

THE COLUMNS

by pupils; for pupils HSD's Newsletter: Issue 131



Well, it's almost time for the October holidays, traditionally a time when children would leave school to go and work on farms picking potatoes and were called the 'tattie holidays' because of this. So just think, if you get bored or don't know what to do at any point, just remember that, had you been born fifty years earlier, there's an even chance you could have ended up knee deep in a wet, muddy field, tearing vegetables from the ground on some local farm.

This has turned into a bit about appreciating the simple luxuries of modern life. Nobody had had a hot shower until about a hundred years ago. Shakespeare may be the most highly (over)rated playwright in history, but he never once enjoyed the simple pleasure of a hot shower.

Co Editor, Charlie Grewar

*THE DANGERS OF EGYPT*OLOGY

Lucy Smith

Over the past few weeks I've been reading "A World Beneath The Sands" by Tony Wilkinson, a brief overview of the history of Egyptology from around 1820-1920. Now of course, it is a fascinating book, full of juicy tales of pyramids and Pharohs, but there is one thing that is really the most interesting. I found that just 2 things seem to connect the Egyptologists in this book. Firstly, they're all rich European men, and more importantly, all seem to die gruesome deaths...So I thought I'd take a little dive into the life of an Egyptologist in the 19th century.

Imagine this:

You are a rich young man, full of curiosity and ready for a life of living off your trust fund, after an average education at Eton and Oxford. You gain an interest in Egypt, it's a trend right now. The complication is: how to further this interest. The only option is to go to Egypt, which isn't a problem given your extensive fortune. After packing your entire library, furniture, silverware, and a primitive first aid kit, your journey can begin... From London, a traumatic week long journey follows, by train, boat, and camel until you reach the fabled city of Cairo. Provided you manage to survive the journey, no shipwrecks, disease, or train crashes, you are now ready to begin your academic pursuits. Luckily, being an Englishman, you have many contacts in Cairo, as you all went to the same university, only one thing stands between you and your research: the law.



Egypt, at this point in time is full of Europeans, laying claims to lands and attempting to suck up to the Pasha. Depending on which specific year you arrive, it is likely you will not be allowed to excavate, but fret not, what's a little criminal activity for the greater good?

Provided you will not be caught in your illegal activity, you now face the cruel conditions of Egyptian excavations. Unbearable heat during the day, freezing cold at night, biting winds, and worst of all, anything you dug up would be covered over by sand the next day. Some resorted to dynamite, attempting to blast their way into the pyramids, or the sphinx, with varied success, and many injuries.

Just when you think it can't get any worse, you discover the diseases. Mosquitos swarm at dawn and dusk, doling out malaria here there and everywhere. If you somehow manage to miss the malaria, in the extreme heat of the desert, it's easy to drink from a sketchy water source, landing you with the long term illness, dysentery. Now, if you are so incredibly fortunate to avoid both of those, the chances that a wound will get infected, or you simply die, is still incredibly high so don't you worry.

On the slim chance you make it to the end of the excavation, you may discover something! A long lost tomb, palace, or even a mummy. This makes everything worth it. But you're not safe yet. The Pharaoh's curse hangs over you, the legends that by disturbing the dead, you will end up dead. You decide it may be safer to put the mummy back where you found it, but being the greedy, glory seeking man you are, you take the rest.

After what will have become years, your time in Egypt has come to a close. You have caught multiple long term illnesses, gained hundreds of seemingly important chunks of rock, and lost half your money. Now you can head home to the dreary London you have somehow come to miss. Once you get your illegal artifacts past the Egyptian customs...

You arrive back home a less rich, less young, yet every bit the same egotistical European man you were.

Was it all worth it?



My Serious Advice *Smiles*

Al Forbes

Before I get back into the habit of horrible introduction paragraphs, let me say one thing; consider this my serious advice for surviving autumn, school tours, and the daily dread of packing a school bag. I'm taking a break from the really dark, deep, and heavy articles I laced thickly onto you all last month. It's been a hard day of school, my eyes are closing, and my iPad is about to run out of charge, so don't blame me if I sound like I've just been dragged out of a bush.

