STEM and **Arts** at Sandringham School

Transform our future with creative opportunities for all











STEM at **Sandringham** Science. Technology. Engineering. Mathematics.

At Sandringham School we place a strong emphasis on STEM education throughout our curriculum. STEM stands for science, technology, engineering and mathematics, and students will engage with this in the formal curriculum as well as through extra-curricular activities including clubs, visits and competitions.

The world needs the students of today to become the scientists, engineers, and problemsolving leaders of tomorrow. Advances in scientific understanding offer new solutions to challenges in society, and educated engineers, mathematicians and technologists work to improve our quality of life.

We provide a wide variety of opportunities for our students in cross-curricular and extracurricular activities to broaden their understanding in these areas and increase students' STEM capital.

In September 2015 we introduced STEM as a high profile, cross-curricular focus. Through this STEM work, our students have had the opportunity to speak to Tim Peake aboard the ISS, visit 10 Downing Street, present at the Houses of Parliament and visit world leading research facilities. We have developed links with outside agencies including the UK Space Agency, Transport for London, York University; Engineering Development Trust, GSK, Leonardo and Setpoint Hertfordshire to support our STEM provision. British Science Week in March each year involves the whole school engaging in a topical STEM-related issue; in 2021 the theme was Biodiversity Loss, 2022's theme was about Going Low Carbon, and this year it was about Connections.

We hope you enjoy looking at the exciting and inspiring opportunities offered to our students at Sandringham.

David Tattersall STEM co-ordinator Mark Allday Assistant Headteacher



STEM Talks

Students are regularly invited to talks from STEM professionals. Students have attended talks on AI, robotics, biotech, biodiversity, climate, women in engineering, physics, aviation and marine engineering.

British Science week

Each year the Sandringham Science, Maths, Computing and Design Technology teams run our version of British Science week which we call STEM Week, a festival of activities for students to enjoy. It allows students to get involved in aspects of science and technology related to a theme, which in 2021 was Biodiversity, in 2022 was Going Low Carbon and this year was about Connections - Sixth formers took part in a Symposium where they gave talks on Artificial Intelligence, KS3 students took part in a House quiz and a science show (pictured), a guest speaker came to give a fascinating talk about Climate Change, and once again we put on the highly successful Chemistry Show in the SandPit Theatre which sold out. The picture on the right shows Wheatfields Year 6 children who came over to Sandringham to take part in a science practical, ably supported by our brilliant sixth formers.



Contact with the International Space Station (ISS)

In January 2016 we made live radio contact with astronaut Tim Peake aboard the ISS. This was a highly technical exercise involving accurate tracking of the ISS as it travelled at over 27,000km per hour around the Earth. This 150-Billion-dollar machine is one of the principles in Earth engineering and our contact with Tim Peake allowed Sandringham students the opportunity to discuss complex experiments and how things differ between Earth and space.



Physics Tournament at St Helen's School



In March 2023 four of our Year 10 girls took part in the annual physics tournament at St Helen's School in Northwood. They competed in events including an experiment competition, a physics-themed escape room and a calculations relay race! They also heard an inspiring talk from an engineering graduate.

Design and Technology enrichment

There is a wide range of activities, clubs and competitions for students who enjoy designing and making. An electricity-



generating exercise bike, a rocket-based sensor module, recycling plastic bottle tops and sustainability design club are just some of the projects students have been involved in recently.

Amateur radio and satellite station



Sandringham received a substantial grant from industry to establish our own Amateur Radio Station. Staff now regularly train students in the basics of radio communications and electronics, and in

addition to gaining the theoretical knowledge of this hobby, they can use the radio station to make contact with stations



from around the World. Some of the activities include building radio kits themselves, learning Morse code and making antennas.

Trip to Silicon Valley - San Francisco



The Computer CcSience faculty continue to lead amazing trips to San Francisco, the most recent being over the Easter break 2023. The trip includes visits to tech giants such as Google and Intel.

