



Discover Primary Science & Maths 2019

Scoil an Spioraid Naoimh Senior Primary

Laytown

Co. Meath



The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic look. The shapes are layered, with some appearing more prominent than others, and they extend from the edges towards the center of the frame.

STEP 1

SCIENCE

Step 1: Science

The pupils from 3rd to 6th classes and our autistic units, 'Loinnir' and 'Réaltaí' participated in science investigations covering topics from all four strands of the Science part of the SESE Primary School Curriculum. The four strands are as follows:

❖ LIVING THINGS

❖ ENERGY AND FORCES

❖ MATERIALS

❖ ENVIRONMENTAL AWARENESS AND CARE

Living Things - 3rd Class

Mrs Carters 3rd Class were learning about the skeletal system. We looked at power points, we made skeletons using card and split pins and we also got to look at a model skeleton's bones and skull. This is what we learned:

The Skeletal System

There are around 206 bones in the adult human body. These bones plus the connecting tissue make up the skeletal system.

The skeletal system is very important for many reasons. Some bones help protect our organs.

The skull, for example protects our brains and the ribcage protects our lungs.

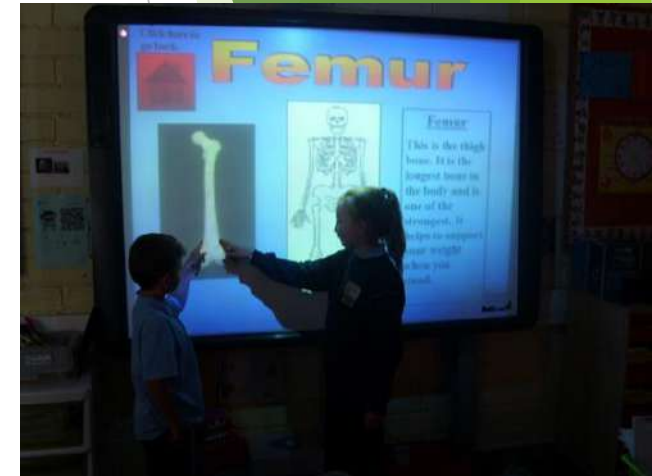
The skeletal system also gives us our shape. Without a skeleton, we would be shapeless blobs like a jellyfish or earthworm. Our bones, which are connected by ligaments provide a frame for the rest of the organs, giving us our unique body shape.

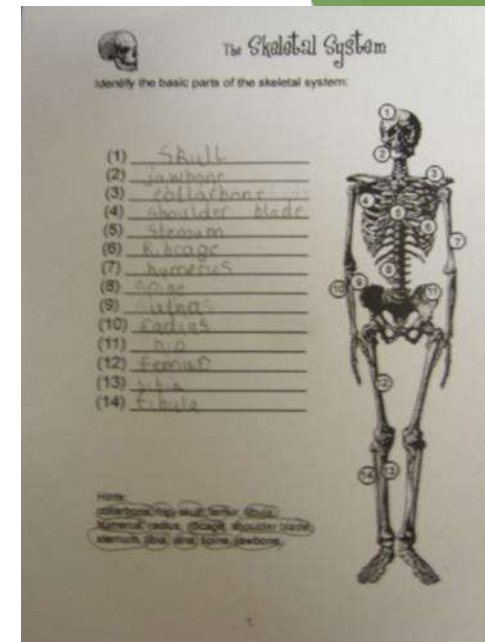
The skeletal system also helps us move. Muscles, which are attached to bones by tendons cause the bones to move, which makes our bodies move.

Bones also help your body store minerals such as calcium. If there is too much calcium in the blood some of it becomes bone. If there is not enough calcium, then bones gives some to the blood.

Finally, another important function of bones is to produce blood. Inside bones there is a soft substance called marrow, which is used to make blood cells.

(Mrs Carter 3rd Class)





Writing
Investigating
Art Work
Teamwork



Living Things - 3rd Class - Mrs. Gough

In my class we have a box of tadpoles. We are investigating how tadpoles change into adult frogs. The tadpoles old habitat was a small pond.

The pond was one third water, one third frogspawn and one third pondweed. The pondweed provided oxygen. There were rocks at the bottom of the pond. (In their old habitat). The rocks provided shelter from predators (birds and fish). Also the pondweed provides food for the tadpoles.



Their new habitat is a large box. (41cm wide 36cm length). There is still some pondweed. The box is on our nature table. Beside the tadpole box is some magnifying glasses. We use them to look at the tadpoles.

~~Here~~ Here are some facts we learned.



Frogs are amazing!!!

Frog

3rd Class



The Life Cycle of the Frog



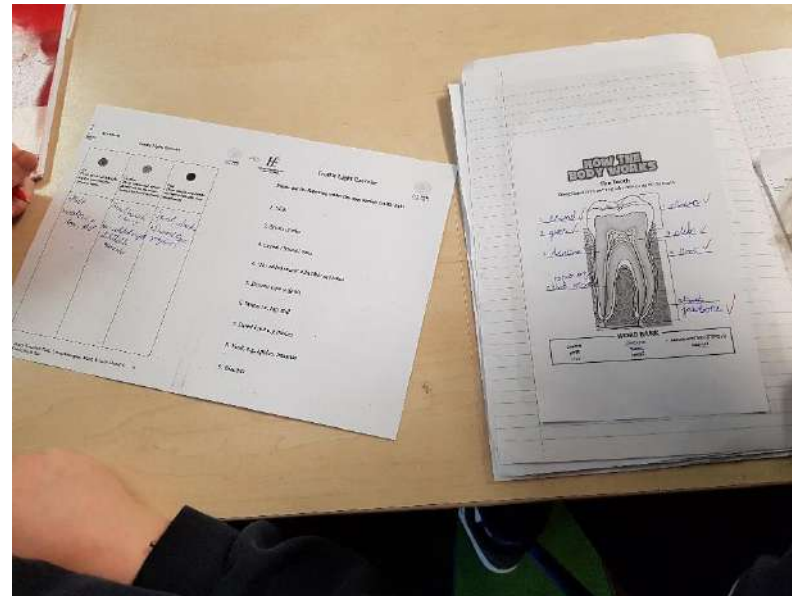
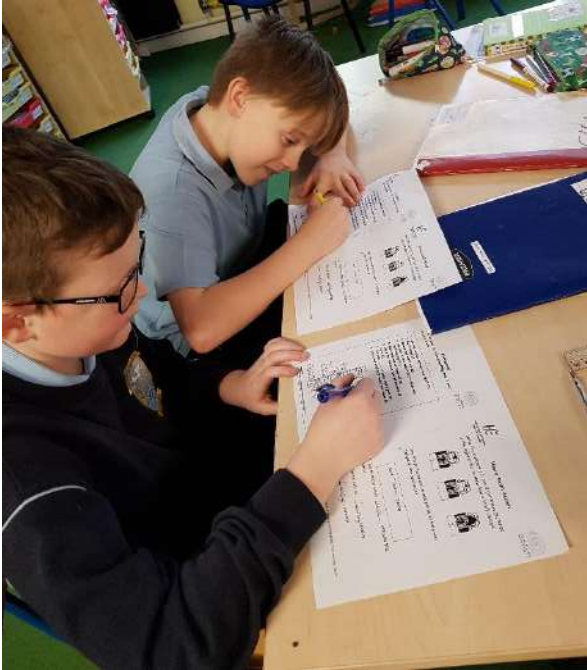
4th class - Ms Kearney - Sugar experiment

- We did a sugar experiment with Ms. Kearney and Hannah last week to see how much sugar was in each type of food. Before the experiment Hannah went through a PowerPoint with us on healthy eating. We then looked at sugars in different foods. Some have low sugar and some have a high amount of sugar.
- We looked at the information on food packaging and used a weighing scales to weigh out the amount of sugar that was in each food item. This meant that we could actually see the amount of sugar and then compare items.
- Most of them were very sugary, the items that were included were a yogurt, small can of beans, a box of Mr. Kipling cakes, mini eggs bag, hot chocolate, can of seven up and more.
- The item with the most sugar was the mini eggs which had 56g of sugar!
- You should eat 6/7 servings of fruit a day. Fruit and veg have sugar but it's a good type of sugar.
- Did you know, last year water was on the bottom of the food pyramid, you should have 8 glasses of water a day.



Teeth - Living Things - 4th Class

- The 4th classes studied the importance of our teeth for speech and eating.
- We learned about the different types of teeth and their function
- We studied the structure of the tooth
- We discussed good oral hygiene and used disclosing tablets at home to see how good our teeth brushing was
- We explored foods that were good & bad for our teeth.



Living Things

Ms Finlay's 5th Class

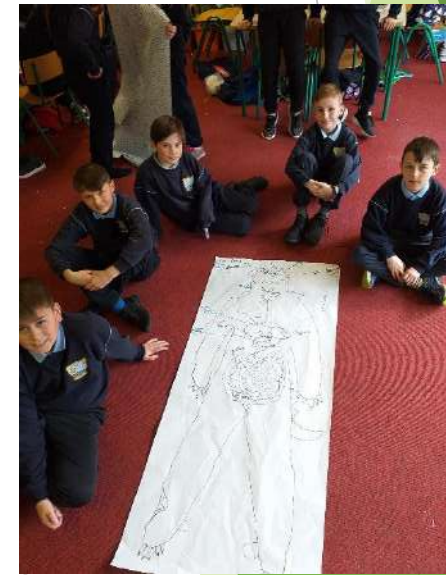
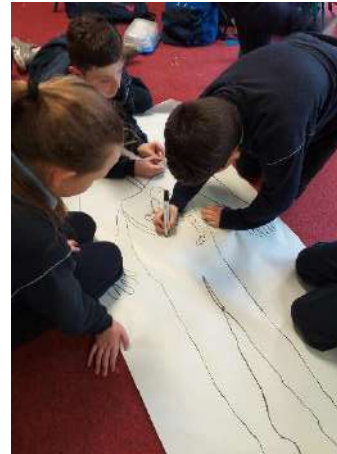
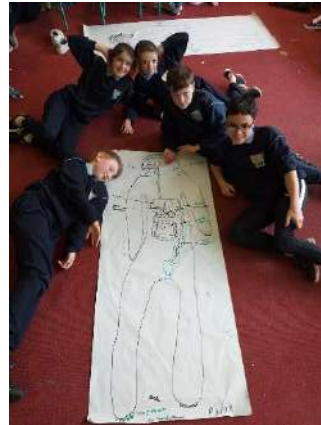
As part of our Literacy and Science lesson we researched and presented projects on bats. Some people presented their projects using the IWB and some people did their reports on paper. We had fun researching and learnt lots of new and exciting information about these wonderful creatures!!



Human Digestive System

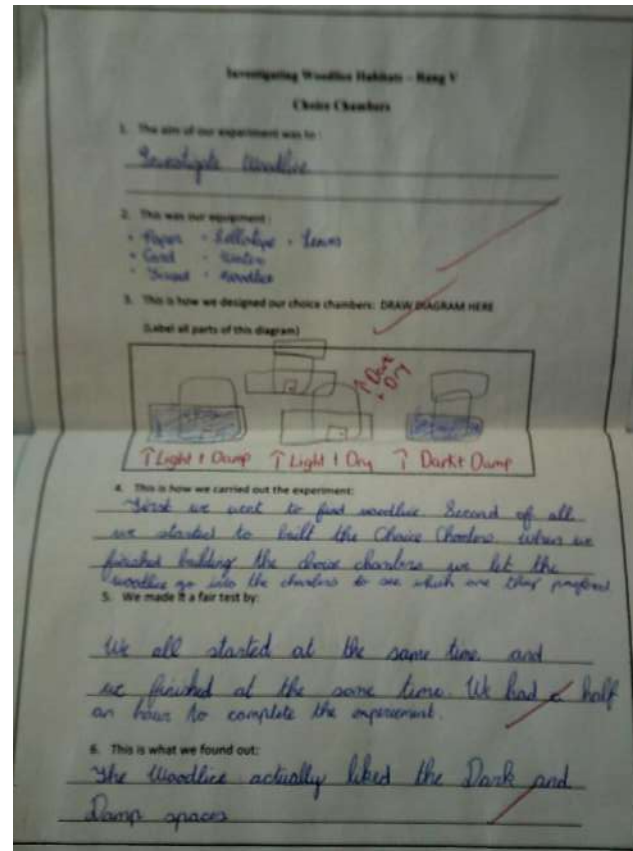
5th Class - Ms McGuinness

We read about and answered questions on the human digestive system. We cut out and stuck a labelled diagram into our SESE copies. We also completed an interactive activity on the whiteboard to test our knowledge. Ms. McGuinness brought in wrapping paper and we created life-size diagrams of the digestive system. One person from each of the five groups volunteered to have their body traced on the wrapping paper. We then worked together to draw and label our digestive system!



Investigating Woodlice Habitats

5th Class - Ms Finlay and Mr Corcoran



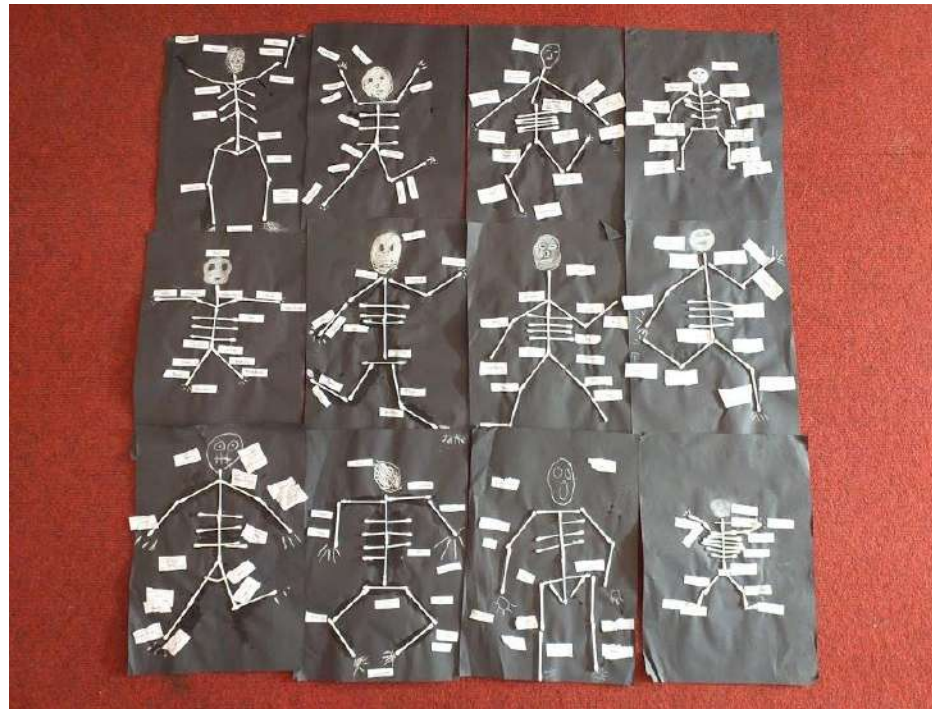
Skeletons

By 5th Class Ms Mc Guinness

First, we used the iPads to research facts about the skeleton. For example, did you know that you had less bones when you were a baby than you will have when you're an adult? Adults have 206 bones altogether in their bodies!

