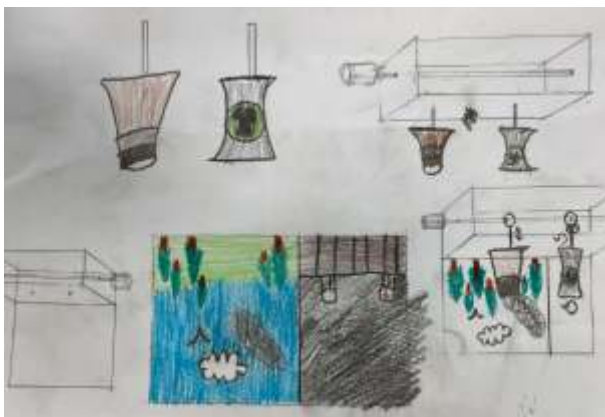
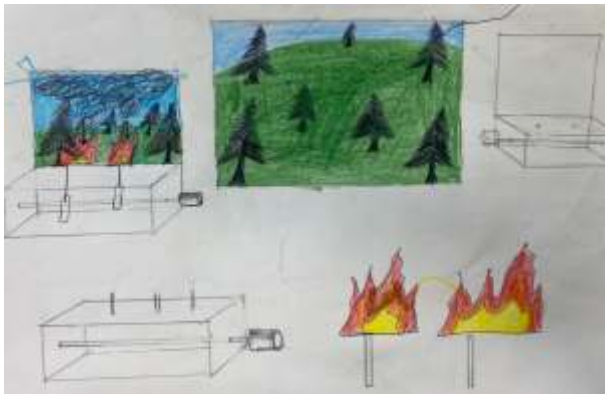
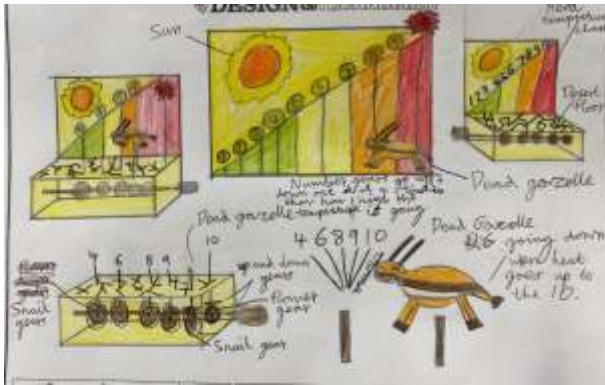


## Year 8 Mechanisms & Automata

This term's focus has been on mechanisms - including gears, cams, pulleys, levers and linkages - and the four types of motion (linear, rotary, oscillating and reciprocating). Students applied this knowledge to design and build automata (moving toys) illustrating the impacts of Climate Change (UN SDG 13). They also researched climate-related issues and looked at professional automata for inspiration. Great effort all round!



### INVESTIGATION

A simple cam mechanism is made up of 4 components: a cam, follower, crank handle and camshaft.

**Task 1:** Annotate (label) the cam mechanism shown. Add arrows to show the 2 types of motion at work.

**Extension:** Can you name the 2 types of motion? Why not linear? How could you create an oscillating motion?

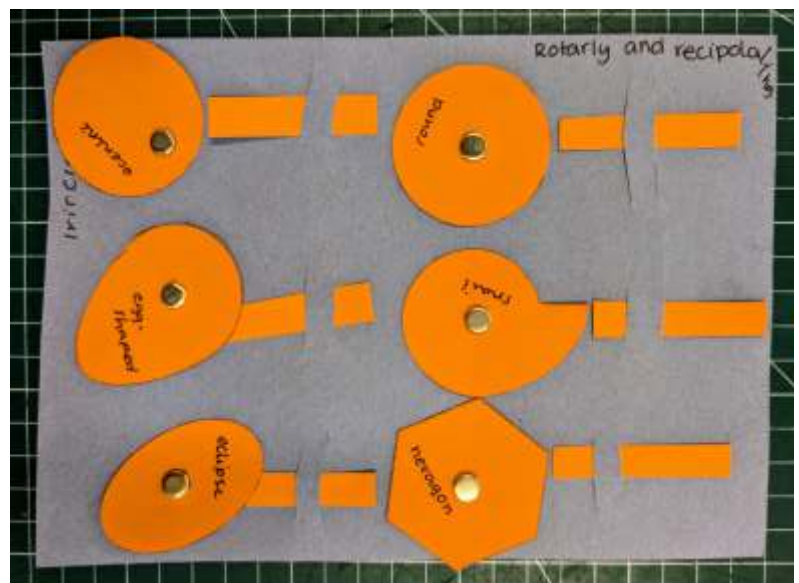
Reciprocating and rotary

**Task 2:** If a cam takes 4 seconds to complete one rotation, how will it move the follower? Investigate the following cams and record your findings. Draw the motion path of the follower and name the cam. (The first one is done for you.)

**Extension:** Describe the type of motion using the following key words: follower, cam, reciprocating, rise, fall, dwell

		Cam shape: <u>Egg-shaped cam</u> Describe the type of motion: The follower will move in a reciprocating motion. It will rise when tip of the egg-shaped cam is pointing up and then it will fall and dwell (not move) until the next cam rotation.
		Cam shape: <u>ellipse</u> ✓ <u>gradually</u> Describe the type of motion: The follower will move in a reciprocating motion. It will rise then gradually fall.
		Cam shape: <u>round</u> ✓ <u>no rise and fall</u> Describe the type of motion: The follower will move in a steady height. It will be on a steady height.
		Cam shape: <u>eccentric</u> ✓ Describe the type of motion: It will go up and then slowly down. <u>room to go up and down</u>
		Cam shape: <u>sawtooth</u> ✓ <u>sudden drop</u> Describe the type of motion: It will increase in height until a sudden drop.
		Cam shape: <u>hexagon</u> ✓ Describe the type of motion: It will have sudden drops.

