



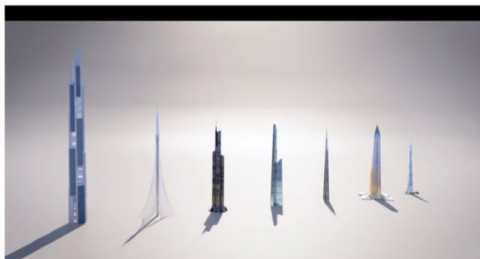
Stem stimulator

At Kings Langley School we recognise the importance of STEM through a cross curricular approach, interleaving this through our wide range of subjects and year groups. During STEM fortnight staff presented a wide range of STEM lessons demonstrating the importance of STEM to their subjects and the wider implications in life. This magazine showcases the best of these activities across our curriculum.

This term has also seen a wealth of STEM competitions that our students from all years have been able to get involved in. Lego city , Remembrance day items, Rotary Chef , Christmas cakes, plus our own STEM fortnight competitions. Well done to all students who have got involved and special congratulations to the winners.

During the STEM fortnight we ran two competitions in form time. These were based on architecture and tall buildings. Congratulations to 11C for naming all the buildings and their location correctly.

How do you build the world's tallest building?

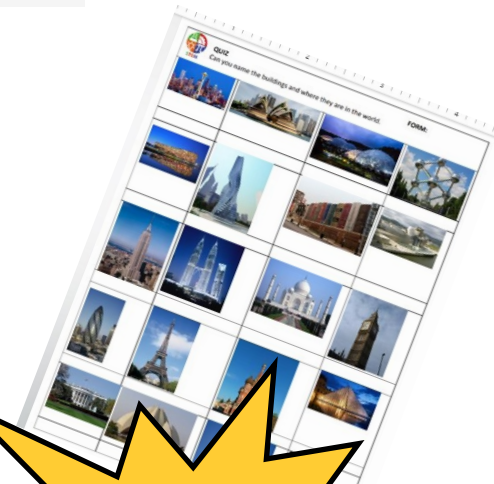


<https://theday.co.uk/daily-videos/how-do-you-build-the-worlds-tallest-building/>

The second competition students watched the video clip from The Day on the designing of tall buildings. Forms then discussed the pros and cons of these building and then designed their own versions of new tallest world building. We had some amazing entries see pages 35-38 and we clearly have some budding architects in school. Thanks to Mr Housego for judging the competition Congratulations to the winners from each form and overall Winners;-

- 1st Emily 8A
- 2nd Lewis 8D
- 3rd Buddy 7C

Miss C Scanlan



STEM colours

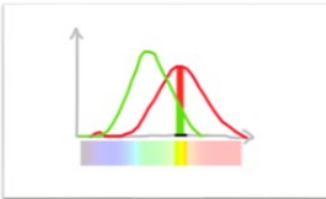
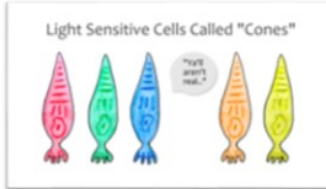
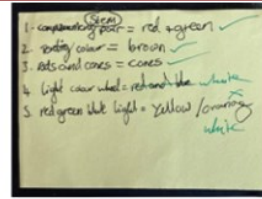
Check out the back page for how your son or daughter can achieve these.

For more information please contact Miss Scanlan– scanlanc@kls.herts.sch.uk

STEM Year 7 The difference between PAINT colour and LIGHT colour

Watch the video below, and answer the following questions:
 1. What complementary pair does the presenter use as an experiment for paint colours?
 2. What tertiary colour do the people make when they mix the two together?
 3. The eyes have two light sensitive cells that help us see. They are called rods and cones. Which of these helps us see colour?
 4. If you mix together complementary colours on a light colour wheel, what do you get?
 5. If you shine red, green and blue light onto your eye, what do you get then?

<https://thekidshousestudio.com/post/how-do-your-eyes-see-color-physics-4/>

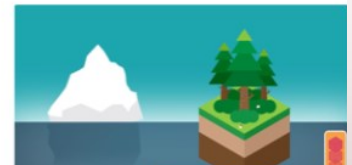
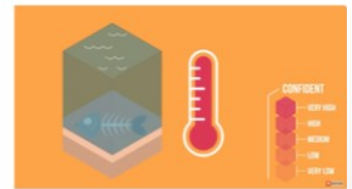
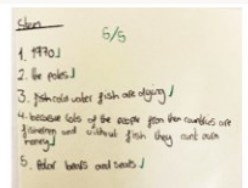


STEM Year 8 CLIMATE CHANGE

Hundertwasser was a passionate campaigner for the environment. Watch the following video on climate change and answer the following questions:

1. From what year can we prove that the oceans have been getting warmer?
2. Where are fish, zoo plankton and sea birds moving towards as a result of warming seas?
3. What has happened in the Mediterranean?
4. How does this effect the people in the world's poorest countries?
5. Which two species are especially affected by the melting icecaps?

<https://www.youtube.com/watch?v=57jwMG054&t=107s>

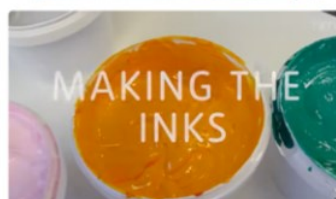
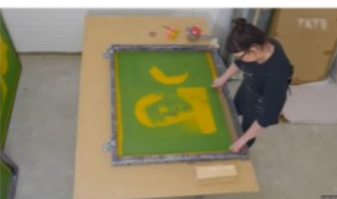
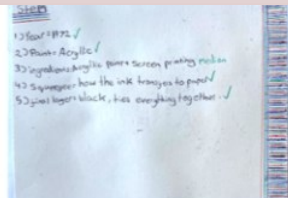


STEM Year 9

Photo-emulsion screen printing is a technical process used by the artist Any Warhol in much of his work. It allowed him to produce multiple pieces of work quickly and cheaply. Watch the following video and answer the following questions.

https://www.youtube.com/watch?v=0tH82Cm_Ag

1. What year was the series of Mao prints created that the artist is using as inspiration?
2. What kind of paint does the artist use to block out some areas?
3. What two ingredients are mixed together to make the screen printing inks?
4. What does the squeegee do?
5. What is the final layer called?





<u>Hogwart's Shop</u>			
Item	Cost	Number ordered	Total Cost of Item
Cauldron	£7.99		
Cloak	£11.50		
Spell book	£4.75		
Wand	£6.25		
Quill	£2.40		
		OVERALL TOTAL	



You have £100 to spend. Choose how many of each item to buy to get you as close to £100 as you can.

- Remember you will need to add formulae for total cost of item, and overall total.

You also need to have a:

- Change of font, font size and font colour
- Background colour in certain cells, align cells and make cells the right size for your text
- Merge the cells for your title
- Add a picture, and at least one chart (either bar or pie chart)

STEM IN DRAMA YEAR 7



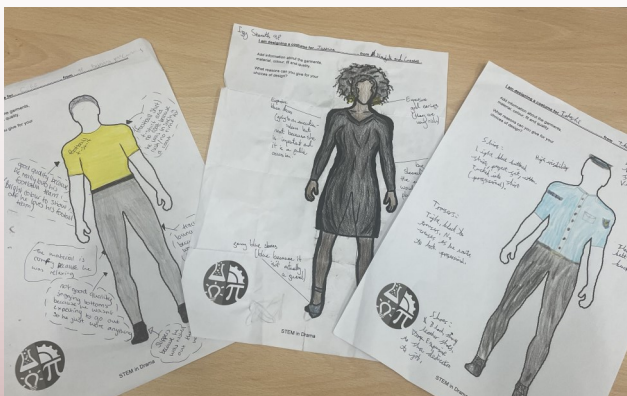
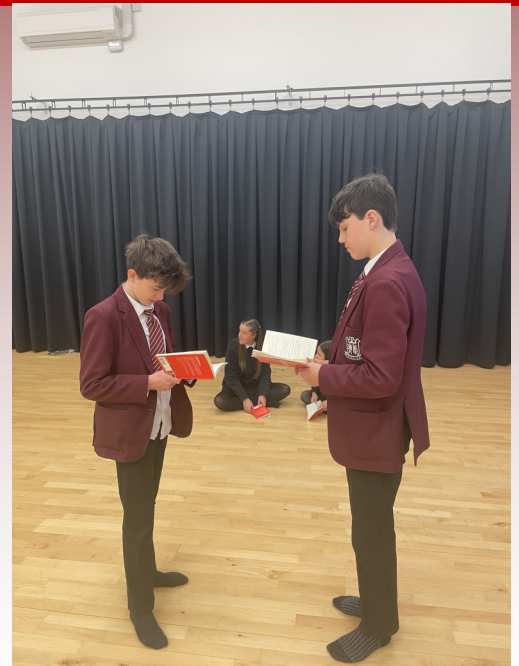
Science, technology, engineering and maths are all important elements of theatre and performance. Without these, theatre, film and performances of any type wouldn't be the same.

You have written a cue for your scene, but in the theatre industry a **sound designer** would need to:

- Find or create the sound effect
- Experiment with the level at which to play it
- Rig and sound check the speakers to play the sound through

For this STEM fortnight we would like you to:

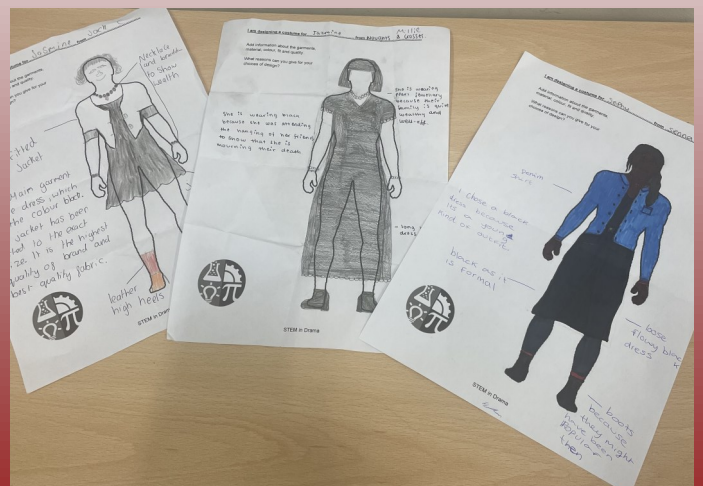
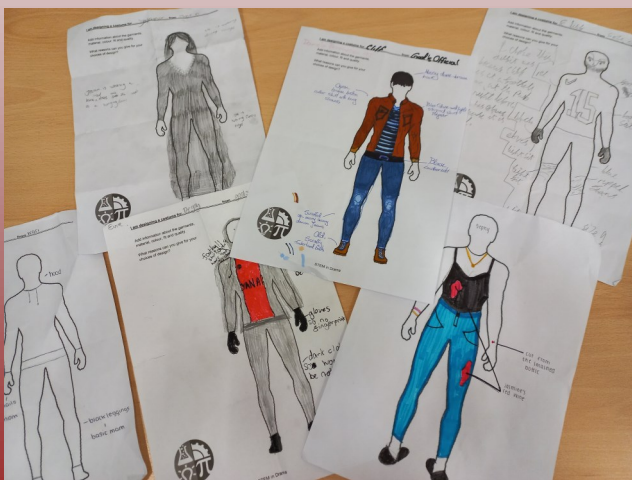
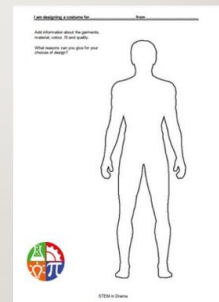
- Find or create your own sound effect for the dog
- You could record your own dog or find a sound effect online
- Complete the document on Teams to explain your choices and upload your sound.



STEM IN DRAMA YEAR 9



- Costume designers have to draw on a number of skills in order to create their designs.
- Not only do they need to consider the director's vision for the production, but they also need to be able to:
 - Work with a budget (maths)
 - make economical decisions about use of materials (engineering and maths)
 - consider how the garments will work under stage lighting (science and technology)
- For this STEM fortnight, use your knowledge of the play you are working on and your understanding of design to create a costume design for your role.



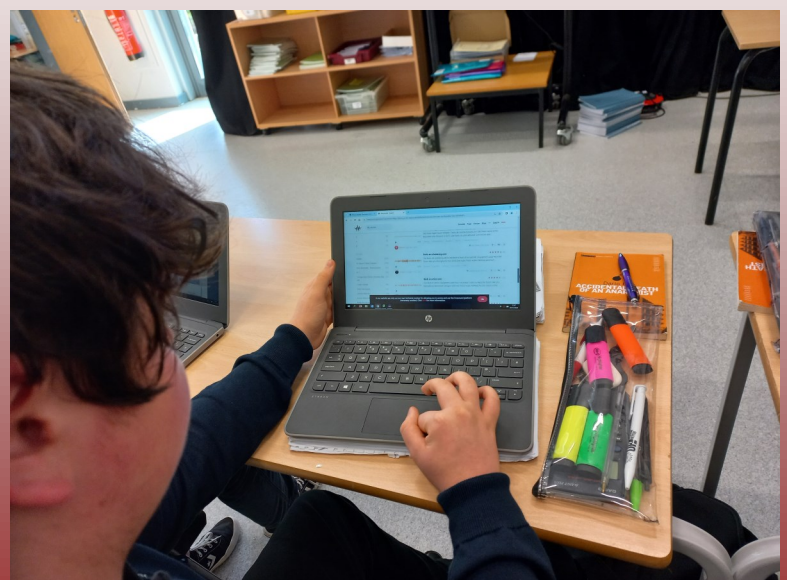
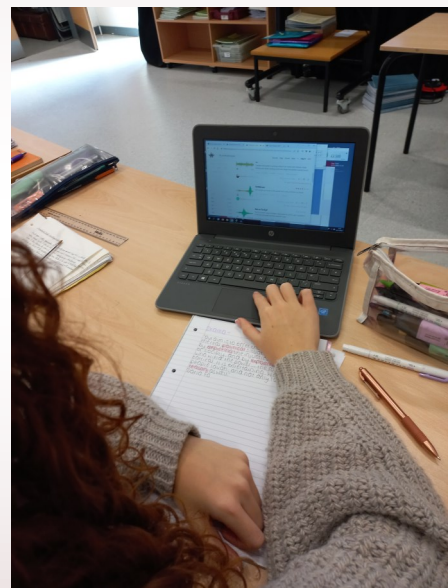


STEM in DRAMA



A level Drama

As part of STEM week, A Level drama looked at how they might use sound design to enhance their set text study of the play "Accidental Death of an Anarchist" by Dario Fo. Using a number of websites and Audacity (an audio editor and recorder) they worked to develop an appropriate soundscape to introduce the play to the audience, considering genre, style and context. Lots of discussion ensued about the relative merits of diegetic and non-diegetic sound and live versus recorded sound.



Year 10 Business:

Technology and Year 12: Mission statements: We discussed how technology affects mission statements.

Quick start: New tech can make or break a business: Which do you believe was the most successful 'new' (at the time!) technology? Which was the least successful?



E-commerce

- E-commerce is when buyers and sellers come together to trade in a virtual location i.e. over the internet
- This has had a significant impact on businesses including:
 - The ease with which businesses can access wider markets e.g. sell abroad
 - The ability to trade 24/7
 - Development of new services e.g. click and collect or online ordering
 - Offers a cheaper alternative to new businesses
 - Greater convenience to customers e.g. you can now book your hair appointment or a table at a restaurant online
 - The need to develop secure payment systems to give consumers confidence

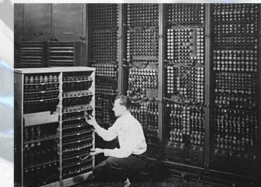


YOU DO: Q. Explain one way in which E-commerce has created challenges for businesses. 3 marks

Digital communications

Discussion:
How should businesses respond to these research findings?

- Digital communication is the transferring of data that has been stored or processed by technology
- Examples include:
 - Computers
 - Internet
 - Cell phones
 - Smart TVs
 - Tablets



Quick Start: How many forms of digital communication do you use regularly?
E.g. blogs, SMS text messaging etc.

Plenary: Talking point: Rise of the robots:

LO: To understand the influence of technology in business

- **'Robots are the future'...**or are they?
- List down the jobs you believe will **not** be taken over by robots.....90 seconds....