Then we looked at a PowerPoint presentation on the IWB and recorded some more facts in our SESE copies.

Finally, we integrated our learning with a Visual Arts lesson. We made skeletons with cotton buds, glue and chalk.! It was great fun



5th Class - Mr Lynch

Our Fingerprint Experiment

Method

Step 1 we coloured a dark square with a pencil in the back of our copy

Step 2 we rubbed our finger on the dark square to make are fingers black

Step 3 we put Cellotape on are fingers and stuck it in a piece of paper.

Facts:

- 1. Fingerprints are used for solving crimes**
- 2. Everyone has a different fingerprint**
- 3. When you spend too long in the water your fingers get lines all over them.**

My fingerprint

My fingerprint is called a loop. The other types of fingerprints are an arch, a tented arch and a whorl.

By Jessica Richardson

Energy and Forces

5th Class - Ms Finlay and Mr Corcoran

Gravity Experiment

We learned about gravity, air resistance and mass in our class today. Our teacher asked us to design parachutes using different materials such as newspaper plastic and tissue paper, to reduce the effect of gravity. We had to design the experiments with three fair tests:

Dropping from the same height

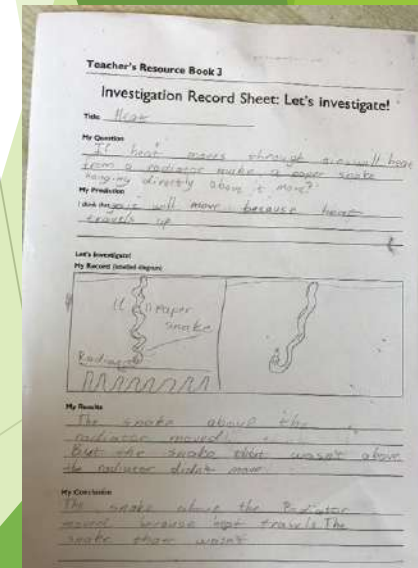
Same size of material used

Same weight on each parachute.



Energy and Forces 3rd Class

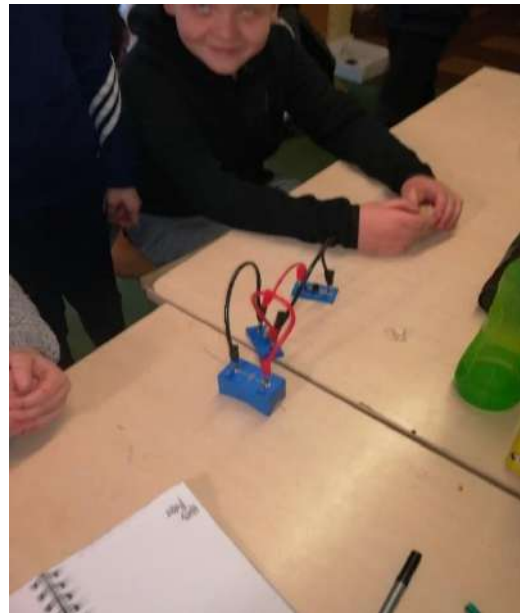
- ▶ Mr. Kavanagh's 3rd class students combined Art and science in an experiment to examine how heat moves through air.
- ▶ Firstly, the students were given a template of a paper snake which they coloured and cut out.
- ▶ The students then attached these snakes to the ceiling above the classroom radiators and observed that the snakes moved by an increasing amount as the temperature from the radiators rose throughout the day.
- ▶ In order to determine whether this was solely in account of the heat coming from the radiator, students thought up a control condition where another paper snake was hung from an area in the room with no direct heat source.
- ▶ It was clearly observable that the snake in the control condition, with no direct heat source, did not move at all.
- ▶ This proved that the heat radiating from the radiator was responsible for the movement of the paper snake in the test condition.



Energy & Forces - Electricity

Mrs Carroll - 4th Class

- ▶ This week we were working on electricity.
- ▶ We learned about all the different types of electricity. We know the difference between static electricity and current electricity. We chatted about all the ways in which we use electricity in school and at home.
- ▶ Teacher organised groups and gave each group a battery, two wires and a bulb. She have us the task of trying to make the bulb light. By placing a wire at each end of the battery and the other ends on the bulb we were able to make the bulb light. This happened because the electric current flowed from battery through wires to the bulb. We know that this is called a circuit.
- ▶ To challenge us we were then given a switch. This switch makes a gap or closes a gap in the circuit. When we put that into our circuit, we were able to turn our light on and off.



Energy & Forces - Sound 4th Class - Ms McGovern



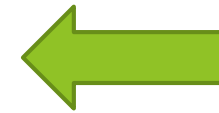
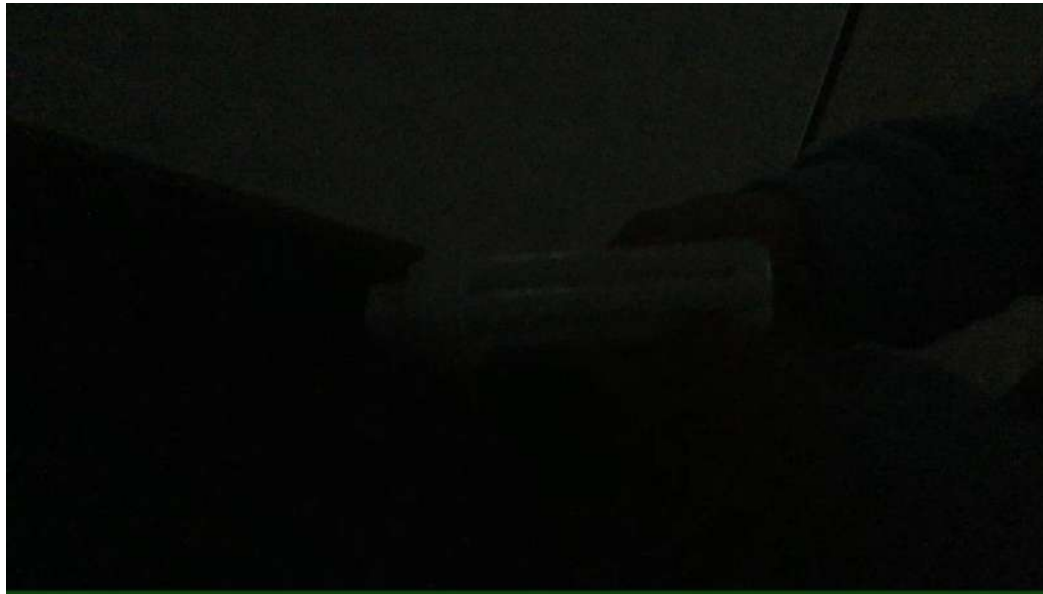
Write a paragraph about what you have learned about sound.

While learning about sound we have done many different experiments. First we learned about vibration. Vibration is when air passes through our vocal cords causing them to vibrate. Then we learned about what air passes through best. We thought air travels best through air or solid materials. Lastly we learned about the pitch of something. We learned that pitch is to do with the volume of something. There could be a high pitch and a low pitch. Over all ~~my~~ I most enjoyed learning about what sound travels through.



Energy and Forces 6th class - Mrs Doak

Using static electricity to light a fluorescent light bulb!
Hannah rubbed a balloon against Jack's hair. The build up of electricity charge on the balloon enabled a fluorescent bulb to light up!!



Hover over video
and press play

Energy and Forces - Mrs Doak - 6th class

Hannah and Zuzanna created static electricity



Kevin creates a simple circuit.



Jack designs a castle with pulleys and its own lighting



Eoghan demonstrates 'Forces' - 6th class

Mrs Doak



I put a straw into a raw potato but I couldn't pierce the straw all the way through. Then I placed my thumb over the hole at the top end of the straw and tried to pierce through the potato again. This time the straw went all the way through! This is because when I placed my thumb at the top of the straw, the air became trapped which made the force stronger and therefore I exerted more power when I tried to get the straw through the potato for the second time.

By Eoghan Flanagan-Healy

Materials

Volcanoes by 5th Class (Ms. Mc Guinness & Mr. Lynch)

First, we looked at PowerPoints and videos on volcanoes. Then, we used the iPads to research some of the most dangerous volcanoes in the world. We recorded the information in our SESE copies. Next, we integrated our Science with Visual Arts and constructed our own volcanoes by paper-maching some plastic bottles. We stuck these to a cardboard base and painted them using brown and green paint. Finally, we carried out a chemical reaction; we poured distilled vinegar and baking soda into the bottles and watched as the 'lava' flowed out of the crater.



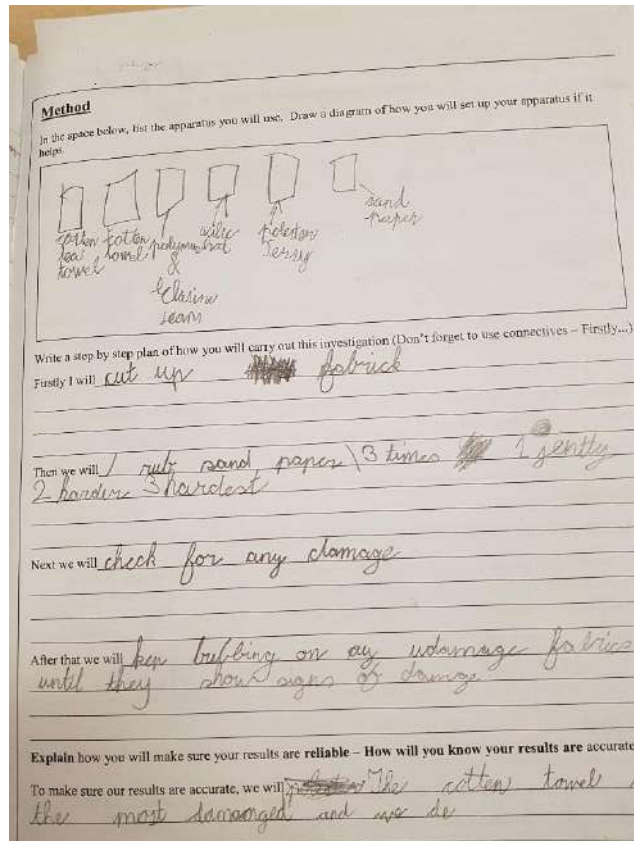
Materials - Properties & Characteristics

Ms McGovern - 4th Class

During Science week we completed a unit of work on the properties of Materials. For each investigation we made predictions and discussed how we would make them a fair test.

1. We tested the durability of different fabrics by rubbing them with sandpaper

2. We investigated which materials were absorbent/waterproof.



3. We investigated which materials were best at insulating water.



4. We tested different materials to see whether they were soluble/insoluble.



Soluble or Insoluble? Name: Heena

Do these solids dissolve in water?

Examine each cup after each step. Put one of the following in the box each time. $\checkmark$, $\frac{1}{2}$, X

Solid	After adding one spoon	After stirring 3 times	After adding hot water	After stirring 3 times again
Coffee	yes	yes	yes	yes
Rice	no	no	no	no
Flour	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Sugar	yes	yes	yes	yes
Washing powder	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

What does soluble mean?
It means that it dissolves

What does Insoluble mean?
It means it won't dissolve

Write the solids you tested in the correct box

Soluble	Insoluble
Coffee Sugar	Rice Flour Washing powder

Materials

Materials and Change by 6th Class (Ms. Coyle)

As part of our Science lesson, we investigated how to produce of a gas called carbon dioxide which is also known as Co2 in the science world.



Materials

Materials and Change by 6th Class (Ms. Coyle)

Some of us realised we could blow up a balloon with this gas! We had fun investigating this which you can see from the pictures. We learnt lots of new information about carbon dioxide and didn't realise how much it is used!



[illegible]

Test 1 : I had coke and mentos , I poured the coke into the glass and dropped mentos in and the coke fizzed up.

Test 3 : I had an empty plastic bottle. I put hot water into the bottle and added a pack of yeast. I also had to add a tablespoon of sugar. I put a balloon over the bottle and it started to blow up a bit.

Those were all of my tests. I enjoyed taking part and it was very fun. I learned a lot.

Sergiu conducts a Chromatography experiment - Mrs Doak's 6th Class

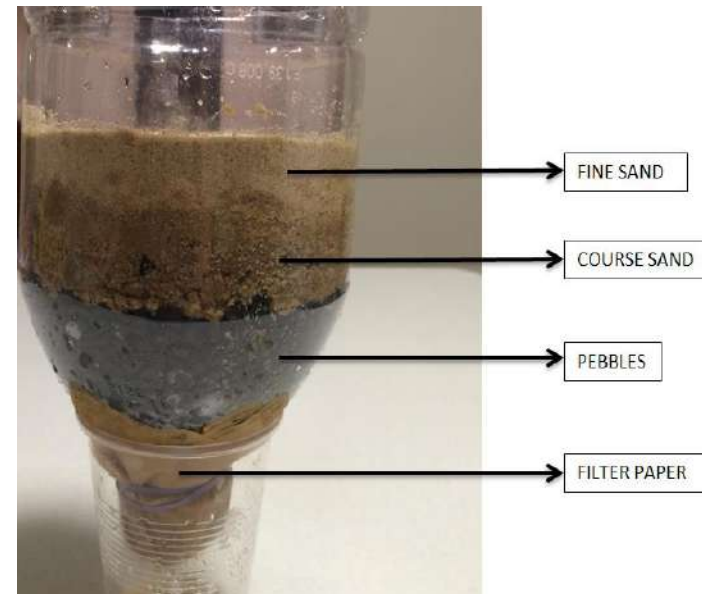
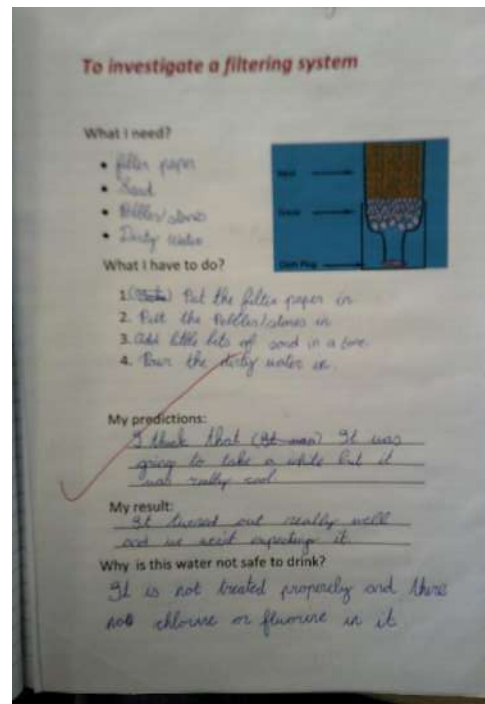


Sergiu added blue food colouring to a water filled vase and put white flowers into the vase for 5 days. The flower petals turned blue. The blue food colouring was separated from the water through a process known as chromatography.