*all correct ✓*



# Design & Technology / STEM



## Climate Change by Max B

Driven by increased greenhouse gas emissions

Causes a wide range of effects on Earth's environment and human societies

### Rising sea levels



- Melting glaciers and ice sheets
- Thermal expansion of water causing the sea levels to rise threatening coastal areas and communities

### Extreme Weather events



- Intensifies the frequency and intensity of extreme weather events; heatwaves, droughts, floods, wildfires

### Changing Ecosystems



### Alters habitats and ecosystems

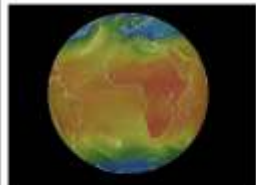
- Leads to shifts in species distribution, biodiversity loss and possible extinction

### Human Health



- Heatwaves
- Food insecurity
- Spread of vector borne disease

### Altered precipitation patterns



### Air quality impacts

- Exacerbate air pollution
- Leading to respiratory problems and other health issues

### Ocean Acidification

- Absorption of excess carbon dioxide into the ocean causes it to become more acidic
- Affecting marine life; shellfish coral reefs

### Food security

- Due to extreme weather events and rising sea levels, it disrupts agricultural production leading to food shortages and price increases

## Automata

### Matt Smith



- Passion for automata began at a young age
- Range from playful animals to intricate machines that represent scenes from everyday life
- He uses a variety of material, wood, metal, plastic

### Fi Hensell



- Contemporary automata
- Animatronics and wooden artwork
- Uses common hardwood, beech, ash, American cherry and lime wood
- Chosen for strength, fineness of grain and natural beauty

### David Dumbrell



- Uses gears, cams, levers and pulleys
- Capture the grace and fluidity of human movement
- Repurposes second hand doll parts and doll clothing giving them a new life

### Philip Lwendes



- Contemporary automata animatronics and wooden artwork
- Uses common hardwood, beech, ash, American cherry and lime wood
- Chosen for strength, fineness of grain and natural beauty

### Rob Ives



- Creates intricate and whimsical mechanical sculptures
- Former teacher
- Paper engineering

**DESIGN & TECHNOLOGY**

Name: William M Class: 7/1 Title: Man cutting wood Date: \_\_\_\_\_

**DESIGN & TECHNOLOGY**

Name: Nataly D Class: AM Title: Turtle Automaton Date: 20-6-2015

## Year 8 Trip to Time & Tide Museum, Great Yarmouth

On Friday 13th June, sixty students visited the Time & Tide Museum to explore the inspiring automata exhibition by Cabaret Mechanical Theatre - a perfect source of inspiration for their own climate-themed moving models.



# Design & Technology / STEM

## Year 8 Faraday Challenge Day - 29 April

Two teams of six Year 8 students took part in the Faraday Challenge Day alongside teams from Acle Academy and Hellesdon High - our fellow Wensum Trust schools. The challenge involved applying their D&T & STEM skills in a competitive setting, and we're proud to report that one of our APHS teams won the event! Brilliant teamwork and problem-solving!



## Year 9 Packaging Projects StarPack & Fairtrade Competitions

This term, Year 9 students took on the exciting challenge of designing innovative and sustainable packaging as part of the national StarPack Schools Competition, run by the Institute of Materials. Tasked with creating packaging for sweet treats, students had to think creatively while considering real-world issues like material choice, environmental impact, and visual appeal. From bold branding to clever construction, their designs showcased brilliant originality and problem-solving.

### 1: RESEARCHING DESIGN POSSIBILITIES

**Product design ideas**

Mo owns a cafe, and also loves dogs - therefore this is an opportunity for Mo to enjoy a sweet treat with their pets.

Different pattern ideas to go with Mo's birthday/having dogs and the bright colour scheme.

These cakes made with pumpkin are suitable for both human and dog consumption. So Mo can share his sweet treat with his dogs.

Packing research to go theme. Also can be posted.

Fonts to use: *EMUL X, Handlice, Pacifico*

### 1: RESEARCHING DESIGN POSSIBILITIES

**Product design ideas**

I really like this design, it is made out of kraft paper. The packaging is stacked on the outside. It is made of Compostable, Commercially Compostable, Biodegradable, Recyclable. The box is thick and heavier safe and can contain cold contents.

I really like the simplicity of this design. It would be really good for everything like brownies or cookies. It seems to be made of something like kraft paper. I presume it is recyclable and seems to be durable.

I like this design. It makes the contents seem really special. It's a 12 inch card box, with a station on top. You can put the tea in the boxes at the fringe if you need to.

I like this design. The cake pop is stable inside the box. The box is made of cardboard so you can put it in the fridge or freezer if needed. You could also put a different style of cake or sweet treat in there too.

**Target customer**

I found this Pie Chart showing the average week-day of a full-time student. As you can see students get an average of 4 hours for leisure and sport and 2.2 hours of "Other" or free time.

**Party and colour**

Lexend Lora  
Playfair display  
AMATE SE  
Pacifico

**Birthday research**

When researching 1000 birthday and student birthday parties, the following images came up. The colour scheme themes were pink and gold.

### 2: DEVELOPING DESIGN IDEAS

Hand-drawn sketches of various box designs, including a cube-shaped box and a box with a viewing window. The sketches include labels like "Net", "Lid connected", and "Lid not connected".

### 2: DEVELOPING DESIGN IDEAS

Hand-drawn sketches of various box designs, including a box with a viewing window and a box with a lid. The sketches include labels like "Box" and "Lid".