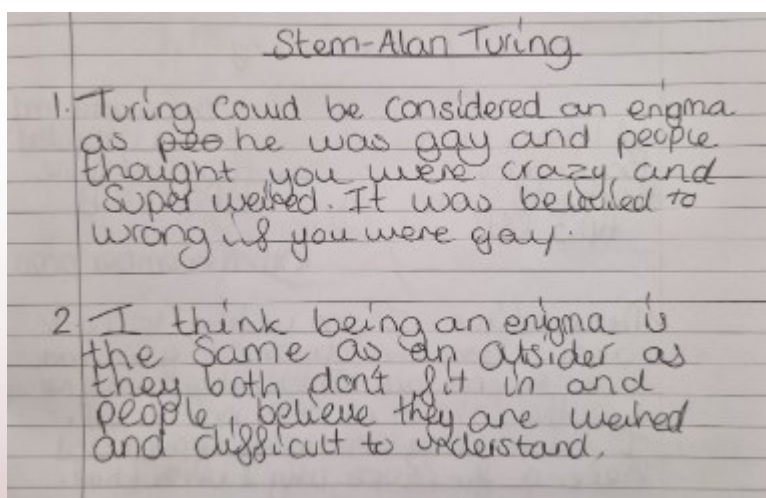




English STEM lesson article

In my English STEM lesson, I learnt about Alan Turing – the man who invented the computer. At a young age his teachers said that he had poor mathematical ability as he never engaged with his learning, however the truth was it was too easy for his mind. He had an IQ of 185, so he was very intelligent. When the war started, he went to work at Bletchley Park, where his job was to decode the Nazi communications. He designed and made a machine that could do this – an early computer. Understanding this code meant that the British knew when and where the Germans would attack, so they could avoid it or plan a counterattack. Turing was a gay man, and at that time this wasn't accepted, so when the police found out, he ate an apple laced with cyanide to re-enact the scene from Snow White. Alan Turing was an inspirational man because of his contributions to winning the war and a statue of him is standing in Bletchley Park.

Jake 9G



The Year 9s learned about Alan Turing, his life and work. This term we have focused on the theme of 'Outsiders' and looked at how someone could be an outsider in STEM. We also discussed Turing's machine and discussed the work with the enigma machine. Looking at the etymology of the word enigma we discussed if this was the same as an outsider.

In the first lesson, we read a biography on his life and wrote our own simplified biographies. In the second lesson, we solved a code whilst learning more about the Enigma machine.



STEM in ENGLISH



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
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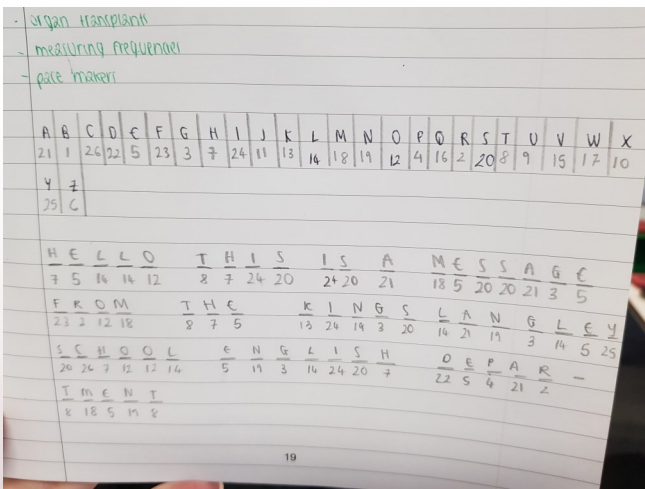
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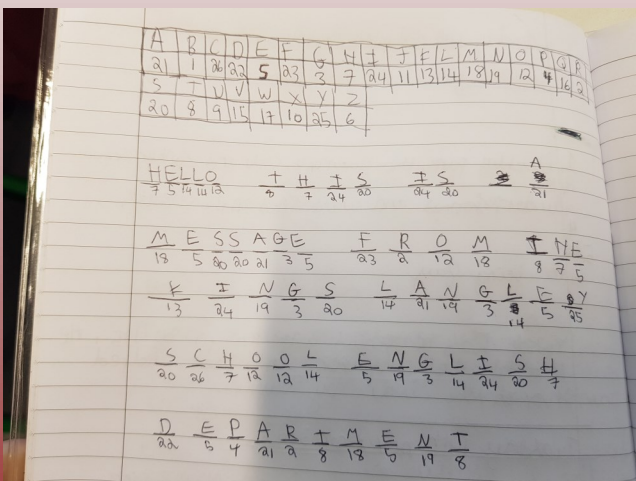
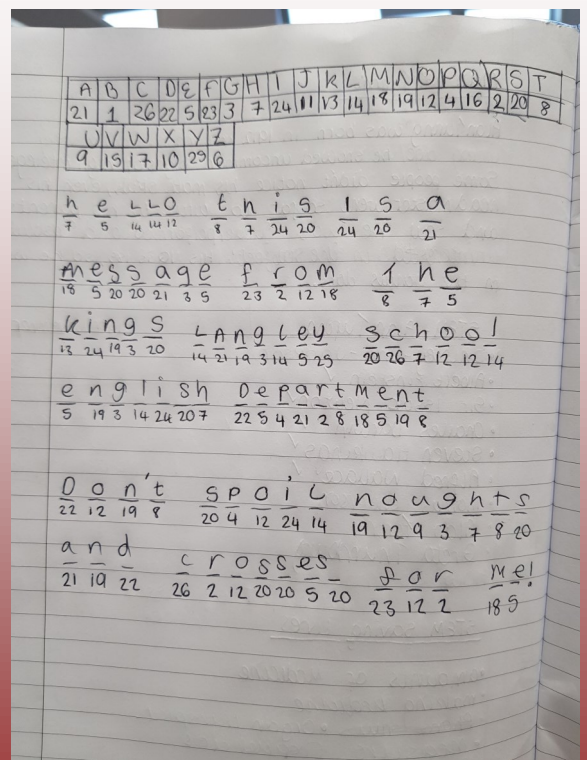
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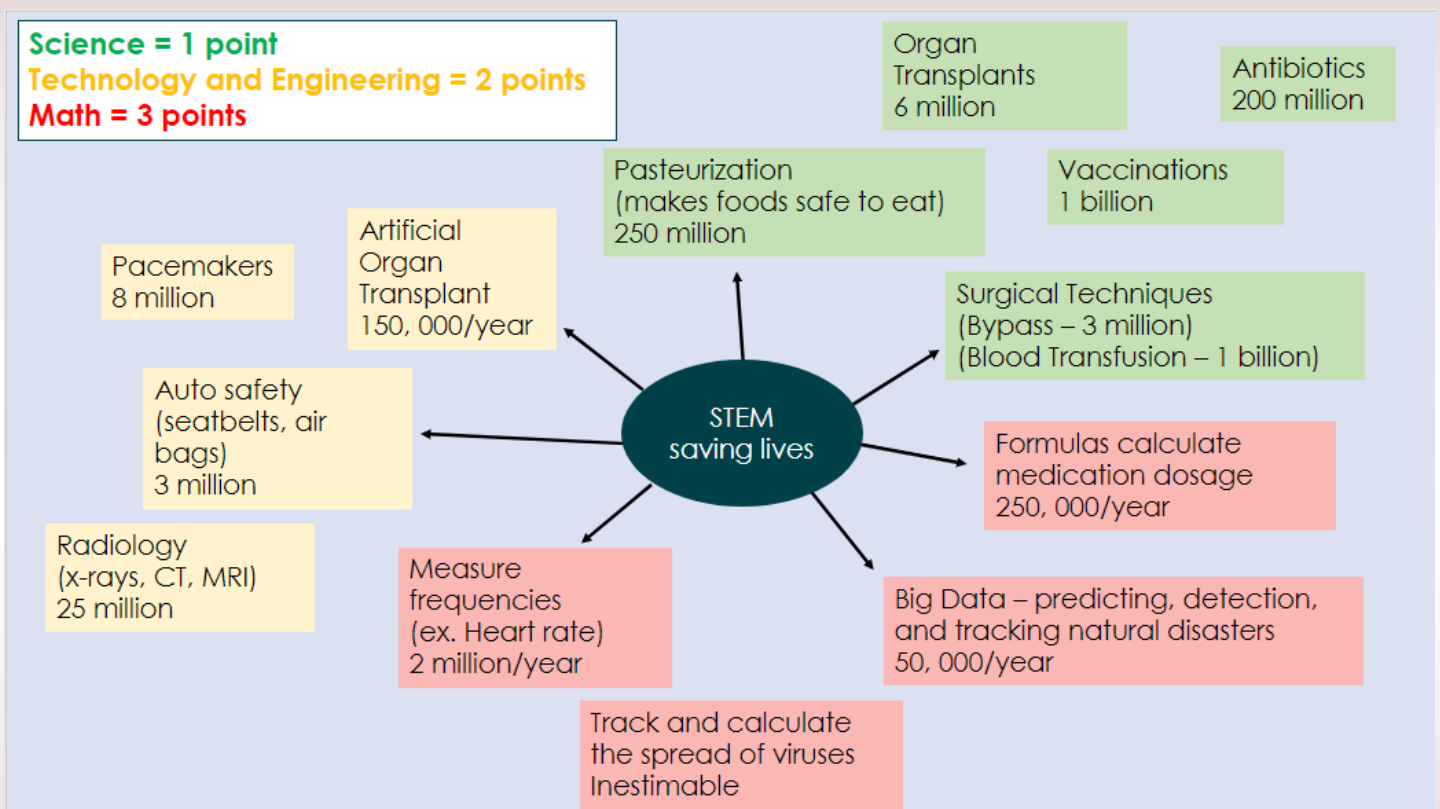
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In year 9 STEM lessons we learned about Alan Turing and the Enigma code.



Code from Izzy 9P



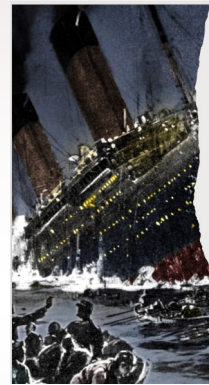
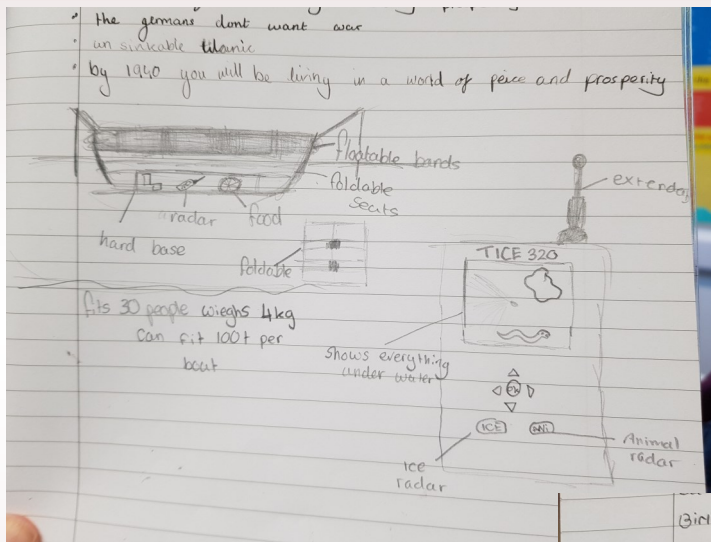


We discussed how Maths was essential in saving lives. The students had to mind-map the ways that STEM can saves lives. They received points for each idea, 1 for Science, 1for Engineering, 3 for Maths. The highest score was 19



Year 8

Images of boats. We are studying An Inspector Calls, where the Titanic is described as “unsinkable”, and we learn about dramatic irony. Students were asked to design something that would



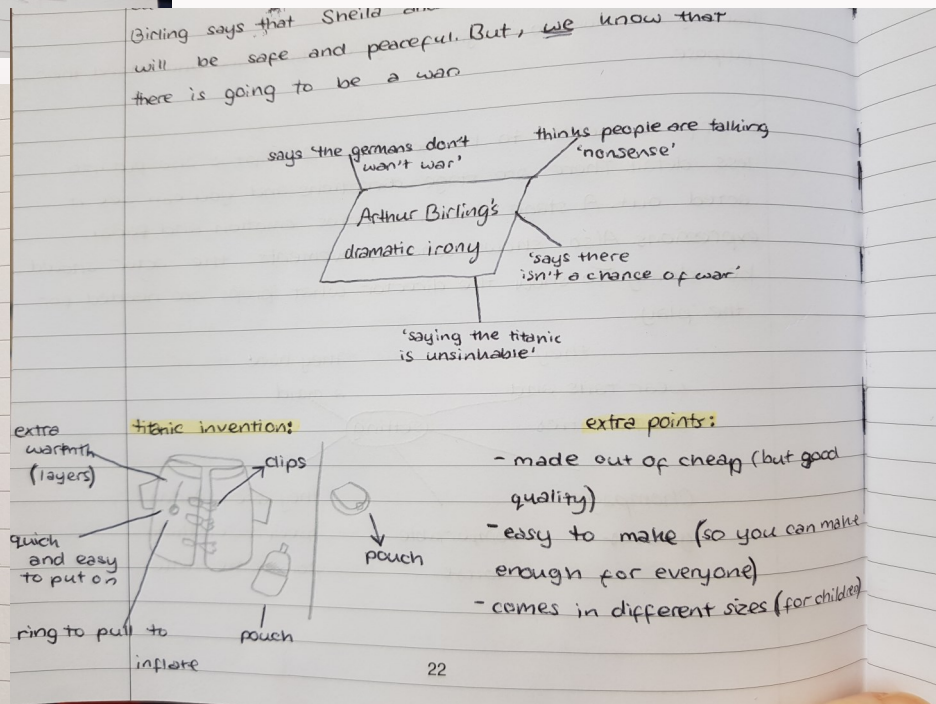
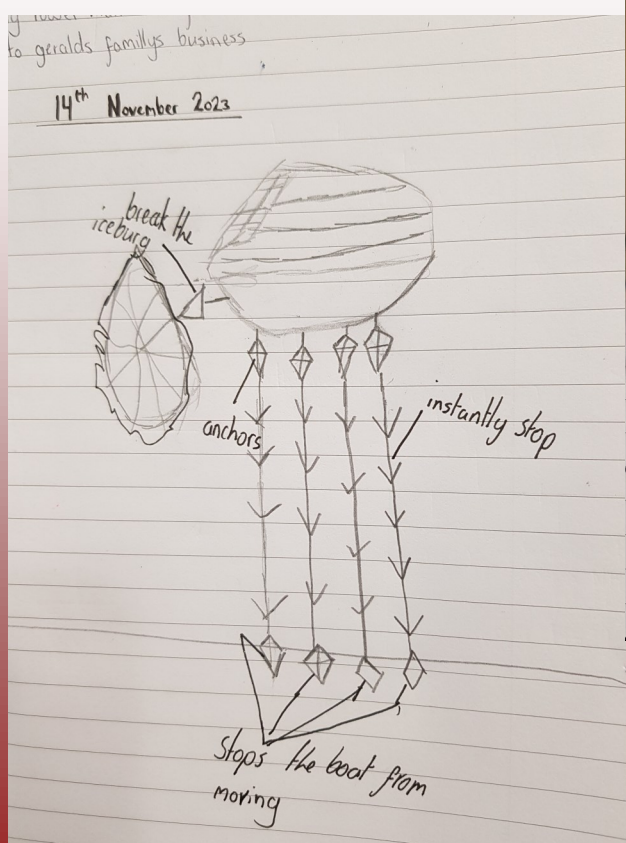
Why did The Titanic sink?

We are going to learn something about the Titanic and the factors that contributed to this disaster.

Using what you have learned you will then be set a STEM challenge.

You are going to come up with an idea (an item or part of a design process) that might have saved The Titanic or at least saved more lives.

You will then need to persuade your teacher that yours is an idea that would be worth backing.





Saving the Titanic

Arthur Birling - the Titanic absolutely unsinkable

Titanic

The Titanic was a 46,000-ton behemoth that failed. The famous phrase the Titanic was unsinkable 'Proved to be false. There are several ways they could have made it 'unsinkable'. For one they could have invested a small percentage of the company (White Star Line) to research into an advanced sonar.

Sonar

Sonar is a form of ultrasound (and yes like the one for humans) that could detect anything over thousands of meters; it also can detect ice bergs, which would of came hand for the titanic. This invention could have saved 2,240 men, women and children.