Environmental Awareness and Care

Water filter Experiment

5th Class - Ms Finlay



Environmental Awareness & Care - Mrs Doak's 6th Class

Beach Walk by Zuzanna

Ms Doak's 6th class went to Laytown Beach for a walk. We split into groups and went looking for specific animals, plants, shells and rubbish. We took the iPads and took photos of what we found. We couldn't believe how much rubbish there was!! We examined erosion on the beach and collected rubbish (plastic in particular) as this causes a lot of damage to local animals and is very ugly. All in all this was a very productive exercise.



MRS DOAK'S 6TH CLASS ON LAYTOWN BEACH

Environmental Awareness & Care - Mrs Doak's 6th Class



Examples of rubbish,
plant life, beach
erosion and a beautiful
shell discovered on the
6th class beach walk in
Laytown

Space Week -October 2018



Cormac and Adrian



Adrian's mission patch for Eirsat-1

Mrs Doak's 6th Class took part in Space Week. We are Adrian Shestakovs and Cormac Lynch from the class. We were literally over the moon to announce that Adrian was the overall winner as designer of the mission patch for the first ever Irish satellite, Eirsat-1. Cormac was also highly commended for his design. Eirsat-1 will be launched in to space in the year 2020 from the ISS (International Space Station). It will go into space, carrying Adrian's mission patch. As the winners of the competition, the class also got to interview an space speaker from the Blackrock Observatory for 45mins in January, live via Skype on our class interactive whiteboard! We are all so delighted to be part of Irish space history!!!

Science Visit - Science Blast at the RDS- Mrs. Doak's 6th Class



On March 6th we took part in the Science Blast exhibition at the RDS in Dublin. Our project was entitled: 'Can we use methods alternative to fossil fuels to power everyday transport'? We had worked very hard in preparation for the exhibition; researching, collecting and analysing data and building our own mini prototypes that can run on renewable energy. It was difficult not to become really passionate about our planet and the dangers of climate change. We were so happy to receive our trophy at the end of the day



Science Visit - Trinity College - Mr. Hayes' and Ms. Coyle's 6th Classes

During Engineering Week our classes got an amazing opportunity to visit Trinity College in Dublin. We travelled to the university by bus and were greeted by engineers from the science department. They taught us a bit about ovens they had engineered in developing countries like Malawi and then we moved on to make some solar powered ovens of our own. The ovens were super fun to make and required us to think as engineers.



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STEP 2

TECHNOLOGY

Examples of Technology Used in the School

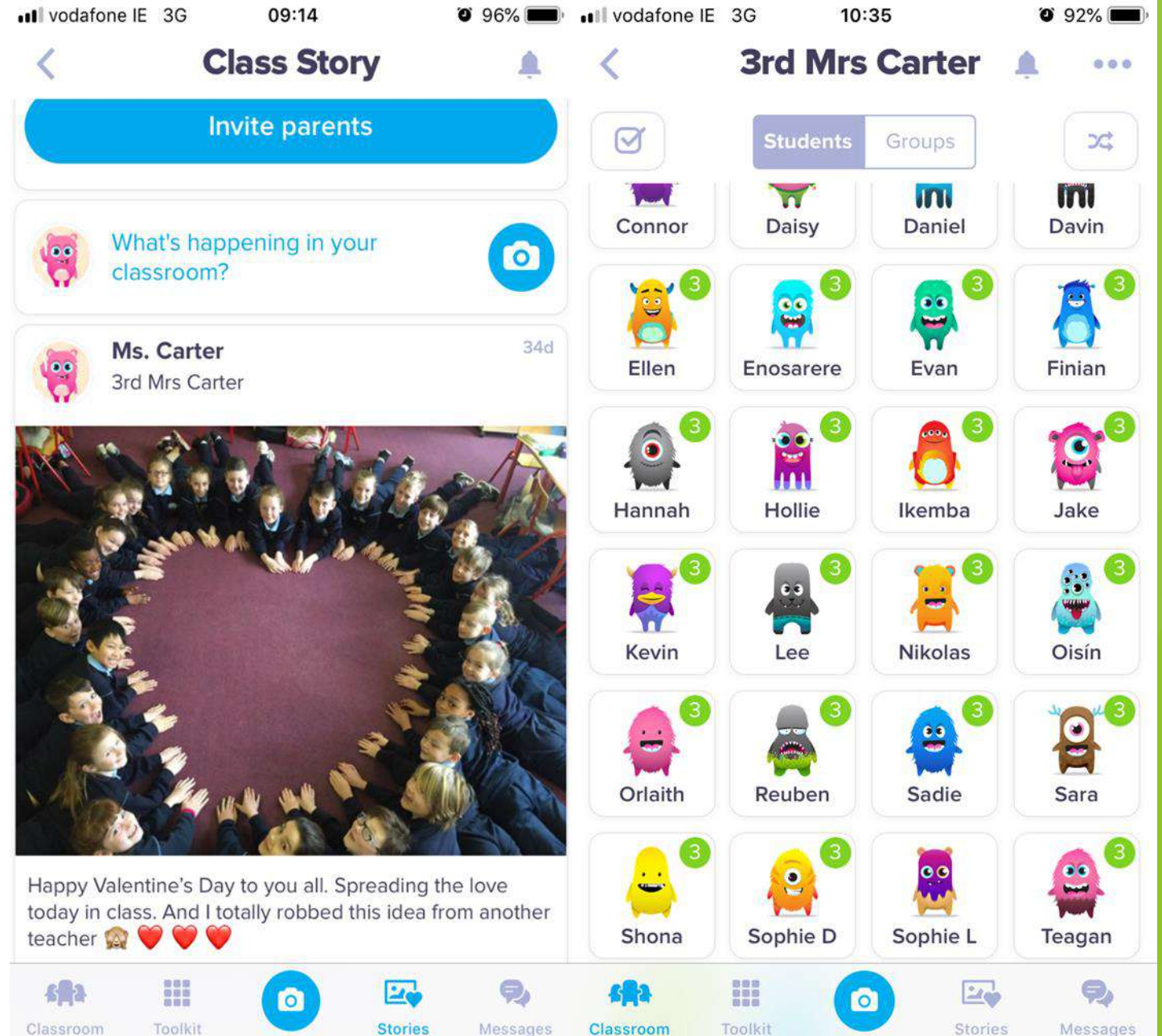
- ▶ Mrs Carter 3rd Class- iPads
- ▶ We have been using the iPads in our class to research information on Spiders and how they weave their webs. This is for our Explanation Writing piece in English this week. We were able to research fun facts about spiders, look at cool (or creepy for some) pictures of spiders and learn how spiders use the silk within their bodies to spin webs to catch prey. It was really interesting. The iPads really help us in being able to look up something quickly and safely in our classroom



► Class Dojo

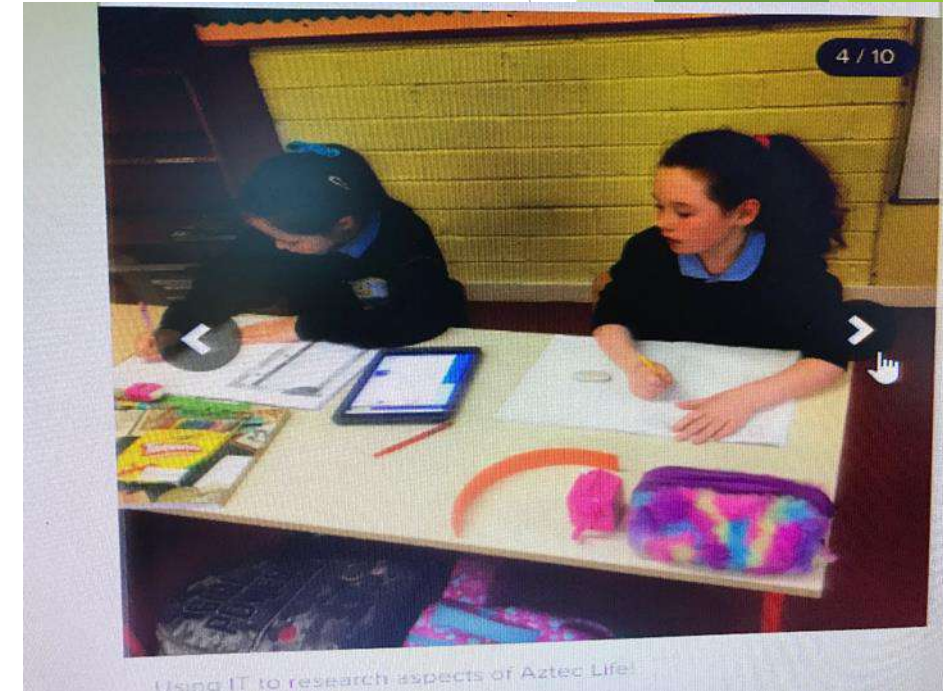
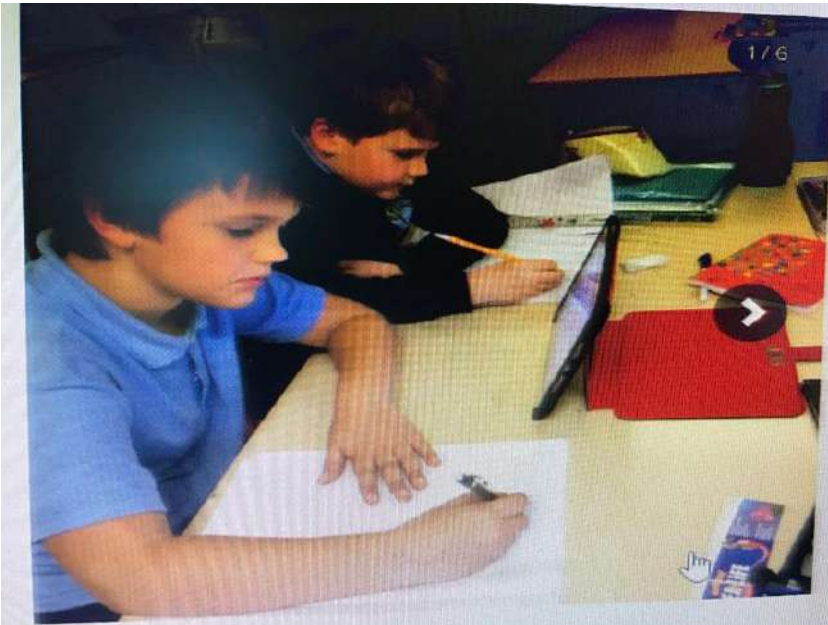
- We use Class dojo in our classroom for when we are being good and doing well. We get points for having homework done, having manners and not reaching any steps. Our parents can see what we get points for too. Our teacher can communicate with our parents about important things and can also send pictures of what we are doing on Class Story. We really like it.

► Mrs Carters 3rd



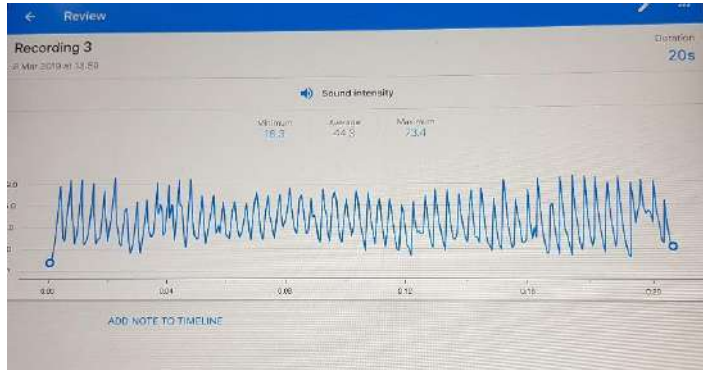
Use of IT in Researching The Aztecs (Mr. Kavanagh)

The students in Mr. Kavanagh's 3rd class used iPads to research various aspects of Aztec life such as warfare, religion, food and school. The students recorded their findings in their SESE copies and then shared the information with all of the other 3rd class students. Photographs of the process and work samples were shared with parents using ClassDojo and in-class with their 3rd-class peers.

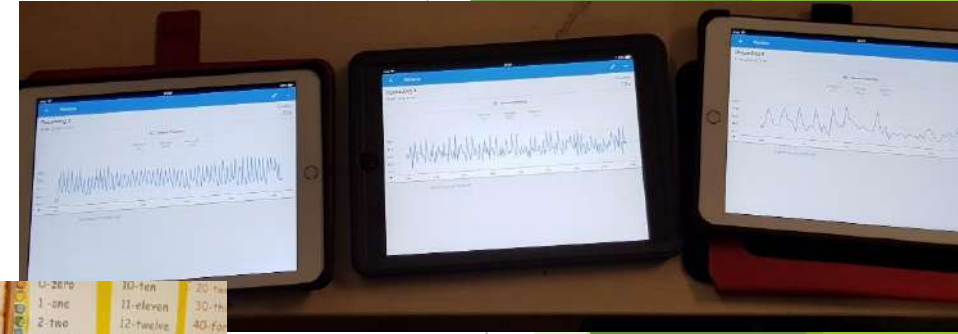


Ipads & Sound - 4th Class (Ms. Mc Govern)

We designed and made musical instruments in groups. We then had great fun recording to see which group could make the highest decibel reading using the Science Journal app on the Ipads



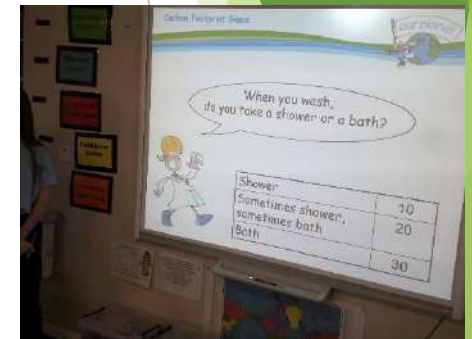
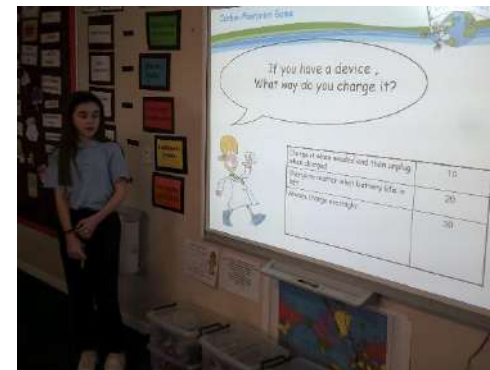
Hover over video
below and press play



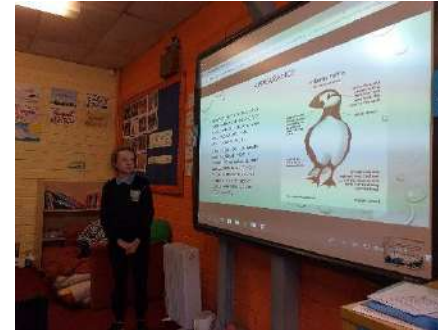
Technology 5th Class – Ms Finlay

We learned about our carbon footprint in 5th Class and the need to reduce our use of electricity and fossil fuels in our daily life.

