

# Strand: Living things

## Strand unit: Human life

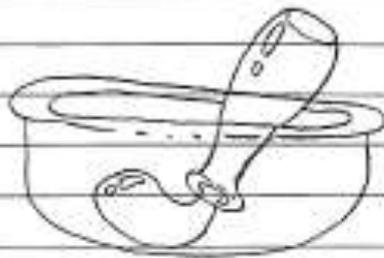
### Lung Capacity

Aim: To find the capacity of your lungs.

Resources: Balloons, large basin, 1 litre bottled water

Method: Fill the basin with water. Blow up the balloon. Fill the bottle with water and submerge it. Put the neck of the balloon into the bottle and release the air.

Result: The amount of water pushed out of the bottle shows your lung capacity.





# Strand: Energy and forces

## Strand unit: Heat

### Flying Teabags: an experiment carried out by the Senior Room

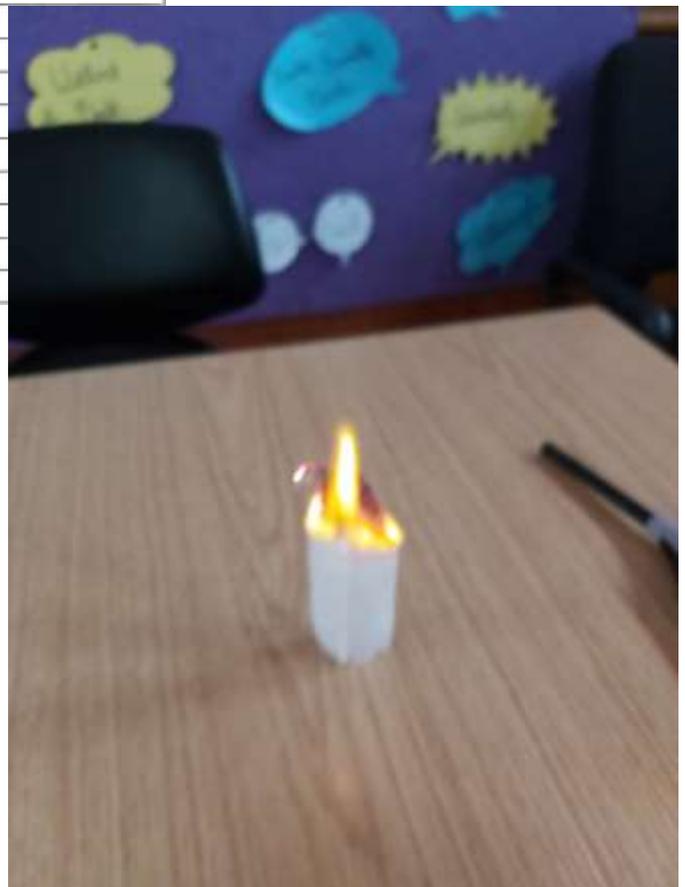
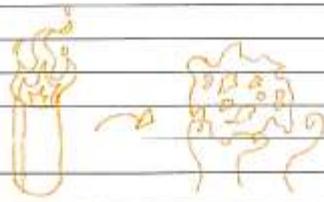
## Flying Teabag

Aim: Make a rocket out of a teabag

- Resources: A teabag that unfolds into a cylinder, matches or a lighter

Method: 1. Empty the tea leaves out of the teabag  
2. Stand up the empty teabag in a cylindrical shape.  
3. Light the top of the teabag

Result: The flames burn the teabag, hot air rises so the teabag flies up into the air



