



AROUND THE PALACE

Dear all,



For those lucky enough to see the performance of *Sister Act* last week, you will recall one of the repeated lines is "I have no words..."

I echo that in writing in praise of the production. It was simply superb, enormous fun and an absolute example of Old Palace at its best. Given the school was founded by an order of nuns, there was something poetic in having what may well be the last big production being *Sister Act*.

Given the challenges faced in managing a cast where people kept leaving the school, to produce something of this quality is amazing.

Thank you so much to Ms Berk, Mrs Hargraves, Miss Kimuli, Mr Griffith, Miss Orr, Mrs Barber, Miss Khan, Miss Morrison, Ms French, Ms Richards and anyone else who contributed and I have rudely forgotten to mention!

I like to think that while Mother Emily Ayckbown may have slightly disapproved, she would have been in awe of the confidence, strength, ability and pride shown by everyone involved. Thank you.

Jane Burton, Head

Seniors Presents...Sister Act! (There will be a special supplement with all the photos after half term)







Seniors Presents...Sister Act! *continued*

Old Palace's production of *Sister Act* was simply fantastic! Set in the vibrant city of Philadelphia, *Sister Act* tells the hilarious and heart-warming story of Deloris Van Cartier (played by Anna), a sassy lounge singer who witnesses a crime and is placed in protective custody in the Queen of Angels Cathedral convent. What follows is an adventure as Deloris transforms the convent's choir, bringing a dose of soul and rhythm, much to the shock of the stern and traditional Mother Superior (played by Megan). Anna's wit and powerful voice charmed the audience from start to finish, making her a beloved and memorable Deloris.

The show began with an energetic performance of 'Take Me to Heaven' by Anna, Amber and Stephanie (Deloris, Tina and Michelle). At the end of the nightclub scenes Abigail (Curtis) and the thugs filled the stage with quick movements and comedic collisions as they tried to capture their target: Deloris, who had just caught them committing a murder. The accuracy with which these students responded to the dramatic music and specifically timed gun shots proved their great level of professionalism and dedication. Abigail's portrayal of Curtis was venomous and her threatening take on 'When I Find my Baby' (while comedic) was very convincing! Deloris' newly developed need for a hero created a

platform for the character of Eddie, played by Nissi. Nissi's performance of 'I Could Be That Guy' portrayed a sense of longing and desire to be the one for Deloris – it was truly heartfelt!

Act 1 went on to introduce us to the nuns and their sacred lifestyle paired with amusingly poor vocal abilities. Our nun ensemble's ability to present each nun's unique personality and quirks was remarkable: a furrowed brow of disapproval here and a conceited smirk there really brought the nuns' individual characters to life! 'Here Within These Walls' was sung excellently by Megan and her overall characterisation of Mother Superior was impeccable. Nicole showcased Sister Mary Robert's vulnerability and inner strength impactfully in her rendition of 'The Life I Never Led' during Act 2.

Act 2 opened up with a lively and spirited number: 'Sunday Morning Fever' including an exciting 'blink-and-you-miss-it' on stage costume change where the plain black nun scapulars were altered to reveal a rainbow-coloured, sequin filled replacement. In this scene we see Ellie's character, Monsignor O'Hara (the charming spiritual leader of the convent), come to life. Ellie's commitment to audience interaction when introducing the choir created a fun and interactive

experience. Sanjana's Motown-inspired rap in this number brought about infectious laughter from audience members each night. Lola-Marie's solo was another highlight of this number - she truly captured the comedic innocence of Sister Mary Patrick.

Another unforgettable Act 2 number was 'Lady in 'The Long Black Dress'', performed by Sapphy, Lola and Theresa (the thugs). The trio captivated the audience with their side-splitting interpretation of the thug dance and their refined characterisation.

While it is sometimes easy to focus on the main characters, our production would have been incomplete without our dance and acting ensembles! Both ensembles showed their versatility and unity throughout the play and maintained the consistency that made Old Palace's take on *Sister Act* the great show that it was! Honourable mentions go to Jaeda, Mia and Grace who provided additional choreography alongside staff led choreography.

