ST. PATRICK'S BOYS NS, LIMERICK

START

Schools Teaching Awareness of Randomised Trials

TREOIR IS TEAGASC

Scoil Phádraig

DOES DOODLING HELP YOU TO REMEMBER DETAILS VS NOT DOODLING?

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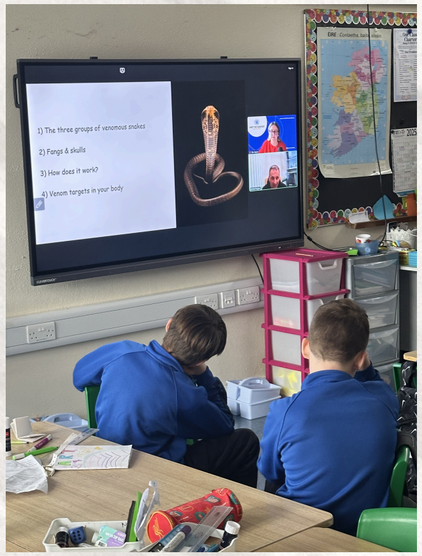
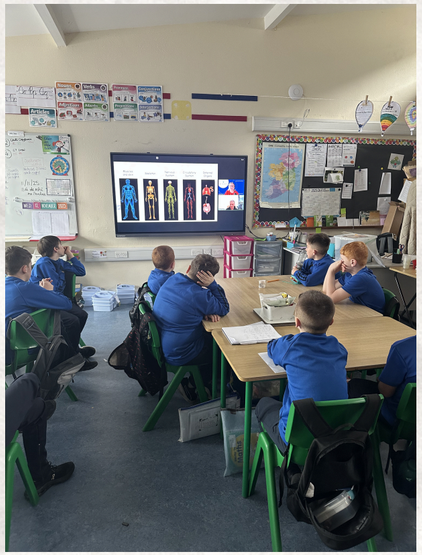
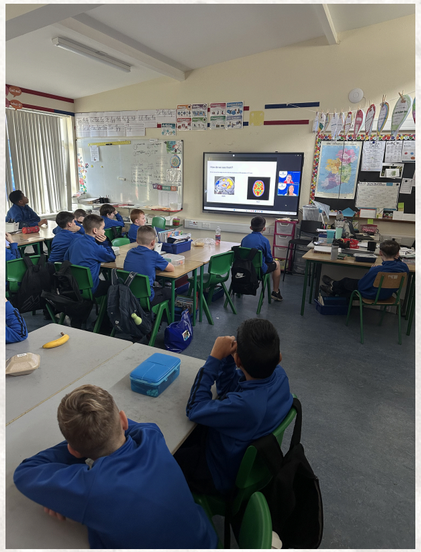
Introduction

MEET THE SCIENTIST

WEBINAR SERIES







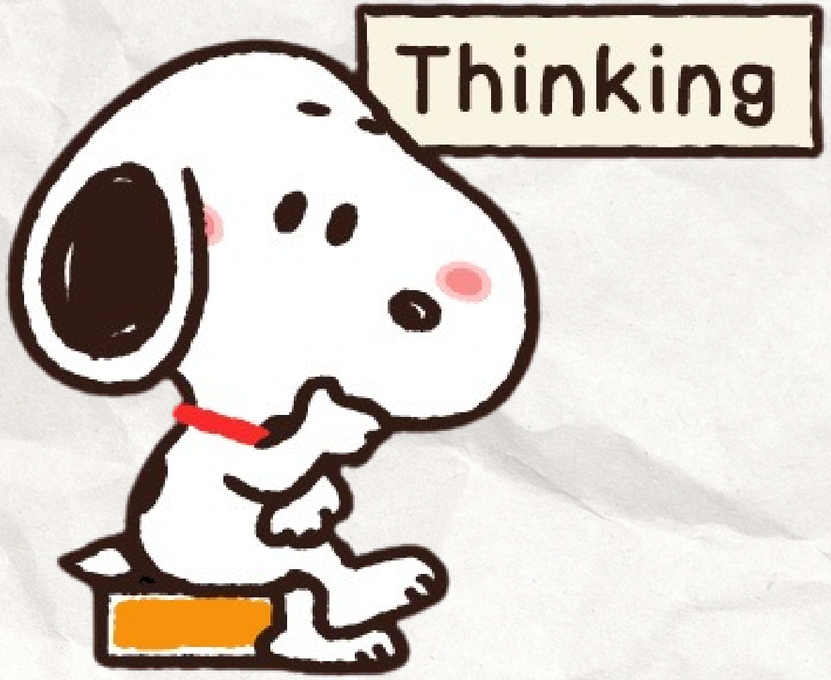
We really enjoyed the webinars particularly the one on venemous snakes and the one about the brain. We asked some questions in the chat box. The scientists were really interesting.

