JTHS SCIENCE NEWSLETTER

Term 1 - 2025-26 **Science@JTHS.co.uk**

WELCOME

Dear Parent(s),
Welcome to our first newsletter of the 2025-26 academic year. We will be highlighting some of the work we do in science and showcasing some of the many examples of personal excellence that our students produce.

We are pleased to open our two new refurbished laboratories (formerly M8 and M10) and are now S1 and S2. The new layouts provide separate practical and theory spaces for students to show their personal excellence in both the substantive and disciplinary aspects of their science education.

IMPORTANT DATES

Y7 Mid-year exam (online) - wb 19th January

Y8 Mid-year exam (online) - wb 19th January

Y9 End of Key Stage exams - wb 6th January

Y10 Mid-year exam (online) - wb 9th February

Y11 Trials 2 (Core subjects) - 27th Feb - 6th March

ENRICHMENT OPPORTUNITIES

Silver Crest (Y9)

HPQ (Y10)

MineCraft Club (KS3)

Science Olympiads (Y12 & Y13)

National Science Week (KS3)

- *Curiosity - What's your question?*

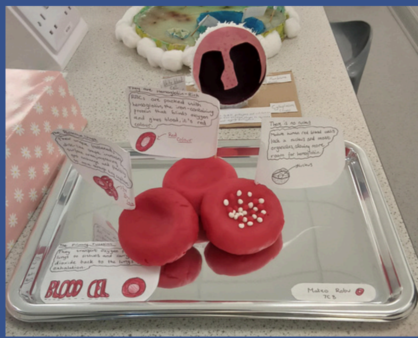
Work of Wonder

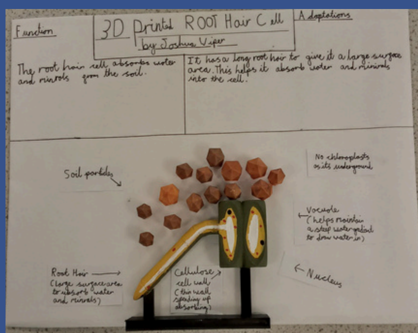
Bringing Cells to Life!

This half term, our science students have been exploring specialised cells in a creative and engaging way. Some students were challenged to design and create a 3D model of a specialised cell, ensuring it was clearly labelled and accurately showed how the cell's structure helps it carry out its function. Using a scientific framework called MAT (Modifications, Additions and Takeaways), students explained how their chosen cell is adapted for its function. They then presented their models in small groups, confidently discussing their ideas and using scientific vocabulary to explain structure and function to their peers.

The creativity on display was fantastic. Students used a wide range of materials including clay, recycled items, felt, glue guns, cake, and even 3D printing. The photograph shows just a small selection of the impressive models produced.

Most importantly, students demonstrated a strong understanding of how cells are specialised and developed valuable communication and presentation skills, learning how to "talk like a scientist" while sharing their ideas with others.





Bronze CREST project

Over the past few weeks, Year 8 students have been putting their scientific knowledge and creativity to the test as they successfully completed the Bronze CREST Award during their Science lessons. The project-based award has seen pupils working collaboratively, problem-solving and thinking like real scientists , culminating in the design and testing of their very own wind turbines.

CREST Awards are a nationally recognised scheme run by the British Science Association. They are designed to inspire young people to engage with science, technology, engineering and mathematics (STEM) through hands-on, investigative projects. The Bronze CREST Award, aimed at Key Stage 3 students, encourages learners to explore a real-world problem, plan and carry out practical work, analyse results and communicate their findings. Completing the award helps students to develop key scientific skills while building confidence, independence and teamwork.

For their Bronze CREST project, Year 8 students were challenged to consider renewable energy solutions, with a particular focus on wind power. As concerns about climate change and sustainability continue to grow, the project provided a timely opportunity for pupils to explore how science and engineering can contribute to a greener future.

During the project, students investigated how wind turbines work and why they are an important source of renewable energy in the UK and around the world. They examined factors such as blade shape, size, angle and materials, discussing how each variable might affect the efficiency of a turbine. Using this research, pupils then designed and built their own model wind turbines, carefully planning their approach and justifying their design choices.

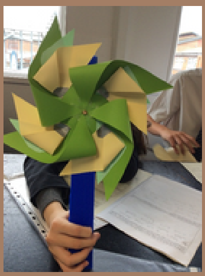
Testing formed a crucial part of the CREST process. Students evaluated how well their turbines performed under controlled conditions, measuring outputs and observing which designs were most effective. Many groups refined their models after initial tests, demonstrating resilience and an understanding that scientific progress often involves trial, error and improvement. Results were recorded, analysed and compared, encouraging pupils to think critically about data and reliability.