Finally, a huge thank you to those whom the audience described as our 'backstage ninjas'. Led by Stage Managers Robin and Mariyah, our *Sister Act* Crew (from running crew to wardrobe to sound and lighting) was more than efficient!



Secondary School Swimming Gala

Many congratulations to the six students who represented Old Palace at the Croydon Secondary Schools Swimming Gala on Wednesday evening!

They all did really well and, impressively, Old Palace came a magnificent **THIRD PLACE** overall!

It was the first gala for a few students, so well done for containing nerves and doing your best.



Year 7/8 Girls Freestyle Relay

THIRD place	Tianna
	Ellie
	Rishita
	Gracie-Mae

Year 8 Individual Medley

THIRD place	Tianna
-------------	--------

Year 8 Backstroke

SECOND place	Ellie
--------------	-------

Year 7 Breaststroke

FOURTH place	Teyha
--------------	-------

Year 8 Freestyle

SECOND place	Tianna
--------------	--------

Year 7/8 Medley Relay

THIRD place	Ellie
	Akshita
	Tianna
	Gracie-Mae

Year 8: PSHE 'Resilience'

"We were put into groups. They each had 3-4 people and we were given tape, 20 pieces of spaghetti, one marshmallow and string."

We worked as a group and tried to make a base. After we started to stack the spaghetti on top of each other we had to put the marshmallow on top of it. The marshmallow had to be higher than the other groups.

We learned how to work better in teams and how to be more connected to our peers." **Noor and Senuri**



"We didn't have the slightest clue what to do at first but when we talked as a team we came together and ended up making the tallest spaghetti tower." **Mya-Rose**

"My group idea was to tape our piece of string onto the projector and build down from there. My group ended up winning!"

This activity was to help us embrace failure – and it was successful! Even though the string was not staying on the projector at first, we still found a way through and managed to build the tallest tower." **Lola and Ruby**



"I have learnt that it is okay to make mistakes in your life. When you make mistakes, you will learn new things. Allow failure in your life." **Anon**



Year 13: Self Defence

Year 13 have been working on Self Defence in their HAL lessons since their exams.

Patrick, from a local club, has been guiding them through some practical ways to keep themselves safe as well as emphasising the need to be aware of what is happening around you and making sensible decisions to reduce the risk of putting yourself in a difficult situation.

These are really valuable skills both now and in the future as Year 13 take the next steps in life.



U16 Football v Sydenham High

The Old Palace U16 football team played their first game of the season against Sydenham High School on Tuesday, 30th January.

After a strong start (and 5 goals) from a well-drilled Sydenham team, Old Palace calmed their nerves and began to counter-attack, putting pressure on the Sydenham goal.

Unfortunately, the final whistle went as Old Palace were playing the better football. The final score was 5-0 to Sydenham, but as we discussed on the journey back; we didn't lose, we just ran out of time!

Adaeze was awarded Player of the Match for several great saves whilst playing in goal.





In BioSoc we were able to strengthen our understanding of the topic of meiosis using active learning.

Our task was to make Reebops which are animals made of marshmallows, cocktail sticks, pins and pipe cleaners. They are used to represent the characteristics offspring inherit from their parents' genes.

We started by taking half of the chromosomes from each of the parents and matching them together according to their

size. We then referred to a table to decipher the phenotype for each of the Reebops' inherited characteristics by using the two letters on every pair of chromosomes as the genotype. After discovering the features, the Reebop would inherit we began building it.

The experience was thoroughly enjoyable and definitely assisted us in visualising the concepts of meiosis!

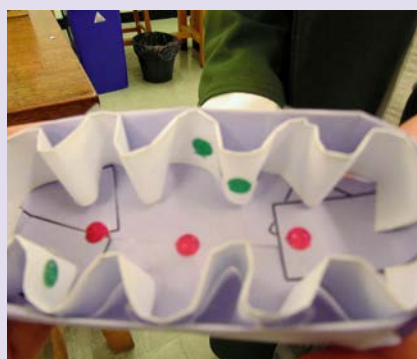
Anaika, Year 12 (Biology Prefect)

BioSoc Origami Organelles

In BioSoc we have also visually explored the world of organelles. We followed instructions in order to produce origami models for both mitochondria and chloroplasts.