Past mistakes

As we know today the Titanic was probably the biggest blunder in the history of ships. The amount of time taken to build this and run checks were 3 whole years and 2 days.

The Titanic's sinking was caused by a mix of blunders and deficiencies in the ship's design and operation. Some of the most common errors are as follows:

- Going too fast in an iceberg-infested area
- Delaying the call for assistance after colliding with the iceberg
- Leaving several portholes open, enabling more water to enter. Closing the watertight doors, increasing pressure on the hull.
- The waterproof compartments were not raised sufficiently to prevent water from spilling over.

Conclusion

The result of the Titanic's failure was lack of technological advancements and lack of effort.

The Titanic disaster served as a wake-up call to all other ships; from then on, all ships had enough lifeboats for every single person on board, and sometimes more. There have been a few more major ship disasters since then, but usually not as many people died and the ship did not commit the same blunders as the Titanic. The Titanic's 100th anniversary is April 15th, 2012, therefore take a moment on that day to commemorate everyone who died on that awful night 100 years ago.

Eduard 8D

Stemlesson 13/11/23

If only we lived in 1912, then the Titanic might have not sunk! But we would need a plan of making. How would have done this? Let me tell you!

First of all, lets talk about water proofing our Titanic or our version of it. The designer - Thomas Andrews, did work on making certain compartments water proof, but he may not have of completely thought it through. The very bottom compartments were water proof but they were low below water level, so the ones on top of them (the second layer) were below sea level as well, so the water flooded right in.

But we will plan ahead, our idea is to water proof all* compartments so that it won't flood the rooms above. We will do this by using the materials that thomas used for the lower compartments.

Madeline 8A

Shana 8A

Amber 8D

Friday 10th November 2023

STEM - The Titanic

Dramatic Irony - When the audience knows something the characters don't.

2200 passengers and crew, but only 1787 survived

- The crew saw the iceberg too late
- Stopping it will take half a mile
- They didn't have time to turn or stop
- The problem was the speed that the Titanic was going
- They couldn't see the iceberg from half a mile away
- They didn't have radars at the time
- They should've gone slower
- The captain takes some blame
- They got a warning from another ship of the iceberg but they paid no mind to it
- The technology was advanced
- Another problem was the size of the ship
- It would also take time to stop the ship since it was so heavy

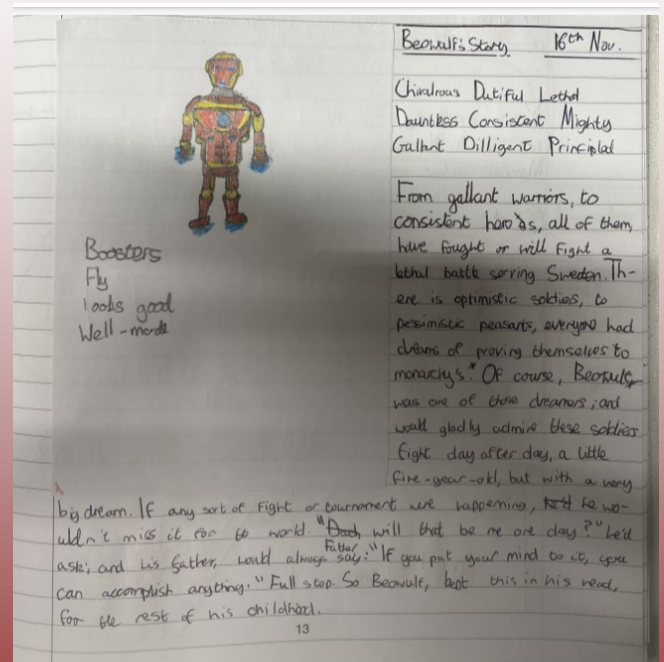
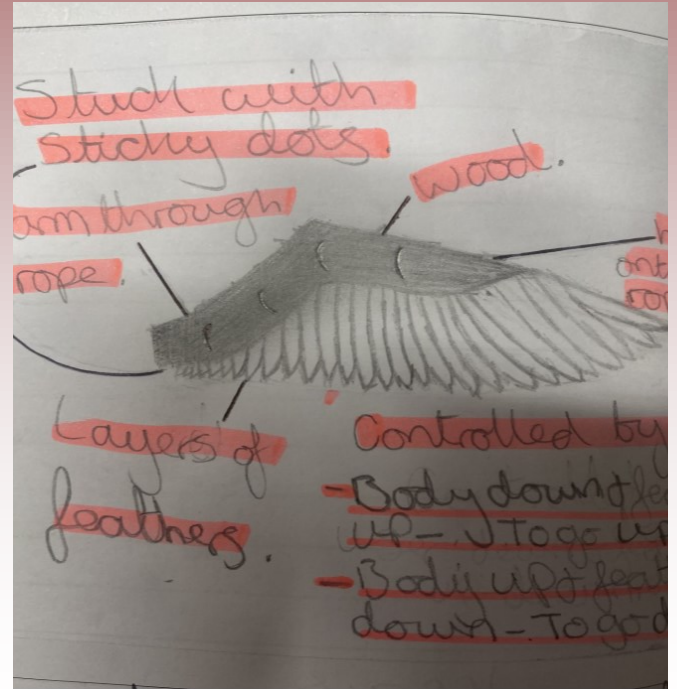
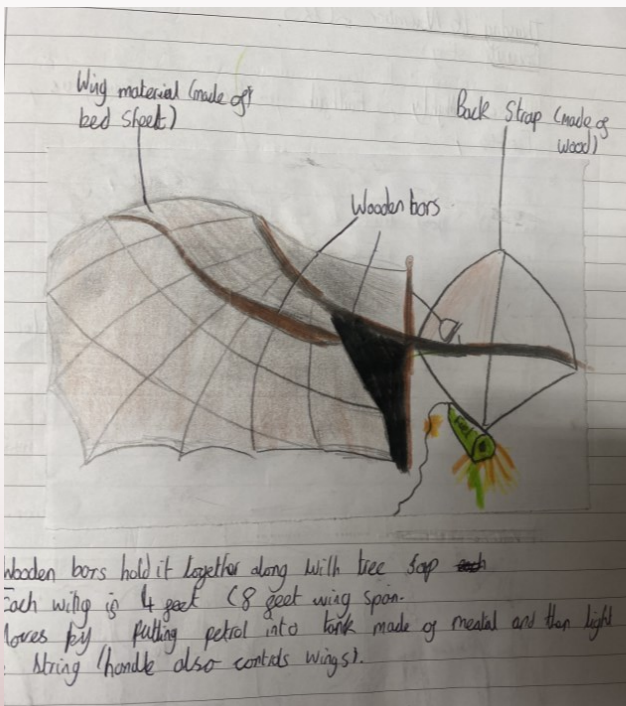


STEM in ENGLISH



Year 7

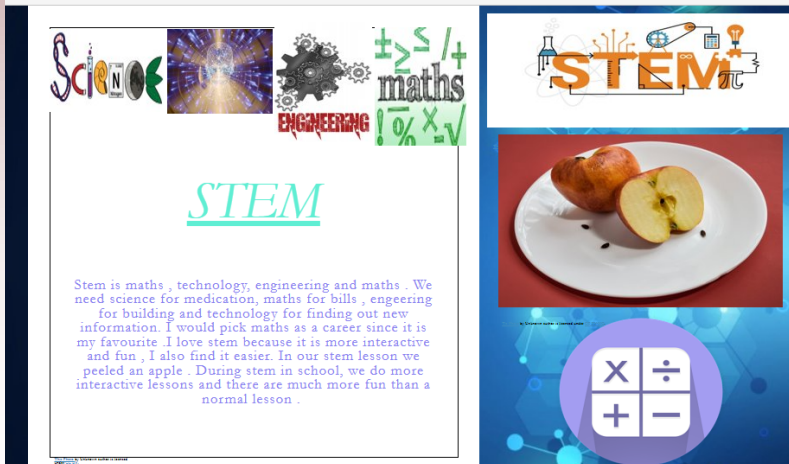
Designing new wings for Icarus



Honey, Oscar and Robert from 7J

Year 7

Created a range of information posters about STEM

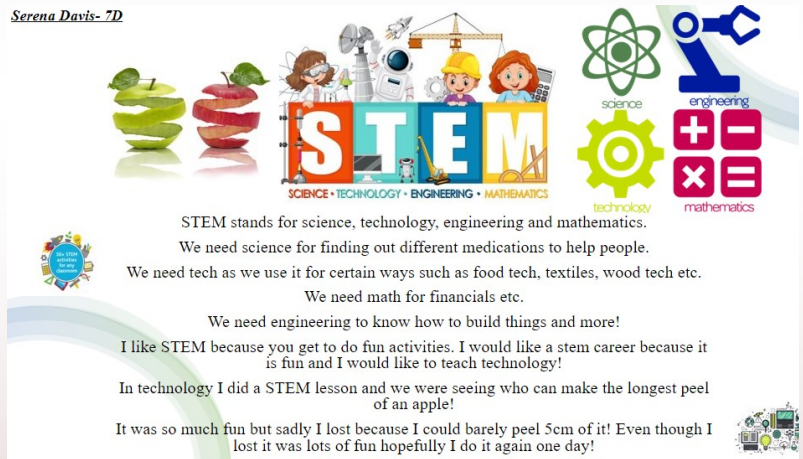


Serena Davis- 7D

• I like STEM because it is a fundamental part of our lives as without it, we could still be living in caves or using sugar as toothpaste (like in the Victorian Times.)

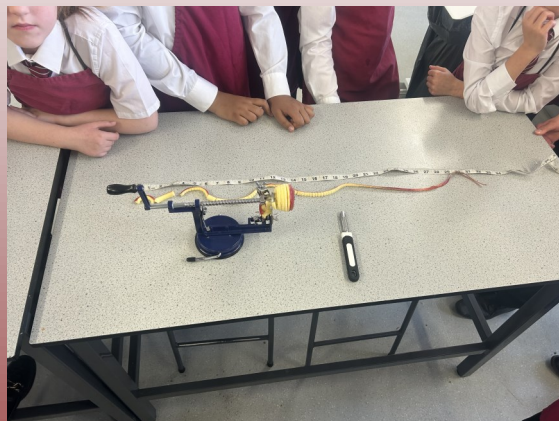
My paragraph of STEM

- Stem is science, technology, engineering and maths. My favourite is technology because I like cooking textiles and making things. You need all off this stuff so you can S: discover things T: cook and make things E: make cars and other stuff M: solve everyday problems. When I'm older I would like to do technology from stem because I really enjoy it! I have enjoyed this lesson because I have liked listening to everyone's ideas for how to stop enzymic browning. I also liked cutting the apple to see who had the longest bit of skin.



Year 7

Students had a competition to see who could peel the longest skin of apple



I enjoyed doing the apple competition because I am competitive at competitions, and it was fun to do. 1st place got 160cm, 2nd place got 139cm and finally, 3rd place got 138cm. This was an enjoyable activity, and everyone had fun.



STEM is an integral part of our historical narrative, both nationally and globally. Every history lessons therefore lends itself to STEM activities; during STEM fortnight we ensure that students are explicitly aware of the role of STEM in our historical narrative.

In **Year 7**, students focused on the growth of trade links and emerging technology in Medieval Britain. This is part of a wider study of medieval societies around the world, highlighting advances made during the Islamic Golden Age, for example.

Y7 Term 2 Knowledge Organiser – Medieval Societies

How far did Medieval societies differ?

Enquiries

- Village and Town Life: What was everyday life like in Medieval England?
- The Islamic Golden Age: What were the achievements of the Islamic Golden Age?
- Kingdoms of West Africa: Why were the kingdoms of West Africa so great?

Key Words

Enquiry 1: What was everyday life like in Medieval England?

Term	Definition
Apprentice (əp-ri-ntis)	A person who is learning a trade from a master craftsman, having agreed to work for a fixed period at low wages.
Baron (b-ron)	Someone who collected tax for a landlord.
Borough (b-ru-uh)	A medieval town, now an area of land that sends an MP to Parliament, e.g. 'Dacorum' is a borough which includes Hemel and Kings Langley.
Burgess (b-urj-ers)	Someone who lived in a town or borough who has full rights.
Charter (tʃ-ɑr-t-er)	A written agreement, often a legal document giving a town the right to have its own government, laws and taxes.
Constable (k-ɒn-st-ə-b-əl)	A man in charge of a group of watchmen, like a police constable.
Export (eks-p-ɔrt)	A product that is sold to another country, opposite of import.
Fair trial (f-ɑi-er t-ri-əl)	A trial observed by a judge or jury that tries to be fair.
Faithful (f-ɑi-ful)	A vassal's sworn loyalty to a lord; a knight's loyalty to a baron.
Feudal System (f-ju-d-əl s-i-st-əm)	The social system whereby land was exchanged for service and loyalty.
Guild (g-ild)	An organisation of craftsmen set up to protect them and their work (like a Trade Union today).
Harvest (h-ɑr-vest)	The process or period of gathering in crops.
Hue and cry (h-ju-ənd k-ri)	An alert (a loud cry) raised when a crime was committed. Everybody who heard the 'hue and cry' was expected to help to catch the criminal.

Enquiry 2: What were the achievements of the Islamic Golden Age?

ISLAM, c.750

How did medieval towns develop?

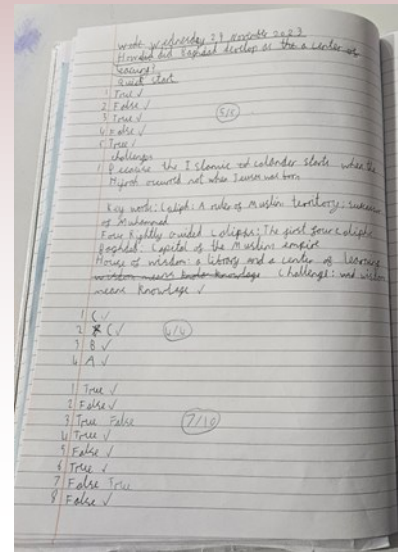
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It's a question, so it needs a ?

LOs:

- To describe the growth of towns under the Normans
- To make identify the key features of daily life in medieval towns
- To explain how and why towns grew and developed

Keywords: Merchant Guild, Apprentices, Craftsmen, Royal charter, Burgess, Export, Trade, Duty, Tax



How did medieval towns develop?

How and why did towns grow during the Norman Conquest?

TRADE: The Normans had greater trading links with mainland Europe.

Markets grew in towns, so **merchants** could buy and sell all sorts of goods.

JOB OPPORTUNITIES:

- Increase in trade = more jobs = the population of towns increased
- For example, there were job opportunities for **bakers, blacksmiths, apothecaries, armourers and barbers**.
- Some peasants moved to the towns to find better jobs.
- You could also become an **apprentice** to a trade, then a **journeyman** then master craftsman.
- Merchants** and craftsmen would have their shops on the high street, using **symbols and pictures as signs**.

LOs:

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How did medieval towns develop?

Challenge: What are the similarities and differences when compared to modern towns, e.g. Hemel Hempstead/Watford?

LOs:

- To describe the growth of towns under the Normans
- To make identify the key features of daily life in medieval towns
- To explain how and why towns grew and developed

Keywords: Merchant Guild, Apprentices, Craftsmen, Royal charter, Burgess, Export, Trade, Duty, Tax

How did the Islamic Empire grow after 632CE?

