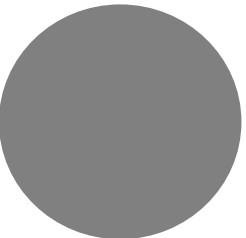
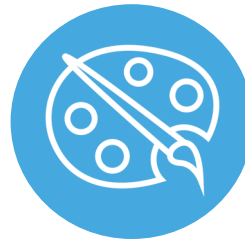
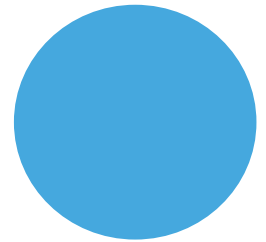
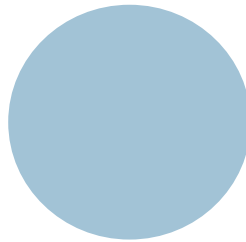


# STEM and Arts at Sandringham School

Transform our **future** with creative **opportunities** for all



**Sandringham School**

*'Everybody can be Somebody'*



# 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 science, computing, design and technology and mathematics curriculum.

The world needs the students of today to become the scientists, engineers, and problem-solving 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 extra-curricular activities to broaden their understanding in these areas and increase students' STEM capital.

As early as 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, Airbus Defense and Space; 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 in a topical STEM-related issue; in 2021 the theme was biodiversity loss and this year it was about going low-carbon.

Take a look at just some of the exciting and inspiring opportunities offered to our students throughout this leaflet.

David Tattersall

STEM co-ordinator

Jo Cavanagh

Assistant Headteacher



### STEM Talks

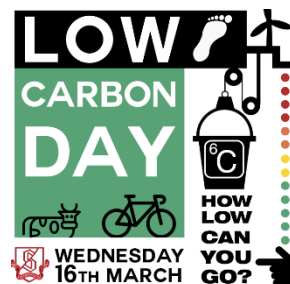
Students are regularly invited to talks from STEM professionals. Students have attended talks on robotics, biotech, biodiversity, women in engineering, physics, aviation and marine engineering.

### STEM careers day

Students have a range of exciting presentations from outside companies including; National Space academy, Hertfordshire University, Youth connexions, Silicon Abbey, MBDA, AECOM, Rothampsted research, Transport for London and GSK.

### British Science week

Each Year the Sandringham science team run British Science week (BSW). This allows students to get involved in aspects of science and technology related to a theme, which in 2021 was Biodiversity and this year was Going Low Carbon. Students in all year groups took part in Meat-Free Monday, a biodiversity survey, electricity generation by exercise biking, climate change summit, guest speakers and house competitions. A highlight was the Sandringham Chemistry Show which sold out the Sandpit Theatre in March 2022!



### The Big Lesson

During the science week in 2019 the three schools in the Alban Academies Trust attempted to break the World record for teaching the world's largest chemistry lesson. It involved three teachers, one from each school - Sandringham, Verulam and the Ridgeway academy - teaching a live lesson on the periodic table to all 3 schools simultaneously from the Sandpit Theatre. The overall structure of the periodic table was taught to the whole of year 8 who were in the theatre, the other students took part in the activities with their form teachers back in their classrooms.

### #Finishtheforest



Last year's theme for British Science Week – Biodiversity - was also the focus of a whole school project in 2018. The challenge was to finish the tree planting in Heartwood forest, Sandridge. Heartwood Forest, owned and managed by the Woodland Trust, is 347-hectare (858-acre) site and was once mainly agricultural land. It is the largest continuous new native forest in England.

Every form group went up to the new area of planting and planted as many trees as they could. With enormous enthusiasm despite the muddy conditions, we planted a total of 2661 trees until we ran out of room. Students dedicated their trees with the addition of a label with their chosen words on it.