### 3: SELECTING MATERIALS

**Materials for Posting**

I would like to use very thick cardboard perhaps, **Heavy Duty Corrugated Cardboard**. I would then place the cake box inside this box and fill in space around with bubble wrap for extra protection from the postal service. I would then add the appropriate stickers to indicate on how to be shipped (Example Stickers shown below).

**Materials for Individual Cake Boxes**

Based off of the 3D model shown below, I'm going to be using cube shaped, thin cardboard boxes. This will be achieved by using **PaperBoard** Which also includes a small viewing window on top. This will be able to house 3 troybakes stocked on top of each other to eliminate waste and unnecessary packaging.

**Materials for the Cake Box**

I would like to make the box mainly from **Corrugated Cardboard** and then use either **Duplex Board** or **Paper Board** to create a good exterior design on the packaging. For example birthday packaging or anything else to suit the consumer, I would then like the individual boxes have a window on the top to view the content of the box.

### 3: SELECTING MATERIALS

**Internal**

These materials would be perfect for the cake box task. These are both lightweight and provide support. Sugarcane Bagasse can go and be made into the material and can be easily discarded.

**Fillers**

Wood wool

Coroplast peanuts

**External**

Edible plastic

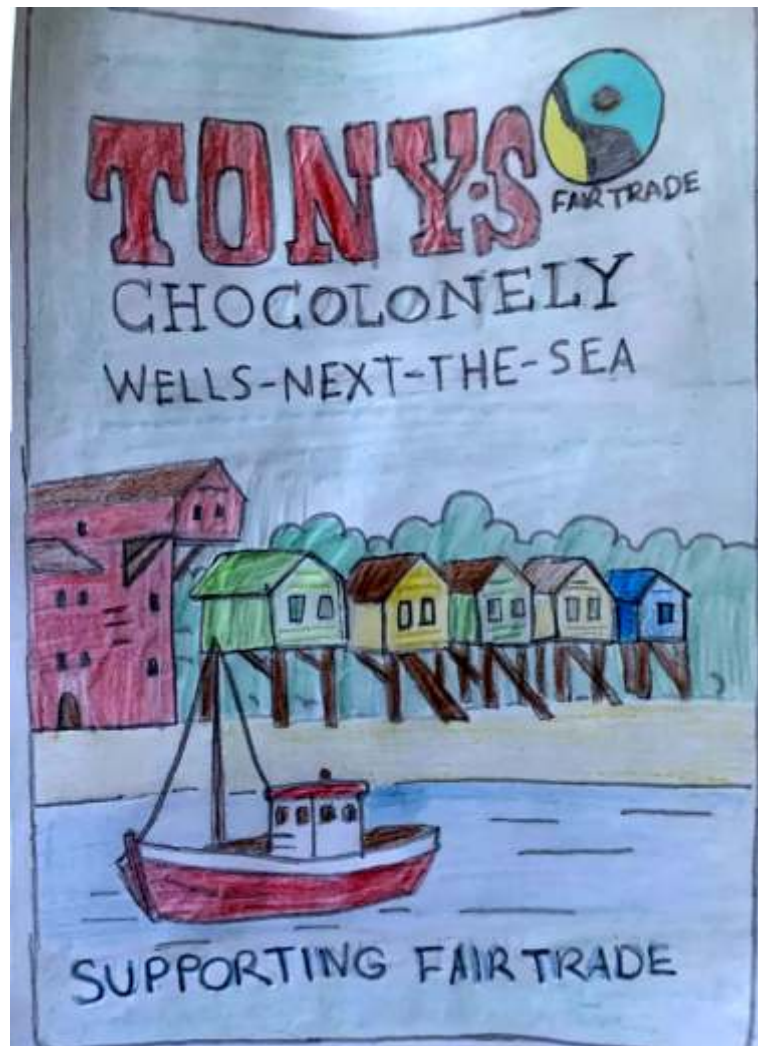
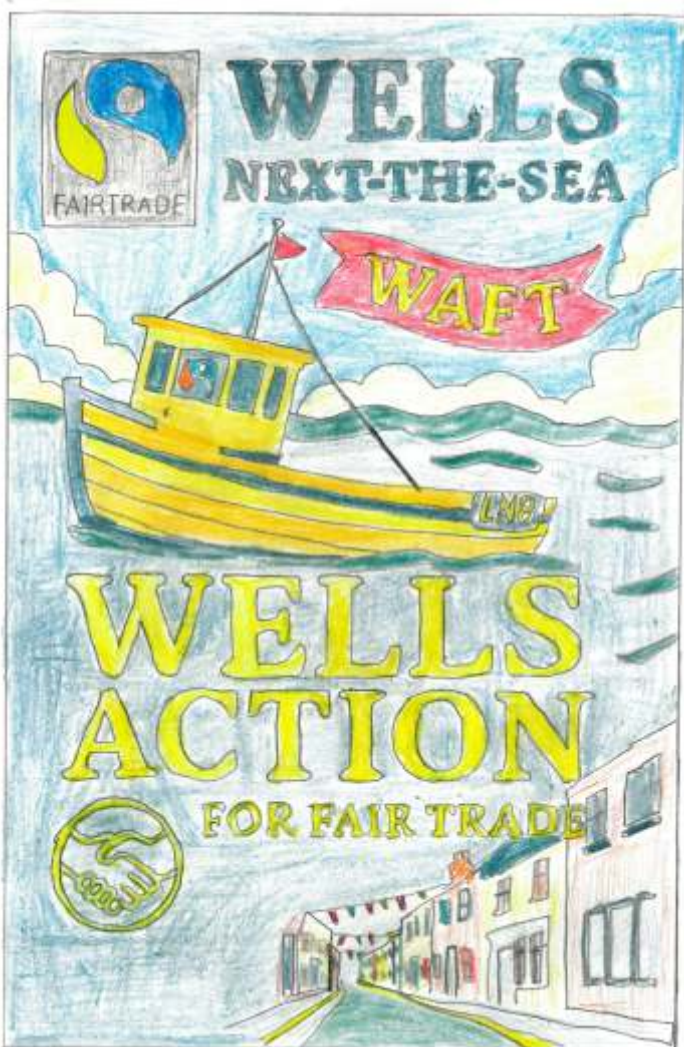
**Reduce, Reuse, Recycle**

All of my packaging ideas follow the ideas of Reduce, Reuse and Recycle. All of my materials can be or have been recycled. By using these we can help reduce the waste and help decrease the rate of climate change.