We all thought of questions related to this and put them into a PowerPoint quiz game to discover what our own carbon footprint was. Georgia and Layla hosted the quiz on our class IWB. Some of us were shocked by our own results!!



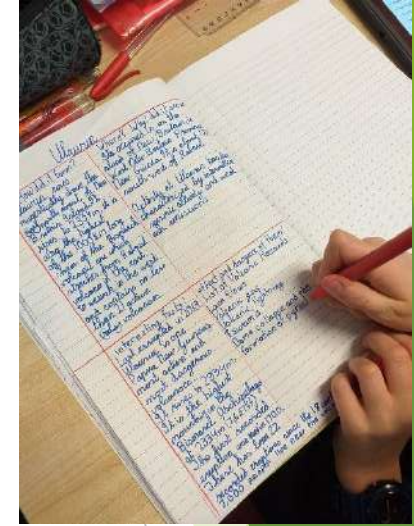
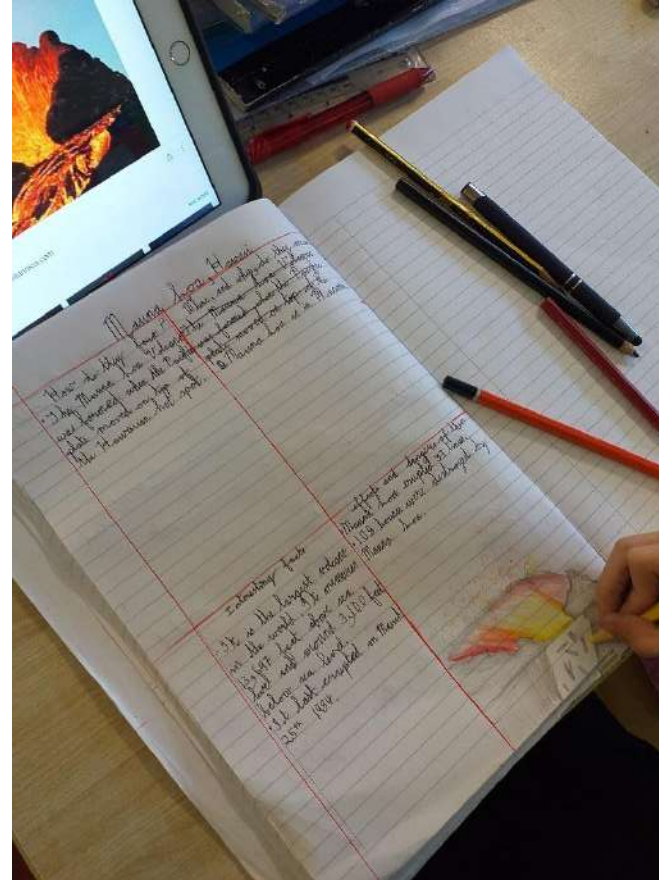
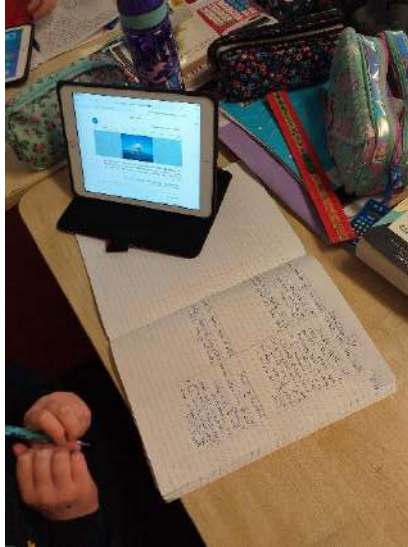
Technology 5th Class – Ms Mc Guinness



Creating and presenting our Polar Animal Projects using ICT

Technology - 5th Class

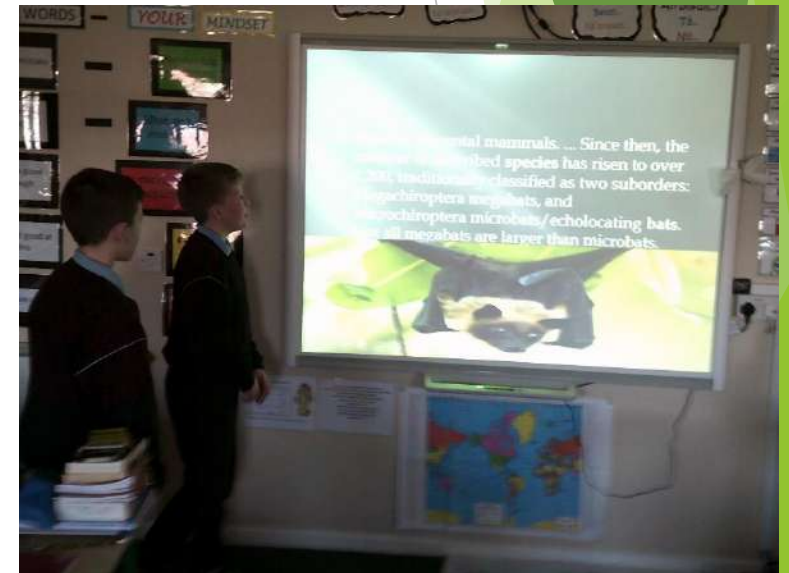
Using ICT to help us research
Volcanoes



Technology - 5th Class

As part of our Literacy and Science lesson we researched and presented projects on bats. Some people presented their projects using the IWB and some people did their reports on paper. We had fun researching and learnt lots of new and exciting information about these wonderful creatures!!

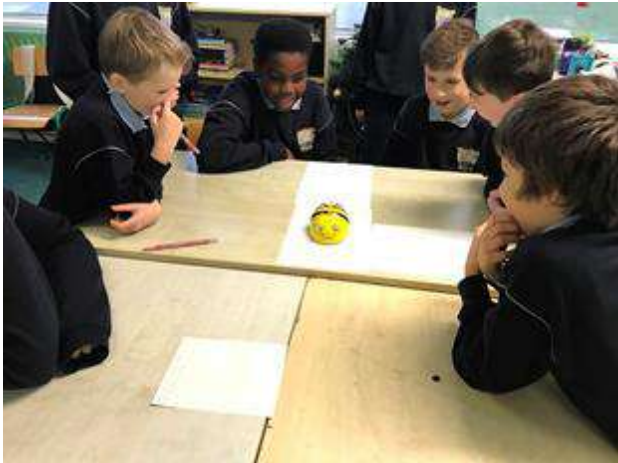
5th Class (Ms. Finlay)



Technology 6th Class (Mrs. Doak)

We were very fortunate recently to experience work and play with 'Beebots' and 'Lego Wedo '. A lot of fun was had as we explored mathematical concepts whilst also integrating with the digital technologies aspect of our STEM curriculum. Beebots are floor robots that move in different directions following human commands.

We also loved working with Lego Wedo 2.0. This resource combines traditional Lego bricks with motion sensors and software. We collaborated on various moving design projects. Developing skills across art and design, mathematics, science, coding and engineering. We are very grateful to Navan Education Centre who facilitated the loan of this equipment to our school. Mrs Doak's 6th Class



Luke, Divine, Joris, Joshua & Kevin from Mrs Doak's 6th class programme a Beebot



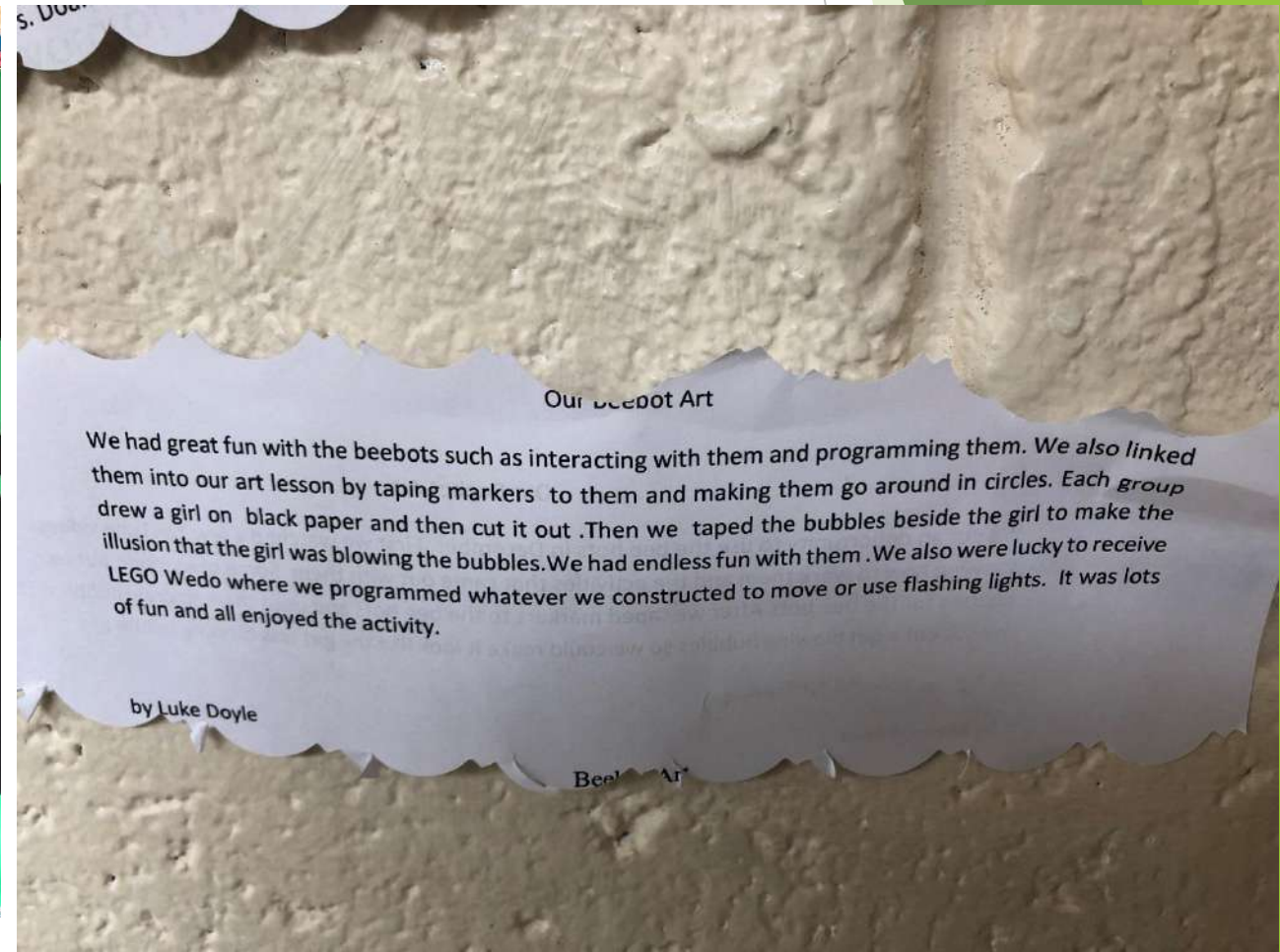
Adrian, Shannon & Zuzanna from Mrs Doak's class design and code a 'Milo' with Lego Wedo



Coding with Lego Wedo 2.0

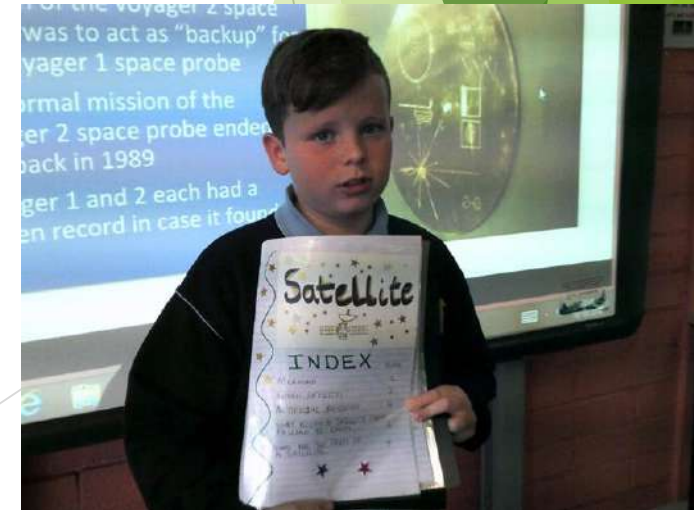
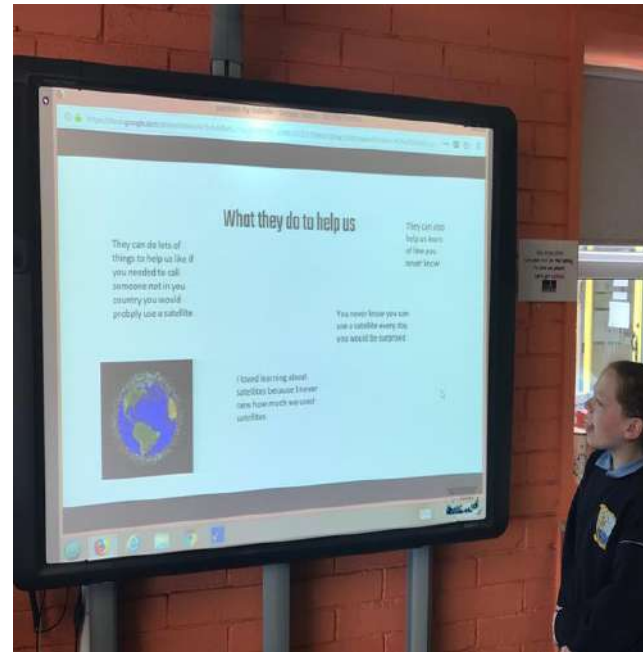
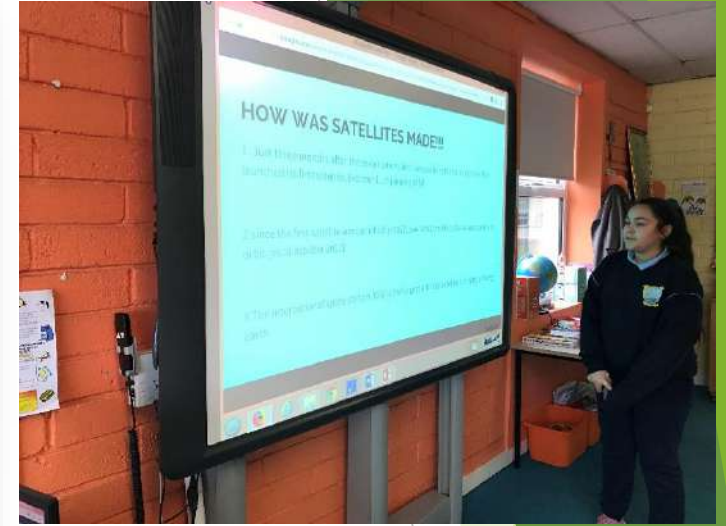
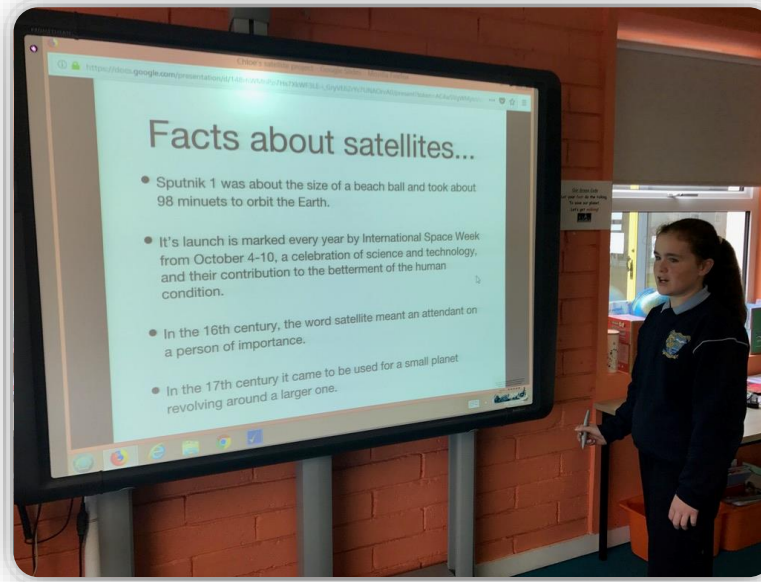
6th Class Beebot Art (Mrs. Doak)

