracted from 10 (3 = 10-7), whereas the other digits of the vinculum are the original digits subtracted from 9 (4 = 9-5). To make the mathematics work, we do have to add one to the last non-vinculized digit (here 6+1=7 in the hundreds place). So 876 = 0876 becomes $1\overline{124}$, with an extra '1' in the thousands column, then 1=9-8, 2=9-7 and 4=10-6.

This trick was known to the ancient Hindus as the *Nikhilam Sutra* and English it means as 'All from 9 and [the] last from 10'.

Subtraction

Real benefits in speed come from using the vinculum when subtracting. The effect of the vinculum is to allow us to use negative numbers to avoid 'borrowing' which otherwise slows down our working. We start by doing our subtractions using negative numbers where it helps. Suppose we wish to evaluate 9136 – 2784. We begin by writing the subtraction of each column as below:

	9	1	3	6
-	2	7	8	4
	7	$\bar{6}$	$\bar{5}$	2

Notice the negative numbers in the answer in the hundreds and tens columns written using a vinculum.

We then need to write the answer without the vinculum. We do that by using the following rules:

1. We consider each block of numbers with vincula as single objects (so the $\overline{65}$ is treated as a single block).
2. Within each vinculum block, we add 10 to the right hand number (so $\bar{5} + 10 = 5$), and we add 9 to any other numbers in the block (so $\bar{6} + 9 = 3$). This is the same as the Nikhilam Sutra outlined above.
3. Next, we subtract 1 from the digit of the answer to the left of any vinculum block (here the 7 becomes a 6).
4. Any other digits of our preliminary answer which do not have vincula are left alone (the 2 remains unchanged).

This gives the answer to 9136 – 2784 = 6352 as required.

Let's do another one: 791051 – 458823:

	7	9	1	0	5	1
-	4	5	8	8	2	3
Preliminary answer	3	4	$\bar{7}$	$\bar{8}$	3	$\bar{2}$
Final answer	3	3	2	2	2	8

The final answer is explained digit by digit as follows:

Units: 10 – 2 = 8. It is the final digit of a one-digit vinculum block.

Tens: 3 – 1 = 2. We subtract 1 because this digit is immediately to the left of a vinculum block (the units digit).

Hundreds: 10 – 8 = 2. It is the final digit of a two-digit vinculum block.

Thousands: 9 – 7 = 2. It is a non-final digit of a vinculum block.

Tens of thousands: 4 – 1 = 3. We subtract 1 because this digit is immediately to the left of a vinculum block.

Hundreds of thousands: 3 as it doesn't need any changes under the rules.

With practice, you will find that this method is much faster than the conventional method with borrowing.

Happy Calculating!

Dr A Machacek, Senior Master Academic Studies

LEARNER PROFILE: LIFE LONG LEARNING

Determination, Determination, Determination!

The 30th President of the United States (1923–1929) John Calvin Coolidge Jr. noted that "Nothing in this world can take the place of persistence. Talent will not; nothing is more common than unsuccessful people with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent".

It has long been understood that although ability and talent play an important role in success, they alone are no guarantee of success. Consequently, for many, determination is considered a highly prized personality trait because it can be used to assess an individual's motivation and drive to succeed. It is also closely associated with the qualities of perseverance (the ability to keep going even when times are tough) and persistence.

Determination can manifest itself in many aspects of our lives from our career paths to our personal hobbies. As a School we know that determination is an attribute highly sought after by the university admissions tutors and employers. It is frequently assessed via applications, references, and at interview. Those selecting candidates often look at how an applicant handles challenges. The universities and employers wish to know whether the individual will fold in the face of difficulty, or whether they continue to seek positive solutions, even in the face of repeated failures.

Rightly or wrongly, evidence of our levels of determination is sometimes judged by our specific interests. Involvement in Sport, Duke of Edinburgh, Combined Cadet Force, for example, may strongly suggest the drive to succeed. So too does learning to play a musical instrument to a high level, debating, acting and mastering an academic subject. To succeed at a high level in any of these and other areas, substantial determination will have been required. An examination in which you secure the highest grade is also seen as evidence, as this takes more than academic ability. In the final analysis, we understand that it is sustained and deliberate effort that elevates a person above those who rely on ability and talent alone.

Resilience is an attribute that is often closely associated with determination. It is the ability to bounce back following the setbacks, rather than giving up. We are all living through a challenging time for our School community and the nation as a whole. In the face of the scale of the challenge presented by COVID-19 it would be easy to feel overwhelmed and lose heart. However, we must remain determined in our resolve to overcome this challenge and play our part in helping our society to move forward. If we recognise that our progress out of the current situation can be transformed through determined effort, then we shall succeed.

I leave you then with a quote I have often shared in School. The words are from another former President of the United States - Abraham Lincoln, who served as the 16th President of the United States during the American Civil War, one of the most turbulent times in his country's history. "Determine that the thing can and shall be done, and then we shall find the way."