# Design & Technology / STEM

Several students also submitted entries to a local competition organised by Wells Action for FairTrade, designing eye-catching wrappers for Tony's Choclonely. This ethical chocolate brand champions 100% slave-free supply chains, and students were encouraged to reflect those values in their packaging ideas. The results were incredible – with colourful, meaningful and imaginative designs that really stood out.

We were so impressed by the quality and creativity across both competitions – watch this space for future packaging designers in the making! Well done to winners William N and Iris C!



# Design & Technology / STEM

Year 7-9 @TeamRepair Lunchtime Club

Our lunchtime @teamrepair club has been a real success this term! Students from Years 7-9 have been developing practical repair skills by fixing broken gadgets provided as kits by @teamrepair, each with hidden faults to diagnose and solve. So far, they've repaired retro game consoles, wind-up torches, and remote control cars! The club has been a great opportunity for students to build confidence through hands-on learning, improve their problem-solving skills, and explore sustainability through repair rather than waste. A brilliant space for curious minds and creative tinkerers!



Join the **NEW**  
**team.repair**  
**STEM** Fixers Club! 

**SCAN ME FOR MORE INFO** 

**ARE YOU INTERESTED IN HOW THINGS WORK?**  
**ARE YOU A BUDDING DESIGNER/ENGINEER?**  
**DO YOU LIKE TO FIX THINGS?**

If you answered YES to all 3 questions, then this **NEW** STEM club is for you!  
Places are limited, so you **MUST** register your interest with Mrs Moffat by 22<sup>nd</sup> May.  
The club will run Tues & Wed lunchtimes (12.15-12.45) during June & July 2025.



 TeamRepair  MrsMoffatDT

# Design & Technology / STEM



A special shoutout to our star repairer, Alfie, (Year 7) who was so inspired by the club that he went home and successfully fixed his own Gameboy—he even came in to proudly show it to us!



# Design & Technology / STEM

## Year 9 RAF Marham STEM Trip - 28 April

Students explored STEM careers during a visit to RAF Marham. Highlights included a camp tour and flying the F-35 VR simulator! Thank you to WO Howard and WO Edwards for the incredible experience.



## Year 9 Sizewell B Power Station Trip - 1 July

Thirty students visited Sizewell B to explore nuclear power generation. The trip included a talk about the nuclear process, information about careers in the energy sector, and a guided site tour which included the opportunity to hug a turbine! Huge thanks to the EDF Visitor Centre team.



# Design & Technology / STEM

## Year 9 & 10 Drone Coding Workshop – 12 May

Selected Year 9 and 10 students took part in an exciting workshop run by Code4Drones, learning to program and fly drones while developing skills in computational thinking and coding.



## Year 9 & 10 STEMUnity Operation Portaloo - 5 June

Another brilliant workshop for Year 9 and 10 supported by Sophie Skipp, Roy Wilkes, and Harry Drew from Equinor! Sophie kicked things off with a lively assembly on careers in renewable energy, including a behind-the-scenes look at life as a wind turbine engineer. This inspired our hilarious and creative "Operation Portaloo" challenge, where students prototyped flat-pack toilets, strapped them into climbing harnesses, tested them for strength, and completed a simulated waste disposal mission! The workshop was a brilliant example of hands-on learning, great teamwork, creative thinking and real-world problem-solving in action!



# Design & Technology / STEM



## Woodturning Workshop

Year 10 students enjoyed a fantastic session led by the Wells Men's Shedders as part of their timbers unit. Thank you to Mark Howes and his team of volunteers for demonstrating woodturning techniques and showcasing his handmade lathe.

They then made mini concrete planters and pine plant stands just in time for Mother's Day!



## IKEA Flat Pack Challenge

Students competed to assemble and dismantle IKEA chairs in record time, exploring the pros and cons of flat pack furniture design. Congrats to the winning teams!



## Eco-Bio-Lamp Project

To complete their Year 10 curriculum, students were challenged with a mini-NEA to design and make an adjustable lamp inspired by nature (biomimicry), using any materials or techniques they've explored this year. This project serves as an ideal lead-in to their NEA (Non-Examined Assessment) coursework, which they will begin in September and which accounts for 50% of their GCSE.



**DESIGN & TECHNOLOGY**  
**Eco-Bio-Lamp**

**Contextual Challenge: Lighting up your home**  
The most recent (AQA) provide a different contextual challenge each year that will be the theme for your NEA coursework project (worth 50% of your GCSE). For this mini-NEA project, your context is 'Lighting up your home' and you are going to design and make an adjustable lamp that is eco-friendly and inspired by nature. The aim of this project is to take you through the main stages of the iterative design process (to show what you need to include in your NEA coursework project next year) and for you to apply your knowledge of the different material areas and manufacturing processes available at school that you have learned about this far (e.g. papers & boards, timbers, metals, polymers, textiles and electronics).

**KEY DEFINITIONS:**  
**Eco = Eco-friendly** - products that are sustainable  
**Bio = Biomimicry** - products inspired by nature

**ITERATIVE DESIGN PROCESS**

Iterative design is a design strategy based on a cyclic process of prototyping, testing, analyzing, and refining a product or process. Designs are continually reworked, improved and refined based on the results of testing. Starting with a contextual challenge a designer may have a good idea that solves a problem. Using an iterative design process, a model can be made from a design sketch and then tested. The test results may suggest failures and modifications to the design. These changes are evaluated, and then the cycle begins again - until the best solution to the problem is found.