# Investigating Pulleys

An experiment carried out by the Junior Classroom

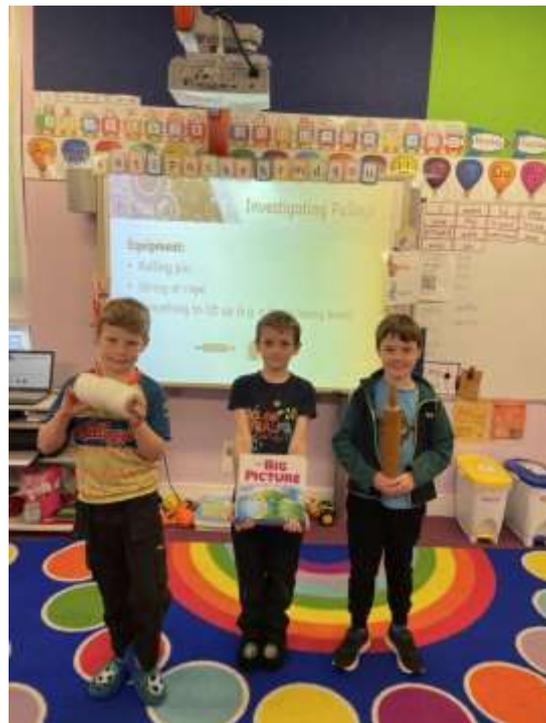
Strand: Energy and forces

Strand unit: Forces

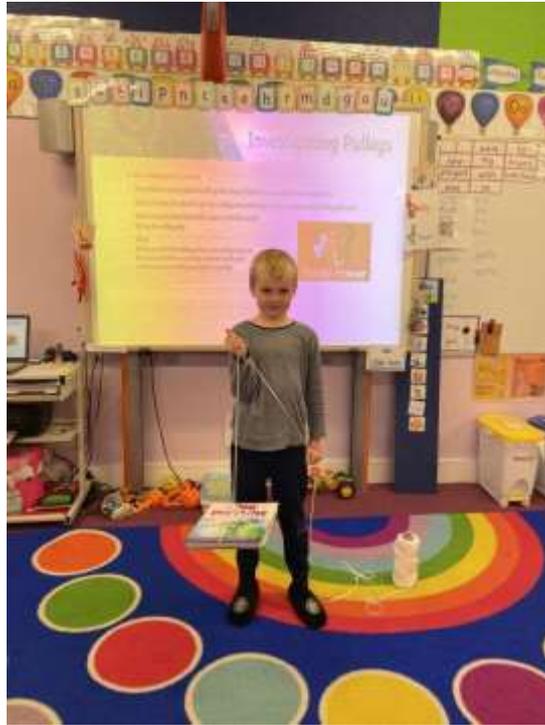
The Junior Room had a **discussion** about pulleys and what they are used for. We came up with two pulley systems that are used in our school: the blinds for the windows in our classroom and the flag poles outside. We thought up of other uses too, like construction workers lifting something heavy up onto a building site and children wanting to hoist something heavy up to their tree-house.



For this experiment, the children gathered their **equipment**: a rolling pin, some thin rope and the heaviest book they could find in the classroom.



**Trigger:** How can we lift this heavy book upwards with little effort?



**Activity:** The children worked together to design and make a pulley system which would be useful for lifting up heavy things. They tested out the weight of the book before beginning. Then the children tied the rope around the book and secured it with the help of the teacher. They used the rolling pin as the wheel and put the rope around it. Everyone had a turn at pulling down on the rope to lift up the book. It was great fun! The children experimented with pulley systems even further during their own playtime later that day!



**Conclusion:** It is much easier to pull down in the same direction as gravity.

# Materials and Change

The pupils in Ballymoney NS love to bake and here are some tasters of what they have enjoyed making so far this year. They follow the recipes, weigh out the ingredients and essentially are 'investigating how materials may be changed by mixing'. Here you will see photos of the pupils making biscuits, pancakes, candy marshmallow snowmen and pizzas. The theme was 'Christmas'. Lots of mixing, heating and cooling went on to produce the finished pieces.







# ENVIRONMENTAL AWARENESS & CARE

Environmental awareness and care is something that the pupils and staff of Ballymoney NS are very passionate about. Here is a flavour of some of the initiatives the pupils have taken part in this year.

