

The Sheldonian

YEAR 8 GO HOPPING MAD!

By Callie

Their amazing AirHop trip!!

On the 17th of April, the top 85 year 8s went to AirHop for a reward trip. If they were in the top 85 people for praise points and under 5 demerits you were accepted to go! All the year 8s that got accepted were very excited and most of their friends got accepted too! AirHop does not just have trampolines, they have dodgeball, basketball, wipe out, steep slides, football, obstacle course, battle beams and so much more!!!! We set off at the end of the day, super excited to go, we hopped on our buses and started our journey wondering who would get there first. Our bus journeys contained Duolingo noises and Jojo Siwa's new song. It was interesting....



COUZENS CRUISES TO VICTORY!

By Amelie, Millie and Callie

We interviewed Mr Couzens about his recent marathon success!

Our question: Did you listen to any music and if so what?

His answer: No but I did listen to some music when I was training the main majority was some good old school hiphop but listen in training. I didn't listen to any during the race as I wanted to soak up the atmosphere.

Our question: What was your time?

His answer: 3hrs 40mins. The fastest time was 2hrs 16mins.

Our question: How exhausting was it?

His answer: Very! I was led down on the grass for 35 minutes after!

Our question: Did you run with friends?

His answer: No I didn't but I always had company as there's up to 50000 people running with you. I was also supported by lots of my family and friends along the way.

What charity did you run for?

Crohn's and colitis uk, which is a Charity supporting a disease which can affect people greatly and I ran for this charity because my wife had a type of this disease and fortunately we raised £4500!



COOKING CORNER: RED VELVET CAKES

For the year 8 red nose day bake sale, I made these delicious red velvet cakes.

By Ezme

Ingredients:

- 125 g unsalted butter
- 300 g caster sugar
- 3 medium eggs
- 30 g cocoa powder
- 1 heaped tsp red food colouring
- 1 tsp vanilla extract
- 250 ml buttermilk
- 300 g plain flour
- 1 tsp bicarbonate of soda
- 2 tsp white wine vinegar

Cream Cheese Frosting

- 150 g unsalted butter (room temperature)
- 150 g icing sugar
- 300 g full fat cream cheese
- 1 tsp vanilla extract

Instructions

1. Preheat your oven to 170°C/150°C fan and line/grease two 8" cake tins - leave to the side for now.

2. Beat together the unsalted butter and caster sugar in a stand mixer until smooth and fluffy like you would a normal cake, and then gradually beat in the egg so that it doesn't curdle (if it doesn't curdle, beat in a little flour to bring it back)

3. In a small bowl, mix together the cocoa powder, red extra food colouring, and vanilla extract to a thick dark paste (if it is struggling to become a paste, then add in a little milk to make it runnier and mix better - it needs to be smooth!) - it may take a couple of minutes but this will make it easier to add to the rest of the mixture if you do it this way - and the sponge will be more red!

4. Add this mixture to the unsalted butter and caster sugar mixture and beat until combined and evenly coloured.

5. Turn the speed down to slow, and pour in half of the buttermilk.

1. Add in half of the plain flour and beat again, and then the other half of the buttermilk & beat, and then the other half of the flour & beat.

2. Beat in the bicarbonate of soda and white wine vinegar.

Beat again for a couple of minutes until everything is smooth and incorporated well.

Separate into the two tins and bake in the oven for 30-35 minutes until the middle of the cake comes out clean when poked with a skewer!

Once the cakes are baked, leave to cool fully on a wire rack.

Cream Cheese Frosting

Make sure your unsalted butter is at room temperature. I leave mine out overnight when it's cold weather, but in the hotter months this can take as little as 30 minutes!

Beat your butter on its own for a few minutes to loosen it.

Add in the icing sugar, and beat again - I beat this for about 5 minutes, to make it really smooth.

Make sure your cream cheese doesn't have any excess water - I find it best to add it to a bowl first just to make sure.

Add in the cream cheese, vanilla and beat. At first, it may look a little weird, but just keep on beating.

I end up beating it for a few minutes - it can go through a lumpy stage first, but eventually the lumps beat out and it's smooth and thick!

Once beaten - it should be lovely and thick.

Pipe/spread 1/2 of the frosting onto the top of one sponge.

Add the other sponge on top, then pipe/spread the other half of the frosting onto the top and decorate with sponge crumbs if you fancy!



Why does the number 37 come up everywhere?

