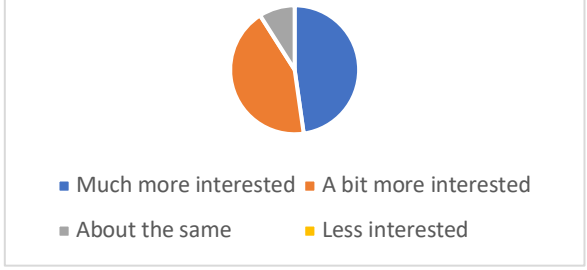
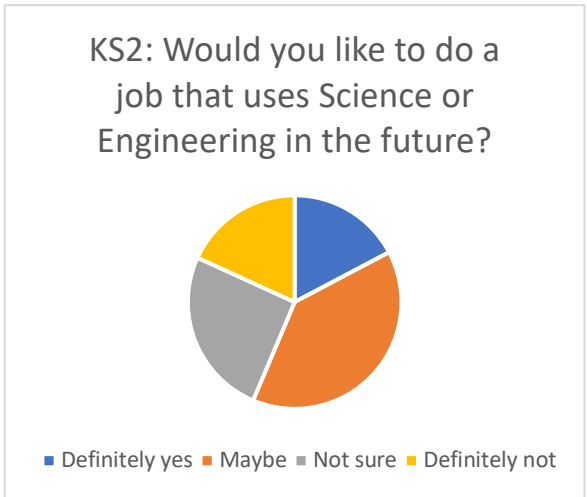
St Vigor and St John: STEM Focus Week

(5th-14th March)

(Science, Technology, Engineering, Maths)

Bryony Class: The highlight of our Science week was putting eggs in the incubator. We discovered the time lengths and temperature for the incubator, and how the machine replicates the mother hen. This is a real experience to support our work on birds which was launched with the RSPB birdwatch. We have started a weekly diary each related to incubator events too. We are also doing a daily weather chart each! We loved the quiz and lots of online the on-line activities.





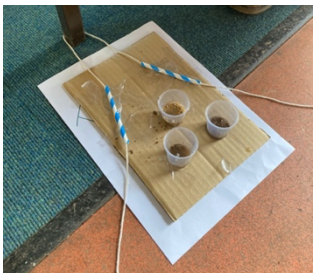
Campion Class: During Science week, Year Two had a problem to solve! Mr Chorley's boat had broken and he needed our help to design a new one. Before we could design it, we had to think about the best materials to use to make a boat. We decided it would need to be strong, waterproof and it would need to float. We tested different materials to see which was best. We found that wood, plastic and tin foil were the best materials for the job! We made boats out of tin foil to test our theory. We also loved speaking to Dr Ken Farquhar who taught us all about invisible heat ink and how to make your own water filter!





Foxglove Class: In line with our space themed quest, we became space engineers and learnt about the ExoMars rover that is due to launch in 2022. We learnt that this rover is aims to look for signs of life on Mars and will drill deep into Mar's soil. Linked to this, we learnt about simple machines such as pulleys, wheels, levers, screws etc. We then designed our own pulley system which could be adapted to carry three samples of "Mars soil" to a testing station which could be tested for signs of life. We dropped some water into the soil to see whether if there were any bubbles. If there were, this could show signs of life.



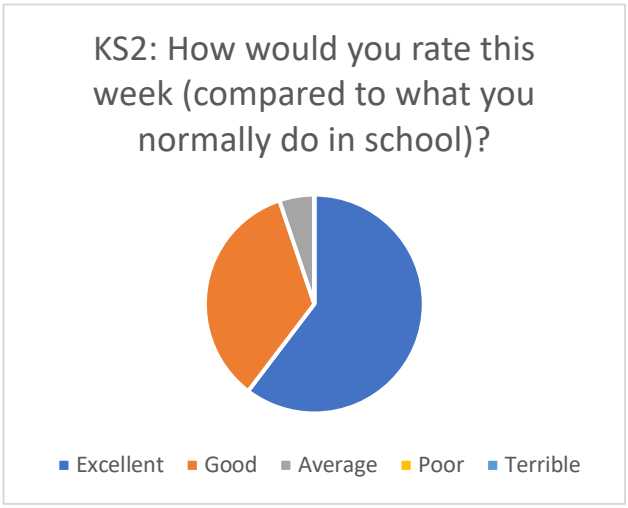


St Vigor and St John: STEM Focus Week

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Elder Class:

Building bridges: the children tried to build bridges that could support a given weight. They used art straws and learned about joins and reinforcements.

Sound: Our quest this term was to make a class orchestra. Each child was given a straw and a pair of scissors. They tried to blow air across the top of the straw to make a sound. After each blow, they cut a bit off the straw to see if the sound changed - it did - this showed us that the shorter the straw, the higher the sound. We watched instruments in orchestras, discussing the different sections. The children looked at real musical instruments to see how the sound was produced - did we hit them, shake them, blow into them, pluck them etc? The children then designed their own instruments and collected appropriate resources to use for their designs.