Using Beebots to help with an Art Lesson



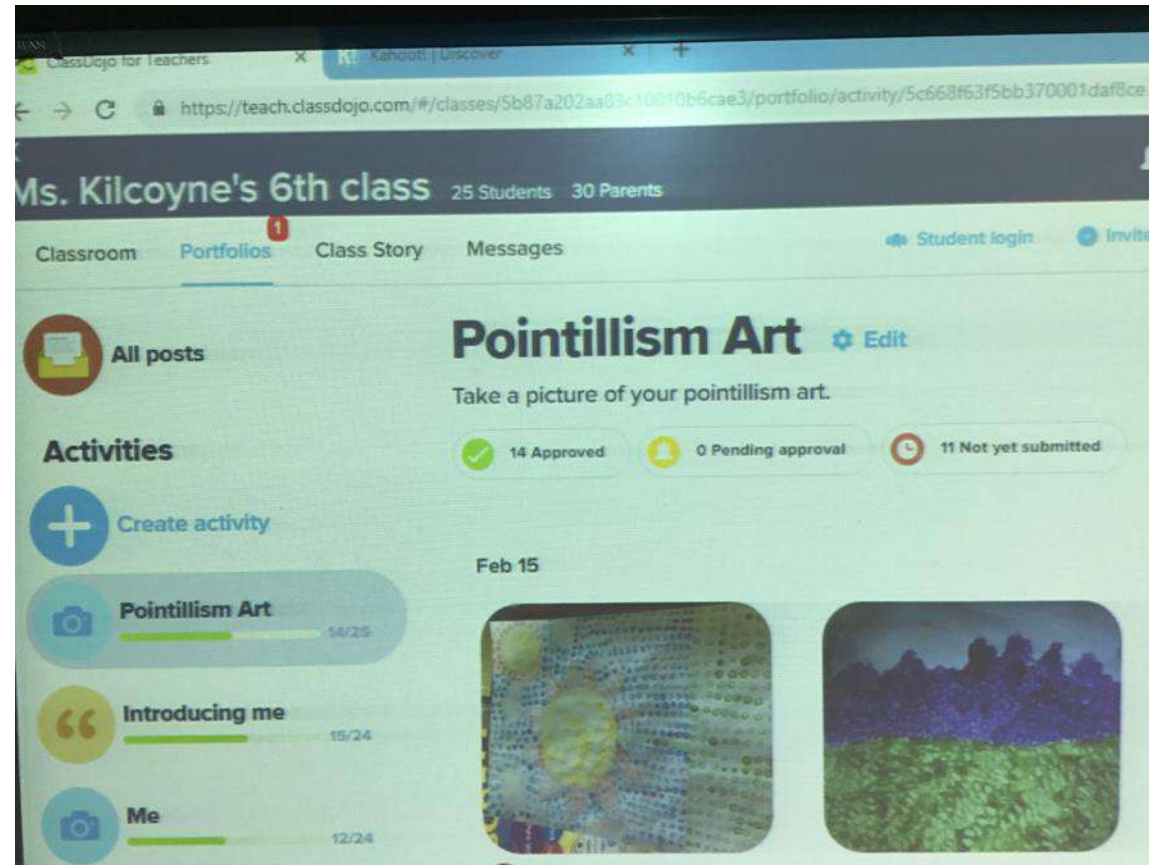
Mrs Doak's 6th class
made Powerpoints
about Satellites and

presented them on
our class interactive
whiteboard.



Online Portfolios

In Ms. Kilcoyne's 6th class, we use the Ipad's to assess our own work using Student Portfolios on Class Dojo. Here is a sample of the art we completed and uploaded to our portfolios.



Technology - Mr. Hayes' 6th Class - ZOETROPE



Zoetrope is one of several pre-film animation devices.

Step 1: cut out a circle using cardboard as your material and use scissors or a box cutter to cut out the shape.

Step 2: cover the circle with white paper and make sure it's flat.

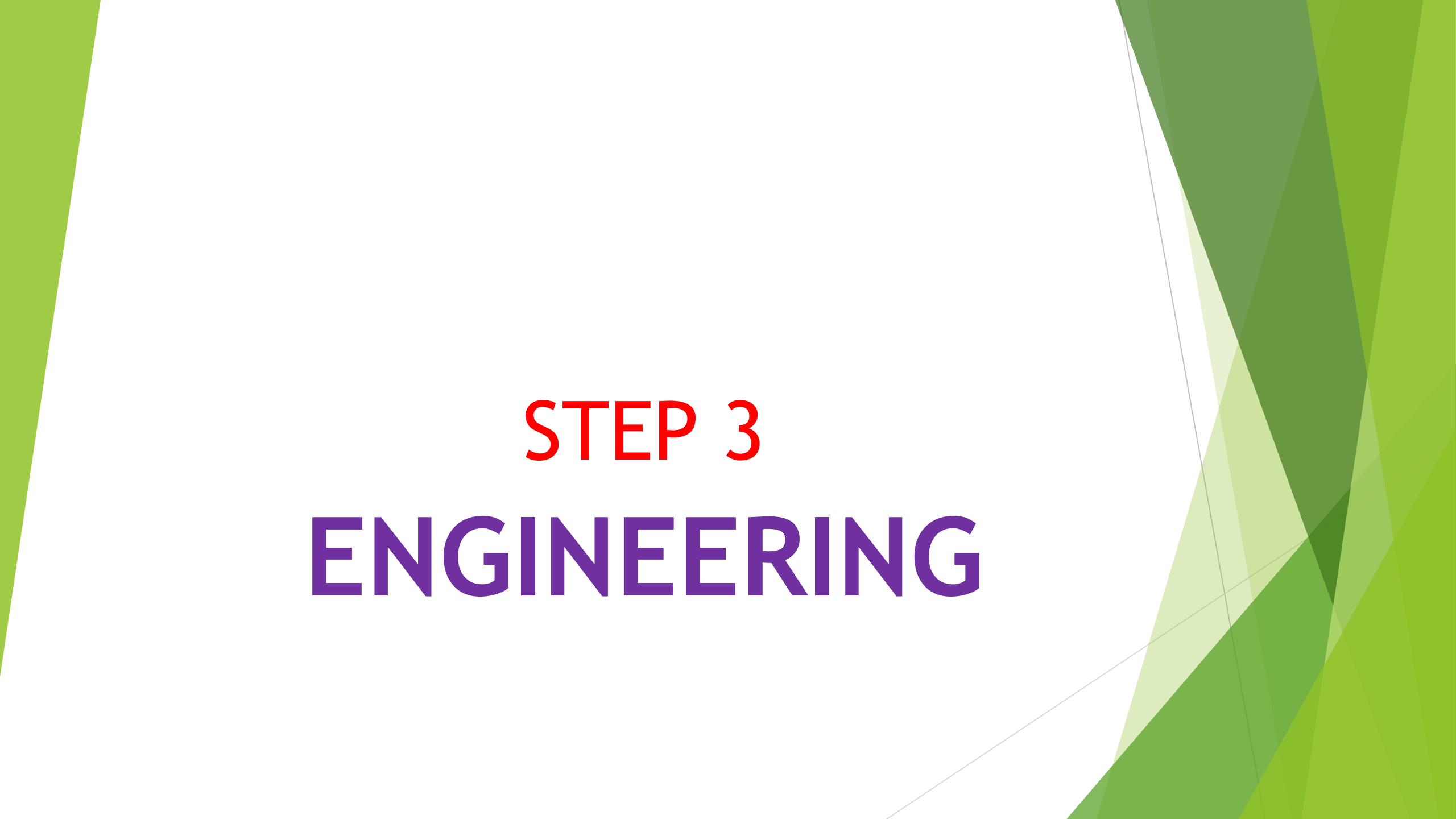
Step 3: stick the circle made from paper on the cardboard circle.

Step 4: cut about a square out of the huge bit of cardboard.

Step 5: cut out small square in the big square, this will show the pictures when you spin the wheel.

Step 6: get your circle and draw a simple drawing you need to draw little movements for each picture.

by Millicent G and Rheydine D

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic feel. The shapes are concentrated on the left and right sides, framing the central text.

STEP 3

ENGINEERING

Engineering- Réaltaí (ASD)



Helicopters

We constructed helicopters out of paper card. We followed the instructions carefully.

When finished we went outside to fly them. We let them fly from different positions to see which one was the best.

Paper helicopters spin gracefully as they fall slowly through the air.

Engineering- Réaltaí (ASD)



Getting the helicopter to spin ...

We discovered that when the paper helicopter falls, air pushes up against the blades, bending them up just a little.

When air pushes upward on the slanted blade, some of that thrust becomes a sideways, or horizontal, push.

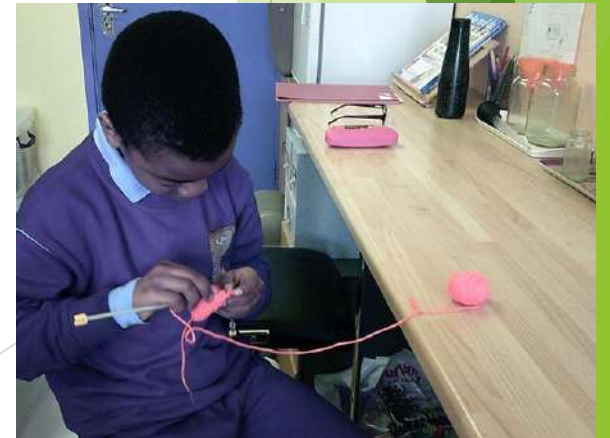
The two paper blades are each getting the same push, but in opposite directions. The two opposing thrusts work together to cause the paper helicopter to spin.

Design and Make Activities

Knitting

We have been knitting with Ms Cahill in the mornings. We have designed Halloween decorations, Christmas decorations and now we are designing and making a bunny rabbit for Easter. We really enjoying going to the kitchen and knitting.

Daniel and Ikemba (3rd Class, Mrs Carter)

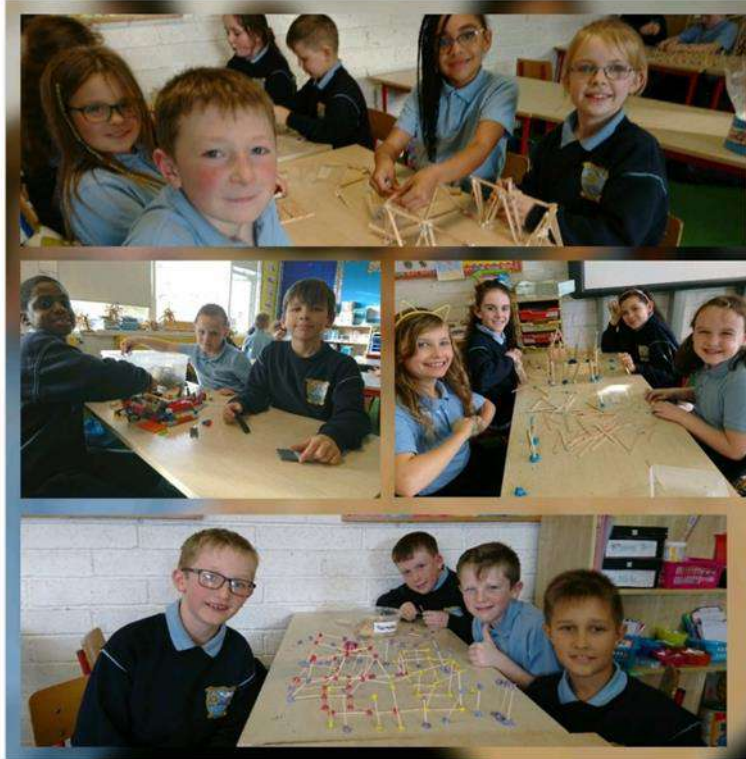


Design & Construction

As part of Science week, we engineered Aztec temples. We used a variety of materials such as lollipop sticks, straws, toothpicks and lego. We found that the lego was the most stable material, easily building a secure structure. We found it difficult to link the other materials together and experimented with playdough, sellotape, blutac. We had lots of fun!!!

Mrs Malone's 3rd Class

← Ms Malone's 3rd class



Lots of fun engineering our Aztec Temples over the past two days as part of our STEM activities for Science week.



→ Ms Malone's 3rd class



Lots of fun engineering our Aztec Temples over the past two days as part of our STEM activities for Science week.

4th Class - Bridges - Ms Carroll

- As a class we have been studying bridges. We learned about 3 famous bridges: Sydney Harbour Bridge, Golden Gate Bridge and London Bridge
- We looked at the design, the supports and suspensions of the bridge. And we looked at what the bridges were used for.
- We then began to sketch designs for our own bridges and gather materials to construct them.
- We collected toilet paper holders, plastic bottles, straws, cardboard boxes, cotton buds bun case holders and milk cartons.
- We used string and cello tape to hold bridges together.
- To test our bridges we used toy cars to check how stable our bridges were



The result were 6 totally stable bridges!!!!!!



Ms. Mc Govern's 4th Class -Castles

As part of our History, we studied the Normans and the design of their castles. We then Engineered our own castles using different materials. Some used recycled materials and others used Lego.



More 4th Class Castles - Ms. Garry



Some of Ms. Garry's class explored the technological route and built their Norman castles using Minecraft.

We also used recycled materials to build Norman castles.



Norman castles that we built with Lego.