We decided to take part in the START competition because we saw it on the Meet the Scientist webinar.

We were excited to do it because our school never took part in this competition before.

Step 1 – Registering our trial

After we chatted about the competition with our teacher.
Our teacher registered us on the website.
And we started thinking about what we would do for our randomised trial.

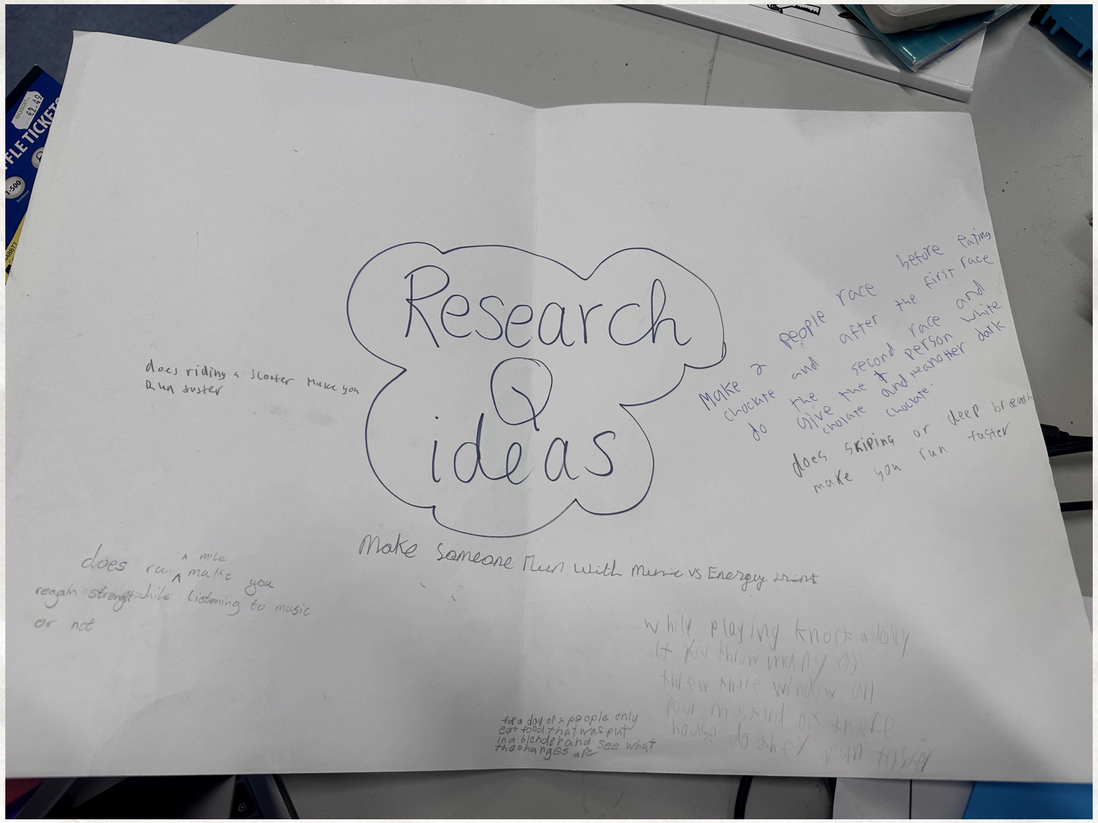


When you're ready to submit your class's entry, you can log in using the details below:

Submission Portal: https://STARTcompetition.com/member-login
Username: k.lohan@stpatricksboysns.com