## Metals & Polymers

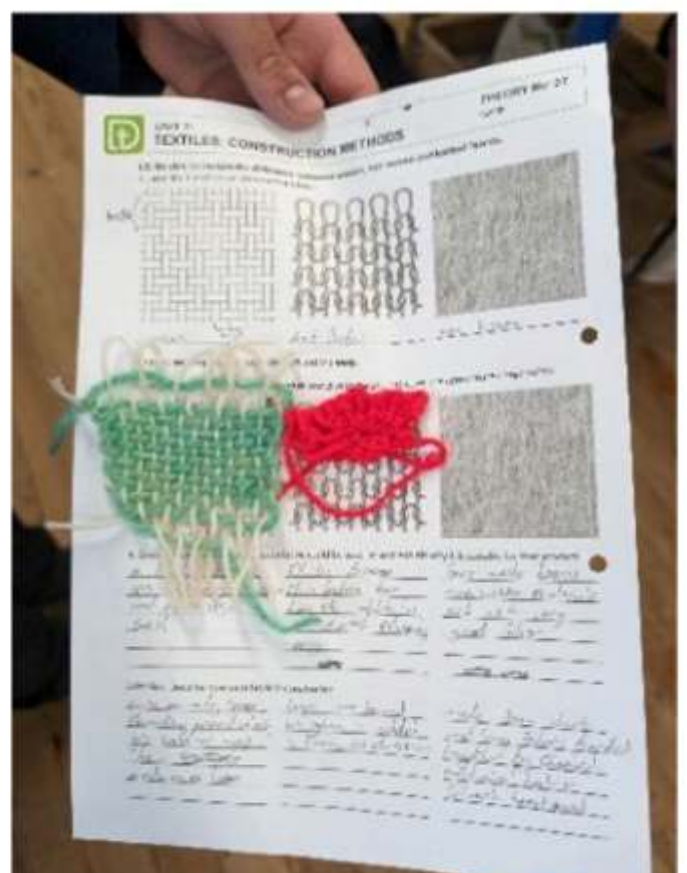
A hands-on unit exploring different types of metals and plastics, along with the processes used to shape them. Activities included pewter casting, creating aluminium wire jewellery, and cutting and bending acrylic to make 'poly-glasses'!



# Design & Technology / STEM

## Textiles

Students explored various construction techniques, including weaving, knitting and wet felting. Special thanks again to Mark Howes for his spinning wheel demonstration.



## Work Experience Highlights

Huge congratulations to Archie W, who completed a week's work placement at Lotus Cars during the Easter holidays, and a week at Scillitoe Bros Garage with Kayla M.



Archie also features in a new video by Norfolk Community Foundation, showcasing the impact of Equinor funding on our Kit Car Club. Scan QR code for video:



Thanks to Demi M and Ryley N for their brilliant student-led video tutorial supporting Year 8 automata projects. Scan QR code for video:



# Design & Technology / STEM

## YEAR 11

Mrs Moffat is so proud of her 25 Year 11 students for completing their GCSE NEA coursework (worth 50% of their final grade). Several exceeded their target grades and produced excellent work, thanks in part to working with real-world clients who provided guidance and feedback throughout the process. Client collaborators included: Annie Golding @Ele and Me, Simon Prince @Coastal Health & Wellbeing, Leanne Neave @RSPCA, Erica Sperry & Joe Wilding @APHS



Students sat their final written exam on 18 June and many left feeling confident. Mrs Moffat came in on her day off to join their Leavers' Assembly – several students are going on to study design at college, and we're excited to see where their creative futures take them!



## STEM @ APHS – Greenpower Electric Kit Car Racing & More!



### Test Track Triumphs and Battery Box Breakthroughs: Gearing Up for Hethel!

Written by Nathan C

Over the last couple of months, we have been working on improving our cars ready for the regional race at Lotus, Hethel and on Sunday 18th May, Holkham kindly let us test our cars on the track near the grain store at Egmere. We took all three cars and tested them on the smooth tarmac, where we could run them at full power and to their full capability. The Formula Goblin (G2) car “Hercules” went around an obstacle course with its newly fitted bodywork, which made it hugely more aerodynamic. The drivers were timed so that we could find our fastest ones and use that information to determine track time allocation at Hethel. The same went for the Formula 24 (F24) car “Ambition”; but unfortunately, Poseidon had an issue with its power controls so couldn’t be tested.

The strip of road was amazing—fully opening the taps on the car, smooth and straight. The road was long enough that we could build the car’s speed up to the maximum, which all drivers enjoyed.

After our testing session, we realised that Ambition’s nose cone needed work, so I padded out the sides so it was flush with the body, and drag was significantly reduced.

All drivers were timed, and we worked out who was going to drive at the Lotus Hethel track near Norwich. Thank you again to James Beamish, Farm Manager at Holkham, for providing us with the opportunity to use their track.



# Design & Technology / STEM

Another project we have started recently is making battery boxes, which is crucial for the care and longevity of our batteries. Keeping them at a constant temperature is essential for retaining the maximum amount of energy while they are being stored. Thaxters Timber and Forestry Ltd, Holt, kindly helped us by donating a large amount of plywood, perfect for constructing the boxes. With the help of Chris Holmes and Chris Hill, we have cut, screwed, glued and sanded each box. They are currently being fitted with rope handles and thick insulation to keep the batteries at a constant temperature. They will soon be labelled so we know, on race days, which box is for which car in each race. We think that this project will significantly help us get into those higher positions in races.