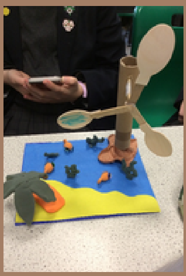
Throughout the project, teachers noted high levels of engagement and enthusiasm. The practical nature of the work allowed students to apply theoretical knowledge from the classroom to a tangible, real-world challenge. Collaboration was also key, with pupils working in teams to share ideas, solve problems and present their conclusions.

Completing the Bronze CREST Award is a significant achievement for Year 8, and students will receive certificates recognising their hard work and commitment.

As one teacher commented, ***the project has shown that Year 8 students are more than capable of tackling complex scientific ideas when given the opportunity. By designing and testing wind turbines, they have not only earned a respected award but also taken an important step towards understanding how science can help shape a more sustainable future***.

Any Year 8 pupils who have not finished their projects have until January 16th to submit their booklets to their Science teacher.





Supporting Success

Mastery of the Science-Verse

In Years 12 and 13, students studying Biology, Chemistry and Physics are supported in their learning through the use of Up Learn, an online platform designed to help students master A Level science content independently and confidently.

Up Learn breaks each subject down into clearly structured sections, guiding students step by step through explanations, examples and exam-style questions. One of the key strengths of the platform is that it encourages students to build regular, manageable study habits, helping students strive for personal excellence through perseverance rather than relying on last-minute revision.

We advise students to aim to master two sections per subject each week. This steady and consistent approach allows students to deepen their understanding over time, revisit key concepts regularly, and build confidence as assessments and exams approach. It also reinforces the importance of perseverance — making progress through sustained effort, even when learning feels challenging.

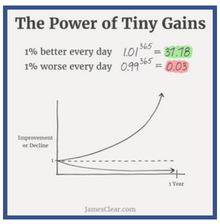
To recognise commitment and resilience, we celebrate progress through our Star of the Fortnight awards. These are based on the number of sections mastered on Up Learn and allow us to reward students who demonstrate strong engagement, independence and personal excellence in perseverance.

Parents can support students by encouraging short, regular study sessions on Up Learn and helping them build these into a weekly routine. When used consistently, Up Learn is a powerful tool in developing subject knowledge, exam confidence and independent learning skills — all of which are essential for success at A Level and beyond.

UpLearn https://uplearn.co.uk/

Marginal Gains - 1% better every day

As year 11 start their last full term at JTHS and start the road towards their final exams, I encourage the students to consider doing little bits of revision on a regular basis to help secure it to long term memory. Every bit of work you do will help!



As our Year 11 students begin their final preparation for science exams, we have created dedicated online revision resources to support them at every step. These are hosted as Padlets with separate pages for Combined Science Paper 1 and Paper 2, as well as for Separate sciences Paper 1 and Paper 2.

Each Padlet brings together everything your child needs to succeed in science:

- Guidance on how to plan and organise revision effectively, helping students build a structured revision timetable.
- Learning organisers covering all key topics for each paper.
- Revision videos that explain and reinforce essential concepts in an accessible way.
- Required practical videos so students can revisit core experimental skills and procedures.

A selection of past exam questions and practice materials to build confidence and familiarity with exam style.

These Padlets act as a one-stop revision hub — an essential complement to classwork and teacher-led revision sessions. Organising revision this way helps students break down the full science specification into manageable sections and practise the skills they will need in their exams.

We encourage parents to explore these resources with their child and support them in setting a revision routine that includes regular review, practice questions, and rest breaks — research shows that spaced revision over time improves retention and reduces stress.