Part 1: How To Have the Perfect Autumn

Autumn is supposed to be aesthetic - right. Candles, fairy lights, nice crisp leaves, all that Pinterest nonsense... I mean wonder. The reality is a literal swamp of soggy leaves and socks that never dry. To achieve the perfect autumn, you must step in as many piles of mush as possible. Drag the leaves everywhere you go, ideally into classrooms where they stick to the floor. Gloves are optional, but suffering from unbelievably cold hands really sells the look. For your bonus points, press a few decomposing leaves in your jotter and then forget about them until March. It will be like a gift from your past self. And also, cancel the pumpkin spice latte. You have the low sun and damp pavements instead. Don't you. Aesthetic...

Part 2: How To Be The Ultimate Tour Guide

Saturday happened. For some of us it happened twice. Being a school tour guide is simple if you follow the golden rules, so this is my advice for next term. First, stay near the cookie table. It is the only source of power you have - just show a cookie into the families mouth if they ask a question you don't feel like answering. Second, smile, but don't look like an exorcism is happening in your soul because that one teacher looked deep inside you yesterday. Also, the classic lie works wonders too. Yes, we all definitely love running up to the top of Margaret Harris. Look them in the eye of extra credit. Parents buy it every time. Another tip is to always know

where the toilets are, because one parent will ask you without fail, and you really don't want to clean up their mess. Plus if the tour drags on and that one teacher is still talking, just say you smell coffee and gently push them toward the exit. Done.

Part 3: How To Pack Your Bag

Packing a school bag is an extreme sport. Start by inserting a 100g weight so your posture is properly destroyed. Then pull the jotter from under your bed. The one that's bigger than a water bottle; and has somehow equipped itself with bite marks. Put it at the bottom so it flattens everything else. Sprinkle in forty-seven loose sheets of paper, preferably to the rhythm of Macarena. Snacks should be stored squashed and broken in a place in your bag that is just out of reach. That way, when you finally eat them, it'll feel like you really really really deserved them after playing Fishing Frenzy in your bag. And of course, make sure every pen is uncapped and free to leak by the time you reach Bonar.

So that's my advice. Autumn in easy disasters, how to lie your way through a school tour, and a safety briefing for the black hole you call a bag. Don't say I never give good advice. *smiles*.

Also I'm just joking so please don't go home with your snotty nose and say "look what that writer in the newspaper told me to do," because I really don't want to get into trouble.

Labour Party Conference 2025

Jack Mitchell

Labour have been having a tough time in the polls, seemingly trailing Reform by greater and greater margins, and the party still doesn't quite know how to handle this. We've seen tough rhetoric on both illegal and legal migration in an attempt to win over some of the Reform voters who have traditionally called Labour their electoral home, but that alienates its current voter base who don't like seeing their leaders seemingly peddle the lines of Farage and his cohort. In recent weeks, the party seem to have decided to appeal again to those voters who aren't as happy with their migration rhetoric, with PM Keir Starmer calling the Reform immigration policy 'racist'. This hasn't done much to sway any potential Labour voters, because those lost to Reform are in large part leaving because they now feel worthless and feel they have directly been called racist, and those leaving for left wing and centrist parties feel it hasn't gone far enough.

Labour still seems to believe that Reform is its biggest threat to counter, but that is not the case. It is very likely that at the next election, Reform will take the position traditionally held by the Conservatives, either in government or opposition, but most of those are not Labour voters leaving. Reform has taken some voters from Labour, but also a large amount from the Conservatives and also enticed many who don't usually vote to get on-side. Essentially, that is the right wing vote transitioning from the Tories to Reform, rather than from Labour and the left. A poll carried out by Thinkinsight and Strategy found that – to varying degrees – 25% of 2024 Labour voters were considering supporting Reform at the next election, but that over 50% were considering supporting the Greens or Liberal Democrats. The Lib Dems and Greens pose a much more significant threat than Labour HQ seems to realise, and could take seats or worse for the left, split the left wing and centrist vote and hand victory in certain constituencies to Reform.

Last week we saw the Liberal Democrat conference in Bournemouth; this week it was Labour's turn in Liverpool, the fourth consecutive conference to be held there. We saw major speeches from the likes of PM Sir Keir Starmer, Chancellor Rachel Reeves, Home Secretary Shabana Mahmood, Foreign Secretary



Yvette Cooper and Deputy PM David Lammy. On the final day, a Deputy Leadership hustings also took place to determine who will take over Angela Rayner's former role.

Both deputy leadership hopefuls – former Leader of the House of Commons Lucy Powell and Education Secretary Bridget Phillipson – agreed that Labour can't, and shouldn't try to, out-Reform Reform. Phillipson suggested she was the candidate of unity who would push the government to be bolder while Powell who recently lost her ministerial post said she would be a 'full-time deputy' who becomes 'campaigner-in-chief' to try to highlight the fact that her opponent already holds a significant cabinet position.