## STEM Club Welcomes Special Visitors

It's been an exciting time for our STEM Club, with three special visits this term that have energised our students and celebrated the incredible progress of our Greenpower kit car teams.

First, we were thrilled to welcome Luke Tyce, Finance Director at Holkham Estate. Students enthusiastically shared their roles within the club, showcased our engineering projects, and took the opportunity to test-drive our electric cars—including a debut run for our new primary school car, Hercules. Luke left suitably impressed by the passion and innovation on display.



Next, we were joined by Sophie Skipp from Equinor, one of the funders of our STEM Club through the Dudgeon Community Fund. After delivering an unforgettable STEM day for Year 9 and 10 students—including the hilarious and hands-on 'Operation Portaloo' challenge—Sophie stayed after school to meet club members and see our work in action. She was very impressed, and you can see her feedback in the video link below.



Finally, we had the pleasure of hosting Adam Baker and Lizzie Barker from the Norfolk Community Foundation. Their visit gave them the chance to see firsthand how generous funding from the Dudgeon Community Fund has transformed opportunities for our students. From electric racing to robotics, their support is powering student innovation every week. They also interviewed several students to create a promotional video, which included Sophie Skipp—you can scan the QR code to view the video.

We are incredibly grateful to all our visitors for their time and belief in the potential of our young engineers. With this kind of encouragement, the future of STEM at APHS looks brighter than ever!



## Girls on Track STEM Day - Thursday 22nd May @Lotus!

Written By Izzy D

Ten girls from Years 7 to 9 were selected to participate in a 'Girls on Track' event at the Lotus Track in Norwich. We were all extremely excited throughout the journey there, talking amongst ourselves about what we might get to experience.

As we arrived, we collected our team shirts and sat down in participation. After a talk about the day and Lotus itself, we began our activities. It started with a tour of where the cars are made. I found it extremely interesting to learn how each part comes together to build the full car. Afterwards, we went to learn about racing itself and even got to sit in a few of their cars. I even got to be on BBC Radio Norfolk! A few of us were interviewed on the importance of women in STEM and how an event like this shapes the way for our futures. Scan QR Code for recording:

We then went on to do a production line challenge, where we were tasked to create an efficient line for assembling toy cars. I really enjoyed trying and testing new ideas to make the line work faster! After lunch, we took part in a pit stop challenge and reaction games. We got to practise on a miniature version of a car—it was so much fun being timed!

After this, we went down to learn about the safety aspects of Lotus and racing in general. It was incredibly informative! Finally, we finished the day off with a talk about one of the co-founders of Lotus and a prize-giving ceremony. Throughout the day, there were three competitions taking place: how many cars your production line could make in 10 minutes, how quickly you could perform a pit stop, and how many buttons you could press within a minute for the reaction challenge.

Our school drew first for the production line, and I won the button challenge! We all received our prizes and a tote bag full of Lotus merchandise! Overall, I had a brilliant day out and learnt so much about cars and Lotus in general! It also built up even more excitement in preparation for the F24 STEM car races the following weekend!



# Design & Technology / STEM



## G2 Race Day Saturday 24th May @Lotus - Hercules Team Go from Strength to Strength!

Written by Erin H-B

What an experience! A dozen team members, accompanied by Mrs Moffat and our valued STEM industry partner, Kieron Scillitoe, travelled to Lotus Hethel for an exhilarating day of racing - a first for our Formula Goblin (G2) car, 'Hercules'. The minibus drive was filled with excitement and anticipation for the day ahead. As first-time G2 racers, there was an air of nervousness; however, that feeling was quelled by the knowledge that we worked well as a team, could support one another, and that all our hard work and preparation would pay off.

Upon arrival, we unloaded our car from the van and got suited and booted in our APHS race gear. Now looking the part, it was time to give the car a "sticker makeover," detailing the sponsors - without whose support this would not have been possible. Around us, other teams were also preparing their cars. We took the opportunity to network while eagerly waiting to gain advice from the more experienced G2 teams.

Finally, the moment arrived - the flags waved, and the races officially began! All the drivers took turns competing in each race. In the pits, waiting and ready for action, the senior members of the team cheered and encouraged others while preparing for pit stops and driver changes, championing the younger students throughout the day and celebrating their successes.

First up was the slalom race. Drivers had to navigate and weave in and out of cones at speed and perform a stop at the end. This was the G2 team's first chance to drive competitively - it was time for the real deal! Despite nerves, the team persevered and gave it their all. We learnt that the slalom race tested precision driving and control at speed. It gave us a boost of confidence. Hercules team members Faith K and Ferney C-R said, "We felt nervous at first, but throughout the day, we gained so much confidence." With a welcome boost in confidence, the team were raring to go. Next on the agenda: the drag race. Our Hercules drivers went head-to-head with another team, this time competing to cross the finish line first. We recognised that this race showcased both the car's capability to reach high speeds and the nerve and fearlessness of the driver. A feeling of pride filled us as we went on to win every drag race we competed in. Pushing the car back to our paddock, there were lots of smiles - our butterflies had flown, and a profound sense of accomplishment washed over us.

After a well-earned lunch break, the Hercules crew explored the paddock, sharing stories and best practices with others. It was a great learning opportunity to gain advice, tips, and tricks from other STEM-loving teams - and a chance to bring newly acquired knowledge back to our STEM club.

The final race: a lap around the Lotus track, a longer-distance circuit where our F24 cars, Ambition and Poseidon, compete. Our Hercules team leader, Faith K, took the driving seat for this maiden voyage and held her nerve as she negotiated the corners and utilised the straights. Faith smashed it - Hercules held its own and crossed the finish line still going strong.

As the day drew to a close, it was time for the fun race - a single lap around the track with no age restrictions in place. Archie W, our team leader and an experienced STEM club member, was more than happy to complete the fun lap for the team, retracing Faith's tracks around the F24 circuit. Cheering from the sidelines, the Hercules team were united and stronger than ever.