Through the process we were able to revisit our knowledge of organelles and demonstrate the complexity of the structure through intricate folds and patterning. The end results were pleasing and the process was challenging but entertaining.

Anaika, Year 12 (Biology Prefect)



Last week, we were able to practice many skills such as following instructions and being very practical with equipment and the method. It was great practice to make serial dilutions and also got us thinking about the volumes needed for certain concentrations.

We were able to visibly see and experience the effect of copper sulfate on the catalase enzyme. Observations such as less bubbles being formed in the tube of hydrogen peroxide and catalase with the inhibitor helped show us the efficiency of the inhibitor and also the more quantitative results such as the inverted measuring cylinder values for each test.

Zainab, Year 12



Community News

Sports Leaders

Our Level 3 Sports Leaders (Year 13) led two sessions with Year 2 students at St Peter's Primary School this week. It was a great experience for them to lead a mixed group and have larger numbers in their group. It is also quite different working in a school environment that you are not familiar with!

The sessions were based on Athletics with the Year 2 pupils working on their running technique, their accuracy and agility.

The feedback from the staff at St Peter's was that the leaders were professional, and did really well!



The Year 13 Sports leaders had the privilege to go to St Peters to teach the Year 2s PE class on Monday the 5th of February.

Mary, Megan and Ria led an athletics inspired session and it is safe to say that it was very lively and fun!

There were three activities: the agility course, the shot put practise and speed bounce, and the running style activity.

It was a unique and different opportunity to be teaching this particular age category as it allowed for a plethora of adaptations as well as advancing different skills for different abilities.

Overall, it was a brilliant experience and definitely introduced to us a new style of teaching and leading sports.

Mary-Rose, Year 13



Maths Puzzle Fun

In the calculation to the right, K, L, M, N and P each denote a single digit.

Can you find K, L, M, N and P?

$$\begin{array}{r}
 K \quad L \quad M \quad N \quad P \quad 4 \\
 \times \quad \quad \quad \quad \quad \quad 4 \\
 \hline
 4 \quad K \quad L \quad M \quad N \quad P
 \end{array}$$

Answer and explanation on page 16

When Solids Get Slippery: Exploring the Fluid-Like Behaviour of Solid Matter

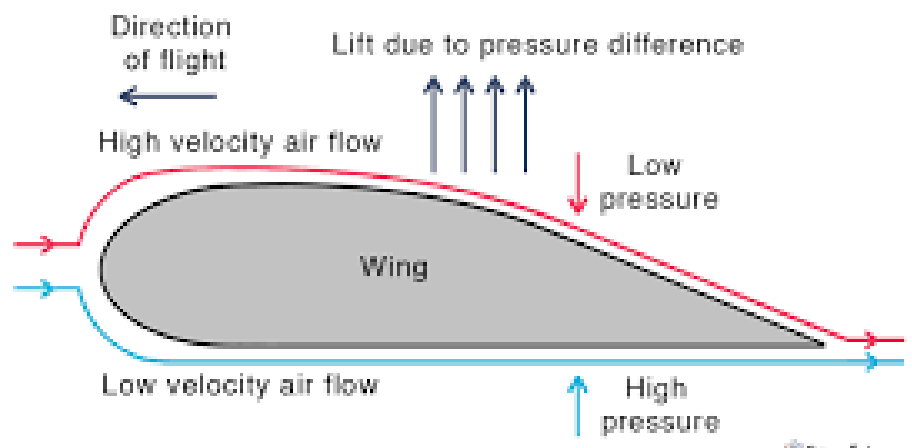
A vital part childhood was mixing water and cornstarch to make Oobleck and thinking 'I wonder why this fluid behave like a solid when acted upon by an external force?' Maybe not to that degree of detail (if you aren't a nerd like us) but wasn't it strange how it was both solid and liquid? How can it be it both? Well, under specific conditions fluids can behave like solids and vice versa.