Baroness Young, chair of the Woodland Trust, joined us on the Thursday and spent time with our Sixth Form students discussing topics such as biodiversity, agriculture, GM crops and gender equality. She also accompanied a group of year 7 students with their planting sessions. We had the great honour of receiving The Gold Green Trees School Award from Baroness Young on behalf of the Woodland Trust.



The week culminated in the planting of an oak tree on the school grounds under which, a time capsule made by our students was buried. During 2020-21 hundreds more oak, rowan and silver birch trees were planted on the school grounds and visitors will see the saplings getting going.

### **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.



The contact was driven by our students who had been trained in the technical aspects of radio communications, with Jessica leading the way in our Earth to Space contact.

### **Design and Technology enrichment**



Year 11 and 12 students in DT contributed to this year's British Science Week by building an electricity-generating exercise bike. We were able to charge our phones while people pedalled!



### 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.

In March 2017 the school was donated an **'Earth Station'**, including a 3.7m satellite tracking dish from a major electronics supplier. The plan is to apply for grant funding from the Wolfson Institute in order to construct the Earth Station on site and build the receiving station to work with it. Once set up, this will provide a wider interest for students wishing to learn more about Satellite technology and how to decode direct downloads from the many satellites in orbit around the Earth. This will now be going ahead in the near future.

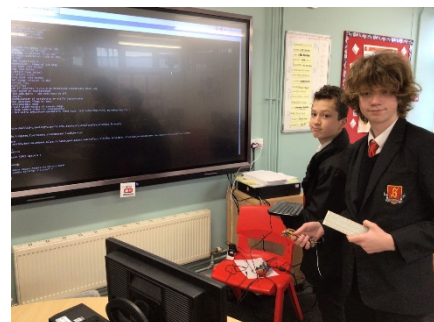
### Trip to Silicon Valley – San Francisco



The computer science faculty lead amazing trips to 'Silicon Valley' in San Francisco. This trip includes visits to tech giants such as Google and Intel.

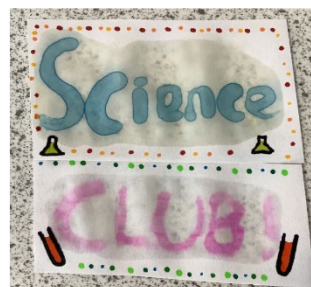
### Computer Science Clubs

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.



### 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.



### Sustainability Club

The members of sustainability club have met each week after school this year, planting seeds, learning about biodiversity and ecosystems, setting up the new polytunnel in the school garden and coming up with ways to improve the school's sustainability.

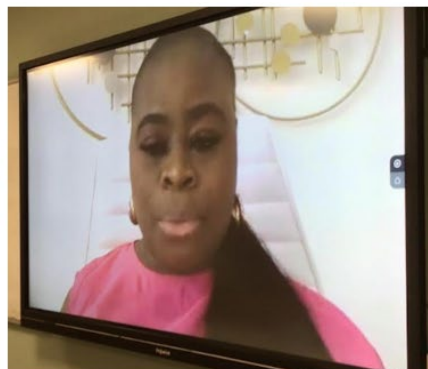
Pictured here is a biodiversity survey of the school grounds carried out in March this year.





## 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. On October 2021 the team pictured went through to the national competition and we await the outcome!



## Weather Monitoring

A group of Year 12 STEM students have been developing a weather monitoring system by linking sensors, a Raspberry Pi microcomputer and their own website. The group took the initiative to develop the system and are on the verge of going live with the results.



The team includes a talented photographer who provided a range of images for the background (pictured).

**Hopefully this gives an idea of the range of extracurricular STEM work at Sandringham.  
Contact Mr Tattersall, STEM coordinator at the school, for further information.**



# Sandringham Arts

## Creative opportunities for all

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### Visual Arts

### Dance

### Music

### Drama

### Sandpit Theatre

We place great importance on the Arts and pride ourselves on providing students with a wealth of different opportunities and experiences which go beyond the curriculum, offer breadth as well as supporting students to become creative, curious and confident individuals.