Step 2- Deciding on a Trial Question

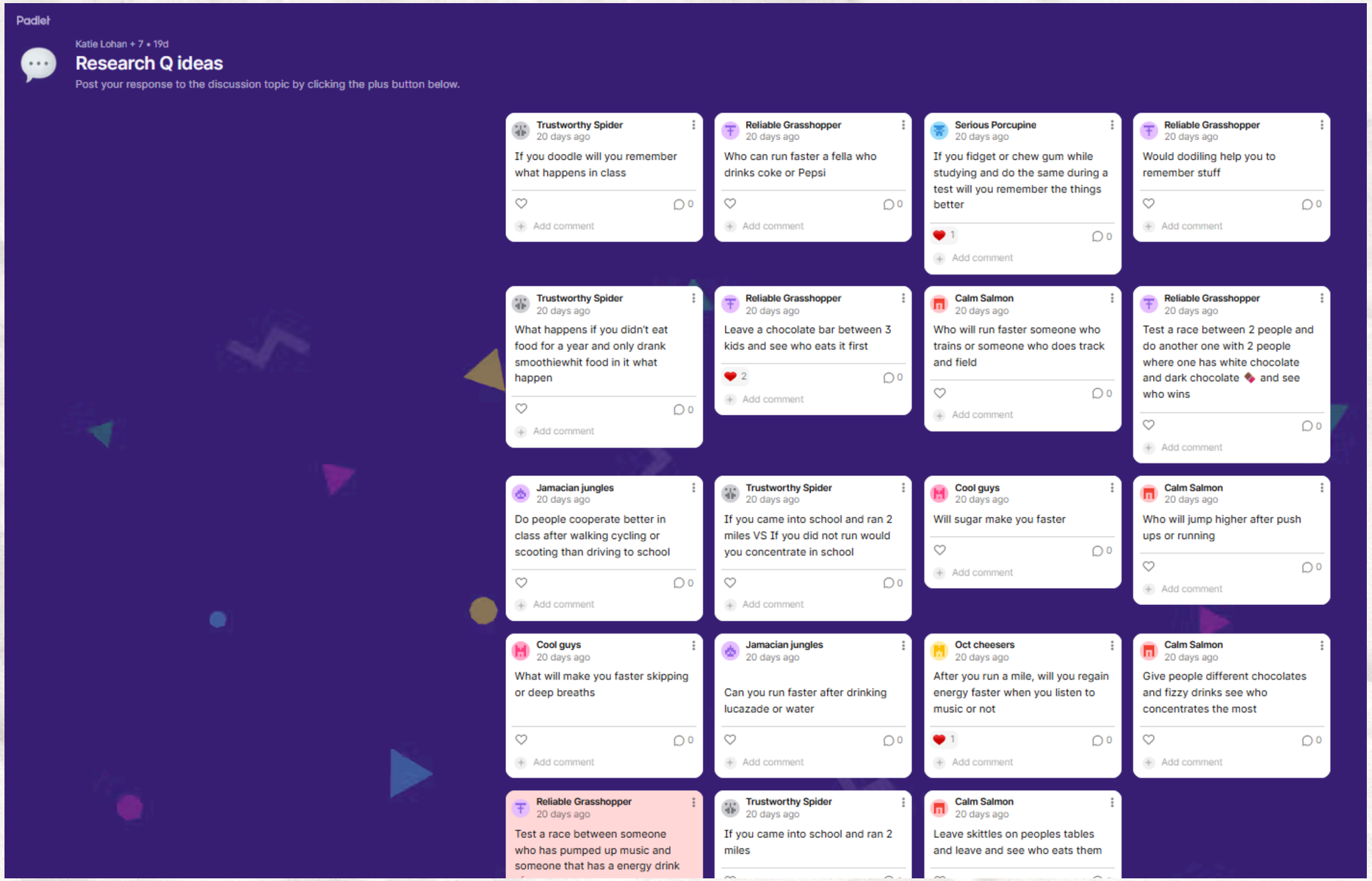
To decide on a question, we broke into groups for a thinking session then we put all the ideas onto a poster. Following more discussions about the ideas on the poster, we thought with our groups. We then added ideas to a padlet. Each group added some ideas to the padlet.



Step 2- Deciding on a Trial Question

Using the Padlet was great because as we were sharing our answers they were showing on the board and we all got to see each others ideas.