On March 10th 2022, all pupils got to plant some trees in the nearby Riverside Garden with the Ballineen and Enniskeane Tidy Towns Association and Thomas and family from the Hollies Centre for Sustainability. This was a thoroughly enjoyable experience for all and it was a privilege to be included in this project.







The pupils are also actively involved in the Picker Pals anti-litter campaign. Every weekend, a family takes home the litter picking pack and decides on an area to go litter picking in. Everything is reported in the album and this is brought back to school on return. Patrick Jackson, Picker Pals founder, visited our school on 8th February. He brought some interesting items with him, including one of the picker pals: a crab called Craig.





Our pupils have green fingers!





Our Bottle Top Mural made of 12,400 bottle tops!



# Science Week 2021

Science Week 2021 was one of our biggest highlights so far this year. The Junior Room had great fun making paper rockets, helicopters and aeroplanes. They also got to make towers using uncooked spaghetti and marshmallows and plastic straws and connectors. The pupils also watched a couple of demonstration experiments led by the teachers.







# Using STEM skills in projects on environment or sustainability

This year, the Green-Schools' Committee have been working on the theme of water and how we can make some small changes in our school to reduce water usage and create awareness.



The pupils used maths skills to calculate the school's water usage. This data was gathered from weekly readings of the water meter, looking at water bills and keeping tick sheets.

**Essential Action 1: Water Usage**

**READ THE WATER METER**

DATE	NO. OF DAYS	READING	LITRES PER WEEK	PER PERSON PER DAY
Monday 22nd November 2021		418773		
Monday 29th November 2021	5	419955	1182 L	7.2 L
Monday 6th December 2021	5	421090	1135 L	6.9 L
Monday 13th December 2021	3	422000	910 L	9.2 L
Monday 20th December 2021	5	423269	1269 L	7.7 L

TOTAL NO. OF PUPILS/STAFF: 32

**READ THE WATER BILLS**

BILLING PERIOD	NUMBER OF DAYS	VOLUME	PER PERSON PER DAY
01/09/2020 - 26/04/2021	238 DAYS OR 34 WEEKS	From 359822 To 391873 Total 32,051 m <sup>3</sup>	5.6 L SCHOOL CLOSURE (COVID-19)
21/07/2020 - 31/08/2020	42 DAYS OR 6 WEEKS	From 356893 To 359822 Total 2,929 m <sup>3</sup>	2.6 L SUMMER HOLIDAYS
26/10/2019 - 20/07/2020	270 DAYS OR 38 WEEKS	From 332289 To 356893 Total 24,605 m <sup>3</sup>	3.8 L SCHOOL CLOSURE (COVID-19)
19/04/2019 - 24/10/2019	189 DAYS OR 27 WEEKS		

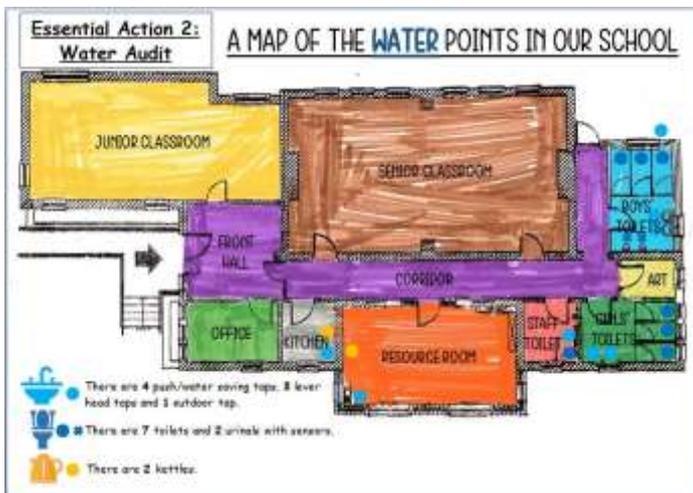
*Water Usage Tick Sheets' Results*  
22<sup>nd</sup> - 26<sup>th</sup> November '21