Sandringham School has twice been accredited with Artsmark Platinum Status and is currently in the process of reaccreditation having completed an ambitious Statement of Commitment for creative practice over the next academic year. We are a Trinity Champion Centre for 2022-2023 and this award recognises the outstanding work delivered across the arts faculties and our delivery of Trinity qualifications.

The Arts team have been awarded the Silver Award for Outstanding Team of the Year at the National Teaching Awards for their commitment to leading a wealth of exciting opportunities both in the classroom and beyond. Last year, our Director of Learning for Music, Mrs Beaton, was, nominated for Teacher of the Year for her incredible contributions and dedication for the Music Faculty and Arts Award. These nominations reflect the commitment and quality of our arts offer at Sandringham.

We are proud of the rich cultural experiences we can offer all students through a range of classroom, enrichment and super curricular activities and projects. Many of these experiences are shared by students in public performances and in Arts Award qualifications from Trinity College, London. We look forward to welcoming you to our vibrant faculties and the theatre, which is central to many experiences at Sandringham.

Athena Pitsillis  
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, Sarah Gidden 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 annual Mall Galleries competition, Royal Academy, St Albans Camera Club Schools Competition, The National Photography Awards and Saatchi online. We also participate in the national Articulation prize to promote literacy and oracy within the Visual Arts.

### **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**

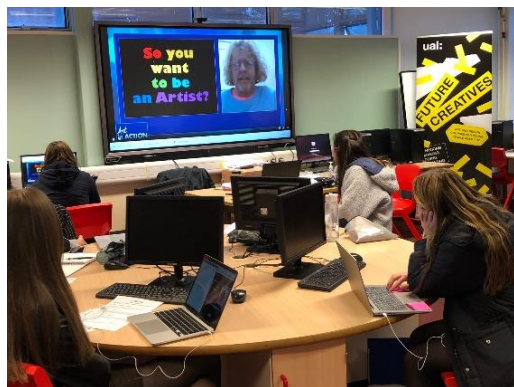
E Week, Arts Week and Extended Curriculum days provide us with opportunities to work with smaller groups of students to produce pieces of art for display around the school. Our aim is for the campus to be a vibrant and inspiring learning environment and we work hard to ensure the artwork is regularly 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 three 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 hip hop 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 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 group choreography and performance in trio 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 performance and choreography exams. 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 8s 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, Triple Edge, to Revolution X Boys Dance, Street Dance and Bollywood.

### **County Dance Show**

Dancers from Sandringham will be performing in 2023 in this bi-annual celebration of dance from all schools across the St. Albans district.

### **External performances and visiting dance artists**

Visiting dance artists spend a day in school working with students to expand their dance technique and performance skills. Various external dance performances and workshops have included the Hertfordshire Royal Gala at the Royal Albert Hall, 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!

### **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 involves the collaboration of Drama, Music and Dance faculties. Recent productions have included *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! This year we will be showcasing a classic text, Charles Dickens' *A Christmas Carol* and we look forward to another fantastic show!

### **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' Concert**

This event is an opportunity for our composers to showcase and share their work and is always 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 St Malo 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 in-house performances from the school, complemented by productions from community groups, professional tours and event cinema – there is truly something for everyone! We were also thrilled to be able to host the filming of the prestigious BBC Question Time in May 2018 and host the filming of a project with the National Theatre in 2021.

The SandPit Theatre also plays host to a monthly comedy club, featuring headline acts such as Nick Helm (Live At The Apollo), Jo Caulfield (Have I Got News For You) and Paul Sinha (The Chase). We are also delighted to present our first professional pantomime 'Hansel and Gretel' (17th December – 1st January). Tickets are on sale now at [www.sandpitttheatre.co.uk](http://www.sandpitttheatre.co.uk)

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 able 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.

### **Follow us on Twitter**

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@SandringhamArt  
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