Padlet


Padlet
Katie Lohan + 7 • 19d
Research Q ideas
Post your response to the discussion topic by clicking the plus button below.
Trustworthy Spider
20 days ago
If you doodle will you remember what happens in class
Add comment
Reliable Grasshopper
20 days ago
Who can run faster a fella who drinks coke or Pepsi
Add comment
Serious Porcupine
20 days ago
If you fidget or chew gum while studying and do the same during a test will you remember the things better
Add comment
Reliable Grasshopper
20 days ago
Would dodiling help you to remember stuff
Add comment
Trustworthy Spider
20 days ago
What happens if you didn't eat food for a year and only drank smoothiewhit food in it what happen
Add comment
Reliable Grasshopper
20 days ago
Leave a chocolate bar between 3 kids and see who eats it first
Add comment
Calm Salmon
20 days ago
Who will run faster someone who trains or someone who does track and field
Add comment
Reliable Grasshopper
20 days ago
Test a race between 2 people and do another one with 2 people where one has white chocolate and dark chocolate and see who wins
Add comment
Jamacian jungles
20 days ago
Do people cooperate better in class after walking cycling or scooting than driving to school
Add comment
Trustworthy Spider
20 days ago
If you came into school and ran 2 miles VS If you did not run would you concentrate in school
Add comment
Cool guys
20 days ago
Will sugar make you faster
Add comment
Calm Salmon
20 days ago
Who will jump higher after push ups or running
Add comment
Cool guys
20 days ago
What will make you faster skipping or deep breaths
Add comment
Jamacian jungles
20 days ago
Can you run faster after drinking lucazade or water
Add comment
Oct cheesers
20 days ago
After you run a mile, will you regain energy faster when you listen to music or not
Add comment
Calm Salmon
20 days ago
Give people different chocolates and fizzy drinks see who concentrates the most
Add comment
Reliable Grasshopper
20 days ago
Test a race between someone who has pumped up music and someone that has a energy drink
Trustworthy Spider
20 days ago
If you came into school and ran 2 miles
Calm Salmon
20 days ago
Leave skittles on peoples tables and leave and see who eats them

Then we narrowed it down to 3 options. We completed the KITE framework together as a group for each of the 3 options. After that we gave each question a colour and we voted on which one we should do.

Research Q	Kids/Key Group K	Intervention/Idea to Test I	Testing & Comparison T	Evidence of Change E
Does doodling help you to remember details vs not doodling?	27 6th class boys	Doodling while listening to a story	Comparing students who doodled vs students who didn't doodle.	Memory test - Questions about the story
Does running help you to jump higher?	27 6th class boys	5 Jumps after running daily mile.	Compare heights of jumps	Measuring jumps with sticky notes
Does listening to music while running help you to run faster?	27 6th class boys	Playing music while running.	Comparing speed of runs.	Average speed of students runs.

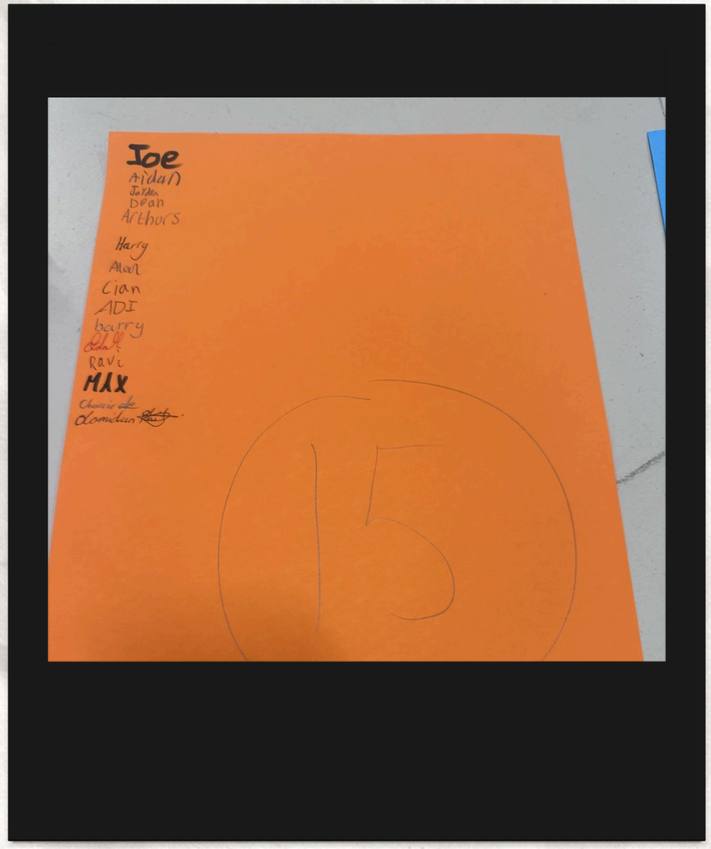
After we looked at the 3 options and went through KITE, we gave each option a colour.