Both women would be serving under leader Keir Starmer, who delivered a generally well-received speech on Tuesday. He spoke with more passion than usual and included some jokes about his famous tool-maker father which went down very well with the Labour delegates. Although it didn't address issues such as the state of public finances and was more rhetoric than substance, it seems to have helped him at a time when he needs it. Manchester mayor Andy Burnham has recently become a key public critic of Starmer and seems to be attempting to launch a leadership bid, but the conference seems to have strengthened the Prime Minister's position a little.

Today, the Green Party conference begins in Bournemouth, followed by the Conservative conference, which starts in Manchester on Monday, bringing conference season to a close for another year. A round up of what was said in those party conferences and the season as a whole may appear after half-term, so keep your eyes peeled.

OCTOBER BREAK BOOK RECOMMENDATIONS

Maisey Lafollette

Since it's now October break and Halloween is fast approaching, I thought I'd give some book recommendations connected to themes of death and horror, to celebrate the spooky season.

Lie or Die by *AJ Clack*: A group of teenagers signed up to star in a new reality tv show, where similar to BBC's the Traitor's there's a group of people known as Agents trying to 'kill' the other players. However, unlike the Traitors these staged murders become real. The players need to find the killer before they're next.

How to Survive a Horror Movie by *Scarlett Dunmore*: Charley loves horror movies and has recently started attending a prestigious boarding school. All is normal, until a string of murders occur, and Charley stumbles upon all of the victims. She also ends up seeing the ghosts of her murdered classmates who haunt her until she agrees to solve their murders.

Good Girls Die First by *Kathryn Foxfield*: Ten teenagers go to a creepy carnival late at night because someone invited them and they know their secrets. As the night goes on, they split up and discover one of them has died. Will they find the killer? Will they keep their secrets? Will they survive?

Catch Your Death by *Ravena Guron*: Three teenaged girls are trapped in a mansion when the wealthy Emily Vanforte is killed, with only her family in the room. The book is unique as we see the police interview with the girls before we see what really happened that night. There are many more mysteries throughout the story uncovered through the investigation and you're hooked to the very end, desperate to know the truth.



I hope you enjoy some of my favourite books for the Halloween season.

How the French Revolution Created the Metre

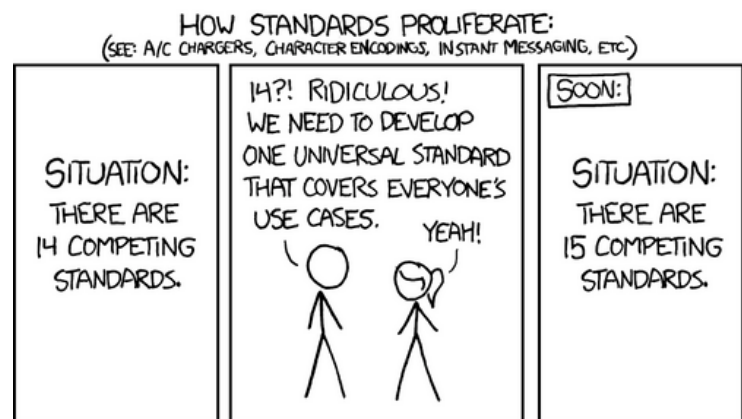
Shan Scott

This all started when I was doing a quiz with some friends a few months ago. One of the questions was: what is the circumference of the earth? Now, it seems like something I should know, being a fan of fun facts, but the statistic had managed to evade me until then, so I sadly had to resign to a guess. A while later, once all the questions were finished, the answers came around. 40,075km was the quoted figure; not quite forty thousand, but awfully close. This sparked my interest, and that evening I decided to do some inquiring. This led me down the fascinating story of the creation of the measurement that is (almost) ubiquitously in use today: the metre.

Let me take you back to 1790, in the bustling city of Paris. The French Revolution had started a year earlier, completely upending the reigning feudal system, and the country was engulfed in a period of change. Before the revolution, it was estimated that there were around 800¹ units in use across France, so amid all the chaos, the French Academy of Sciences decided to appoint a panel of five leading scientists, to create a unified measurement system. This formed the groundwork of what would later become the fabled metric system.