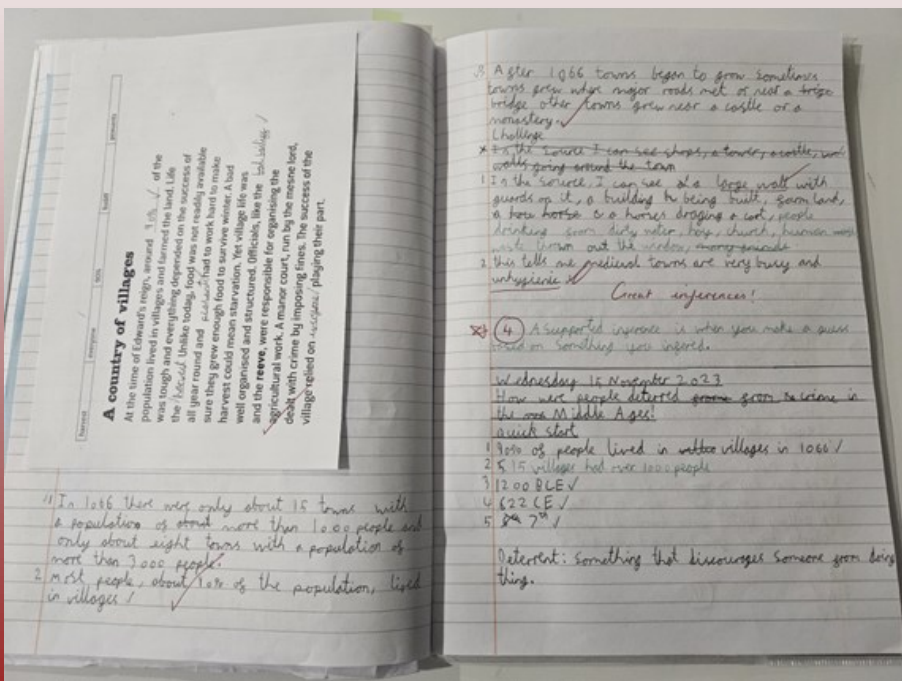
The Islamic Golden Age

- The Islamic Golden Age was between c.700-1300.
- They made great developments in medicine, science, education and trade.
- At this time, Arabic societies were amongst the most advanced in the world and their **medical knowledge was far greater than that of Europeans**.
- When the Tatars began to explore and make alliances, they gained great knowledge and technology from the Muslim Empire.

LOs:

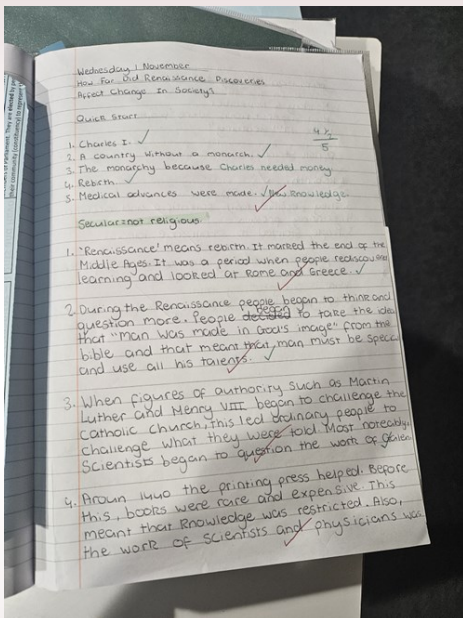
- To describe the growth of towns under the Normans
- To make identify the key features of daily life in medieval towns
- To explain how and why towns grew and developed

Keywords: Merchant Guild, Apprentices, Craftsmen, Royal charter, Burgess, Export, Trade, Duty, Tax



Year 8

In Year 8, students judged the extent to which science and technology had an impact in everyday life during the Renaissance period in Europe. Students studied the nature of new discoveries and technology, such as the forming of the Royal Society and the invention of the Printing Press, then explored whether this made a difference to the lives of ordinary people in society. Students compared and contrasted the role of continuing superstitions, such as those during the witch craze and during the Great Plague of 1665. Students then reflected on this question of whether science or superstition had more of an impact by writing an extended judgement in class or for homework.



How far did Renaissance discoveries affect change in society?

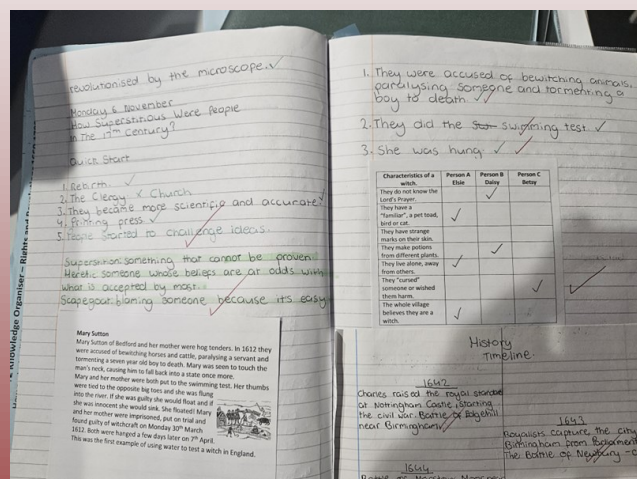
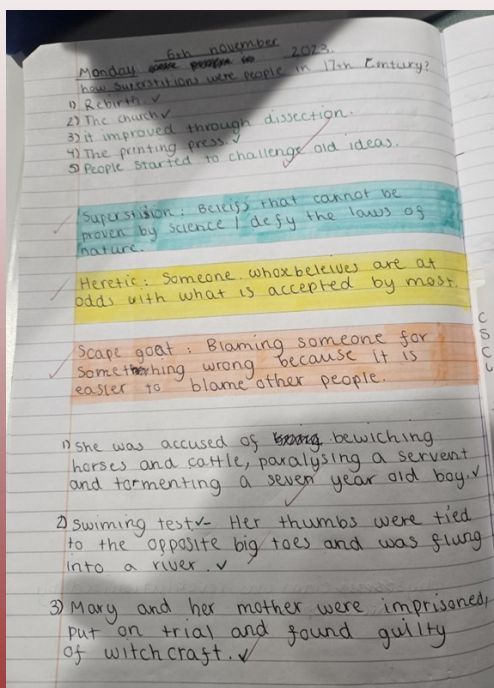
How far did Renaissance discoveries affect change in society?

underlined It's a question, so it needs a ?

LOs:

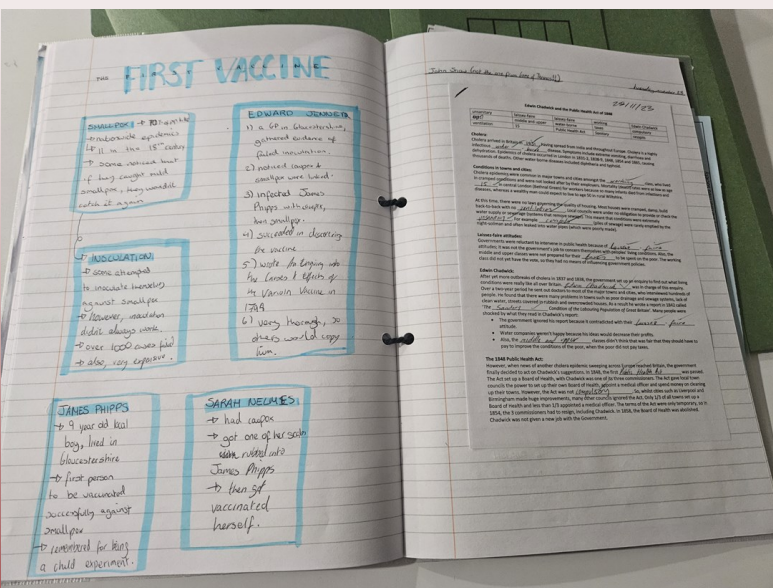
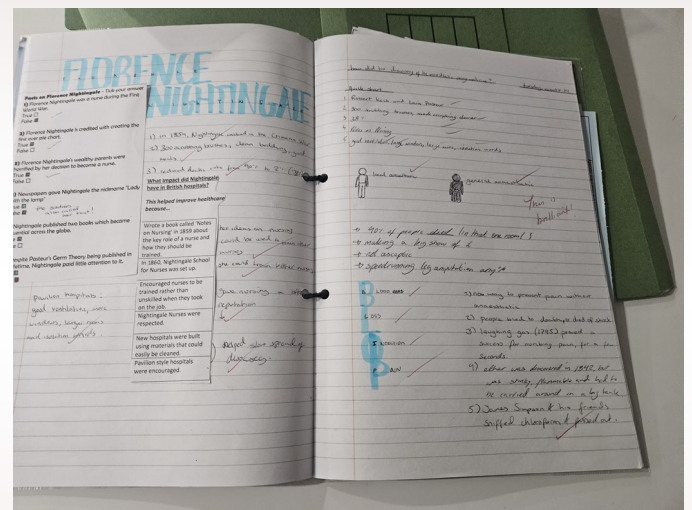
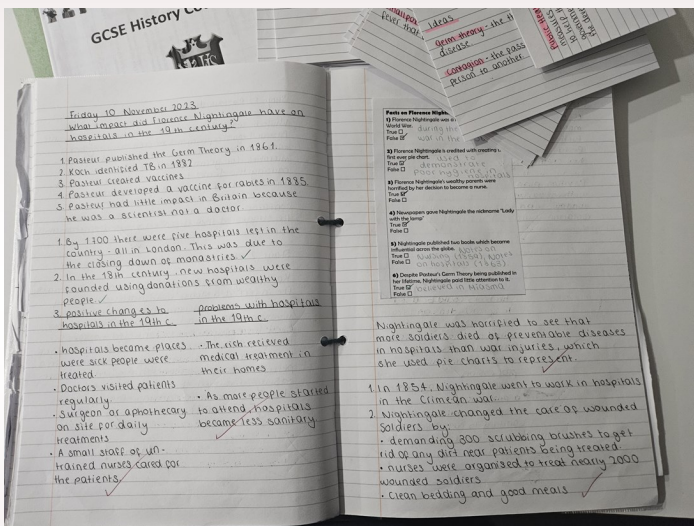
1. To explain how new scientific ideas, methods and technology that emerged during the Renaissance period
2. To explain the continuing impact of superstition on society
3. To weigh up the extent to which scientific discoveries changed attitudes and superstitions

Keywords
Renaissance
Rebirth
Secular
The Royal Society
Charles II
Superstition
Witchcraft
Trial by Ordeal



Year 10

In Year 10, students are studying the role of Medicine in Britain c.1250-present as part of their Paper 1 thematic study. STEM fortnight falls whilst students are already studying the impact of new discoveries and development during the Industrial period, so we are able to highlight the role of STEM in great depth. For example, students studied the impact of Florence Nightingale's reforms in the nursing profession, as well as her use of graphs and pie charts to convey her findings visibly and clearly to politicians, so students are able to see the application of mathematics beyond the classroom. Students also explored the role of Edward Jenner in creating the world's first vaccination, linking the importance of the scientific method and discussing the role of public attitudes in preventing vaccination.



How significant was the work of Edward Jenner in the fight to prevent deadly diseases? **LOS.**

The first vaccination

• He took some **cowpox** matter from a sore on the arm of **Sarah Nelmes** and inserted it into a cut on the arm of **James Phipps**

• **James Phipps was slightly unwell** but quickly recovered.

• When Jenner inserted some smallpox matter into a cut on Phipps' arm, Jenner did not develop the illness - **he had developed immunity to smallpox.**

• Jenner vaccinated **another 23 people** to check his findings.

• He named the method 'vaccination'; 'vacca' is Latin for cow.

1. To identify the dangers posed by inoculation against smallpox
2. To explain how Jenner used scientific methods to test and develop the world's first vaccination (for smallpox)
3. To evaluate the impact of Jenner's development of the first vaccination against smallpox

Keywords: Vaccination, Jenner, Phipps

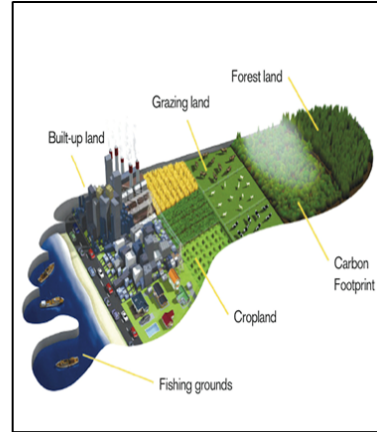


Earth Overshoot Day

>TASK. Answer the questions after writing the sub-heading 'Earth Overshoot Day' into your book.

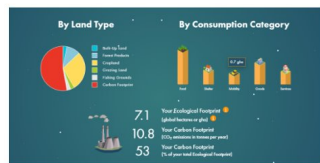
1. Describe what Earth Overshoot Day is.
2. Describe the rate at which we as a global community are consuming Earth's resources?
3. Describe a social, an economic and an environmental impact of our unsustainable use of Earth's natural resources.
4. Explain why the author claims there is hope for the future.

CHALLENGE Explain how you would check the reliability of the information used to form this article.



Dylan

- My personal Earth overshoot day is the 26th of March,
- this represents 4.3 Earths in total.



- Personally, I need to work on reducing my carbon footprint as it is the most (by over 4x).

Lexie E.



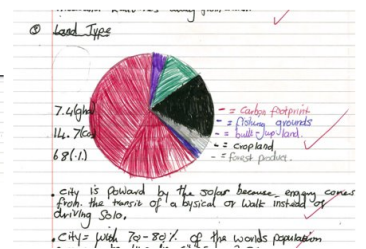
Lucy

- My Earth overshoot day is the 8th of March
- If everyone lived like me, we would need 5.5 earths.
- This means that I use too many items that impact the environment.
- 5 ways I could decrease my ecological footprint is:
 - Get an electric car to decrease carbon emissions
 - Turn off lights and outlets when I am not using them
 - Don't use heating as much, instead use jumpers and warm clothes
 - Use renewable energy sources such as solar panels
 - Don't leave electronics turned on at night



Gracie

Homework: Ecological Footprint
 1. When people live on their own Earth half of the consumption goes for 22 months which is good but people have to go for less of their land.
 2. The one with the largest footprint is the average person. Because some within the mean of one planet it grows thousand kilometers away from home.

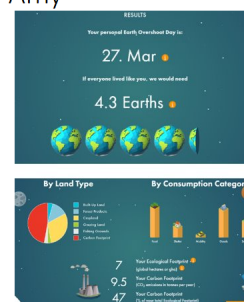


Thomas

My Ecological Footprint Monday 30th November 2019
 An ecological footprint is the impact of a person or community on the environment. This is expressed as the amount of land required to sustain their use of natural resources.
 Everyone has a different personal footprint. My own personal footprint is 4.3 Earths. This means that if everyone lived like I do we would need roughly 4.3 Earth's worth of natural resources. This is not good because if there wasn't enough natural resources we are using then we would be over 4.3 Earths. (Overshoot Day) being any soon at some.
 Categories: 7.8 Your ecological footprint (total natural resources)

1.5 Your Carbon Footprint (100 amount of tons per year)
 5.1 Your Carbon Footprint (Part of your total ecological footprint)
 By Land Type: Built-up Land, Forest Products, Cropland, Grazing Land, Fishing Grounds
 By Consumption Category: Food, Shelter, Mobility, Goods, Services
 Some of the things that I do to reduce my footprint are: I don't use my car as much as I used to, I use public transport, I don't use my phone as much as I used to, I don't use my laptop as much as I used to, I don't use my TV as much as I used to, I don't use my computer as much as I used to, I don't use my printer as much as I used to, I don't use my camera as much as I used to, I don't use my camera as much as I used to, I don't use my camera as much as I used to.

Amy



- Reflections**
- It is very surprising that the way we live has such a large impact on the planet.
 - We will soon be getting an electric car, so this will lower our ecological footprint but if I wanted to lower it further I should use more public transport as well.
 - I already get all of our household electricity from 100% green electricity as my family has an electricity provider that uses 100% renewable energy. We could reduce our electricity usage by turning off appliances when they aren't being used and keeping lights off for longer.
 - I should also eat more locally sourced food rather than eating pre-packed food.
 - To reduce my ecological footprint by a lot I could either go vegetarian or vegan as this would have a large impact.
 - When I am old enough to vote I could vote for MPs that support green initiatives to help reduce the population's ecological footprint.

9A Housing in a tectonic area

You work for an Estate Agents and have been asked to advertise a house on the side of a dormant volcano where there are frequent earthquakes. **Design a poster** to go in the estate agent window.

Disaster risk equation

- $R = \frac{H \times V}{C}$
- R= Risk of disaster
- H= hazards
- V= Vulnerability
- C= Capacity to cope decreases

Josh – 9A

WOULD YOU RENT THIS HOUSE?

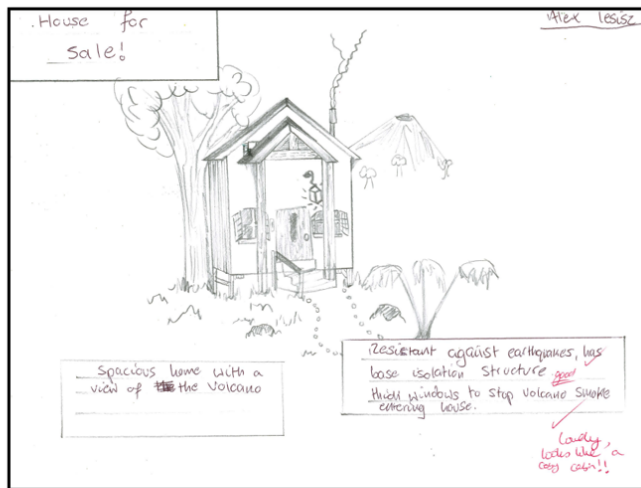
This house, with an amazing overlook of the countryside, sits next to a dormant volcano, and it is looking for a new owner. This area is prone to earthquakes, so it has plenty of precautions. This house has flexible steel foundations allowing it to withstand earthquakes. It is also fitted with next level dampening technology, to dampen the force of the earthquake.