We voted on a coloured card to show our preference.

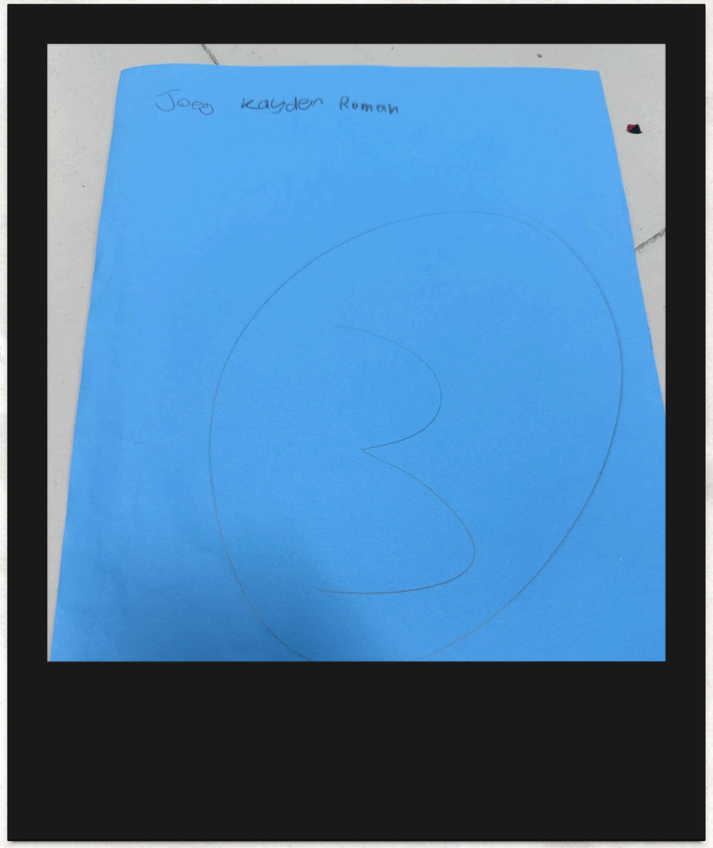
The orange option was the winner.

Here are the votes.