Computer Science Clubs

These clubs run throughout the school and give students the chance to learn to code in a variety of programming languages dependant on their skill level and interest. We are fortunate to have sixth form computer science students to help run these clubs for the younger students.



Science Clubs

Available separately to Year 7 and 8, the Science Clubs offer our students the opportunity to further explore their interest in Science. Students undertake a range of exciting experiments including dissections, making rockets, experimenting with chemicals and pond dipping.



Maths Enrichment

The UK Mathematics Trust (UKMT) maths challenge is run throughout the year for selected students from all year groups. In addition, 'Pi Club' is open to all year groups as a fun lunchtime activity. This will include UKMT challenge practice, parts of the supercurriculum and maths puzzles.

Engineering Club

Every year we have a number of Year 12 students applying to study some form of engineering at university. To give them a better background knowledge we run a forum for sharing ideas about cutting-edge research and development. The picture shows a Year 12 student giving a talk to his peers at Engineering Club.



GCSE Astronomy

There is an optional GCSE in Astronomy that students can undertake. It does involve extra commitment after school, but the rewards are a practical engagement with telescopes and other astronomical techniques, and a deeper understanding of the Earth, Moon, Solar System and beyond.



International Women in Engineering Day

We marked another 'INWED' in June 2022. Year 8 and 9 students took part in an international seminar from the Women's Engineering Society. We heard the stories of inventors and innovators, and two questions from our own students were put to the speakers!



The seminar gave a wider perspective on what engineers do, with digital skills, creativity, innovation and inclusivity being talked about as essential features of modern engineering.

IET Faraday Challenge

Open to Year 8 students across the Trust secondary schools, the Faraday Challenge is a one-day engineering competition led by the Institute of Engineering and Technology. In April 2023 the winning team (pictured) went through to the national competition and we await the outcome!



Weather Monitoring

A group of Year 13 STEM students recently completed their weather monitoring project, linking sensors, a Raspberry Pi microcomputer and their own website. The group took the initiative to develop the system and after going live with the results presented the project in assembly and made a podcast for a World Class Schools article.



Future STEM Trips

In June 2023, all of Year 9 will be going to the Imperial War Museum Duxford to learn about aviation, and in July KS3 students will be visiting Williams Formula 1 in Oxfordshire. In 2023-24 there are plans to take students to the Large Hadron Collider in Geneva.



Hopefully this gives an idea of the range of extracurricular STEM work at Sandringham. For further information, feel free to contact the school and ask for the STEM coordinator.



Sandringham Arts Creative opportunities for all

- Visual ArtsAt Sandringham we believe that the Arts are an essential part of our
curriculum, providing students with a wealth of authentic opportunities
to build skills both in and beyond the classroom. We take pride in
inspiring our students to become creative, curious and confident
individuals with the cultural capital they need to succeed.
- MusicOnce again, we are a Trinity Champion Centre for 2023-2024. This
recognition is a testament to our outstanding exam results, significant
impact on learners, and sustained innovation in the Arts. We enjoy
collaborating with Trinity and our Artsmark bridge organisation, The
Royal Opera House, and look forward to continuing our Artsmark
journey. Having twice been accredited with Artsmark Platinum Status,
we celebrate our exceptional provision across all of our Arts' faculties,
provision of Trinity qualifications, and role as an Arts Award Centre.

Our Arts team has been recognised with the Silver Award for Outstanding Team of the Year at the National Teaching Awards. Their commitment to young people is exemplary, and they offer an outstanding range of classroom and additional opportunities. Our students access unique learning opportunities across the Arts, such as our Extended Learning Day in Year 8, where all students participate in a musical production of The Lion King in our Sandpit Theatre, or our extensive range of co-curricular clubs that lead to performances such as the Whole School Show and Velocity. We acknowledge our students' hard work and involvement in our extensive offer, and we seek to recognise this with our unique Arts Award provision. Arts Award recognises our students' individual creative journeys, allowing them to discover their potential as artists and focus on developing their leadership skills. We are a registered centre for all levels: Discover, Explore, Bronze, Silver, and Gold. Our Arts Award students lead others and contribute fully during key events such as our annual Arts Week.