However, to ensure that there didn't end up being 801 competing measurement systems, the panel decided to base it on a measurable fact, unlike the arbitrary 'king's foot' or 'three grains of barley' inch. And so it was decided, that the metre should be defined as one ten millionth of the distance from the north pole to the equator, going through Paris. Perfect, we have a way of defining length based on a physical attribute, the earth itself. But wait, how on earth do we calculate this distance?

Being pleased with their hard work, the panel decided to delegate this momentous task to two mathematicians, Pierre Méchain and Jean-Baptiste Delambre. After some heavy thinking, they came up with a hopefully fool-proof method to find the metre.



xkcd comic 927 - <https://xkcd.com/927/>



Jean Baptiste Delambre



Pierre Méchain

¹ Although this was in large part to the difficulty in spreading a standard measurement across the country. This was before mechanised travel after all

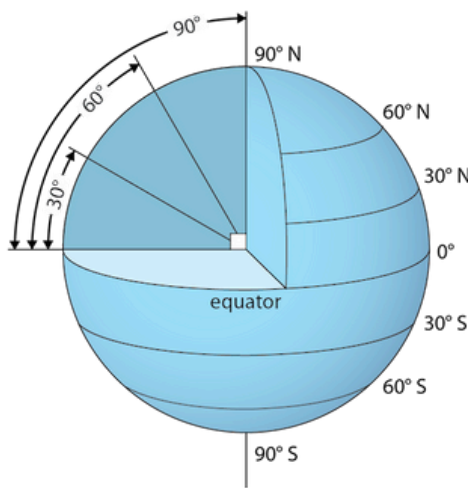


Diagram of latitude on Earth

Latitude is the angle from the equator to the north pole, and thanks to complicated telescope thingys, we can look up at the sun and measure this angle in observatories for different places on earth. So if we can find the precise distance between them, we can scale that distance up to the full 90°, the distance between the north pole and the equator, fitting the definition. But this leaves us with another conundrum, how to find this distance?

The intuitive answer would be to just take some measuring device, walk between two observatories that are aligned vertically, and get the distance. But to make the measurement as accurate as possible – after all we

still rely on it to this day – the cities needed to be very far apart. And so, walking hundreds of lieues² and measuring the distance you'd travelled would be at best an imprecise affair. So, Méchain and Delambre decided to borrow an awesome technique from cartography, triangles!

One amazing fact about triangles is that if you have all the angles, all you need is one side length, and through some fairly basic trigonometry you can work out the rest of the sides. You can then connect another triangle, reusing one of the sides of the first one, and since you can work out that shared side length because of the original triangle, you can use that length in the new triangle with the angles to find out all the side lengths of the new triangle. If you keep doing this triangulation³ you can accurately find the distance between two places with only ever measuring one side length.

And so, Méchain and Delambre decided to triangulate the distance between Dunkirk in northern France and Barcelona, directly south of it. But during all of this, France was in the midst of the revolution that saw the fall of three different governments in the 6 years that they were measuring the angles. But, despite being accidentally imprisoned multiple times, they heroically managed to measure 115 triangles spanning a thousand kilometres across France.



Diagram of the triangulation across France.

² A French pre-revolutionary unit equal to 10,000 pieds, which was itself 12 pounces, which was... ok, ok I'll stop, a lieue was roughly 2 miles.

³ Interestingly, this method is what trig points on the top of hills are used for. Before modern mapping tools, they were used by the ordinance survey to map the UK.

But, they still needed that one side length to be able to do that trigonometry. So, along a particularly straight road near Paris (and another one in the south to check their working, see map), they got four platinum rods (platinum does a very good job at not expanding in heat), and laid them end to end for the entire stretch. These rods had been precision manufactured to be exactly one Toise – another measurement used at the time – giving them the concluding measurement of this elaborate mathematical puzzle.

So now, through the single length and the many, many angles that they had measured, they could work out the distance between Dunkirk and Barcelona. Taking this distance with the latitude of the two cities, and scaling it up, they got the number of Toises from the North Pole to the equator. And by comparing that value to the 10 million described in the definition of the metre, they could work out how many Toises were in a metre. And since they knew how long a Toise was, we finally, after 10 long years of mathematical calculations, and the passing of Méchain, we finally get the Base du système métrique decimal, the book authored by Delambre and the late Méchain which was able to definitively define the metre.