DAY	JUNIOR BOYS		JUNIOR GIRLS		STAFF		TOTAL	
	U	R	U	R	U	R	U	R
MONDAY	6 boys		6 girls		2 staff		14 people	
	20	15	20	11	6	5	49	16+15
TUESDAY	5 boys		5 girls		2 staff		12 people	
	11	6	15	7	6	5	32	12+6
WEDNESDAY	5 boys		5 girls		2 staff		12 people	
	18	14	15	6	8	5	41	11+14
THURSDAY	4 boys		5 girls		1 staff		10 people	
	9	5	11	6	2	2	22	8+5
FRIDAY	4 boys		5 girls		2 staff		11 people	
	9	5	13	7	7	4	29	11+5

The pupils used engineering skills and looked at how the push taps and lever head taps work and how much water is produced with just 'one push'.



The pupils did a water audit on the school and looked at the water sources in the school building. Their science skills, especially caring for their locality, came into play here. The pupils took on responsibility for improving the environment and conducted leak tests using food colouring dye.



**Essential Action 3: Conduct Leak Tests**



**CHECK FOR SMALL LEAKS**

-Any leaks, drips or problems with the taps and toilets are reported to staff members

-All taps close properly and toilets aren't leaking water outside of flushing

-We put food colouring dye in the cisterns of 5 toilets and none of this ended up in the toilet bowls until the next time they were flushed



The pupils decided to fit the cisterns with water-saving devices so as to save on water with each flush. The pupils also designed and made posters with water saving tips using technology. They also made 'turn it off' signs on the computers and these were placed beside the taps in school. We must wait until next year to finish off our water targets and review them.



# Bee-Bots

The Junior Room were lucky enough to borrow six floor robots called Bee-Bot from the West Cork Education Centre back in Term 1. The pupils were able to work with them for 2 weeks and got to use 4 different floor mats, one which even had a maze.

Bee-Bots can be given different commands using their basic controls. Bee-Bots can move forwards, backwards, rotate left and rotate right.

Bee-Bots help the pupils to learn their directions and allow them to think about how to get them from one place to another.







# Coding

The Junior pupils have been using the Hour of Code website and have been working on their Minecraft coding skills.



# Engineering and Bioblo

The Junior pupils have been designing and making using Bioblo. They made this model of a bird using these stacking blocks. The blocks are plastic and have no connecting pieces so the only way to make a model is by using stacking and balancing skills. Lots of trial and error before getting to the end piece!



# Mars Rover

First and Second Class have been investigating how Mars Rovers work. They made their very own space buggies using cardboard, pencils, elastic bands, paper clips and sellotape. They explored how potential energy can be converted to kinetic energy.



# MATHS WEEK 2021

The pupils enjoyed lots of different activities to celebrate Maths Week. The Senior Room were using Minecraft for Education while the Junior Room were learning how to code floor robots called Bee-Bot. There were some interesting competitions including a photography competition called 'Have You Got Maths Eyes?'. Both rooms also completed a maths trail where they had to look for answers in the school playground and beyond. Everyone got to take home some maths games for homework and the Juniors got to make maths hats.





## Maths Trail

1. How many buttons are on the job at the front door?

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2. How many windows are on the pirate ship?

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3. What year will the Ballymoney Time Capsule be opened?

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4. How many chimneys are on the roof of the school?

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5. What shape are the flower beds in the school garden?

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6. How many windows are on the back of the school?

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7. How much is it to stay in Buggingham Palace?

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8. What shape is the tunnel?

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9. How many beds are in the tunnel?

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10. How many compost areas are there?

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11. How many bars are on the chime?

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12. How many windows are on the water tower?

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13. How many sunrays are on the mural?

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14. How many arches are on the bridge on the mural?

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15. How many pillars are in the shelter?

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16. How many litres do the wheelie bins hold?

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17. What shape is the blackboard in the shelter?

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18. What year was the extension officially opened?

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19. How many flagpoles are there?

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20. What is the school phone number?

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# Have You Got Maths Eyes?

We took part in the Maths Eyes competition.





# STEM Showcase