Engineer Visit to 4th Classes

From the 4th - 8th of March we celebrated Engineers week in Scoil an Spioraid Naoimh. As part of Engineers Week Eoghan Duggan, a chemical engineer visited some of the fourth classes. He spoke to us about the different types of engineering and how important they are in making the things we use every day. We then got to work like a chemical engineer and made elephant toothpaste, it was so fun. Fun Fact: He is Ms McGovern's Brother too!!! For safety and to keep everything clean we had to wear goggles and gloves and we covered the tables with bin bags and newspapers. He even bought Mrs McGovern a hazmat suit. We measured the correct amount of the chemicals using pipettes and graduated cylinders. When they were all mixed they created a brilliant colourful foam. It wasn't hard to tidy up the chemicals we just rolled up the bin bags and newspapers. We really enjoyed the visit.

James & Keeva - Ms McGovern's 4th Class





Some Videos of the Visit



Our Principal Ms Maguire questioned the class about their opinion on Science.



Hover over the videos and press play

Engineering 5th Class - Mr Corcoran

Today we were building a digital accessory with LEGO.

We made a device that can help and prevent neck pain and screen shattering.

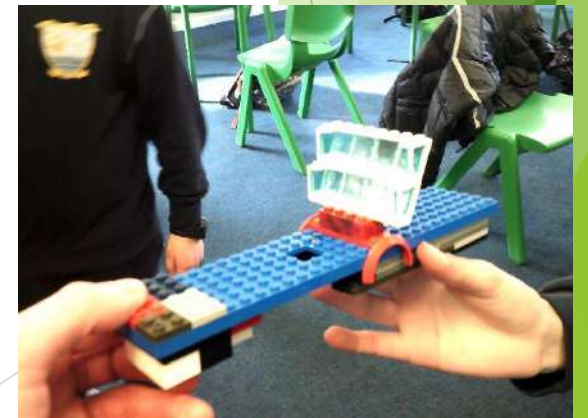
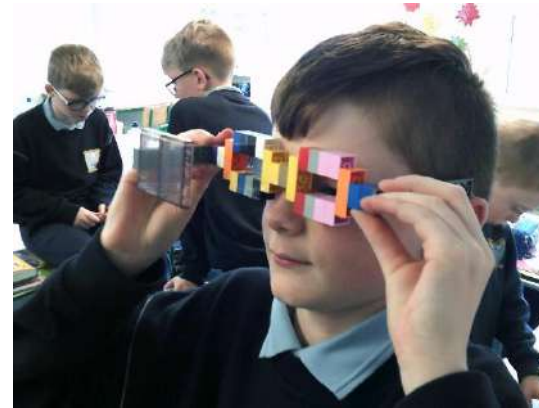
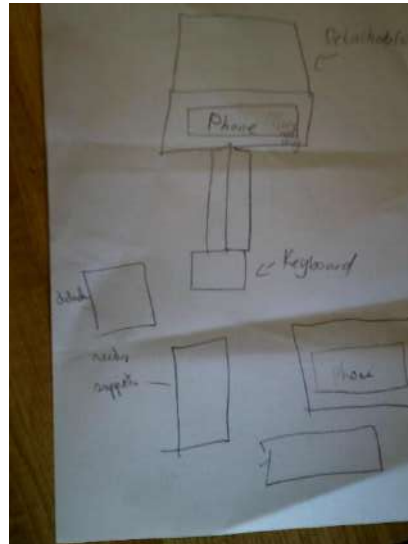
Firstly, we drew a diagram showing our ideas and then we turned the idea into LEGO.

Our group built a tall structure that holds the phone safely and in front of your face.

We have the keyboard attached to the bottom of the structure so you can type your messages etc.

When you want to put your phone away, carefully remove half of the structure and flip it so the phone is facing towards the other half of the structure.

ENJOY! 😊😊😊😊😊😊😊😊😊😊



Engineering - 5th & 6th - Design and Make Activities

Designing Parachutes

We learned about gravity, air resistance and mass in our class today. Our teacher asked us to design parachutes using different materials such as newspaper plastic and tissue paper, to reduce the effect of gravity. We had to design the experiments with three fair tests:

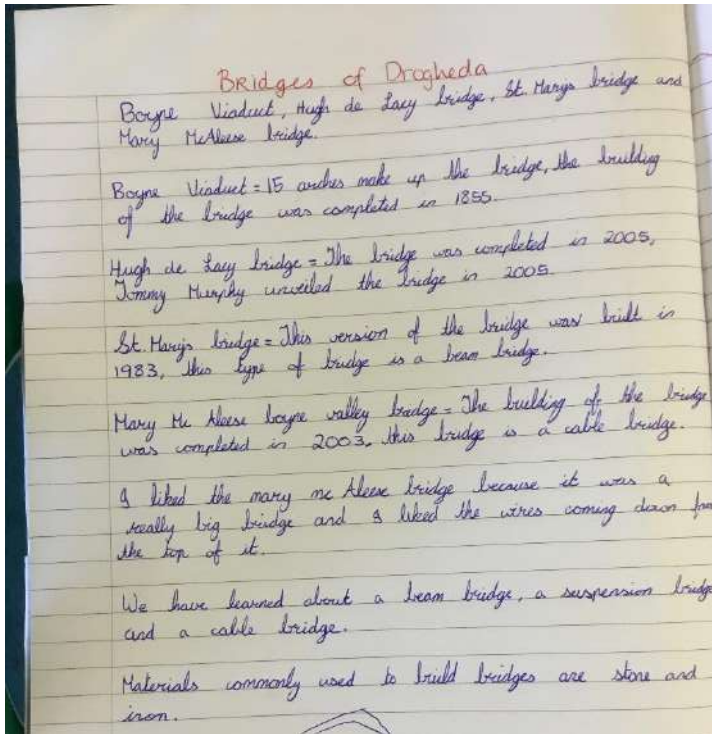
- Dropping from the same height
- Same size of material used
- Same weight on each parachute.



In Ms. Coyle's 6th class for the month of February, we learned about different forces. We decided to engineer parachutes as we found them very interesting. We all didn't use the same material or measure our parachute at the same size. Instead, some groups investigated the change in size of their parachute and the effect this would have while other groups changed the material and investigated the effect this would have. We used the following materials; string, newspaper, tinfoil, cling film, cloth and plastic. We found it quite difficult to engineer a parachute that would have a safe landing. We decided it would be best to bring them outside and let the wind do the talking. The best parachute glided along and safely landed on the grass (a large parachute made of plastic!). We had lots of discussion based on engineering a parachute and we really wanted to make a new one once we knew what would make the parachute land safely!



BRIDGES DAYTRIP - 6TH CLASSES



We had a great day out studying the bridges of Drogheda. We examined their structure, the materials used to build them and their history. We learned a lot that day and went back to school to build our own bridges!!!

We used our iPads to take photos of the bridges



The Boyne Viaduct Bridge, Drogheda



St. Mary's Bridge, Drogheda



The Hugh de Lacy Bridge, Drogheda



The Mary McAleese Cable Bridge

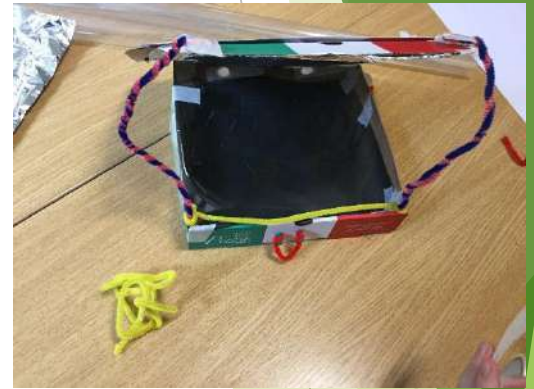
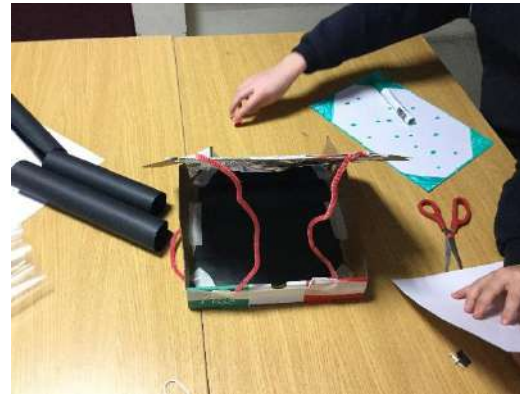
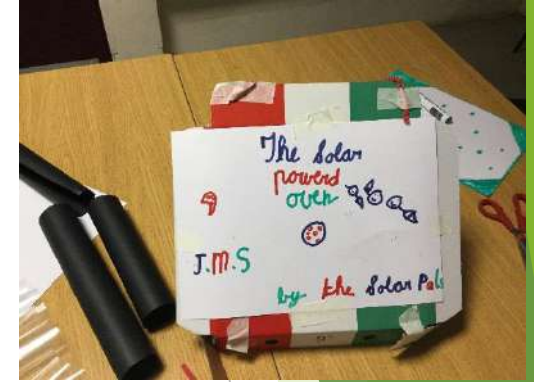
BRIDGES DAYTRIP - 6TH CLASSES (Mrs. Doak)

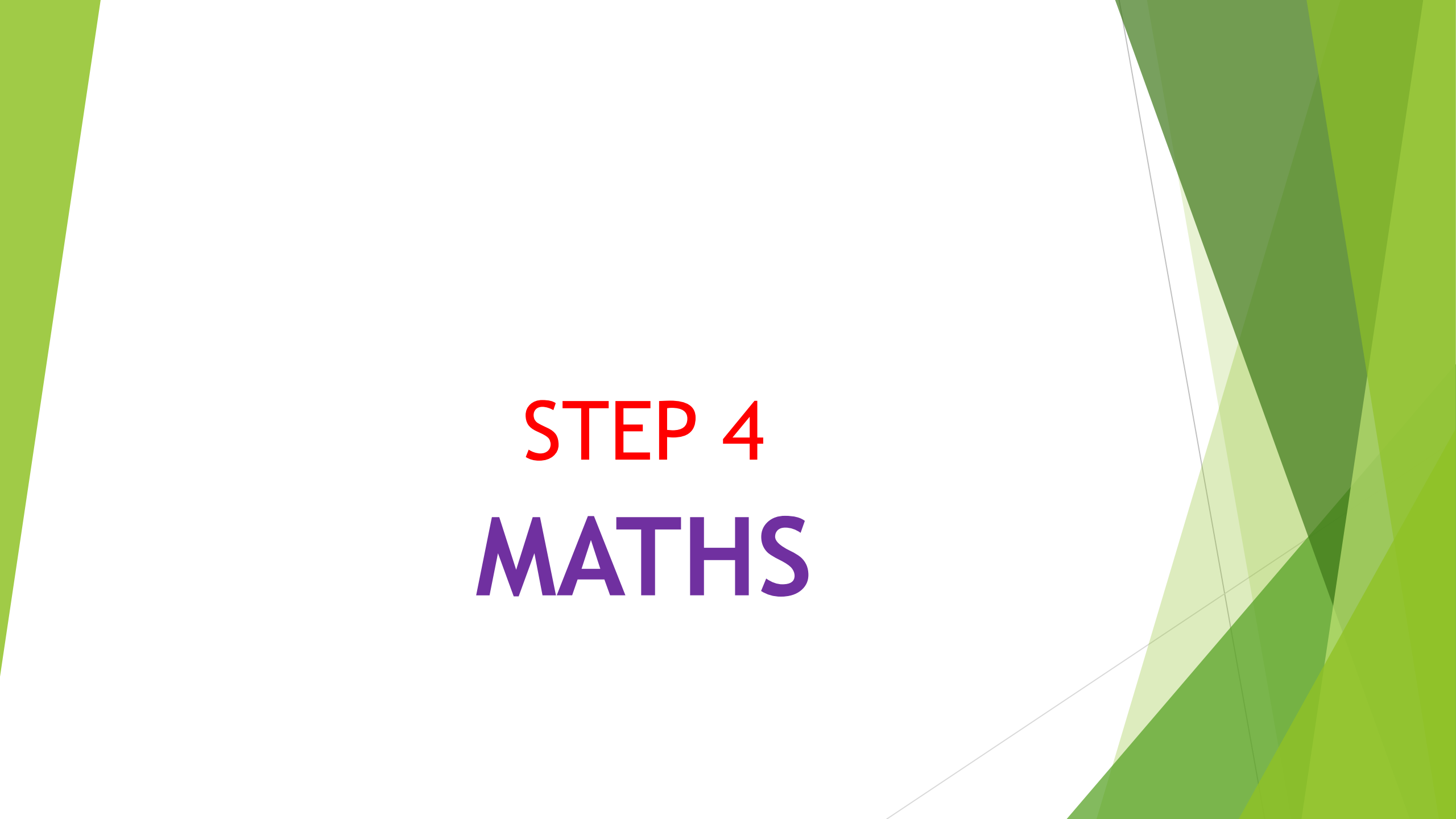


After our day out visiting the bridges of Drogheda, we completed our bridge worksheets and built our own bridges using recycled materials. Here is a photo of Jack and Adrian who built a replica of the Mary Mc Aleese Cable Bridge.

Engineering Week- Ms. Coyle's 6th Class

As Part of engineering week, Ms Coyle's class went to Trinity College. There was great excitement as we walked through the grounds and into an actual lecture hall. First, we listened to the researchers about how they made solar panel ovens for the people in Malawi as they desperately needed a cooking device that would require less power. We even looked at one that they actually made!! We were then split into groups and discussed how we would make our own solar powered oven using the materials provided (Pizza box, clingfilm, pipe cleaners, sellotape, black paper, markers, pins, tinfoil, glue) . We all designed and made our own versions of solar powered ovens and we plan to test them out this summer to melt chocolate.



The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic feel. The shapes are layered, with some appearing more prominent than others, and they extend towards the right and top edges of the frame.

STEP 4

MATHS



Mrs Gough's 3rd
Class doing
Maths Stations
on the topic of
time.



Maths Trails

Mrs Carter's 3rd Class did a Maths trail during Maths week. They worked in small groups together and tried to finish before other groups



Ms Garry's 4th Class

Who breathes faster?



4th Class - Ms Garry

- Keeping Fit : Measuring our breaths for 30 seconds prior to 1 minute vigorous activity , after 1 minute vigorous activity and repeated again.
- We tried to Identify whether girls breathe faster or slower than boys but didn't come up with accurate or definite results as there was such a variety.

Girls	Resting Rate	1 st time after exercise	2 nd Time after exercise	3 rd Time after exercise
Emilia	18	26	32	40
Karina	16	24	40	26
Egle	18	36	74	40
Catlin	24	29	52	44
Maria	16	60	70	64
Lucy	22	23	44	38
Grace	12	19	38	26
Ilaria	24	18	22	24
Juliet	22	34	60	60
Ava	24	40	56	66

Boys	Resting Rate	1 st Time after exercise	2 nd Time after exercise	3 rd Time after exercise
Reuben	10	21	28	20
Sam	16	29	32	32
Rian	16	65	52	24
Riain	26	66	60	70
Leo	14	29	38	36
Ethan	24	21	38	34
Cormac	22	27	40	52
Jamie	24	40	56	52
David	14	22	56	Did not do it
Brayden	26	35	94	102

- ▶ Athletics and Fitness Training - Figuring out Distance Speed and Time
- ▶ We ran 4 laps of the school and timed ourselves, we knew it was 1 km and we figured out how long it might take us to do 3km or 5km based on our speed over our original distance of 1 km.