Headmaster

THE WEEK AHEAD

WEEK BEGINNING 4 MAY 2020

Please see inside The Westcliff Week for details of further activities.

Day	Date	Time	Activity
Monday - Sunday	4 – 10 May	N/A	WHSB Lockdown Gallery 2020 (page 15)
Monday - Sunday	4 – 10 May	N/A	Online Theatre events available (further details in issues 2 & 3)
Monday – Sunday	4 – 10 May	N/A	Music Theory Tuition – YouTube 'itchy2learn' (see issue 5)
Monday - Sunday	4 – 10 May	N/A	Education Perfect Website familiarisation Languages Competition 14-21 May, see Issue 4
Monday – Sunday	4 – 10 May	N/A	PSHEE Centenary House Gardening Competition (see issue 4)
Monday - Sunday	4 – 10 May	N/A	Upper Sixth: Opportunity to sign up for Alumni Community (page 25)
Monday - Sunday	4 – 10 May	N/A	Centenary House Butterfly Survey Competition (Page 20)
Monday - Sunday	4 – 10 May	N/A	Southend Youth Council Logo Redesign Contest (page 7) Deadline 20 May 2020
Monday - Friday	4 – 8 May	N/A	Wargaming Team: Bloodbowl League
Monday - Friday	4 – 8 May	N/A	BBC Science & History Education offer (see issue 5)
Monday – Friday	4 – 8 May	N/A	P.E. with Joe (featured in issue 1)
Monday – Friday	4 – 8 May	N/A	Mr Jeffreys' History Crossword competition (page 22)
Monday - Friday	4 – 8 May	N/A	Round Robin Challenge – ideas to Dr Machacek (page 10)
Monday – Friday	4 – 8 May	N/A	Middle School and Sixth Form House Find the Connections (page 11)
Monday - Friday	4 -8 May	8.45am	Hallway Gym Class with Mr Moore (all invited), Page 8
Tuesday	5 May	1.00pm	Healthcare and Medical Society
Tuesday	5 May	4.00pm	Westcliff Drama Online
Wednesday	6 May	1.00pm	Weekly Watch with Miss Williams
Wednesday	6 May	1.00pm	MOxbridge English (Sixth Form)
Wednesday	6 May	4.00pm	Bibliophiles Book Club (Middle School, Sixth Form and staff)
Thursday	7 May	7.30pm	Mr Derrick's Film Club 'Watch-along'
Thursday	7 May	N/A	Deadline for responses to this week's *Where in the World?* (see page 21)
Friday	8 May	4.00pm-6.00pm	Southend's VE Day Concert, hosted by Sir David Amess MP (stream live on YouTube) Page 30

Details of further clubs are included on page 10. Clubs and Societies Team code xkzlh2s.

Facebook: /WHSforBoys

Twitter: @WHSforBoys

LinkedIn: Westcliff High School for Boys

ACTION CALENDAR: MEANINGFUL MAY 2020

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
				1 Take a minute to remember what really matters to you and why	2 Do something meaningful for someone you really care about	3 Reconnect with nature today, even if you're stuck indoors
4 Focus on what you can do rather than what you can't do	5 Send friends a photo of a time you all enjoyed together	6 Take a step towards one of your life goals, however small	7 Let someone you love know how much they mean to you	8 Set yourself a kindness mission. Give your time to help others	9 Look out for positive news and reasons to be cheerful today	10 Tell someone about why your favourite music means a lot to you
11 What are your most important values? Use them today	12 Be grateful for the little things, even in difficult times	13 Today do something to care for the natural world	14 Show your gratitude to people who are helping to make things better	15 Find out about the values and traditions of another culture	16 Look around you and notice five things you find meaningful	17 Take a positive action to help in your local community
18 Hand-write a note to someone you love and send them a photo of it	19 Find a way to craft what you are doing to give it more meaning	20 Reflect on what makes you feel really valued and appreciated	21 Share photos of 3 things you find meaningful or memorable	22 Ask a loved one or colleague what matters most to them and why	23 Share an inspiring quote with others to give them a boost	24 Do something special today and revisit it in your memory tonight
25 Give your time to help a project or charity you care about	26 Recall three things you've done that you are really proud of	27 Today link your decisions and choices to your purpose in life	28 Tell someone about an event in your life that was really meaningful	29 Think about how your actions make a difference for others	30 Find three good reasons to be hopeful about the future	31 Look up at the sky. Remember we are all part of something bigger

"Start Where You Are. Use What You Have. Do What You Can" ~ Arthur Ashe

ACTION FOR HAPPINESS

www.actionforhappiness.org

31 actions to look after ourselves and each other as we face this global crisis together

Keep Calm · Stay Wise · Be Kind