We are immensely proud of the positive impact that the Arts have on our students. Seeing them thrive and flourish in our vibrant faculties and theatre is truly rewarding. We are excited to continue to expand our offerings to provide even more opportunities for our students to explore their creativity and develop their artistic talents. We invite you to join us on this journey and look forward to welcoming you to Sandringham.

> Andy Cracknell Assistant Headteacher

VISUAL ARTS

Visits to Galleries and Exhibitions

We make the most of our proximity to London by visiting a variety of galleries and exhibitions throughout our courses at KS4 and KS5 level. Our close proximity to St Albans Museum and Gallery provides many opportunities for our students to complete workshops with artists and practitioners. We are a creative hub and work in partnership with University of the Arts London to offer their Future Creatives courses and summer schools. We provide an annual residential trip to provide stimulus beyond the classroom to destinations such as Liverpool and Paris.

Visiting Artists and Alumni

We aim to provide regular opportunities for our students to engage and be educated by professional artists as well as visiting alumni. Students have been visited by local artists including Laura Kate Ellis, Jen Clarke, Simon Maskell and Harry Woodgate. All of our students also participate in regular events including The National Campaign for Drawing and we also use this annual event to celebrate our outstanding partnerships with local feeder schools by providing art outreach events for their younger learners.

Summer Exhibition

The summer exhibition is our annual celebration of students' work from throughout the academic year. The range of work on show from Fine Art, Photography and Textiles students reflect their consistently outstanding outcomes. We encourage students to get involved in external competitions and online galleries such as the The Maltings Art Prize, Royal Academy Young Artist's Summer Show and The National Photography Awards for Schools.

Global Links

Every year, we participate with the US-based 'Memory Project' which promotes global understanding and kindness between children around the world through creating and sharing artwork globally.

Artwork around the campus

E Week, Arts Week and Extended Curriculum days provide us with opportunities to work with smaller groups of students to produce pieces of art for display around the school. Our aim is for the campus to be a vibrant and inspiring learning environment and we work hard to ensure the artwork is regularly renewed and exhibited to celebrate our students' achievements.

Art links with other schools

We have established links with several of our feeder schools and have engaged in many different projects with them. We are always keen to share our best practice and have supported local schools through arts training and support with their ArtsMark journeys.

Art Clubs

We offer a broad range of clubs to celebrate our full range of endorsements. We also ensure that our studios are open every lunch time to enable our students to enjoy the space as they work on their portfolios.









DANCE

Velocity

Velocity is the annual dance show held over four performances and is the highlight of the Dance calendar. Students from all years are involved in a celebration of Dance, demonstrating a variety of styles from jazz and Bollywood to contemporary. This event is not to be missed!

Dance Extracurricular Activities

We have a broad range of dance clubs on offer for all students to enjoy at lunchtimes and after school; from Street, Bollywood, Ballet, Contemporary to name a few. We hold auditions in September for our KS3 dance company, TripleEdge, and our resident dance companies, Tuxedo and SYCD.

A Level Performance Evening

The A Level Dance Evening incorporates solo, group and quartet exam work from the A Level Dance students. The range and quality of Dance work on show is truly breath-taking and is an enjoyable evening of contemporary dance.

GCSE Performance Evening

GCSE Dance Evening showcases the Year 11 GCSE dance students prior to their practical exam. The evening will incorporate the solo/group choreography work. This is an enjoyable evening of contemporary dance.

BTEC Performance Evening

This evening showcases the hard work and dedication of our BTEC students in their Component 3 choreography exam. The range of dance styles, creativity and expressive skills is inspiring and demonstrates the versatility of our students.

House Choreography

This is a very popular house event in the calendar where students from all years battle it out on the dance floor to gain points for their house teams.

ELD Musical in a Day

A fantastic day dedicated to Year 8 students and their expression and talent in the Arts. Each faculty produces scenes for a designated musical and at the end of the day perform our own version of the musical. Year 8's take away so much from this day and it is a joy to watch the involvement from every student in the year group.