During the week, we also joined some informative science sessions on teams. A particular favourite was the Hero Arm. This was a prosthetic arm that Liz showed us. Elder were fascinated and asked some thoughtful questions. Marcie was so inspired she went home and made a robotic arm.





Arum Class: We had a brilliant fun packed week and covered many aspects of Science - exploring, investigating, and predicting in many ways. All our learning perfectly fed into our quest this term, which is looking for and learning about change and where this happens.

Here are some of the activities that we all engaged with over the week:

- Exploring what a magnet is and what things are magnetic
- Using cars on flexible tracks and beginning to learn about forces
- Making an ice garden and talking about how liquids can change into solids
- Planting sunflower seeds and finding out what seeds need to grow - we will watch them grow over time
- Lifecycle of the frog - we have frogspawn in the classroom which is changing into tadpoles and causing lots of excitement!
- Learning to use a microscope and look at things close up
- Coke and mentoes experiment and predicting what happens when the mentoes are added to the coke – a lot of fun!

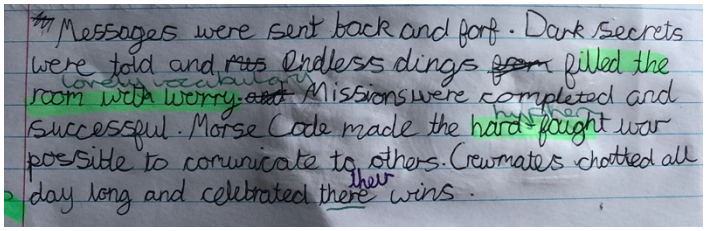
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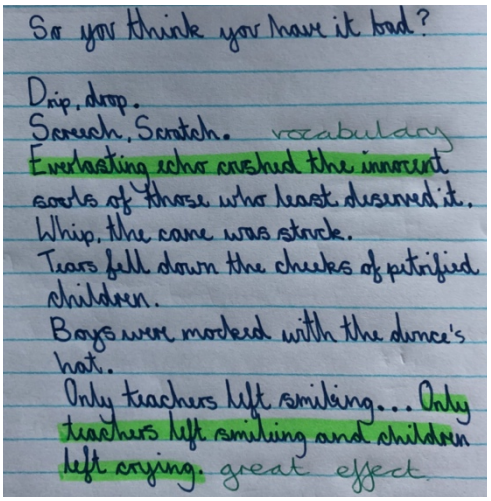
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Gentian Class:

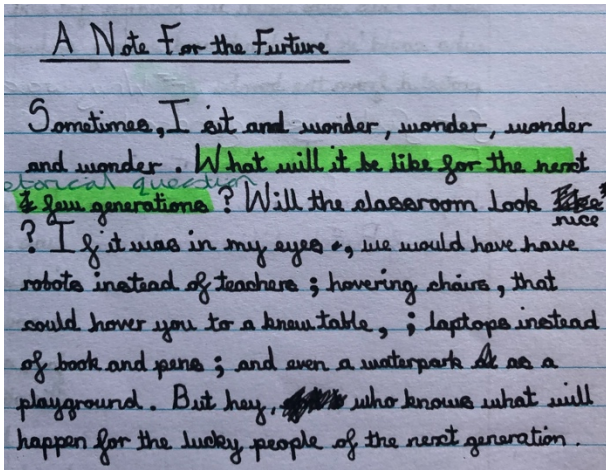
We were really lucky to visit Aerospace Bristol virtually to explore how WW1 aircraft were innovated during the war. We were inspired by these innovations, so we connected out learning to WWII to explore how different innovations during this war helped with the war effort.


Messages were sent back and forf. Dark secrets were told and endless dings filled the room with worry. Missions were completed and successful. Morse Code made the hard fought war possible to comunicate to others. Crewmates chatted all day long and celebrated there wins.

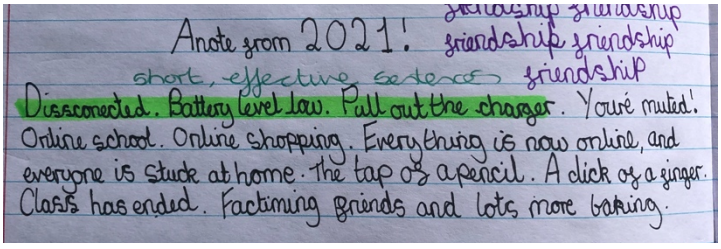
Since returning to school, our teacher (Mrs Higgs) has continued to teach us virtually from the staff room. This inspired us to think about how classrooms have been innovated over a period of time from the Victorian era, to 2021, and predicting the future of school! We were also lucky enough to be joined by Thales engineering to talk to use about robotics engineering and the role of robots in both the present and the future.