This area has the friendliest people you will ever meet and plentiful shops and services, including 3 schools for children!



THIS HOUSE CAN BE YOURS FOR £235,000!!
CONTACT [DANGEROUSHOUSES@SALE.COM](mailto:dangeroushouses@sale.com) FOR MORE INFORMATION!

Alex – 9A



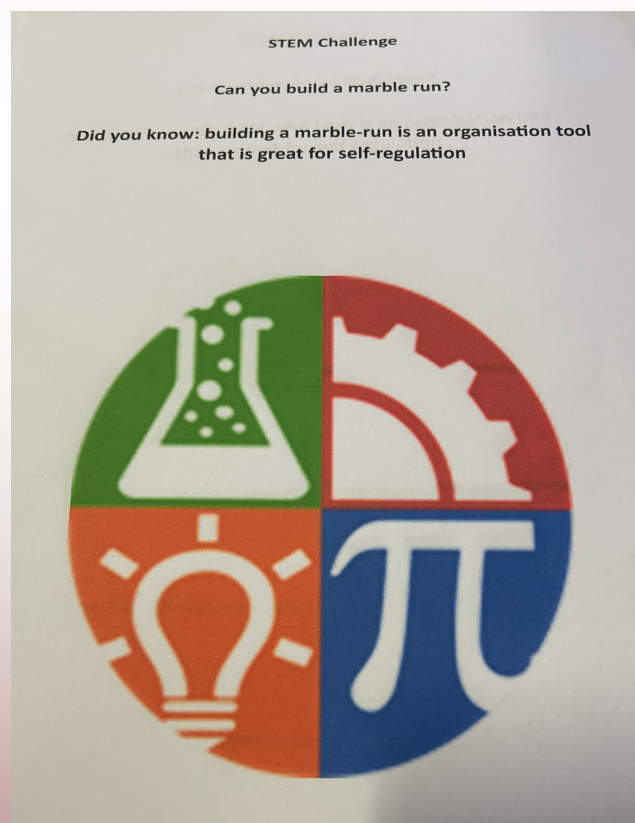
Olivia – 9A

	<ul style="list-style-type: none"> • Excellent view with perfect garden, with water feature in a higher spot for fountain. • Perfect for a little volcano with a water pump in the back garden. • Geothermal energy on the mountain, with perfect cheaper electricity for the house. • Low carbon footprint like diamonds - these can be mined to make money.
	<ul style="list-style-type: none"> • Sleeps 6 people with luxury heating with water tank, ash will sink right off of any smooth roof surface. • Bedrooms and other rooms with all steel most support. • Be inspired concrete built up the back against a volcano as well as other things like high winds and earthquakes. • You will still think it's like an ash near but it provides perfect back which helps create a higher roof space for fountains. • Same as the ash, mountains aren't great but they aren't terrible either. They are a valuable resource of the ash. • Even though it's a very good thing to see near but it's also a geothermal energy which it's great to create renewable energy.
<ul style="list-style-type: none"> • Living near a volcano means not many people are around meaning you can live in peace and quiet or with your family above the ash with a private life and no bad and obvious neighbours. • There are many excellent benefits of a volcano and being near one. 	<p>£188,000 2 bed, 1 bath, 450 sqft, 0.28 acres</p> <p>Volcano House Agency London Village Road £215,240 United Kingdom 0203 57674 1113 SA Agency for volcanic houses</p> <p><i>This is a great! Super good thing!</i></p>

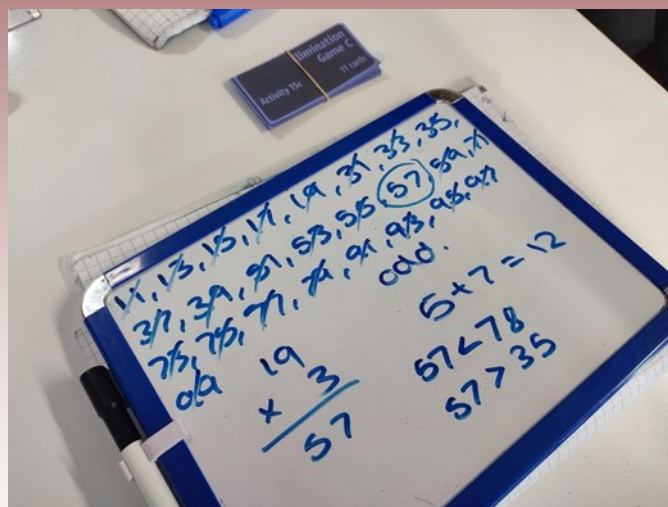
George – 9A

	<p>BENEFITS</p> <ul style="list-style-type: none"> • Rich in mineral deposits and provides excellent farming opportunities. • Since tourists are attracted to volcanoes, it increases money for you.
	<p>FEATURES</p> <ul style="list-style-type: none"> • 4 bedrooms • Pool • Re-imposed roof • Shattered roof to make ash fall off
<p>EXTRAS</p> <ul style="list-style-type: none"> • Nice view • Cheaper electricity • Diamonds contained for lava 	<p>DOWN-SIDE</p> <ul style="list-style-type: none"> • Frequent earthquakes • Hazardous gases are ash • No warning for an eruption
<p>PRICE</p> <p>£100,000</p> <p><i>Just to be it? What is it?!</i></p>	

Learning Support joined in with STEM fortnight and we had different regulating tools and challenges from Lego structures, play dough and marble runs. This run took several attempts to build from just pictures for instructions and the students involved showed real stickability and self regulation. Marble run is a great sensory tool for cause and effect which several of our students seek out. It is also used as an organisation strategy to help regulate students during their time outs



For STEM fortnight, our Year 7 and Year 10 students have been challenged with some problem solving tasks. Both Year 7 and 10 were given a set of cards that pose a problem and contain all the information required to solve it. The first set of cards they were given was an elimination game, which required students to use the properties of numbers to find the missing number. However, some of the cards have irrelevant information on them, therefore student's first job is to find the cards that are useful.



Year 10 then went on to solve a UK Intermediate Maths Challenge question, which required them to fill in the number-word by using the clues provided. We invite you to have an attempt at this question below.

Both activities link to number properties, which both year groups have been looking at in the autumn term. The purpose of these activities is to develop more logical and strategic approaches to organising information to help prepare students for problems they may have to solve in further education, but also in real life.

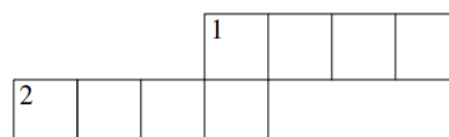
Year 10 UK Intermediate Challenge Question

Across

1. A power of 5
2. A power of 4

Down

1. A power of 6



Eight of the digits from 0 to 9 inclusive are used to fill the cells of the crossnumber.
What is the sum of the two digits which are not used?



Los números

Match up these Spanish numbers in your book

72	80	31	2
11	18	50	24
63	9	47	95

ochenta	nueve	setenta y dos
cuarenta y siete	dieciocho	sesenta y tres
trenta y uno	noventa y cinco	cincuenta
dos	veinticuatro	once

FRENCH

90

quatre-vingt-dix

Vendredi 17 juin 2013


Les numéros (1-1000)

Objectif: to be able to count until 1000 in French.

STARTER: C'est quel numéro?

1. ezdou
2. qeutzrao
3. vgtni-traeque
4. trtene
5. efnu

EXTRA: Can you make up similar anagrams of the numbers 1-31 for your partner to solve?



Y7 - Test on numbers 1-100

Name: _____

Write the correct number in the space

82	74	58	88	64	98	94	51	87	63
25	33	14	73	48	96	11	42	61	83

1. soixante-treize ____
2. quatre-vingt-sept ____
3. vingt-cinq ____
4. quatre-vingt-seize ____
5. onze ____
6. cinquante-huit ____
7. soixante-quatre ____
8. quarante-deux ____
9. quatre-vingt-huit ____
10. quarante-huit ____
11. cinquante-et-un ____
12. soixante-trois ____
13. trente-trois ____
14. quatre-vingt-dix-huit ____
15. quatorze ____

Write the correct number out in words IN FRENCH

67 _____	16 _____
77 _____	95 _____
82 _____	59 _____
92 _____	21 _____
57 _____	45 _____

SPANISH

¡Las Matemáticas!

Try to work out these sums and write the answer in Spanish.
If you want, you can write the numbers to help you work it out.

Más +

Menos -

Son =

1. Dos más cinco son _____
2. Diez más ocho son _____
3. Trece más quince son _____
4. Diecinueve más veinte son _____
5. Veintiuno más veintitrés son _____

Los números

Match up these Spanish numbers in your book

72	80	31	2
11	18	50	24
63	9	47	95

ochenta	nueve	setenta y dos
cuarenta y siete	dieciocho	sesenta y tres
trenta y uno	noventa y cinco	cincuenta
dos	veinticuatro	once

The music department looked at how African and Samba instruments were made and learnt how to perform them.



We looked at the natural resources used to make African Djembe's and Gourd Shakers.



We looked at Samba drums and how they are reinforced with ligatures and the tension of drum rods to support their structures when performing for extended periods of time in street carnivals in Rio De Janeiro.



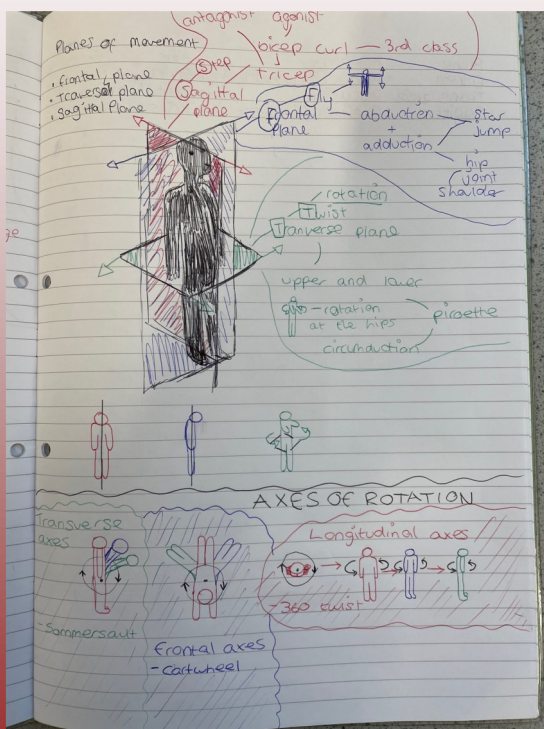
The tension is also adjusted depending on the pitch required for the instrument.



Year 10

We have been looking at levers, planes of movement and axes of rotation, and how we can utilise these during practical sporting examples. The students have used a variety of resources to support their knowledge and understanding, with some of them choosing to draw their own human bodies when illustrating the use of a plane of movement or axis of rotation.

Planes of Movement	<p>Sagittal Plane: Cuts the body into left and right halves</p> <p>Flexion and Extension only Example: Running 100m</p>	<p>Frontal Plane: Cuts the body into front and back halves</p> <p>Adduction and Abduction only Example: Star Jumps</p>	<p>Transverse Plane: Cuts the body into top and bottom halves</p> <p>Twist Rotation Example: Pirouette</p>
Axes of Rotation	<p>Longitudinal axis: vertical axis which runs from the top to the bottom of the body</p> <p>allows you to twist 360° Example: Pirouette, Throwing a discus, Full twist on trampolines</p>	<p>Frontal axis: horizontal axis running from the front to the back of the body</p> <p>Cerebral example: chess</p>	<p>Transverse axis: horizontal axis running from side to side</p> <p>Allows you to rotate forward and back 360° (go around) Example: front somersault</p>
Axes of Rotation Sporting Examples			



Lever Systems

1) Complete the diagrams below of the different classes of lever system in sport and provide an example of a sporting movement that uses each type of lever system.

First Class:

Example of movement: Heading a ball in football.

Location: Where the vertebrae meet the cranium.

Second Class:

Example of movement: Standing on tip toes when smashing a ball.

Location: Foot

Third Class:

Example of movement: extending a bicep curl.

Location: Bicep/elbow

Differentiated Homeworks for GCSE OCR PE: Paper 1 Page 17 of 111 v1.1 © 2020 Education, 2016



All of psychology as a subject involves STEM, particularly biology, chemistry and maths. For example, in studying schizophrenia, we review research into the concordance rates of onset in twin studies as well as neurochemical explanations such as the dopamine hypothesis. The study of neurotransmitters is also relevant to depression and addiction. All psychological explanations and theories are backed up by empirical research data which demands mathematical and statistical skills.

As seen above, Y12 students learn about descriptive statistics by carrying out their own research projects in groups and presenting their findings to the rest of the class.



Year 7

We are looking at Ultimate Questions in Year 7 PRE. We will be doing a lesson on what is your world view? In our lessons, we will be making glasses to depict what our world view is.



Year 8

We will be beginning our topic of Old Testament Foundations and discussing how historians and archaeologists use radio-carbon dating to tell us when documents were written.



Year 9

We are looking at STEM solutions to the problems of human abuse of the environment within our Ethics module.



Year 10

We are looking at the use of STEM in the justice system- forensic science, methods of capital punishment and statistics of the effectiveness of different types of punishments.





Year 7- The bad and good of the internet; Are social networking sites/apps like Instagram good or bad for our society? what are the positives and negatives of the internet? Digital footprints- what are digital footprints? How can you protect yourself online?

Year 8- Body Image Lesson – key question; Has technology made us more aware of how we look (body image)? What examples can you give?

Year 9- Trolling and Online harassment. What are some of the challenges faced by technology giants like Facebook, Instagram, and twitter in stopping trolls and cyber bullying? Are Instagram and twitter doing enough to stop online abuse?

Year 10; Child to Child sexual abuse and harassment; A lot of sexual harassment is done online. Do technology companies have a moral duty to help reduce incidences of sexual harassment? Discuss Has the easy access to pornography led to the increase in peer to-peer sexual abuse? Discuss

What is an internet troll?

- An internet 'troll' is an abusive or obnoxious person who purposely seeks to get an emotional reaction out of others online.
- Trolls post hurtful and abusive comments

STEM LESSON

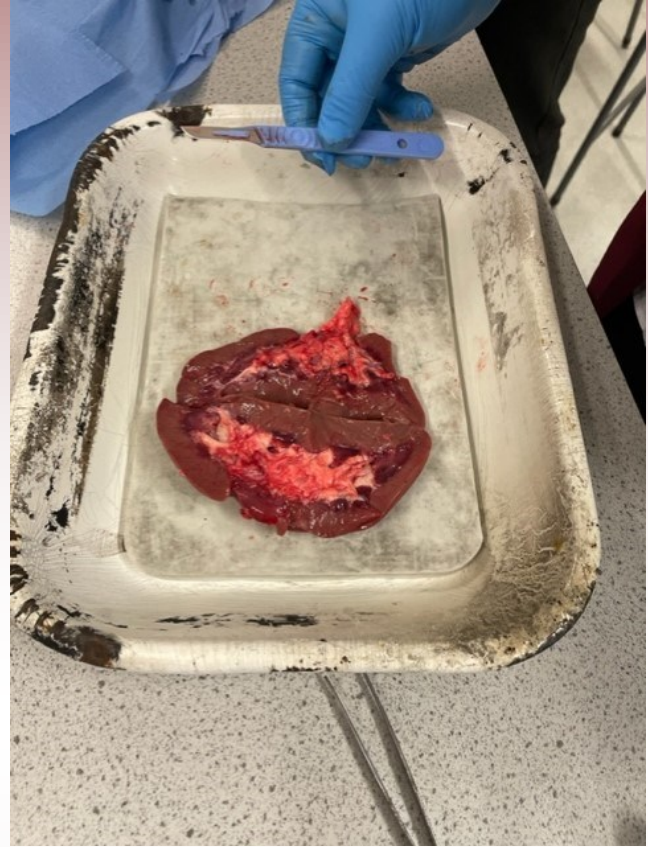
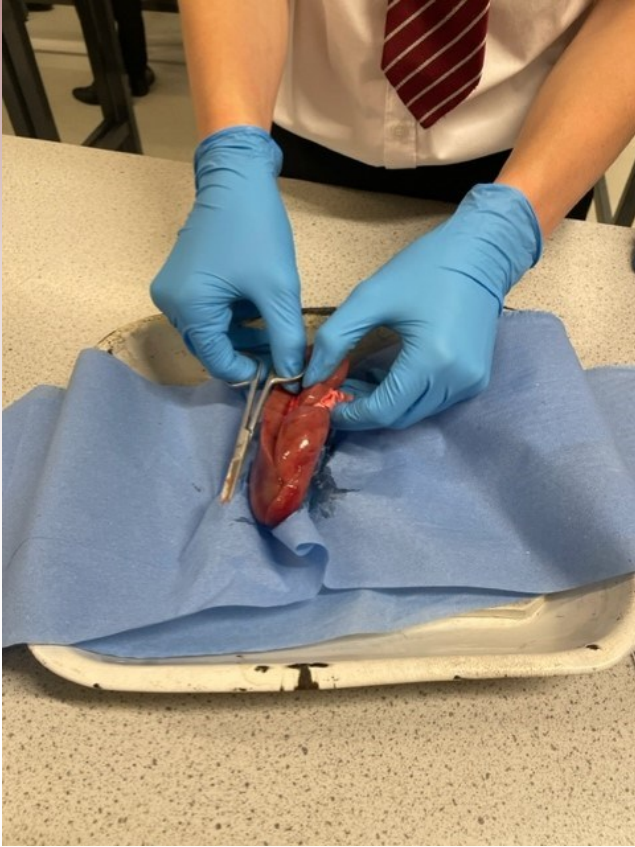
Are social networking sites good or bad for our society?