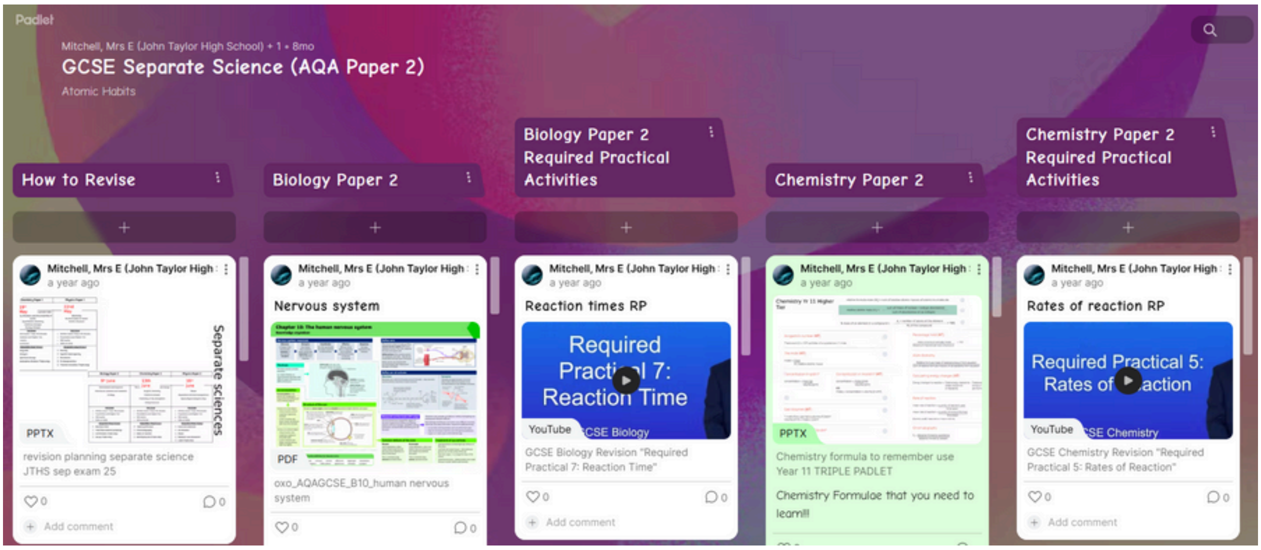
You can access the Padlets here:

GCSE Combined Science (AQA Trilogy Paper 1)

GCSE Combined Science (AQA Trilogy Paper 2)

GCSE Separate Science (AQA Paper 1)

GCSE Separate Science (AQA Paper 2)



Other links / sites

https://www.carousel-learning.com/

https://www.bbc.co.uk/bitesize/levels/z98jmp3

https://www.aqa.org.uk/subjects

https://www.physicsandmathstutor.com/

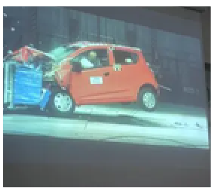
https://www.kerboodle.com/users/login

Guest Speakers

ASPIRING MEDICS

Our Aspiring Medics Club were invited to meet with special guest, Dr. Chris Pickering, a consultant in Medical Leadership, Quality Improvement and Governance.
Mrs Abbott, who organised the session said ‘it was an honour to have Chris talking to our aspiring medics today. His wealth of knowledge and experience was invaluable to our students and we would love to invite Chris back in the near future. Not only was Chris incredibly informative, but the students really warmed to his personable approach and left feeling inspired.’

Chris began his talk by sharing his qualifications with the group, from studying double maths, physics and chemistry at A-level, biology at The University of Cambridge and all the way through the rigorous process to becoming a consultant. Chris explained how he gained an incredible amount of experience and was exposed to a wealth of opportunity during the training process. Throughout his time training, he explored different faculties within medicine which helped him find what he was passionate about.
Chris showed the group a docu-series called “999 critical condition” in which a camera crew followed his department to be broadcast on channel 5. Following the clip, the group of students were asked to critically analyse the footage and what problem-solving factors were involved into providing the best type of care for the patient. The group enjoyed the discussion and gave some impressive answers, which led onto a discussion about what skills are needed to work in medicine. These included; communication, teamwork, awareness, being personable, adaptability, time management and working under pressure. A key learning for our students was how important voluntary experience is at their age. Chris’ love for helping people began when he pushed the tea trolley round at his local hospital!
The students then split into groups to discuss various current affairs in the NHS. These included; Should Doctors Strike, Maternity Care, Queuing Ambulances & Corridor Care. Chris was delighted to hear the conversations and debates between the students who were putting some intelligent points forward to argue their opinion and what impact decisions can make in the long and short term.



Visit from MIRA

Alisdair Bowie from Horiba Mira, is a familiar face at JTHS and was invited back to lead a session on data modelling and talk about his career pathway to becoming a Principal Engineer. Horiba Mira, are a global provider of automotive engineering solutions and well-known for testing and gathering data for F1 and Top Gear.
Mrs Bostock, Computer Science Teacher, said, ‘Alisdair’s real-life scenarios directly linked with the Data Modeling Unit the pupils are currently studying. Our pupils felt inspired and got some useful tips for when they are completing their data modelling coursework. The interactive nature of the session meant the pupils could ask lots of questions and create some great discussions which brought the learning to life.’
Alisdair spoke about career pathways into engineering, writing software, sample data and analysis.