Fluids are substance that can flow and deform under the influence of external forces. Most people have accepted liquids as fluids; however, gasses are fluids too! They lack predetermined shape and can adapt to fill any container. Even stranger, solids can act like fluids because they have similar flow and deformation properties under specific conditions.

Let's get a little bit more scientific. The area of this topic is called fluid dynamics. One the main ideas is called Bernoulli's principle, which is when the speed of a fluid is inversely proportional to the pressure of the fluid. It's difficult concept to wrap your head around. Imagine a plane. How does it stay in the sky for so long? Well, using this awesome principle, we know

Bernoulli's Principle Example Lift of an Aircraft



that the flow of air over the wing makes a pressure difference. This causes an upward lift, letting the plane take you safely to your destination.

Despite knowing this principle, a fluid-like solid sounds crazy! The Navier-Stokes equation describes how fluids move. Not their dance moves but, how they behave in different circumstances. This equation is used by cool engineers for a lot of things. For example, studying turbulent flow. Being able to predict turbulent flow is so important for aerospace engineers to making efficient planes, combustion processes, and simulating weather patterns. All so your plane door doesn't come off... Asiana Airlines.

This looks absolutely, positively, utterly terrifying, like parents evening after failing a test. Yet when you break it down, it as easy as relaxing on a beach, toes in the sand. Basically, the speed of a fluid affected by its acceleration, pressure, and viscosity. Now we normally us this with liquids but we can also use it with solids. Remember how we all used to think quicksand meant

unescapable death, it still can, but as you suffocate you will understand why you aren't drowning. Suffocation is just drowning, but instead in a liquid like water, it's a solid like quicksand. Quicksand is a solid that behave like a liquid when pressure is applied, like falling and struggling to get out. The weight of you causes the sand particles to separate, making a liquid-ish consistency.



Imagine punching a bowl of Oobleck. It would feel solid, like hitting a wall. But if you slowly dip your hand in, it will effortlessly sink like a liquid. It's like magic! Oobleck's behavior can be attributed to shear thickening, a phenomenon where the viscosity of a fluid increases with the applied force. This increase in viscosity causes the Oobleck to resist deformation, giving it solid-like properties.

So, thanks to the Navier-Stokes equation and the peculiar nature of Oobleck, we have a solid that can behave like a fluid. It's a perfect example of how science can surprise us with its wacky and wonderful discoveries. Remember this the next time you mix two parts cornstarch with one part water to make the most fun non-newtonian matter.

Year 13 Stafford

Navier-Stokes Equations

Continuity Equation

$$\nabla \cdot \vec{V} = 0$$

Momentum Equations

$$\rho \frac{D\vec{V}}{Dt} = -\nabla p + \rho \vec{g} + \mu \nabla^2 \vec{V}$$

Total derivative

Pressure gradient

Body force term

Diffusion term

$$\rho \left[\frac{\partial \vec{V}}{\partial t} + (\vec{V} \cdot \nabla) \vec{V} \right]$$

Change of velocity with time

Convective term

Fluid flows in the direction of largest change in pressure.

External forces, that act on the fluid (gravitational force or electromagnetic).

For a Newtonian fluid, viscosity operates as a diffusion of momentum.

WORLD
**BOOK
DAY**

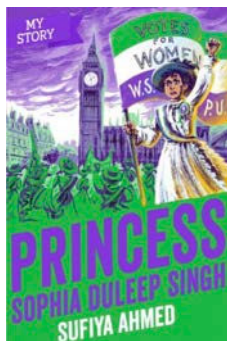
7 MARCH 2024



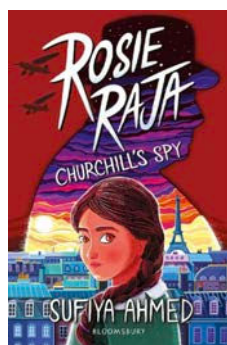
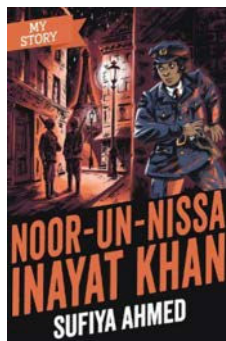
Sufiya is an award-winning author of historical fiction and before becoming a full-time author, worked in advertising and the House of Commons.