STEM LESSON

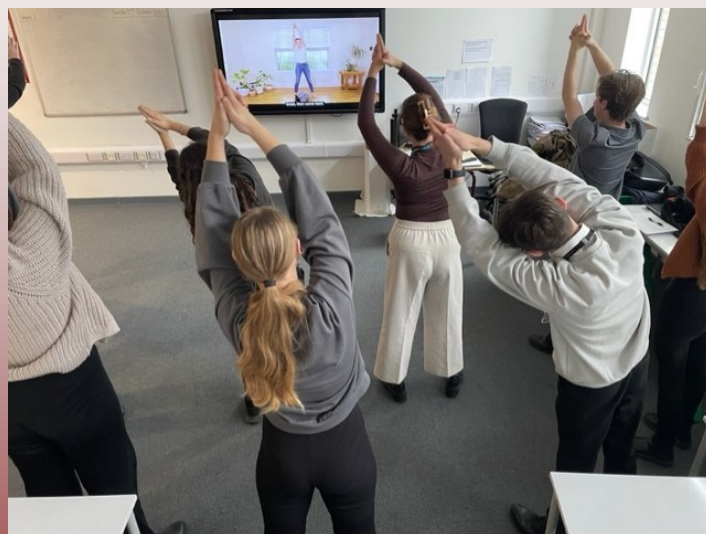
- Why is it difficult to get rid of things that we leave on the internet?

STEM task

What are some of the challenges faced by technology giants like Facebook, Instagram and twitter in stopping trolls?



Yr11 students carrying out a kidney dissection. The kidney filters out metabolic wastes such as urea and regulates the water balance and pH levels in the body. They also help regulate blood pressure and red blood cell production. Dissecting a kidney allows you to trace the path of wastes and urine through the organ and better understand its function.



Yr13 students investigating the relationship between moderate exercise and pulse rate and whether this can significantly impact long term health benefits.



Paula Bradbury

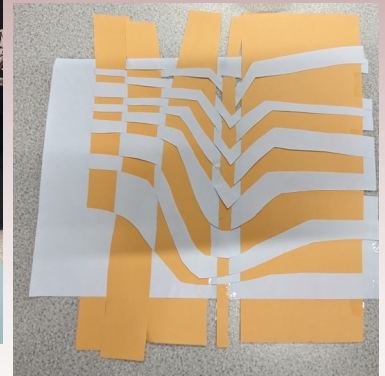
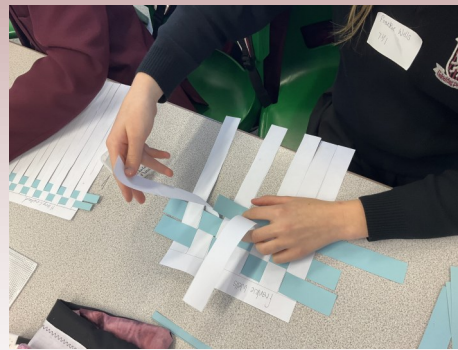
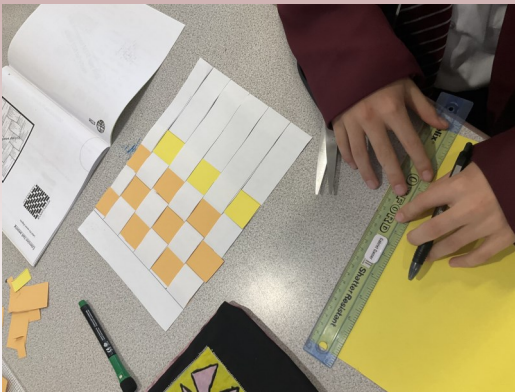
Guest speaker Paula Bradbury, Criminology & Policing Lecturer at Middlesex University and Senior Research Fellow at the Centre for Abuse & Trauma Studies, came to speak to the Y13 Sociology students in October, who are currently completing a module on Crime and Deviance. After studying psychology and sociology at A level, and Criminology at university, she started her career in the police as a Criminal Intelligence Analyst, before studying for her masters in Child Forensic Psychology & Law, then a PhD in Criminology. Her PhD focused on adolescent sexual behaviour in cyberspace, with an examination on policy and practice to determine how we might more effectively respond to adolescents who share nudes. Paula is well versed on aspects of the law relating to online cyber-sexual offending and the psychology of human behaviour in cyberspace and the metaverse, and frequently consults UK and international Ministries of Justice and law enforcement on this topic. She provided a lot of interesting material and answered a lot of curious questions from the students. We are fortunate to have such an accomplished professional within our parent body.



Amelia Crawley, Y13 Psychology student, won a Nuffield Research Placement earlier this year and took part in a study comparing the effectiveness of different assessments of cognition to see which was more effective in uncovering mild cognitive impairments in patients with long covid. This is a very relevant and important part of research aiming to assist patients with long covid so their cognitive symptoms can be better assessed and understood by clinicians. Nuffield Research placements encourage collaboration between scholars and academics in a bid to encourage promising students into STEM careers. Amelia worked alongside an academic engaged in this research throughout the summer and wrote up a research document on the study. She and the other candidates were acknowledged at a special award ceremony at the University of Bedfordshire, where they presented a poster of their research and received their certificates. Supporting her at the event were her father, Mr Crawley and her psychology teacher and tutor, Mrs O'Hanlon.

Year 7

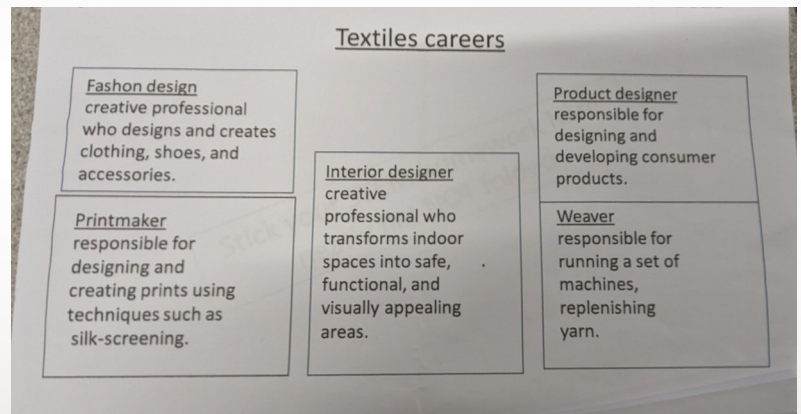
Students looked at the 3 types of structures of fabrics— Bonded, knitted and woven. Students then created different types of weave patterns



Elise 7x1

Students also produced information about STEM careers linked to textiles

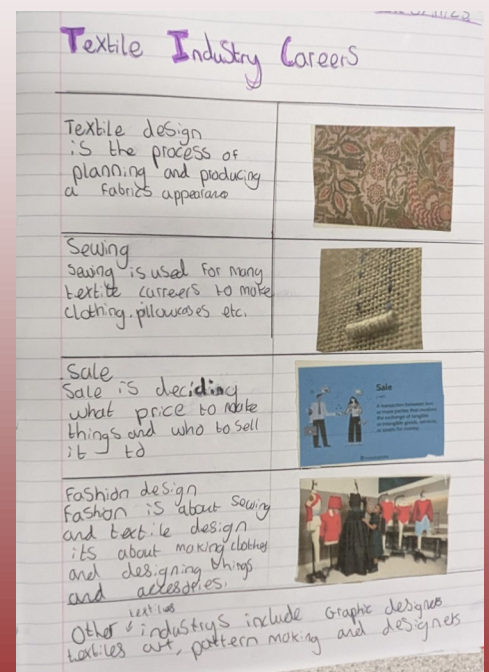
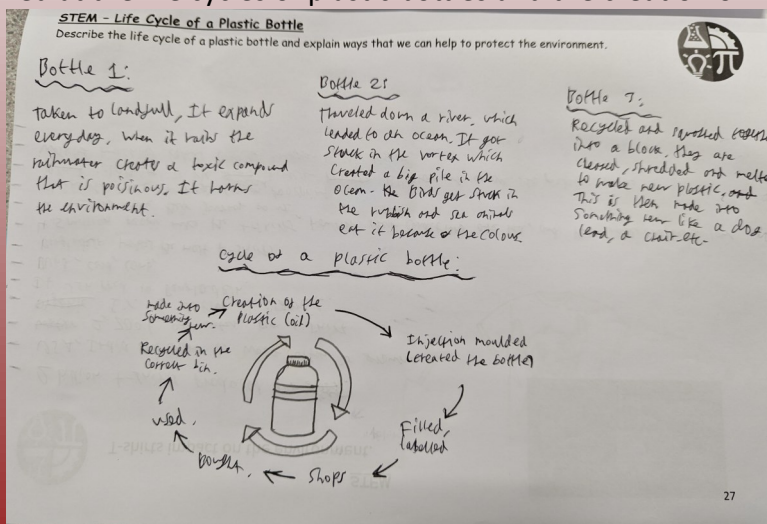
Alexa 7A



Dylan 7D

Year 8

Looked at the life cycles of plastic bottles and the creation of recycled fabrics



Matilda 7A

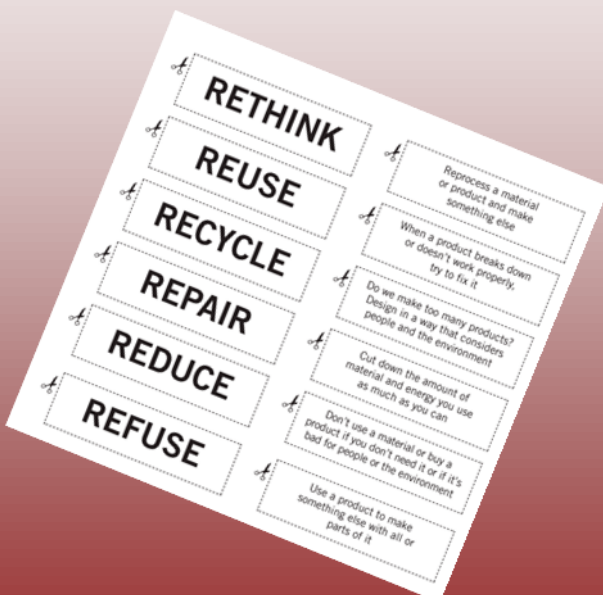
In our STEM lesson we learned about the 6 R's of sustainability. We looked at how a children's party bag could be redesigned to be more sustainable



- Sustainability is about meeting the needs and demands of society without using up natural resources or harming the environment.
- This is about making sure that the planet is able to support the growing population for the foreseeable future.
- This involves everyone using the resources in a sensible manner.

If everyone in the world used as any resources as we do in the UK, we'd need **3 planets** to sustain us.

Only 1 in every 10,000 products are designed with the environment in mind...
(Edwin Datschefski)



Ben wrote: "What I liked about the STEM lesson is that it made you realise how much danger our world is in but in a fun and engaging way."

"I really enjoyed the party bag!" Niamh

"I liked learning about sustainability" Violet

"I enjoyed looking at and judging the party bag" Polly



Year 8 – Have been learning about how CAD/CAM can be used to design and make promotional laser cut items based upon their character virtue superheroes.

Year 9 – Have been learning about CAD/CAM and how this can be used to create laser cut shop signage for the newly created brands.

Year 10 – Have been learning about the environmental and sustainability issues that need to be considered when designing buildings through the container living project.

Year 11 – Looking at advantages, disadvantages and how CAD/CAM can be used to develop at test key components of the NEA.

Year 12 – Reviewing the work of James Dyson with a focus on the importance of prototype development and design iterations. Especially for their desk light storage.

Year 13 – Reviewing the work of James Dyson with a focus on the importance of prototype development and design iterations.

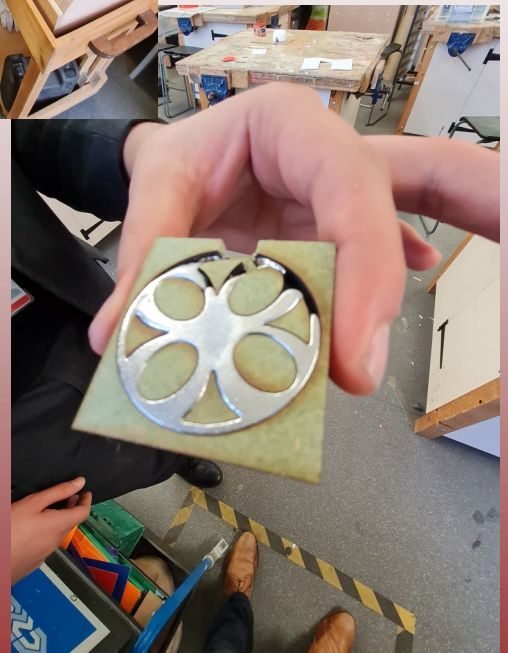
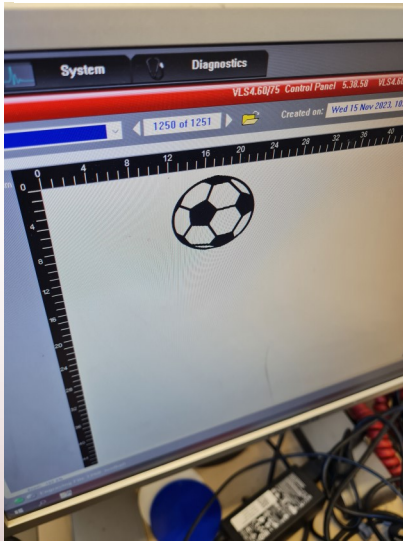
Year 10

Sustainability of house design project





Kit Car – We have continued to embrace the challenges of engineering and been testing fibre glass in order to manufacture a more aerodynamic nose cone. The team continues to grow as we welcome students from all three key stages.





STEM Student Ambassadors



Student Ambassador Joshua G 8A



Art

Consisted of a climate change themed quick start that links to our topic about Hundertwasser as he was an environmentalist, after this we watched a video about saving the seas. We are designing a poster for save the seas which will like the work we are currently doing.

English

Was a two part lesson all about the Titanic we watched a video about what made it sink. We were tasked with making something to save the Titanic from sinking. We had to present the work to the class.

Geography

Was about Earth Overshoot Day; we learnt our carbon footprint in our homework. We had an Ecological Footprint task about ways to decrease our carbon footprint. We also learnt about ways of producing goods and what consequences they have.

Maths

Started with a STEM Careers themed quick start, the starter consisted of STEM focused Careers after this we watched a video about STEM Careers promoting different jobs in all areas of STEM.

Technology

was about jobs that like with STEM and Graphics, and we did a 2-point perspective drawing.