Materials and Change: 4th Class Mrs. McAleer

► Demonstration activities

First we saw how solid could change to a liquid by melting a chocolate button on our hands.

We changed liquid water to a gas (steam) by boiling it in a kettle .

Then we 'caught' the steam (carefully) as it rose from the spout on a piece of acetate. It cooled enough to change back to a liquid.

Meanwhile some cool pops were melting from solid to liquid on the windowsill.

We modelled the behaviour of particles in solids liquids and gases as a class (each person was a particle!) Then we drew what the particles would look like

► Fair test

A lot of ice packs had gone missing in the school and we needed to bring ice to school matches instead. We wanted to know which container would be the best in which to transport it.

We came up with a testable question and decided which things we would keep the same and what we would change. We discussed the limits of our fair test.

► Question:

Which container will have the least amount of liquid water inside after a) 2 hours and b) one night?

► We kept the Same:

Number of ice cubes

Position of containers in room

► We changed:

The containers

► What we did:

We put 8 ice cubes into each container and labelled them A-F

We predicted which one we thought would be the best thermal insulator and so keep the ice solid for longest.

After **2 hours** we poured off the liquid water into a measuring cylinder and recorded the volume of water in millimetres and returned it to the container. Some containers had no liquid at this stage. We chose the smaller **graduated cylinder** because we thought it would be the best **measuring tool** for small volumes of liquid. We discussed the most appropriate **unit of measure** also. .

The next morning we again recorded the **volume** of liquid using our **maths measuring skills**. We **subtracted the time** (9.30a.m) from the time we started the investigation and worked out that 17 hours had passed. It was a good opportunity to practice working out **elapsed time** in a practical situation.

We were surprised by some of the results. The container that was best over a shorter time (2 hours) was not the best thermal insulator overnight. The most well-known brand of container did not keep the ice solid as well as one of the cheaper containers.

We labelled the containers with their results to share with the other 4th classes. We displayed our decisions on keeping the test fair on posters.

We enjoyed learning about the other classes investigations and explaining our own investigation.

Mrs. McAleer's 4th class turn solids into liquid ...



Maths

5th Class

Ms Finlay

Ms Finlay Gravity Test

We were learning about gravity on Earth and the fact that it is different on the moon and other planets. We found out that gravity on the moon is one-sixth of that on Earth.

We then recorded the weight of some everyday objects and then calculated what their weight would be on the moon. Here are some of our results.

Object	Weight on Earth	Weight on the Moon
Book	433g	72g
Pen	12g	2g
Pencil Case	292g	48g
Glue Stick	30g	5g
Tin Whistle	15g	2g



Maths

5th Class - Ms Finlay

Measuring and recording Classroom Furniture Area and Perimeter



Maths

Mr Corcoran – 5th Class

Today we were measuring distances doing two and one footed long jumps.

We were put in groups of four and each of us got three turns of each type of jump.

We drew a chart in our maths copies to represent the data on a jump

One pupil would take a jump and the other pupils would measure the jump.

Thanks for reading!!!! Charlie and Tadhg.

Mr Corcoran's class

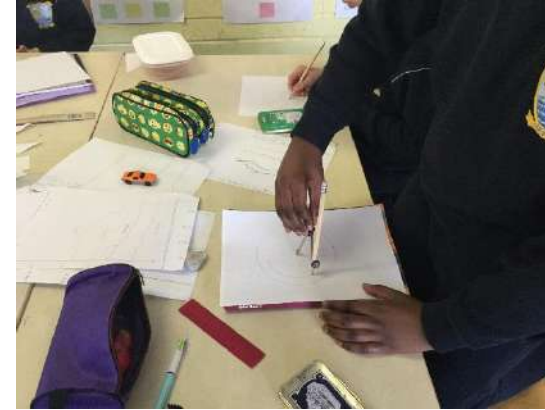
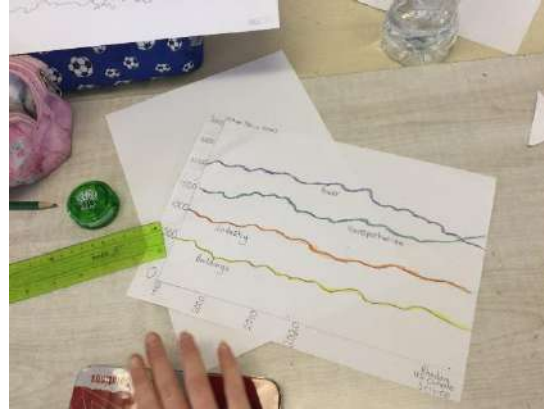


Using Maths in Science to help with our project on
Climate Change - Mrs Doak's 6th Class

Using Maths to Highlight Climate Change
- Sophie Deegan (Mrs. Doak 6th class)

We learned all about climate change and the impact of fossil fuels and harmful gases on our planet. We made graphs, surveys and piecharts to present information. We used percentages in one of our surveys where we calculated the percentage of how much our 5th & 6th knew about climate change damaging our earth. One of our piecharts was to show our greenhouse gas emissions.

Using Maths in Science to help with our project on Climate Change - Mrs Doak's 6th Class

Three handwritten data tables on pieces of paper. The tables are organized into columns and rows, with headings and data entries. The tables are titled 'Sources of Renewable Energy'.

MATHS WEEK - OCTOBER 2018

In school we had lots of fun during Maths Week. We played Kahoot on iPads and we played Living Maths Quiz, Mental Maths and Quick Maths Quiz on the interactive whiteboard.

We had a maths diary every day so we had to see maths around the environment. We also had to come up with a good or decent enough maths problem for our friends to solve it. Then we had to try to play some maths games online at home.

We also did a mystery problem about someone putting spiders in a bowl instead of sweets. There were 6 clues and our group won!!

On Friday, we did a Maths Trail with the third class and we, the 6th class created the trail itself. Our teacher made a few slide shows about Maths Week 2018. When we saw them, we all had a good laugh.

After all, I really enjoyed Maths Week 2018

By Kevin Ursu - Mrs Doak's 6th Class



Kahoot Maths Games



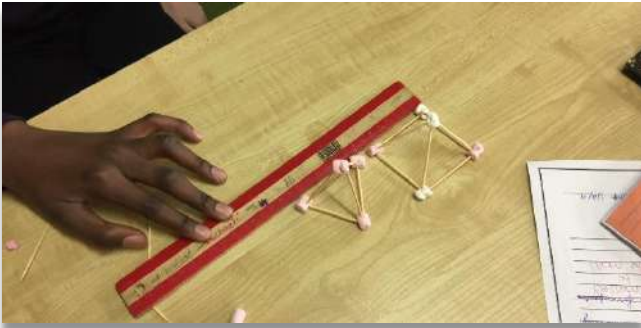
Maths on our iPads



Sixth and third classes doing a maths trail together

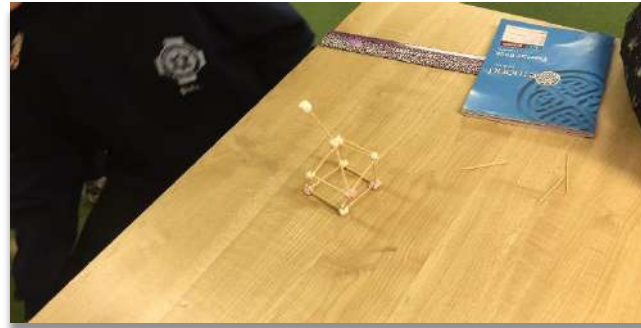


Amazing Shapes Construction - Ms. Coyle's 6th Class



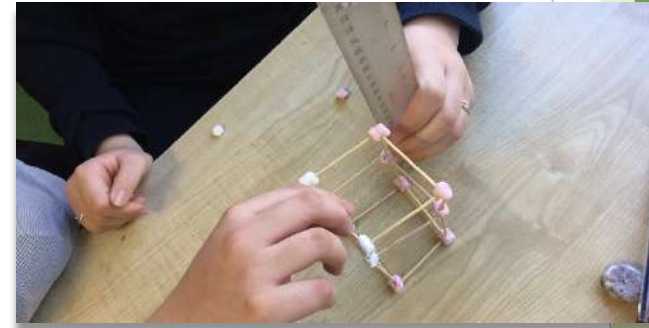
Step 1

Using marshmallows and cocktail sticks, we made different shapes. We made a square, cube, triangular-based pyramid and a square-based pyramid using a maximum of 8 marshmallows and 12 cocktail sticks.



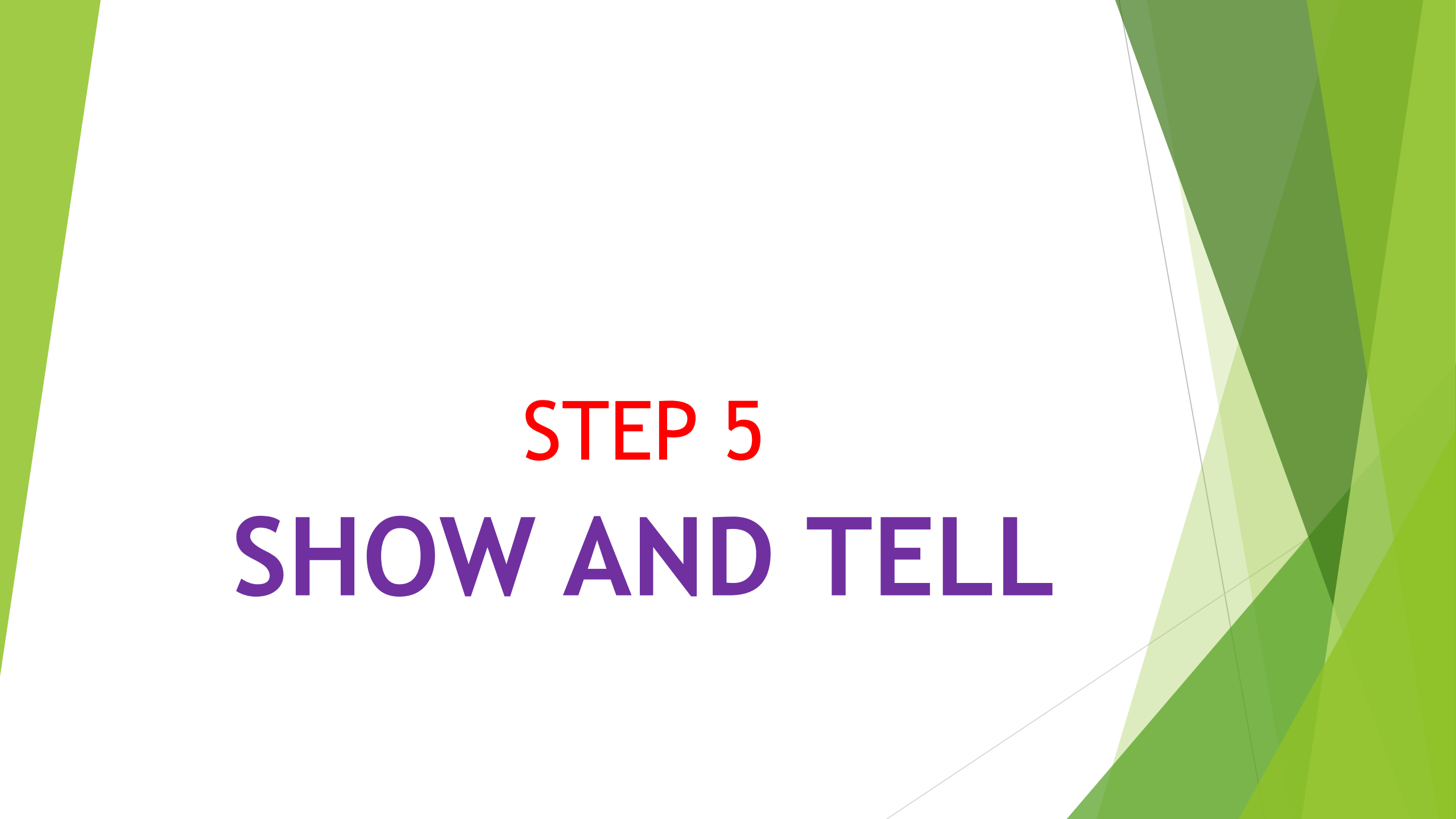
Step 2

Then we were given a challenge to make the tallest and strongest structure using 12 sweets and 20 cocktail sticks.



Finally!

Look at some of our pictures to see what we made!

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern, layered effect on the right side of the slide.

STEP 5

SHOW AND TELL



Watch this video of Mrs Gough's 3rd class presenting their maths games to the other 3rd classes at the show and tell demonstration



Hover over video and press play

STEM SHOWCASE NOVEMBER 2018 - 3rd Class

Mrs Carter- Science Show and Tell

Living things- Hedgehog habitat Dioramas

- ▶
- ▶ We had been learning about hedgehogs and their natural habitats.
- ▶ In groups of 3 we worked together using a variety of materials to create and construct hedgehog habitat dioramas. Each group had a shoe box and we used things like cloth, felt, leaves, feathers and paper to create a scene like that of a hedgehog's home. Mrs Malone's, Mrs Gough's and Mr Kavanagh's classes came in to view our projects and we spoke about what we used and how we worked together.