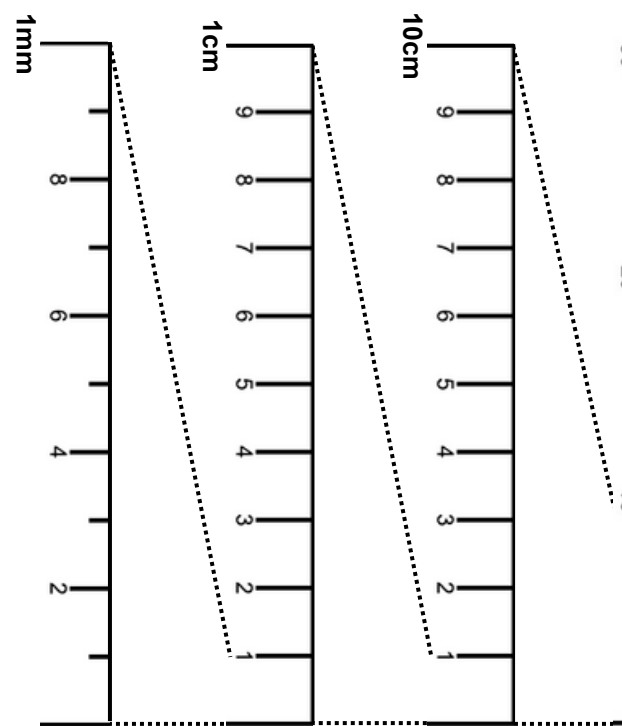
Finally!

But wait a second... didn't I say the circumference of the earth is 40,075km? If the definition is correct, the earth's circumference should be four times the distance from the north pole to the equator, making it 40,000km. So what's with the discrepancy? Well, there are two reasons for this sad deviation. The first, perhaps the more excusable, is that the definition relied on the polar circumference, the circumference going between the two poles. This was necessary to be able to use the latitude to work out the angles. However, nowadays the most common circumference used is the equatorial circumference, that of the equator. And as the earth isn't a perfect sphere, these circumferences are different.

But if you search up the polar circumference of the earth, you still get 40,008km. A lot closer to the ideal number, but still a tad off. Something else went wrong, and it's also got to do with that annoying fact of the earth not being a perfect sphere. This happens because of a physics phenomenon called flattening. Imagine a Pizzaiolo⁴ with a spherical ball of pizza dough. They then start to spin this dough expertly in the air, and slowly but surely the spherical ball flattens into a large disc.

While the earth is made up of markedly less squishy material, it still experiences this exact same phenomenon, if to a far lesser extent. This means that instead of being a perfect sphere, the earth is an oblate spheroid, a 3D oval. Delambre and Méchain were aware of flattening, and tried to minimise its effect, notably by measuring a section that was near the centre of the quadrant. But even though their measurement for the distance was astoundingly accurate, it was a miscalculation with the flattening that ultimately caused this 8km error.

The error in the final measurement of the metre



⁴ A pizza chef!

So that is the story of how we came to have our metre. It seems so every day, so nonsignificant, so standard, but the only reason we have this essential distance is thanks to the momentous effort of two French mathematicians painstakingly measuring across France in the midst of a bloody civil war. And to think that in 1810 they got within a fifth of a millimetre of the ideal value, is such an incredible feat that I think we ought to acknowledge.

If you would like some astonishing further reading, then I would recommend this article about Arago, another mathematician who went on a fabulous adventure (which includes a prison escape!) while trying to improve on Delembre and Méchain's measurements. It is a great read!

historyofinformation.com/detail.php?id=2351



And finally...

Lucy Smith

Cinnamon Swirl Scones



With autumn incoming, these are a perfect cosy bake for the rainy season. Easy and quick with ingredients everyone has in the house, I adore these, especially when still warm!

Method

- Set oven to 200°C
- Add all dry ingredients and rub in margarine until it resembles breadcrumbs
- Add egg/milk using knife
- Knead and roll out to an A4 rectangle
- Brush with the melted butter and sprinkle the cinnamon and sugar over it
- Roll up lengthwise like a Swiss roll and cut into 8 rings
- Place rings flat down and bake for 10-15 minutes
- Pour icing over when still hot

Enjoy!

Ingredients

For scones

200g self-raising flour
1 tsp of baking powder
1 tbsp caster sugar
50g margarine
Approx. 120ml of egg/milk

For filling

½ tsp cinnamon
10g melted butter
1 tbsp caster sugar

For icing

2 tbsp icing sugar
3 tsp water

Editors' note

That's All Folks!

Your Editors - Charlie and Emma.