The prize-giving concluded a fantastic day, celebrating the successes and sportsmanship of all involved. Although not placed this time, the Hercules team came home with valuable knowledge and cherished memories. Heath B said, "The Goblin race day was an amazing experience for both the younger and older members. It was a brilliant opportunity for everyone to learn and grow." And Orla H-B, a Hercules team member, added, "I loved being part of the G2 team. I felt a bit nervous as a first-time driver, but everyone has been kind and encouraging. It's so much fun - I'm looking forward to racing again!"

# Design & Technology / STEM



# Design & Technology / STEM



## F24 Race Day Sunday 25th May @Lotus - Ambition and Poseidon Teams Shine at Lotus with Best Team Portfolio Win!

On Sunday, both our senior teams headed to Hethel again to experience another unforgettable day at the prestigious Lotus track as part of the national Greenpower Formula 24 electric car racing series. Representing APHS were two student-engineered vehicles—Ambition and Poseidon—competing against schools from across the region.

Both teams demonstrated outstanding resilience, communication, and teamwork, impressing spectators and judges alike with their lightning-fast pit stops and smooth driver changes. Their hard work and preparation paid off in more ways than one: the team was proudly awarded the Best Team Portfolio of 2025, recognising the exceptional planning, engineering, and design thinking that went into their projects.

The Greenpower F24 challenge offers students a unique opportunity to design, build, and race electric kit cars—an experience made possible thanks to the generous support of sponsors, including Scillitoe Bros, the Norfolk Community Foundation, Equinor, Wells Carnival, and Holkham Estate.

Project Lead and STEM Coordinator Mrs. Moffat shared:

*“I’m incredibly proud of all the students involved. They continue to show ambition, pride, and a drive for success—true APHS values in action. This award is a testament to their effort, creativity, and teamwork.”*

As the school continues to build momentum in STEM education through projects like Greenpower, it’s clear that the future is very bright for these young designers and engineers.



# Design & Technology / STEM



## Greenpower @ Lotus - Student Reflections & Shout-Outs

“I was buzzing after racing Poseidon for the first time - a real team effort!” — Erin H-B (Year 9)

“It helped me overcome my nerves and made me more confident for next time.” — Orla H-B (Year 6)

“We should focus on better battery care and driver communication next time.” — Jake J (Year 9)

“Having specific race day roles and clear organisation is key.” — Archie W (Year 9)

“Battery maintenance is crucial - we need a smarter storage and prep system.” — Kit P (Year 9)

“It was such a fun and exciting event - thanks for the chance!” — Kyrylo N (Year 9)

“Quick thinking and teamwork kept us going, even when things went wrong.” — Izzy D (Year 9)

“We need every driver to know pit plans and race rules inside out.” — Nathan C (Year 9)

“We should assign team members to different parts of the car.” — Sam S (Year 9)

“Even just watching was a great learning experience!” — Rowan J (Year 7)

“Jumping in that car was unforgettable - thank you!” — Blake B (Year 7)

“We need to focus on saving battery for the final push!” — Zach B (Year 7)

“Loved racing - thank you for trusting me to take a lap!” — Faith K (Year 6)

“Great time! Let's improve aerodynamics next.” — Finley W (Year 6)

“Thank you for an unforgettable weekend!” — Noah H (Year 7), Zach H (Year 6), Ferney C-R (Year 6)

## Year 7 Students Blast Off with Big Bang STEM Day!

On Monday 7th July 2025, Year 7 students experienced an in-school Big Bang STEM Day, packed with exciting workshops designed to spark curiosity, innovation and teamwork. Throughout the day, students rotated through five unique STEM sessions led by industry professionals and experts:

### Session 1 - Sphero Bolt Coding & Engineering

Delivered by Dominic Surry from Skill Supply and funded by the Neon Bursary, this session introduced students to the world of robotics and coding through hands-on challenges using Sphero Bolt robots.

### Session 2 - Boat Design Workshop

Neil Thompson and Rachel Bould from Neil Thompson Boats led an engaging session exploring the principles of buoyancy and marine design. Students used their creativity and problem-solving skills to design and test model boats.

### Session 3 - Mission Mars

STEM Ambassador Paul McMahon transported students to outer space, exploring the real-world science behind Mars Rover projects and the logistics of travelling and surviving on the Red Planet.

### Session 4 - Principles of Flight

WO Howard and his STEM Ambassadors from RAF Marham, guided students through the principles of flight by challenging them to create high-performing paper planes.

### Session 5 - Structural Engineering with Hudson Architects

Students became architects for the day, designing and building their own cityscapes while learning about the importance of structure, stability, and teamwork in urban planning.

We extend a huge thank you to all our visiting facilitators for delivering such fun and informative sessions. Their time and expertise helped make this STEM day a truly valuable and memorable learning experience for our students.



# Design & Technology / STEM



## Cluster Sports competitions

High 5 Netball - 28/04/25: Winners – Burnham Market Primary School

Tri-Golf - 12/05/25: Winners – Wells Primary and Nursery School

Mini Tennis - 12/05/25: Winners – Burnham Market Primary School

## U13 Cricket Indoor Cricket

After qualifying from their group early in the year, this team earned the right to compete against Aylsham, Framingham Earl and Thorpe St Andrew schools at the County Schools Indoor Cricket Final in April.

The boys started the day with a narrow defeat to Aylsham (166/3 vs 169/1), before a strong performance saw them beat Framingham Earl (175/3 vs 162/6). Their final match at the finals was a loss against eventually winners, Thorpe St Andrew (142/7 vs 160/3). This competition allowed many players to experience an indoor format in the sport and acted as excellent preparation for the summer hardball season.