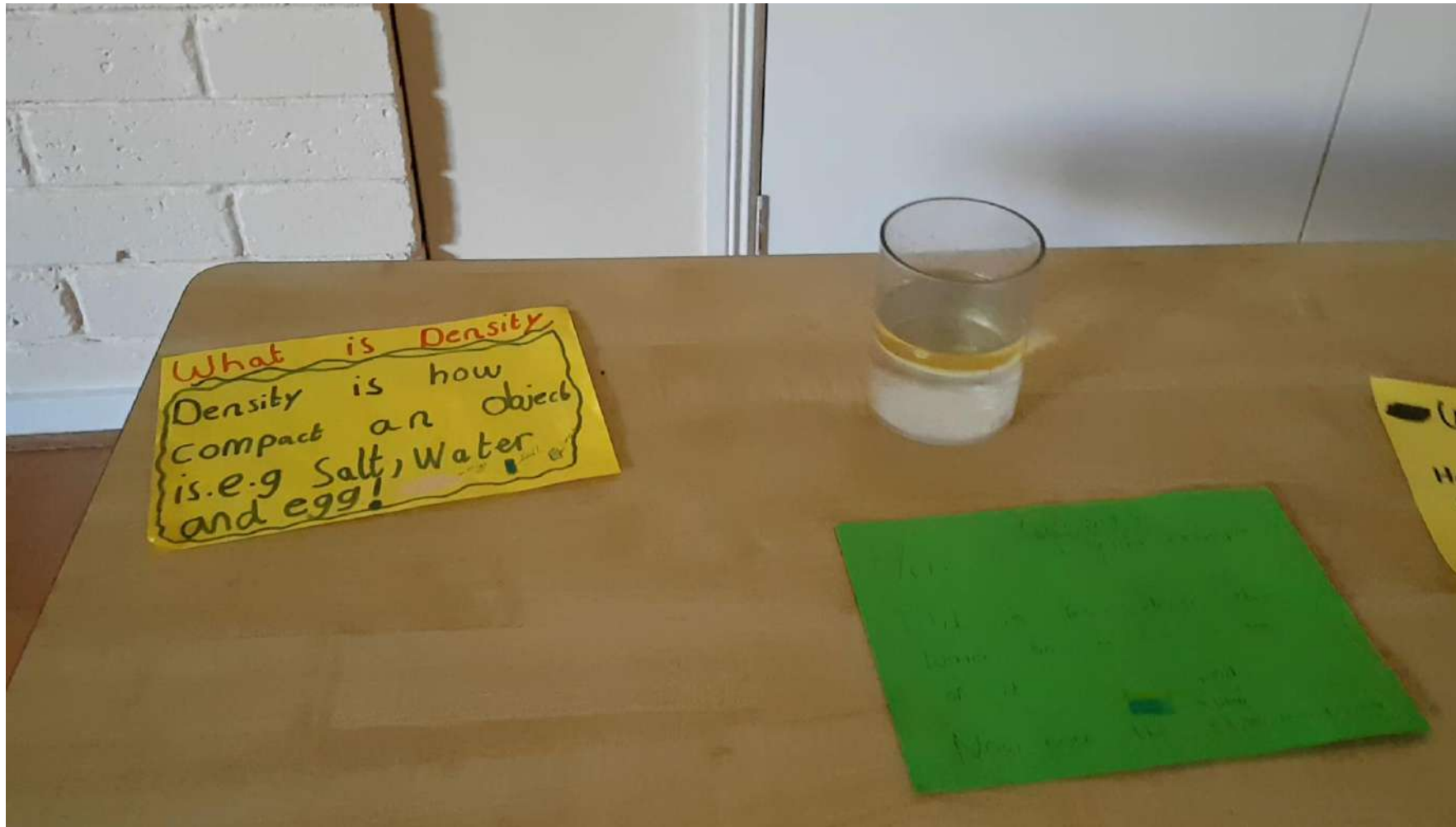
Watch the video of us presenting our hedgehog habitats for our show and tell



Hover over the video and press play

4th Class - Science Week Showcase (All)

On the last day of Science Week the 4th Classes all came together in the hall and set up the experiments we had been doing. We each got a chance to go around and view each others work.



Hover
over and
left click
and
press
play

Science Week Activities (Ms. Coyle)

6th Class

We made lava lamps using plastic bottles, water, vegetable oil, Alka Seltzers and food colouring. First, we poured the water and vegetable oil into the plastic bottle and watched the two liquids separate. The water sank and the vegetable oil floated to the top of the bottle because oil is less dense than water. Next, we added some food colouring to our bottles. Then we broke the Alka Seltzer tablets in half and dropped one half into our bottles. The tablet sank but the bubbles began to rise!



Watch Our
Video



Science Week Activities

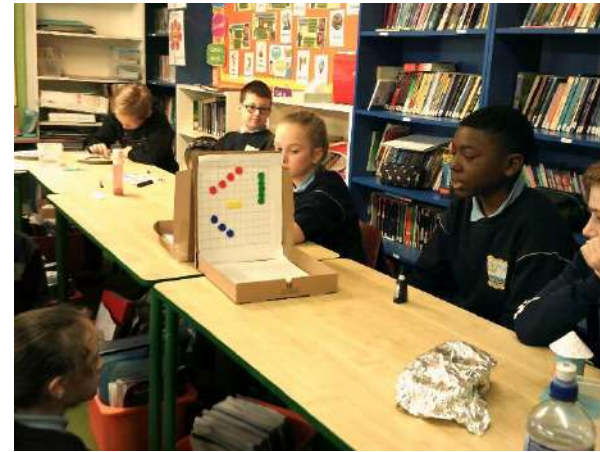
Our teacher then showed us an experiment using a plate, a glass, a candle, some water and a lighter. We first predicted that the candle's flames would go out if she covered the flame with the glass. And we were right! Then she asked us to then consider what would happen to the flame if there was water on the plate? We were really surprised to see that the glass sucked up the water on the plate as the candle's flames went out. That's because the candle heats the air and expands it. When the candle goes out, the air cools and contracts - or takes up less space. This extra spaces allows the water to rise inside the glass.



Hover on
the video

5th Class - Science Week Show and Tell

These experiments were so much fun we decided to share them with another class in our school. We teamed up with Ms. Mooney's Class and got to share our experiments with them. They showed us some of their experiments and inventions too!



5th Class - Science Week Show and Tell



Sixth Class STEM Showcase - entertaining 3rd, 4th and 6th Classes ... Science ...



Filtering Water



Separating Materials



Designing with Lego

Technology ...



Erdvile makes a short animation.



Zuzanna makes a PowerPoint presentation.



Cormac and Breen make a maths based Kahoot quiz.

Engineering ...



Jack makes a lighting chandelier from tin cans.



Adrian designs a catapult.



Erdvile designs a sweet dispenser.

Maths



Divine performed a brain puzzle card trick using numbers. A member of the audience picked a card out of 16 cards. Then Divine used a clever process of elimination to guess the correct suit and number. It was great fun!!!!

GREEN SCHOOLS PROJECT



We created beds in a garden space. We planted vegetables such as carrots, lettuces, beetroot and scallions. The pupils tend to the vegetables and will harvest them when ready.

School Garden



In another bed we grew herbs and we talked about the healing powers of some plants.



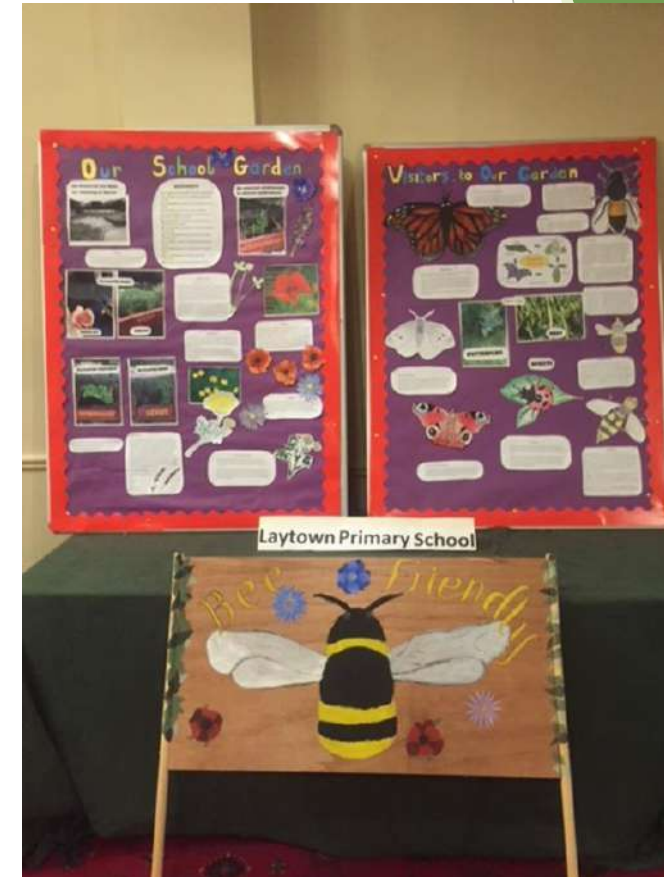
We then planted a wild flower garden to attract bees and butterflies and learned all about biodiversity and the inter-dependence and importance of plant life and ins

GREEN SCHOOLS PROJECT

We carried out a survey on biodiversity and we put together a project on bees and other visitors to our garden.

BIODIVERSITY SURVEY

Questions	3 rd Classes	yes	%	no	%
1. Have you heard of biodiversity?					
2. What does biodiversity mean?					
3. 3 reasons why biodiversity is important					
4. 3 threats to biodiversity					
5. 3 ways we can help biodiversity					



Bees and Butterflies Project

Living Things & Green Schools - 3rd Class Mrs. Gough

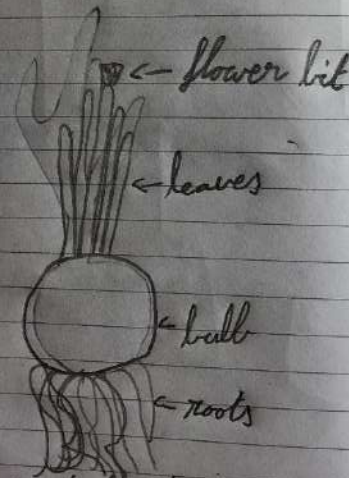
A Bulb into a flower

- * We put the hyacinth bulb into a special container and half filled it with water. As soon as it sensed the water it let roots down to drink.
- * The water there was so many of them it was a dark colour.
- * We put the bulb into a dark cubard so it would think it was in soil.
- * When the shoot came up, it was white. After two days in the sun the shoot turned green. In about three weeks the leaves started coming up. Only a little while later the flower came up!



Our Hyacinth Bulbs

* At first we planted the bulbs we put them in the cubard, to make the bulb think it's in soil. A week or two later we checked to see how much it developed. It had shoots and it was white. A few days later it got green. Then it started to bloom and get colour, one turned wine and the other turned purple. They were beautiful but now there's only some colour. They sit on the nature table in a jar labeled "HYACINTH".



* Each day teacher took it out and we saw the roots got thicker and more grew and they got longer.

AND FINALLY

In our class we did lots of science this year and lots of experiments.

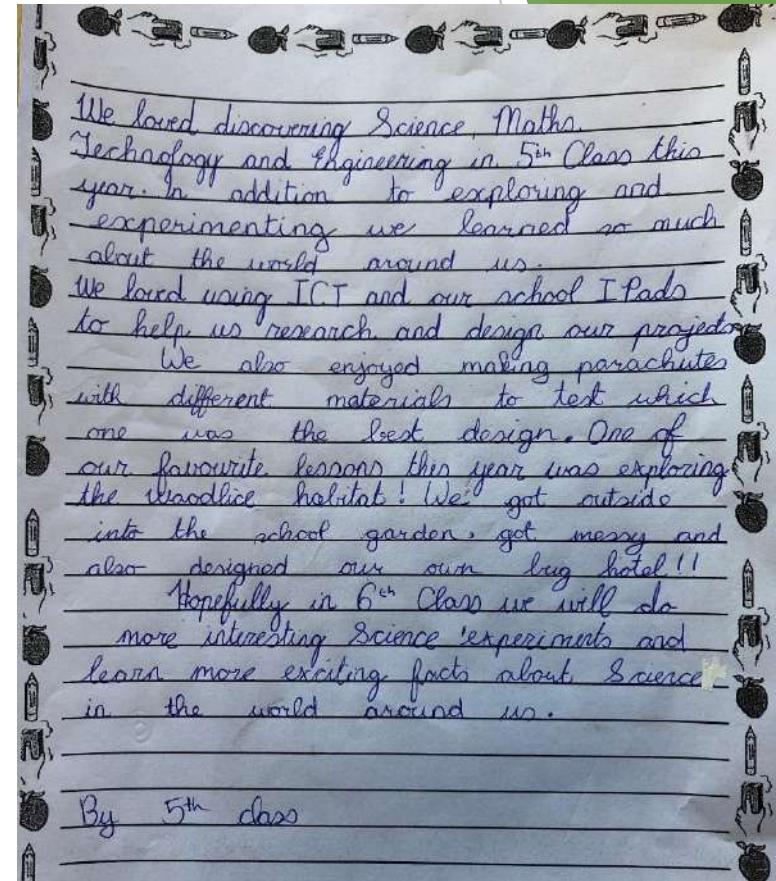
We tried mixing different substances with water some did not dissolve and some did dissolve. We also used jars and filled them with water and wrapped them with all sorts of papers such as tinfoil, greaseproof paper, tissue paper and normal paper to see which one made the best insulator. People in our class brought in different materials like cloth and felt and we used fork's to scrape the material and saw which one held up the most.

We learnt all about different bird nests, including blackbirds, robins, sparrows and a lot more. We also learnt all about trees. We learnt about the beech trees, ash trees, sycamore trees and a lot more!

Throughout this whole experience we had a lot of fun! Which was the whole point. Our favourite experiment was when Mrs McGovern's brother came in to teach us about chemical engineering and there were cool explosions with vinegar and yeast!

By Ava and Christian, Ms McGovern's 4th Class.

Ms. Mc Govern's Fourth Class



Ms. Finlay's Fifth Class

Sciencetastic
 Science this year has been extraordinary!
 I have experienced and participated in
 many events, so I'll only talk about one.
 Space Week was very interesting. We learned
 a lot about Satellites and it was my
 first time doing a project on Powerpoint,
 so it was very exciting! We also
 entered a space badge competition
 into Trinity College for the Eirsat-1,
 and amazingly Adrian's badge was
 chosen and Cormac's badge was highly
 commended. Part of Adrian's badge being
 placed on Eirsat-1 meant we were able
 to have an interview with two of the
 students who helped make Eirsat-1. It
 was great fun!

 My favourite part of Science in 6th Class
 this year was the time we went to
 the Science Blast in the RDS. Our Question
 was 'Can we use methods alternative to
 fossil fuels to power everyday transport?'
 From the start of September we had been
 working on our prototypes to show the
 judges. It was great to talk to the
 judges about our project. It was a great
 day!

 All in all I think Science is very
 interesting and I can't wait to do it
 in Secondary school!

Mrs Doak's 6th Class

Being part of the STEM Project in school has
 been so much fun. We have learned so much
 about science, technology, Maths and
 Engineering. Maths week was brilliant because
 we got to go out and do Maths trails. Science
 week was so much fun because we did lots
 of different experiments in our classroom.
 The best was the one with the snakes over
 the hot radiators.

Our favourite thing though was when we
 made our hedgehog habitats out of shoe
 boxes. We then presented them to the other
 classes. We were nervous but proud to show
 off our hard work.

Mrs Carter's 3rd Class

Thank you so much for taking the time to view this PowerPoint Presentation which highlights a very active and fun-filled year of STEM education at Scoil an Spioraid Naoimh. As educators, we have truly enjoyed a renewed focus on this area of our primary school curriculum. We believe that it is evident from the many photos, videos and write-ups here that our pupils have benefited enormously from these lessons. We feel very passionate about the development of science citizenship for our students. We endeavour to embed global citizenship in our day to day lessons so as to enable our learners to have a voice that will question and challenge societal behaviour and policy to effect positive change in a clean and fairer world for the their future. No doubt their love of Science and Maths will produce future researchers and participants in areas such as health, disease, transport, water, climate change, technology, astronomy and much more... Whatever path our students decide to take, it is our wish that they do so as informed citizens who are encouraged to take a stake in the affairs of the world around them.



The staff of Scoil an Spioraid Naoimh, Laytown, Co. Meath

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