Wednesday, 6th March Sufiya Ahmed - Author, visit and book signing

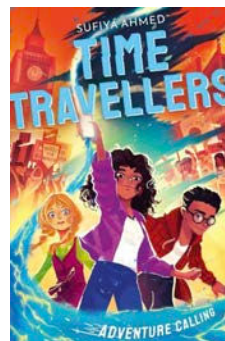
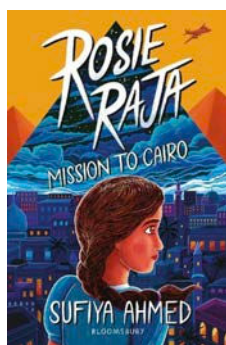
Sufiya will be giving talks and workshops at Prep and Seniors on Wednesday 6th March, covering historic fiction writing, her work in the Houses of Parliament, becoming an author and the importance of reading.



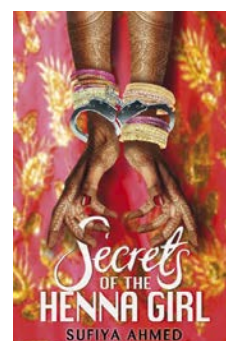
The My Story series. Suitable for Year 5+ (age 9+)



The Rosie Raja spy-mystery series



New! For 2024: Adventure calling is the first in the Time Travellers series



For Year 9+ students (Age 14+)

Books £6.00 each, available to purchase via WisePay from now until **Friday, 1st March**.

Purchased books will arrive with Sufiya on Wednesday, 6th March, which Sufiya will sign at the end of her talk.

Table Tennis



On 2nd Feb, Old Palace took part in London South Schools' Table Tennis Individual Championships at Whitgift School. Mahnoor and Anniyah competed in the Girls U16 category.

Both presented impressive table tennis skills and desire to win but unfortunately that was not enough to qualify for knockout rounds. In the end, the girls left the competition with a smile as they gained important, new experience and reconnect with old friends.

OPA 'Memories of Old Palace' project

We are seeking volunteers to take part in our 'Memories of Old Palace' project.

Could this be you?

The aim of the project is to capture stories from former students so that we can continue to share the history of Old Palace. You would be interviewed by a Sixth Form History/English student, who would then be responsible for recording and reporting your memories for our archives. Alternatively you could write your own account to share, should you prefer.

If you would like to take part, please contact OPAlumnae@oldpalace.croydon.sch.uk as soon as possible.



Old Palace
Alumnae



Dear all,

As the days grow longer, the weather warms and the little purple violets start to spring up on our school lawns, it is wonderful to take a moment to reflect over the last six weeks at Old Palace Prep. In addition to the academic curriculum, always bursting with new and exciting learning experiences, we have also seen wellbeing week, sports festivals and fixtures, school trips, clubs and workshops, taking place across the school. We certainly know how to fill every single week to the very brim!

As always thank you to each and every family for your unwavering support of the brilliant Prep team and all that they do every single day for the spectacular Old Palace Prep students.

Wishing you and your families a restful half term break, whatever you have planned, and we look forward to welcoming your daughters back to school on Monday 19th February.

Mrs Jodene Panteli
Head of Preparatory



Safer Internet Day at Prep

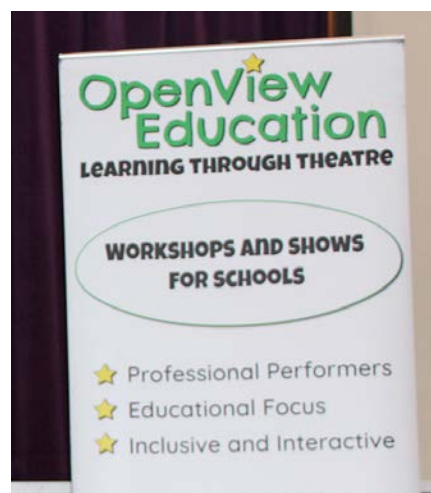
We marked Safer Internet Day at Prep on Tuesday 6th February 2024, where the theme *"Inspiring change? Making a difference, managing influence and navigating change online"* was explored.