Summer Dance Show

The summer show showcases class work across all key stages, exam pieces and our dance clubs from our resident companies SYCD, Tuxedo, TripleEdge, to Revolution X Boys Dance, Street Dance and Bollywood.

County Dance Festival

This is a bi-annual celebration of dance from all schools across the St. Albans district and Sandringham took part in the 2023 festival. It was an inspiring day with a tech and dress rehearsal into matinee and evening performance.

External performances and visiting dance artists

Visiting dance artists come into school working with students to expand their dance technique and performance skills, especially during Artsweek. Various external dance performances and workshops have included the Hertfordshire Royal Gala at the Royal Albert Hall (Sandringham School have been selected and are performing in 2023's gala), Move be Moved Festival, Ipswich, performing at the Watford Palace Theatre, Laban Conservatoire, London as well as the Scoop Amphitheatre at the Southbank Centre in London and the Alban Arena.





DRAMA

The Young Actors Company

This is a great opportunity to see the new Year 7 students perform their wonderfully magical Y.A.C performances. They will have toured these performances in local primary schools during the same week and this will be the culmination of months of hard work and rehearsals. Our most recent show to go on tour was *The Wizard of Oz* which was thoroughly enjoyed by pupils at Skyswood and Wheatfields.

Drama Clubs

Led by our crew of exceptional Drama Leaders from Year 10 and 12, our Drama Clubs perform a range of pieces throughout the year. From Shakespeare to Roald Dahl classics, there's always something incredible going on in Drama. Get involved!

GCSE Drama Performances

We invite friends and family of our GCSE students to watch both their devised and scripted performances throughout the year. This is usually the first opportunity for our GCSE students to perform to a live audience in The Sandpit Theatre and is usually met with much anticipation and enthusiasm from both performers and audiences alike.

Year 12 A-level Devised Performances

This is a truly exciting event where an audience will get a chance to see performances that have been independently written, directed and rehearsed by our A-level Drama students. The pieces are inspired by an influential theatre practitioner or company and are wholly original, created by students. The evening promises to be highly thought-provoking and entertaining. Not to be missed.

Year 13 A-level Scripted Performances

Our A-Level students will present their scripted performances to a visiting examiner. It is a wonderful event that celebrates final performance for our Year 13 students.

National Youth Theatre Auditions

For the past two years we have been honoured to host The National Youth Theatre auditions at Sandringham. It is an incredible opportunity for students to participate in and we are phenomenally proud of the efforts of all students who take part each year. Students participate in workshops led by NYT associates and have the chance to collaborate across year groups. In 2021, two Year 12 students successfully gained a place on the summer acting course and will be recognised as NYT members. It is a highly renowned accolade to add to any student wishing to pursue the arts further and provides an excellent stepping-stone into the industry and beyond.

Whole School Show

This event takes place every November and alternates between a musical and play each year. We feel it's important that students are offered opportunities to showcase a range of skills from the Performing Arts and this enables all students to have a chance to shine! Recent productions have included A Christmas Carol, The Sound of Music (as seen in the images below). School of Rock, Fame, Guys and Dolls, Annie, Oliver, Our House, Grease, Les Misérables, Good Night Mister Tom and our hugely successful unique performance of 'Vaudeville' to celebrate 15 years of the theatre. It is a highlight of the year at Sandringham and offers an opportunity for students to collaborate across the year groups and come together to create a spectacular, West-end worthy show! Auditions take place in the summer term in readiness for the next academic year.

House Drama Competitions

There are an array of exciting House Competitions for students to get involved in throughout the year. In the last few years, students have competed in 'Drama Bake-off' where they

created spectacular stages out of cake! There's been a House Chair Duet competition, where students created a physical routine, inspired by the works of Frantic Assembly and finally the 'Anything Goes Challenge', where students were tasked with creating a character from anything they could find around their homes during lockdown. Whatever the competition, it is always fantastic to see how willing our students are to get involved.