So you think you have it bad?

Drip, drop.
Screech. Scratch.
Everlasting echo crushed the innocent souls of those who least deserved it.
Whip, the cane was struck.
Tears fell down the cheeks of petrified children.
Boys were mocked with the dunce's hat.
Only teachers left smiling... Only teachers left smiling and children left crying.


A Note For the Future

Sometimes, I sit and wonder, wonder, wonder and wonder. What will it be like for the next few generations? Will the classroom look like? If it was in my eyes, we would have have robots instead of teachers; hovering chairs, that could hover you to a brain table,; laptops instead of book and pens; and even a waterpark as a playground. But hey, who knows what will happen for the lucky people of the next generation.


A note from 2021!

Disconnected. Battery level low. Pull out the charger. You're muted. Online school. Online shopping. Everything is now online, and everyone is stuck at home. The tap of a pencil. A click of a finger. Class has ended. Facetiming friends and lots more baking.

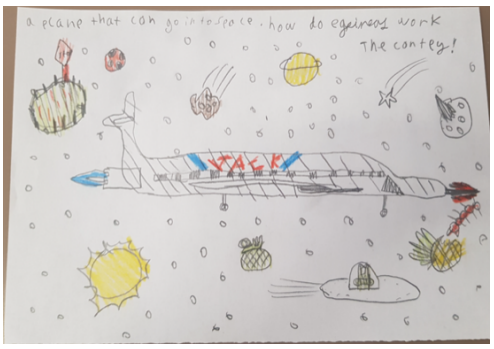
We have also thought ethically about our uses of plastic and used water and bending to classify different plastics and think about whether their properties are sustainable or not. We then looked at such items under a microscope with Mark Coleman from Swansea University which was so cool! He made us guess what different items were up close.

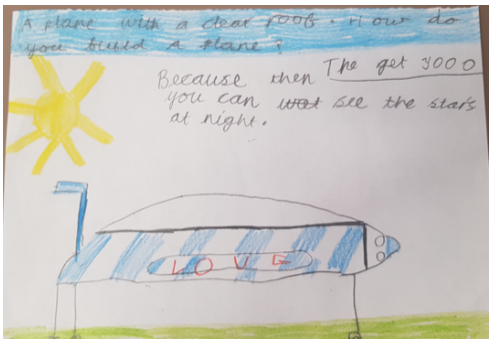
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Dogwood Class: In the first half of the week, we investigated whether the appearance of food had any effect on its taste. We did some research as a class into selective breeding and what that meant for both animals and crops. Then we read about differing opinions about selective breeding and held a debate acting as those characters. The following day, we conducted a blind test to see if we could taste the difference between fruit and vegetables which had undergone selective breeding. We tested two foods: strawberries and carrots. One of our samples had undergone selective breeding to be perfect and the other was 'wonky'. We found that we couldn't really taste the difference between samples, but they did *feel* slightly different. Finally, we formed our own opinions about whether or not selective breeding should be allowed. Most of us were in the middle, we felt that selective breeding on farms was ok as long as it was controlled, but otherwise nature should be left alone. We thought that more people should give 'wonky' vegetables a try because they are cheaper, taste the same and it creates less food waste. We didn't like that pets were selectively bread just to improve appearance, sometimes resulting in a negative effect on their health.





At the end of the week or focus turned to aeroplanes. We had a really interesting live session from Aerospace Bristol and the children loved the tour of the Concorde. During the tour they were asked what a plane of the future would look like. The children had lots of ideas for this and wanted to explore it further. So, first we drew a design of our aeroplane for the future. Some children used their planes to solve big problems like world hunger or natural disasters, others thought about it commercially and designed planes with glass roofs for stargazing and planes which could go to the moon. This raised lots of questions about how planes were built and what they used for power, so we contacted an aircraft engineer who helped us find the answers. We learnt that they are made of light metals like aluminium and titanium. We thought about which materials we had available to us which were lightweight and decided on using paper to build our planes. We used instructions at first to make our planes then modified our planes after testing them a few times and identifying flaws. Raphael noticed that his plane nosedived a lot so he tried changing the angle of the nose. Finally, we had an air race to see whose aeroplane was the most successful and Kane and Raphael won.

What next for STEM at SVSJ?

- We have just secured some funding to deliver CREST awards for our Year 2 and Year 6 children. In the summer term, our Year 2 children will complete a STAR CREST award and our Year 6 children will complete a SUPERSTAR CREST award – both awards are achieved by completed 8 x 1 hour of STEM activities.
- We are currently working with Science subject leaders from the South West to look at completing a Science challenge alongside other schools in the summer term; this will be available to some year groups and will involve creating a multimedia tool to enable visitors to find out about STEM in our local area.