All our pupils took part in marking the day through workshops and assemblies facilitated by OpenView Education. Why not ask your daughter about something they have learned about internet safety?

For more information, guidance or help about safer internet use within the home, please visit

Parent Zone: Internet Safety Resources - OpenView Education www.openvieweducation.co.uk/parent-zone/

and **Safer Internet Day 2023 - UK Safer Internet Centre** <https://saferinternet.org.uk/safer-internet-day/safer-internet-day-2023>



Feel Good Wednesday

A huge 'thank you' to Mrs Eynon who organised a wonderful programme of Feel Good activities this Wednesday for the entire Prep School.

Sessions included: Lego/Junk Modelling, Just Dance, Hot Chocolate and Chat around the camp fire (Mrs Anderson wins the award for the most popular session!), Musical Instruments, Cloud Spotting, Cooking, Yoga, Mindful Colouring, Garden Potions and 'napping' with Mrs Panteli.







Maths Puzzle Fun page 7 Answer

Answer: K, L, M, N, P are 1, 0, 2, 5, 6.

Working it out by doing the calculation

$4 \times 4 = 16$, so P must be 6

$$\begin{array}{r} \text{K} \quad \text{L} \quad \text{M} \quad \text{N} \quad \text{6} \quad 4 \\ \times \quad \quad \quad \quad \quad \quad 4 \\ \hline 4 \quad \text{K} \quad \text{L} \quad \text{M} \quad \text{N} \quad \text{6} \\ \quad \quad \quad \quad \quad \quad \quad 1 \end{array}$$

$6 \times 4 + 1 = 25$, so N must be 5

$$\begin{array}{r} \text{K} \quad \text{L} \quad \text{M} \quad \text{5} \quad \text{6} \quad 4 \\ \times \quad \quad \quad \quad \quad \quad 4 \\ \hline 4 \quad \text{K} \quad \text{L} \quad \text{M} \quad \text{5} \quad \text{6} \\ \quad \quad \quad \quad \quad \quad \quad 2 \quad 1 \end{array}$$

$5 \times 4 + 2 = 22$, so M must be 2

$$\begin{array}{r} \text{K} \quad \text{L} \quad \text{2} \quad \text{5} \quad \text{6} \quad 4 \\ \times \quad \quad \quad \quad \quad \quad 4 \\ \hline 4 \quad \text{K} \quad \text{L} \quad \text{2} \quad \text{5} \quad \text{6} \\ \quad \quad \quad \quad \quad \quad \quad 2 \quad 2 \quad 1 \end{array}$$

$2 \times 4 + 2 = 10$, so L must be 0

$$\begin{array}{r} \text{K} \quad \text{0} \quad \text{2} \quad \text{5} \quad \text{6} \quad 4 \\ \times \quad \quad \quad \quad \quad \quad 4 \\ \hline 4 \quad \text{K} \quad \text{0} \quad \text{2} \quad \text{5} \quad \text{6} \\ \quad \quad \quad \quad \quad \quad \quad 1 \quad 2 \quad 2 \quad 1 \end{array}$$

Now, $0 \times 4 + 1 = 1$, so K must be 1.

So K, L, M, N, P are 1, 0, 2, 5, 6.

Feel Good Wednesday continued



Prep Swimming Gala

On 26th January, the talented Old Palace swimmers competed against other local schools at the Prep Swim Gala.

After the initial nervousness settled down, the swimmers displayed not only great speed and stroke technique in individual events, but also impressive coordination and teamwork in relays!

Congratulations to everyone who participated and fingers crossed some can qualify for the finals!