By Ethan- Sheldonian special edition

Think of a number between 1 and 100. Chances are, your number is 37. If it wasn't, it probably contained 3, 7 or ended in an odd number. It turns out people are actually really bad at selecting things randomly. In fact, when people were asked to pick a colour and a number, people reliably select blue and 7 the most across dozens of different cultures. Psychologists have a name for this pattern, it's called the blue-seven phenomenon, and it has stumped them for years. I found a Reddit poll from 4 years ago with over 1000 contributors, and the most common number was 69, but after that the most common number was 37! Also, Veritasium asked the same question to over 200,000 people, and ignoring the extremes of the scale because people were primed by the numbers 1 and 100 in the question itself, and ignoring 42 and 69 because they're not random, there are a few numbers that stand out, which we seem to regard as more random than the rest. Those numbers were 7, 73, 77 and 37.

But its not just psychology as to why we choose 37, its quite mathematical. It's not just odd numbers, but specifically primes, which feel like the most random numbers. Notice how we ignore odds ending in 5s or how something like 39 still feels a little less random than 37? Primes feel random for at least two reasons. First, they don't appear as much in our lives. For example, if you look at screen pixels and storage sizes, they always use powers of 2, and never include prime numbers. We live in a composite world with multiple dimensions that multiply together, so we just don't see primes much past the single digits. Secondly, we don't have a formula for primes. If you have a prime number and you want to find the next one, you have no choice but to check every number until you find a prime. The closest thing we have to a formula is the prime number theorem, which gives the approximation that the nth prime number occurs around n times natural log of n . For example, the 1,000th prime number should be around 6,908. And it's close, but certainly not exact (7919). So primes essentially occur at random, but of all the primes, 37 has a reason to stand out.

If we were to find the prime factors of every number, we would see that 2 is the smallest prime factor for exactly $1/2$ of them, all of the even numbers. And 3 is the smallest prime factor for $1/6$ of all numbers, anything that's divisible by 3 but not by 2 and so on. As we pick larger and larger primes, they form the smallest prime factor for fewer and fewer integers. But, what if we track the second smallest prime factor of each number? Well, first, we have 3, which is the second prime factor of a number. Only when the number is divisible by both 2 and 3 or divisible by 6. So $1/6$ of all numbers have a second prime factor of 3. And as we keep going, which number will end up at the balancing point? This is the median second prime factor of all numbers, all numbers from 1 all the way up to a googol and off to infinity. Would you believe that that number is 37? Also, There are other remarkable qualities about 37 as a prime. It's an irregular prime, a Cuban prime, a lucky prime, a sexy prime, a

permutable prime, a Padovan prime. And at this point, mathematicians might just be making up types of primes.

Also, 37 comes up in probability. Imagine you're faced with decisions like whether to rent an apartment, accept a job offer, or stop at a gas station on a road trip. These choices are tricky because you can't see all the options at once. You have to decide whether to accept or reject each option as it comes, knowing that if you decide too early, you might miss something better, but if you wait too long, you might miss out altogether. So, the question is: when should you stop rejecting options and start picking the best one you've seen so far? The optimal strategy suggests you should reject about 37% of the options you encounter, just to get a sense of what's out there, and then select the next option that's better than all the ones you've seen so far. This strategy gives you the highest chance of picking the best option overall. This concept applies not only to decisions like renting an apartment or accepting a job offer but also to broader life choices like finding the right partner or hiring the best employees. The idea is to spend a bit of time exploring your options before committing to the best one you've seen.

A few more coincidences with the number 37 include:

- Normal human body temperature is 37 degrees celsius
- William Shakespeare wrote 37 plays.
- The only American President to resign from office was #37, Richard Nixon
- Michael Jackson's Thriller was #1 for 37 weeks on the Billboard album chart
- There are 37 movements in Beethoven's nine symphonies
- There are 37 holes in the speaker part of a telephone
- The Hindenburg took 37 seconds to burn
- Amelia Earheart disappeared in 1937.
- 37 people died in the crash of US Air 1016, Summer 1994.
- It took 37 years to build the Kansas State Capitol.
- Hannibal brought 37 elephants with him on his conquest of Rome
- MCI was bought by WorldCom for \$37 billion
- There are 37 genes in the mitochondrial genome
- Blue light spans 37 nm of the visible wavelength spectrum
- $37 \times 3 = 111$, $37 \times 6 = 222$, and so on.
- $3 \times 7 \times 37 = 777$

For further information on 37 and its coincidences, go to:

<http://thirty-seven.org/>

<https://www.youtube.com/watch?v=d6iQrh2TK98>