Jack 8A

Jack achieved his STEM colours this term and also won the Remembrance day competition– well done Jack.

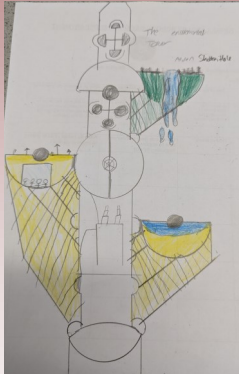
More information about how to achieve your STEM colours at the back of the magazine.





Whole school form competition for new tallest building designs

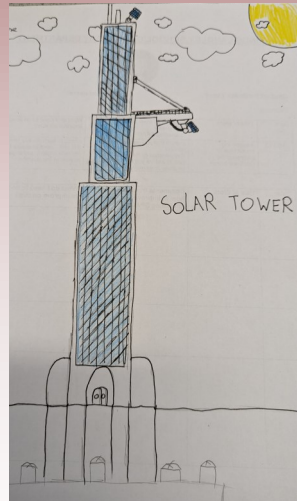
7C



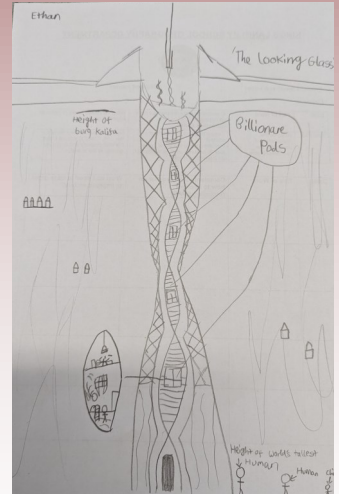
Aiden



Noah

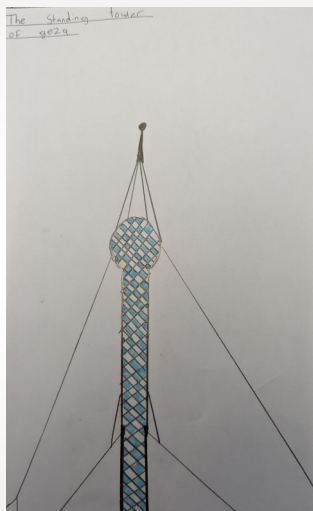


Buddy



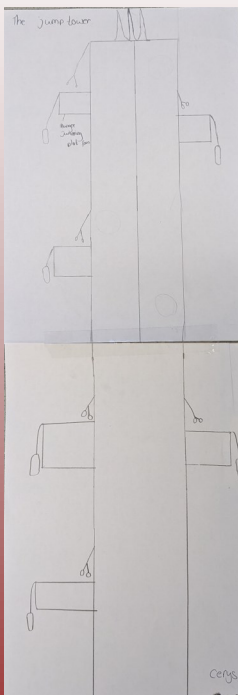
Ethan

7G

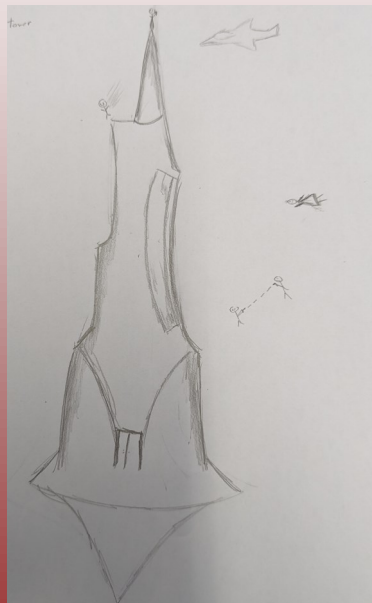


Ceri

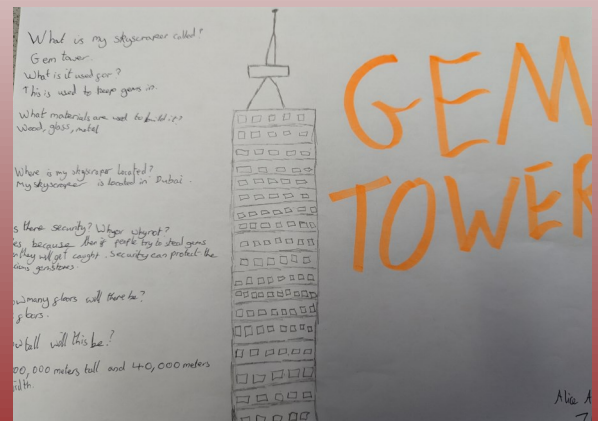
For	Against
- Doesn't take up much space on the ground.	- Tallest buildings are outdated quickly with new designs.
- Helps put cities on the map.	- Space at the top of buildings is limited as they are often a pyramid shape.
- Increase in tourism - supports the economy.	- Uses up valuable resources ↳ very expensive
- Development of new technology / knowledge of architecture.	- The developer doesn't always benefit.



Cerys



Joseph



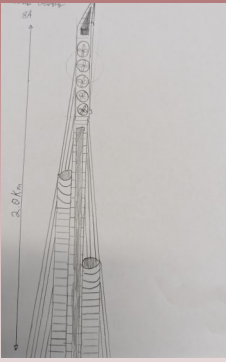
Alice



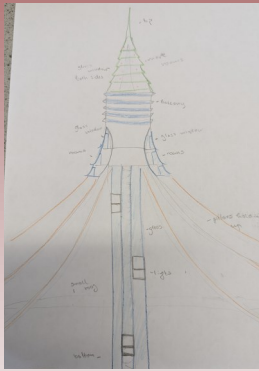
STEM FORM TIME: Tall Buildings yr8



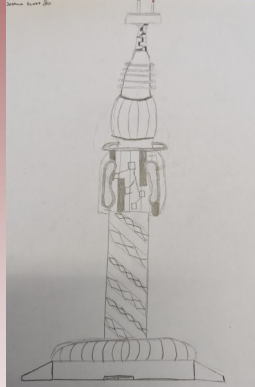
8A



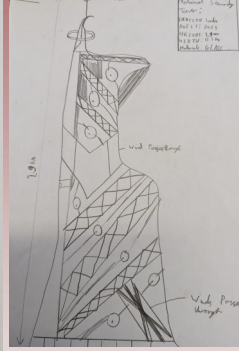
Joshua G



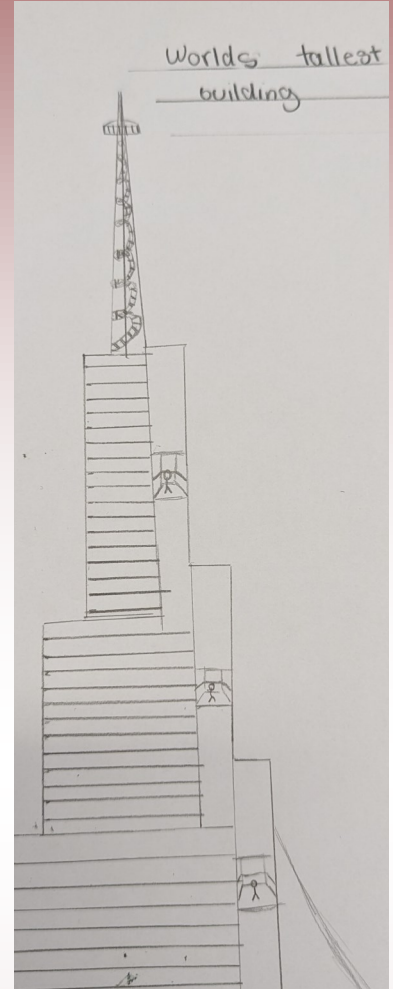
Emily



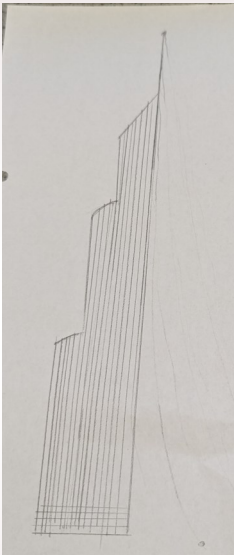
Joshua S



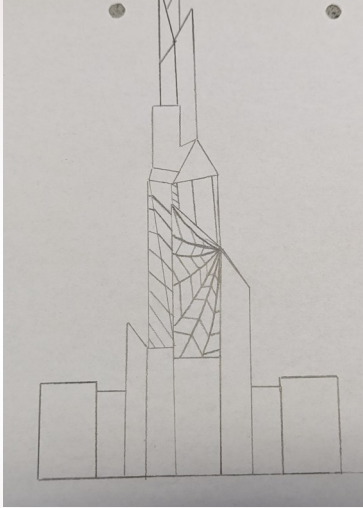
Jack S



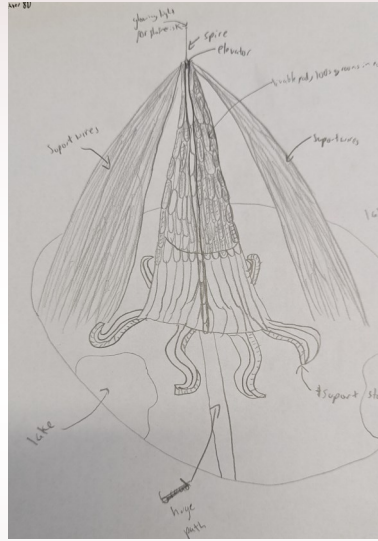
8C



Flo



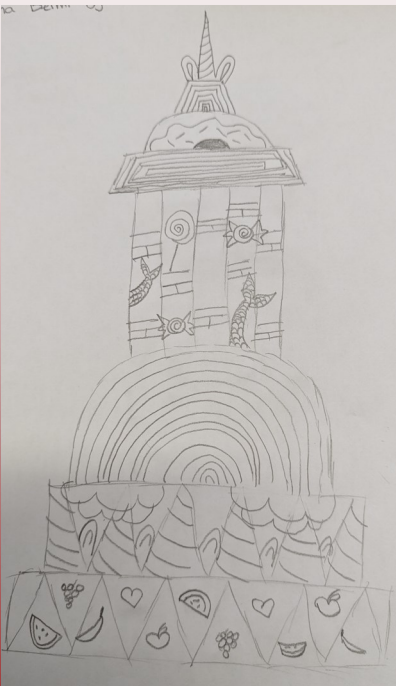
Ollie



8D Lewis

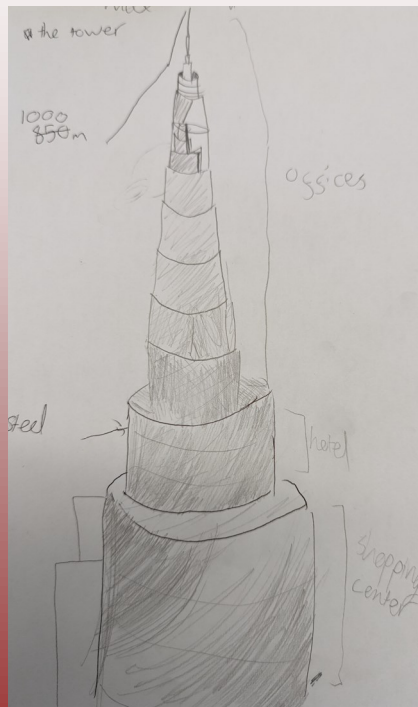
8D Olivia

8J

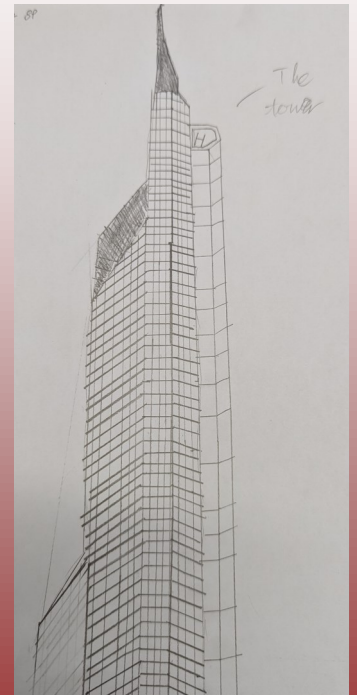


Roma

8P

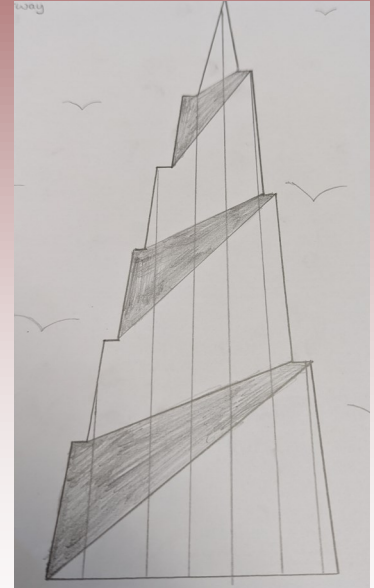
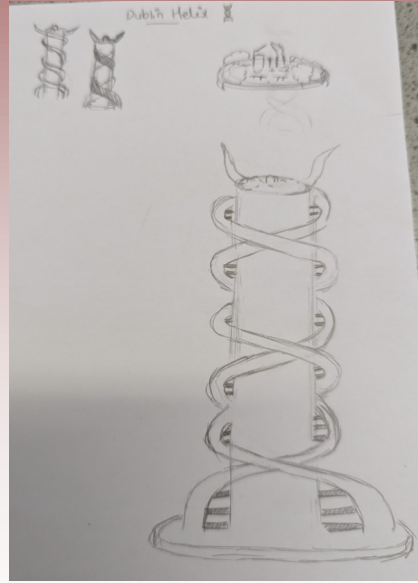
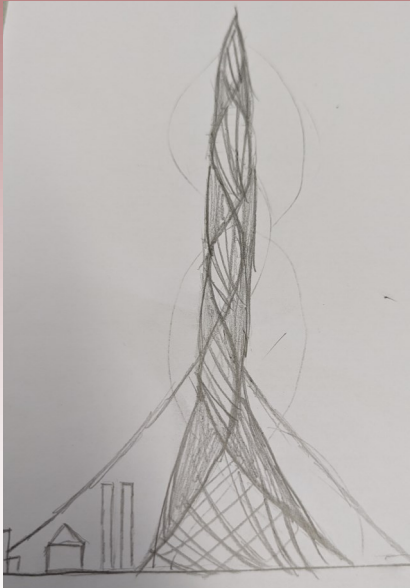