STARS of the TERM

Half-Term 1

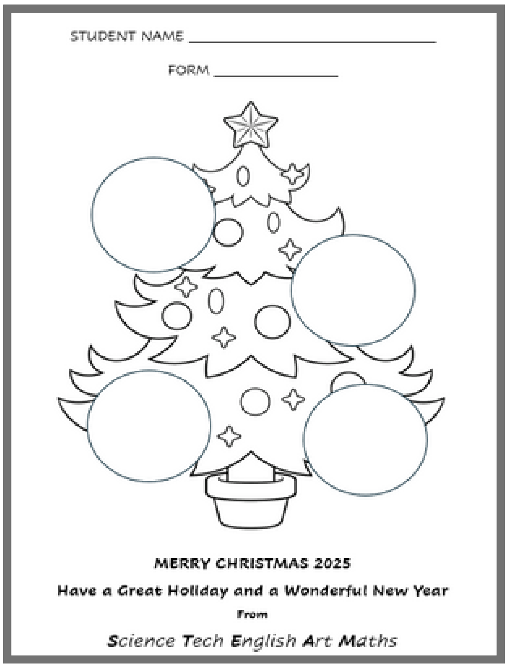
KS3 Stars			KS4 Stars		Key Stage 5 Stars			
Group	Science	Computer Science	Science		Year 12	All Subjects	Year 13	All Subjects
Year 7	Chloe	Ellis	Year 10	Enfys		Emily		Paige
	Beatrice	Jakob		Halima		Holly		Freya
	William	Jacob		Arsenia		Dan		Imogen
	Ronan	Theo		Daisey		Scarlett		William
	Abigail	Zak		Megan		Edward		Ruby
	Thomas	Seba		Dennis		Riley		Jacky
	Ethan	Inayah		William		Jenson		MJ
	Mateo	Isabella		Eisha		Dylan		Matthew
Year 8	Alexia	Brooke	Year 11	Jake		Phoebe		Finn
	Maisie	Alfie		Lana		Orla		Matthew
	Scarlett	Grace		Kayleigh		Ryan		Guy
	William	William		Mateusz				
	Beatrice	Isla		Moses				
	Freya	Freya		Beatrice				
	Alice	Alice		Lewis				
	William	Freya		Archie				
Year 9	Hamish	Rabia						
	Edie	Ellie	Computer Science					
	Evie	Olivia	KS4	Ibrahim				
	Edward	Olivia		Thomas				
	Charlie	Dylan						
	Ralph	Ralph						
	Rebekah	Noah						
	James	Lauren						

Half-Term 2

KS3 Stars			KS4 Stars		Key Stage 5 Stars			
Group	Science	Computer Science	Science		Year 12	All Subjects	Year 13	All Subjects
Year 7	Ellis	Ernest	Year 10	Ava		Millie		Hannah
	Robbie	Evelyn		Neveah		Seb		Fleurella
	Eliza	Martin		Flora		Emily		Bisma
	Reuben	David		Elshammi		Maria		Caitlin
	Aaiza	Ailan		Emilia		Holly		Isabella
	Thomas	Thomas		William		Ioannis		Louise
	Rocott	Ethan		Lily		Daniel		Eva
	John	Mateo		Matilda		Harry Drayton		Lois
Year 8	Jem	Adam	Year 11	Daniel		Liv		Ellie
	Maheen	Grace		Ben		Jenson		Luke
	Emily	Scarlett		Alfie		Henry		Rupert & Suiliman
	Jude	Jude		Thomas				
	Jaden	Sophie		Alice				
	Connie	Keeghan		Amelie				
	Erin	Oliver		Manayal				
	Gabriela	Thomas		Esme				
Year 9	Erika	Sophie						
	Lucy	Minnie	Computer Science					
	Isla	Isla	KS4	Max				
	Thomas	Sophie		Daniel				
	Dylan	Rosie						
	Basri	Nathaniel						
	Jack	Dakota Jones						
	Charlotte	Aaminah						

FESTIVE STEAM

The year 7 students have taking part in a festive STEAM project whereby they complete Festive themed lessons to complete their Christmas Tree reward card.


STUDENT NAME ____________________

FORM __________

MERRY CHRISTMAS 2025

Have a Great Holiday and a Wonderful New Year

From

Science Tech English Art Maths

Students have taken part in activities in;

Science

Tech (Art)

English

Art

Maths

At JTHS we know that this is a huge area for growth, further education and careers. We are focussing in on these areas as we hope to inspire the next generatiuon of scientists.

The CREATIVE SCIENTIST can solve endless problems!

One lucky winner and the form with the most entries will win a festive surprise!

Congratulations to form 7J who submitted the most completed entry cards.
Hope you enjoy your prize!
The 8 individual winners will be informed in the new year, receiving a small individual prize as well as hot chocolate with the Headteacher.
A big thank you to all who took part. More to come next half-term!


STUDENT NAME ____________________

FORM __________

MERRY CHRISTMAS 2025

Have a Great Holiday and a Wonderful New Year

From

Science Tech English Art Maths