Player of the Day: Bradley C

## Panathlon Multi Skills Festival

50 children from 5 different schools had lots of fun and tried to achieve their personal best in 8 adapted multi-skilled activity stations which were: cricket, boccia, skittles, speed bounce/long jump, beanbag target, basketball hoop target, target flight and tennis slalom. Overall team APHS finished in joint 1st position, but narrowly lost out on a count-back of the points to finish runners-up. Many thanks to the West Norwich & Dereham School Sport Partnership and North Norfolk School Sport Partnership for organising and Taverham High School for hosting.



## U13 Hardball Cricket

Following on from the indoor competitions, the PE Department were very aware that they had a talented bunch of cricketers in Year 7 and 8 and eagerly looked forward to what the team could achieve this term. Prior to starting their U13 State School Norfolk Trophy group matches, they played a friendly against Glebe House School. Put into bat first the boys set their hosts a target of 108, thanks to a superb 50 from Solomon E. The team restricted Glebe to 96/6 with wickets shared around the team.

Holkham Estate once again kindly agreed for APHS to host their home cricket matches in their wonderful settings and the U13 team got their group matches off to a winning start with a comfortable win against Litcham High School. Steady bowling and secure fielding restricted the visitors to 70/3 off their 16 overs. This total was chased down with 3 overs remaining.

The team made it 2 wins out of 2 against Springwood High School at Grimston CC, where good bowling and fielding kept the hosts at 86/4 from 20 overs. This was followed by mature batting by Solomon and Brad to see the team safely home 87/1 with just under 5 overs still to play. The boys went into their third and final group game knowing a win against KES would secure them a spot at the U13 Finals Day. Batting first, the team finished their 20 overs for 157/8. Notable scores for Fin H - 22 over 14 balls and Bryce W - 27 off 17 deliveries. KES completed their 20 overs with a score of 125/8. Solomon picking up a four-for off his 3 overs, two wickets for Brad and one each for Bryce and Jack N. It was brilliant to see so many APHS staff staying behind after school to cheer on the boys at Holkham.

The U13 Finals Day was due to take place on Wednesday 2nd July, with APHS due to take on Thorpe St Andrew in a morning semi-final (Long Stratton vs Wymondham College in the other semi-final). However, rain saw the day postponed, therefore the finals will now be rescheduled for September!



## U14 T1 Rugby Qualifier and U13 Norfolk Schools Touch Cup

Several Year 9s and a couple of Year 8 students enjoyed a great day of T1 Rugby on Friday 6th June. The weather could not quite make up its mind, but that did not stop the selected students from having a brilliant day playing this relatively new format of co-educational Rugby.

Article courtesy of Soul Phoenix – England Touch Player, Coach and Referee.

An incredible afternoon of Touch Rugby at Holt RFC as teams from Cromer Academy and Alderman Peel High School brought energy, skill and sportsmanship to the pitch.

Four Year 7 & 8 teams played a series of high-quality games—many of the players having honed their skills since primary school, and it showed! After a draw in their opening encounter, Cromer A team and APHS A team delivered a thrilling finale, with APHS A team just edging ahead to lift the 2025 Norfolk Schools Touch Cup.

A special shoutout to our young sports leaders and England Touch High Performance players, siblings Thea, Acacia and Lyndon from Fakenham Academy, who helped coach the newer players before expertly refereeing the competition.

Touch is one of the fastest growing, most inclusive and enjoyable sports out there—perfect for schools who want to offer their pupils a lifelong activity that promotes teamwork, fitness and fun. With more schools already signed up for 2026, Norfolk Schools Touch is on the rise!



## Ski Trip

Over the Easter holidays we ran our biennial ski trip, with this year seeing us take 87 students and 10 members of staff to Tonale, Italy for some time skiing up in the mountains. The week consisted of glorious mornings skiing up the mountains, followed by a number of fun-filled evenings which involved activities such as bumboarding, a disco and a trip into the local town for pizza and ice-cream. Throughout the time away, the students were all absolutely outstanding and received nothing but continuous praise from transport staff, resort members and their skiing instructors - they were a real credit to themselves and APHS. We absolutely love running these trips and it was a real pleasure and privilege taking away such a fantastic set of students. A big THANK YOU to all those involved who made this a trip to remember!



## Spirit of the Games

On the 13th May, 32 students from year 7-8 participated in the Norfolk School Sports Partnership Spirit of the Games Festival hosted at UEA. Some students took part in the competitive activities which involved cricket and volleyball, whilst some students took part in non-competitive activities which involved rowing and karate.

We were fortunate enough to enter two teams into the softball cricket competition and both sides won the pool of 4, followed by their semi-final matches to meet each other in the final. Congratulations to Team Fin, who triumphed over Team Freddie!

Six other students made up our volleyball team, competing in a 4-a-side volleyball competition, where they finished 3rd out of 8 teams.

All students were fantastic, with many of these students representing the school for the first time.



## NNSSP Athletics

We took over 30 of our year 7-10 students to the UEA to compete in the Norfolk School Sports Partnership Athletics competition. Students competed against students from a number of other schools in a mixture of both track and field events throughout the day. The day saw the heat brought both on and off the track, from high energy sprints to impressive field events and every single one of our students gave their absolute all. At the end of the day, APHS came away with a 3rd place finish overall!

## Goodbye to Mr Wilding

We are sad to say that Mr Wilding, PE teacher and Director of Learning PE and Expressive Arts, will be leaving Alderman Peel at the end of this term. He will be very much missed at school.

In honour of his time at APHS, the school has created a new award for the Olympeel Games in his name, The Joe Wilding devotion to sport award.

We wish him well in his new post at Hewitt Academy.



## APHS Instagram

Please find us on Instagram at @APHS\_PE or use the QR code below to give us a follow to see what we get up to!



# Our Partners