Max



Jensen

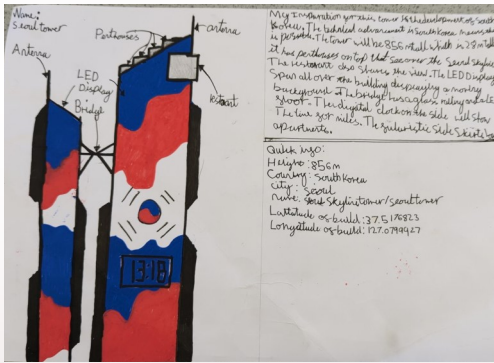
9A



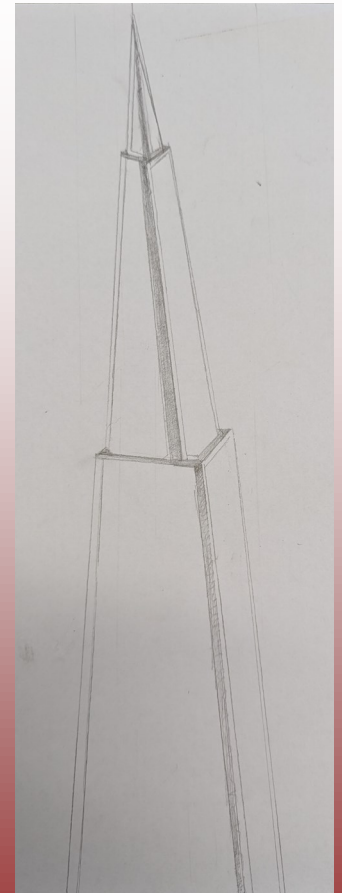
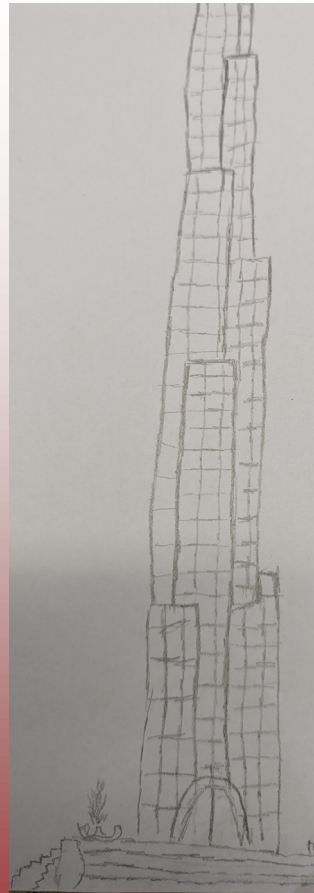
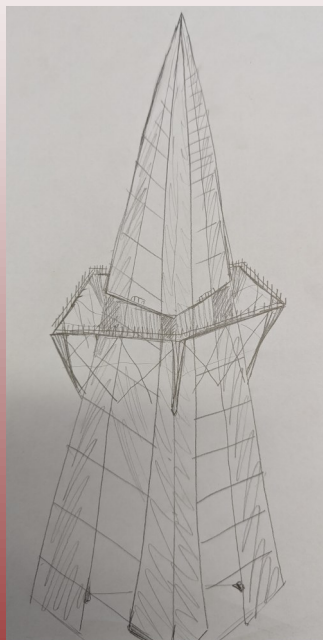
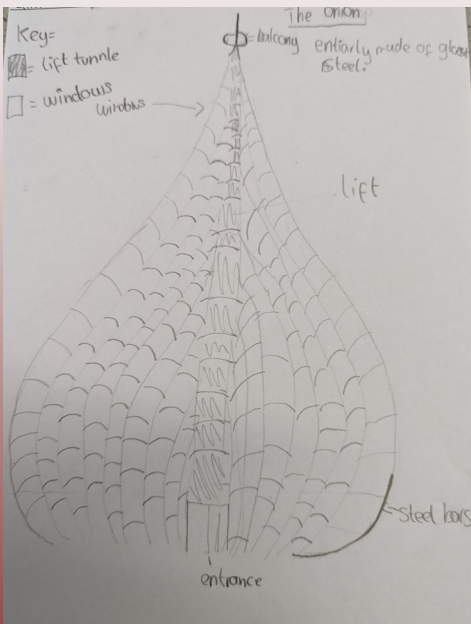
Maise and Betsy

9D

Oliver



9J

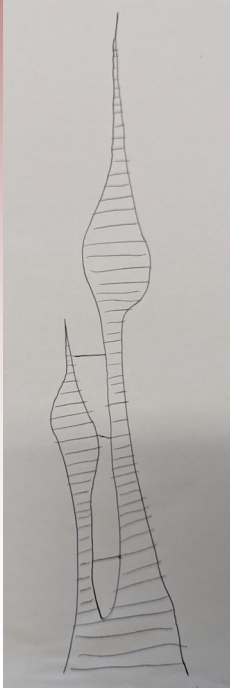


Elina

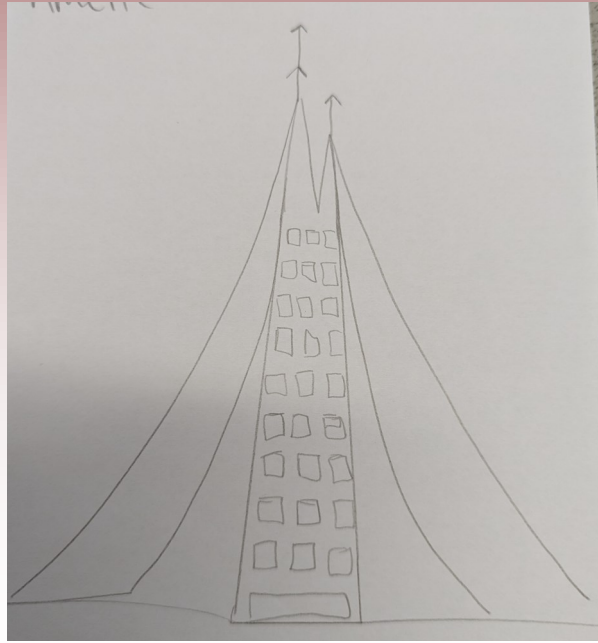
Charlotte

Benji

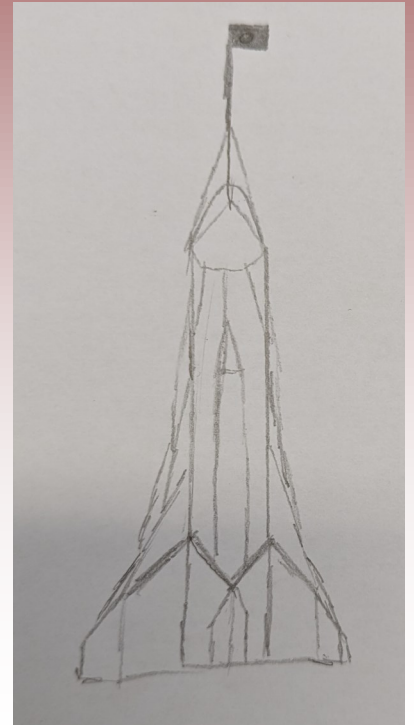
10G



Heidi

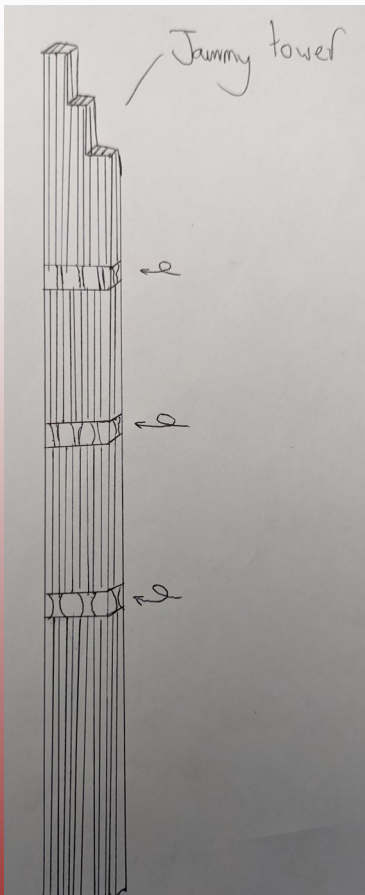


Amelie

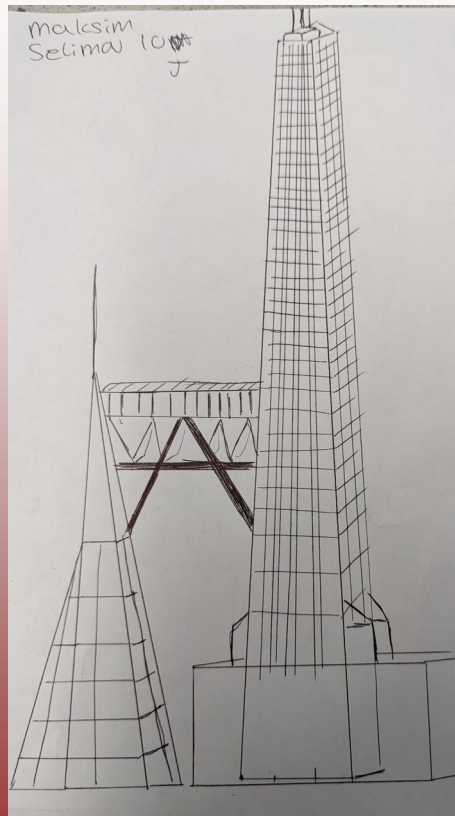


Luke

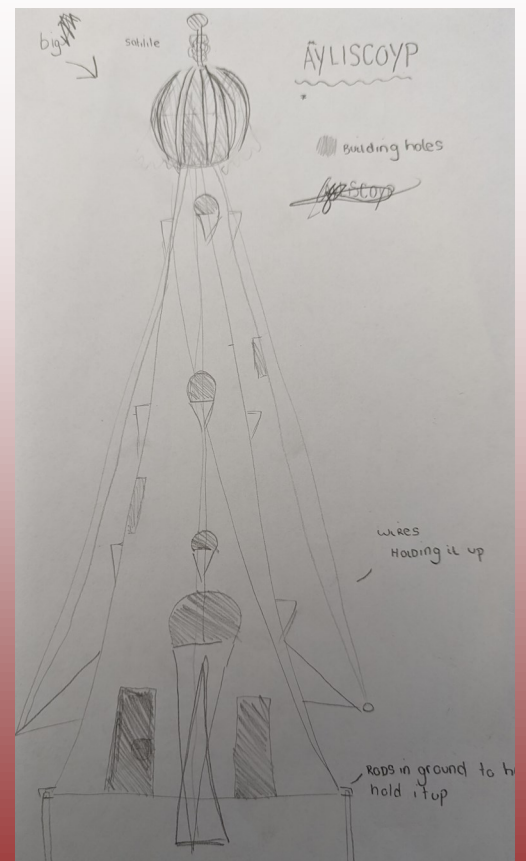
10J



James



Maskim



Hannah



**Build
THE Change**

Wild Cities Competition
from The Day and the LEGO® Group

Kings Langley School Competition

We have now made decisions on the in-school winners for the Lego Wild Cities competition.

Congratulations should go to all who entered, well done all.

1st place: Alice 7G

2nd place: James 7P

3rd place: Joshua 8A

4th Place: Joshua 8A

A massive well done to our school winners and I have been informed by the competition organisers that they are close to making a public announcement – so watch this space!



The city I have chosen is London. There are many famous buildings found here including Big Ben, The Shard, The Houses of Parliament and Wembley Stadium. The animals that can be seen include mice, rats and foxes; the plants found include daffodils, poppies and daisies (but these are generally seen in the more rural areas rather than in the city); insects include butterflies, bees and ladybirds and the birds that are predominately seen are pigeons.

I have chosen to base my idea on Big Ben as it is such an iconic building but have adapted it to be more eco friendly. Solar panels are found on the roof and on 2 sides of the building (grey Lego pieces/boards). The solar panels would work the clocks found on each side to keep time. There is a green space at the top of the building so people can go to relax and look at the views whilst looking at the plants and tending to vegetable patches that are found there.

At certain intervals (where each flight of stairs would meet a level internally) I have placed green areas to encourage wildlife and give them somewhere to nest. There would be some areas of wildflowers to attract butterflies and other insects.

Benches are found for people to relax and unwind. There is an arch leading to a door for the grand opening and can be used for special occasions.



Alice 7G Kings Langley Secondary School

On the 29th November Kings Langley School were delighted to host's The Rotary Clubs of Berkhamsted and Hemel Hempstead's annual Young Chef competition. 11 students from across 6 schools entered into the competition to cook a two course meal costing no more than £20 for two people in two hours. The judges this year were Nic Leon, executive Chef at Leon Catering and Grant Young Executive Chef at Fine Dine In.



Gus made a Lamb apricot Tagine and a raspberry ice cream.



Rotary Chef Watford-Bobby year 9



Ruby made chicken stuffed with mozzarella wrapped in Parma ham with new potatoes and asparagus and for dessert lemon tarts.



Rotary Club Watford Young Chef competition on Saturday and coming 2nd cooking his butter chicken, and raspberry and white chocolate cheesecake

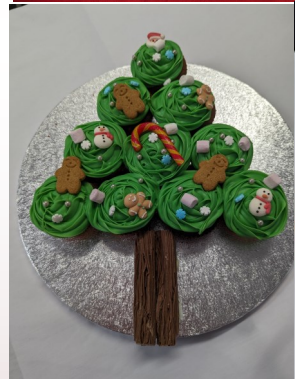


Tymofii made Shepherds purses and Moochi

STEM Student Competitions: XMAS CAKES



1. Lyra, Freya, Purdy, Maddie 8T
2. Cerys 7G
3. Alistar 7j
4. Saffy 7D
5. Senna Verity 7C
6. Dylan 7D
7. Roma 8J
8. Fillip 7D
9. Sofija 7A
10. Niamh 7A
11. Lottie 9A
12. Mia and Hattie 7D
13. Morgan 7D
14. Abbie and Beth 7J
15. Connor 7D
16. Myiah 7D and Sania 7A
17. Grace 7D



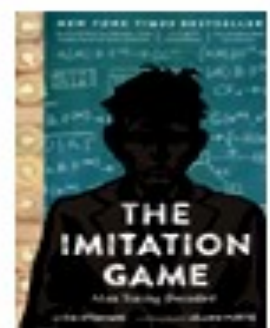
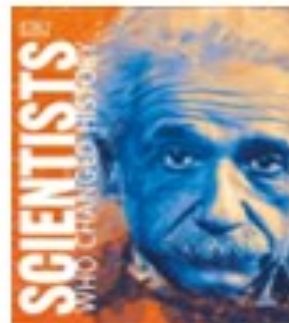
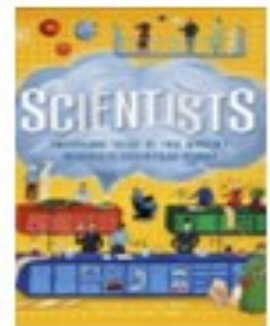
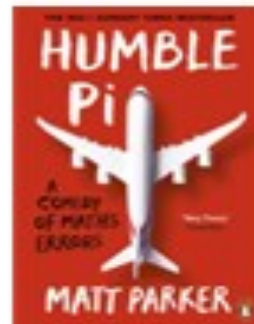
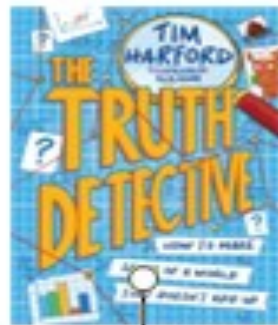
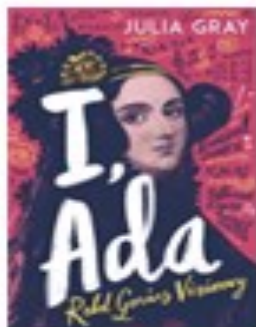
Amazing cakes– well done all that entered.



STEM Reads

Stickability in STEM

From determined scientists who wouldn't let anything get in their way, to people trying to save the world, the history and present day of STEM is full of stories about how stickability makes success possible.



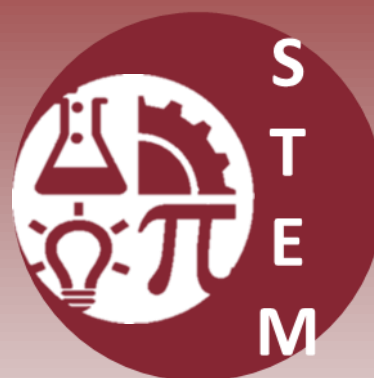
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	Bronze	Silver	Gold	Platinum	Diamond
Extra-curricular	Attend one extra-curricular STEM club for two terms.	Attend one extra-curricular STEM club for at least a further two terms	Assist a member of staff in the running of an extra-curricular STEM club for a year term, assuming a role of responsibility.	Plan and run an extra-curricular STEM group for a year.	Take an active role with specific responsibilities for STEM such as setting up and leading a STEM activity
Leadership	Become a student leader within an area of STEM, for a minimum of two terms.	Become a student leader within an area of STEM, for a minimum of three terms, taking responsibility for a specific activity/event.	Become a student leader within an area of STEM for at least three terms, assuming a specific role of responsibility where you contribute to the running of events.	Become a student leader within an area of STEM, for at least two years, assuming a specific role of responsibility where you lead others.	Lead a student group/club within an area of STEM, taking responsibility for its planning, design, content and delivery.
Personal Development	Submit one article to the STEM newsletter or contribute to STEM subject display board or Enter at least one STEM form competition	Submit two articles to the STEM newsletter or contribute to STEM subject display board within a school year or Enter at least two STEM competitions over the year	Submit one article to the STEM newsletter each term or contribute to STEM subject display board each term or Enter at least three STEM competitions (one per term)	Via the STEM newsletter, write an article to be included in local press about a positive aspect of your school or Enter the STEM fair individually or as a team	Produce a STEM student magazine for a STEM subject area of the school over a year. or Lead a team or support a primary school team to enter the STEM fair
School and Wider Community	Take part in a STEM school or community fundraising event	Contribute to a STEM school or community fundraising event assuming a role of responsibility	Lead a STEM school or community fundraising event assuming a role of responsibility	Organise a STEM school or community fundraising event assuming a role of responsibility	Lead on, or assist the support of students in a STEM fundraising event across the school