MUSIC

Last Form Standing

This House event features Year 7 battling it out to see which form can perform the most creative, musical and enthusiastic choral piece!

St Peter's Lunchtime Recital

This lunchtime concert forms part of a popular series of concerts, hosted by St Peter's Church in St. Albans. It will feature small ensembles and senior soloists from Sandringham and our consortium sixth form classes.

Lessons and Carols

This traditional lessons and carols evening features music from Sandringham's choirs and instrumental ensembles.

Battle of the Bands

Originality and musicianship are prized in this popular annual event. Student bands of all genres and ages will perform to a panel of judges and musicians in the hopes of winning Sandringham's Battle of the Bands.

Spring Concert

The Spring Concert features all our ensembles performing music they have prepared during the term.

Junior and Senior Recital Evenings

These evenings showcase the hard work of students from Years 7-9 and 10-13 respectively.

Composers' Competition

This event is an opportunity for our composers to showcase and share their work and is a really special event on our calendar.

Summer Concert

Our final concert of the year celebrates all of the music making from our ensembles, student composers, as well as our student leavers.

Music Tour

This residential takes place biannually in the summer term. We take a group of performers to a European city to perform their work in a range of exciting venues to live audiences. This year's trip was to Antwerp where students had a fantastic time.







THE SANDPIT THEATRE

The SandPit Theatre is a professional arts venue based on campus at Sandringham School. The venue seats 266 with a bright and welcoming foyer area complete with The Chalkboard Bar to provide refreshments. The modern and attractive theatre also has facilities for the disabled and baby changing.

Since the theatre's opening in 2001, the venue has endeavoured to provide a cultural hub for the whole community of St. Albans and further districts, alongside its invaluable contribution to school life. Over the last 20 years the venue has grown to become 'The Heart of Sandringham School,' boasting a full and varied programme of performances from the school including the Whole School Show in November and Sandringham's annual dance show 'Velocity' in February. These internal events are complemented by productions from local community groups, performing arts schools and touring theatre companies – there is truly something for everyone!

In 2022 The SandPit Theatre presented its very first Christmas Pantomime. Featuring a cast of professional actors and running throughout December, the venue saw its busiest festive period since its opening and we are delighted to be presenting our second annual pantomime 'Rapunzel' this December! Tickets are on sale now at <u>www.sandpittheatre.co.uk</u>

The theatre not only offers its facilities to performers but also to those who are technically minded. The SandPit Theatre has received awards for its 'service to the community and young people' from HCS Careers, frequently takes work experience students and works with the council to provide voluntary work opportunities for less abled individuals. The venue has a small army of volunteer helpers, starting as young as 11 and always welcomes new members to the team.

The SandPit Theatre is an organisation member of UK Theatre, a national group of theatres which also includes the Society of London Theatres which places us in the heart of the theatre industry.



OTHER OPPORTUNITIES

Musical in a day!

As part of our extended learning programme, we work with all Year 8 students to put on a musical in a day. Our abridged version of *The Lion King* involving a whole year group is a wonderful opportunity for all to participate and perform in The SandPit theatre. Students always embrace the challenge of creating costume, set, live music in addition to many of the iconic scenes from the film.

Arts Award

We are now working in collaboration with Trinity College London to offer Arts Award across all levels: Discover, Explore, Bronze, Silver and Gold. This is truly unique to our centre and recognised in our Trinity Champion Centre award for 2022-2023. This external qualification is a celebration of the high level of arts opportunities available to every child during their weekly lessons in art, music, dance and drama. The Silver Award supports opportunities of leadership in the Arts and projects have included students writing and directing their own plays and running music workshops at local primary schools. The Gold Award promotes leadership skills for young creatives and is recognised with 16 UCAS points.

Sandringham Arts Week

Our annual Arts Week welcomes many visitors to the school to support the vibrant array of activities and experiences that are taking place across the school to promote the arts. This year our work included visits from professional musicians, dancers and ex-students, returning to work with our younger cohorts.

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