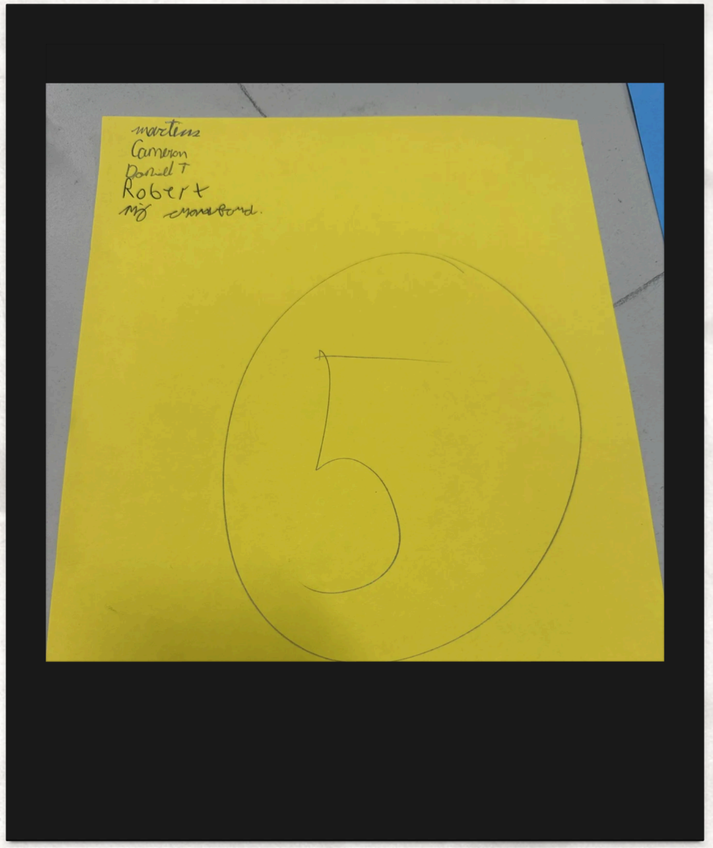
ORANGE



BLUE



YELLOW



Step 3 – Selecting the Outcomes

We are trying to find out if doodling helps us remember more from a story. In simple terms, we want to see if the boys who doodle while listening can recall more details than the boys who just listen without doodling. We'll compare how well each group does on the memory questions to see if doodling makes a difference.

1

Have the groups listen to an excerpt of a story.

2

Complete a questionnaire based on what they have read.

3

Compare the results of the group that doodled while listening versus the group who just sat and listened.

Step 4– Participants & Consent

We chose the 6th class to be involved in our trial.
We chose them because we felt it would be easiest to write questions at their level for the questionnaire.

23 out of 28 students took part.
We visited their classroom and explained the trial and asked if they would be interested.
23 students completed the consent form.

Consent Form

A group of boys created the permission slip using Google Docs.

START

Schools Teaching Awareness of Randomised Trials

Permission Slip

Created by Adam, Joe, Cameron, Ravi, Evan, Tadhg, Martins and Darragh

We are investigating whether doing certain activities while listening helps us to remember more information.

I understand what this project is trying to do ☐

I understand that I can stop taking part in this project at any time ☐

I am happy to take part in this project ☐

Please sign your name here Date

Step 5 – Groups & Randomisation

By randomly assigning the boys to either the doodling group or the non-doodling group, we reduce the chance that one group has an advantage (for example, being naturally better at remembering, paying attention, or listening).

This helps ensure that any difference in memory scores is more likely due to the doodling itself, not other factors.

Randomising helps us make a fair comparison so we can trust that our results actually show whether doodling makes a difference.

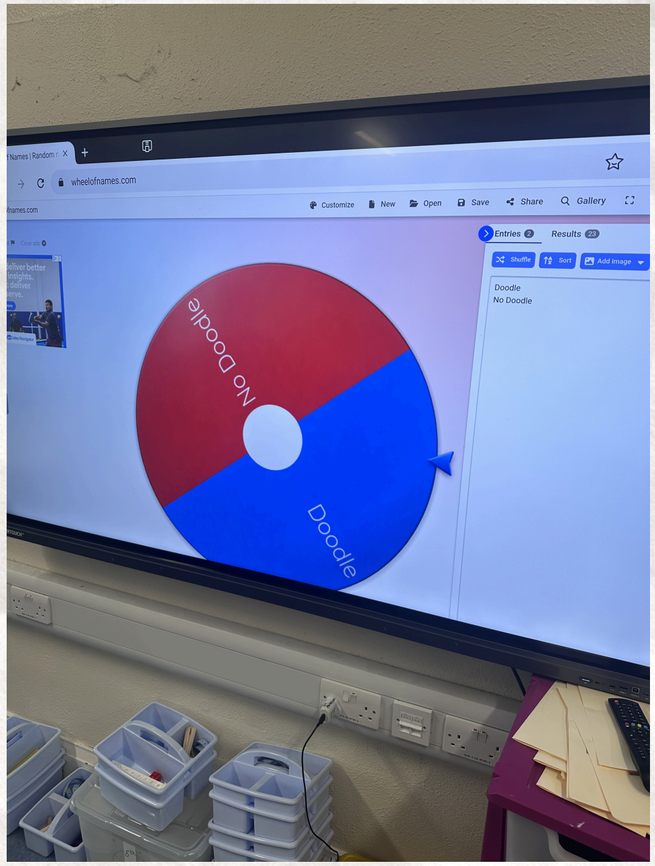
Groups

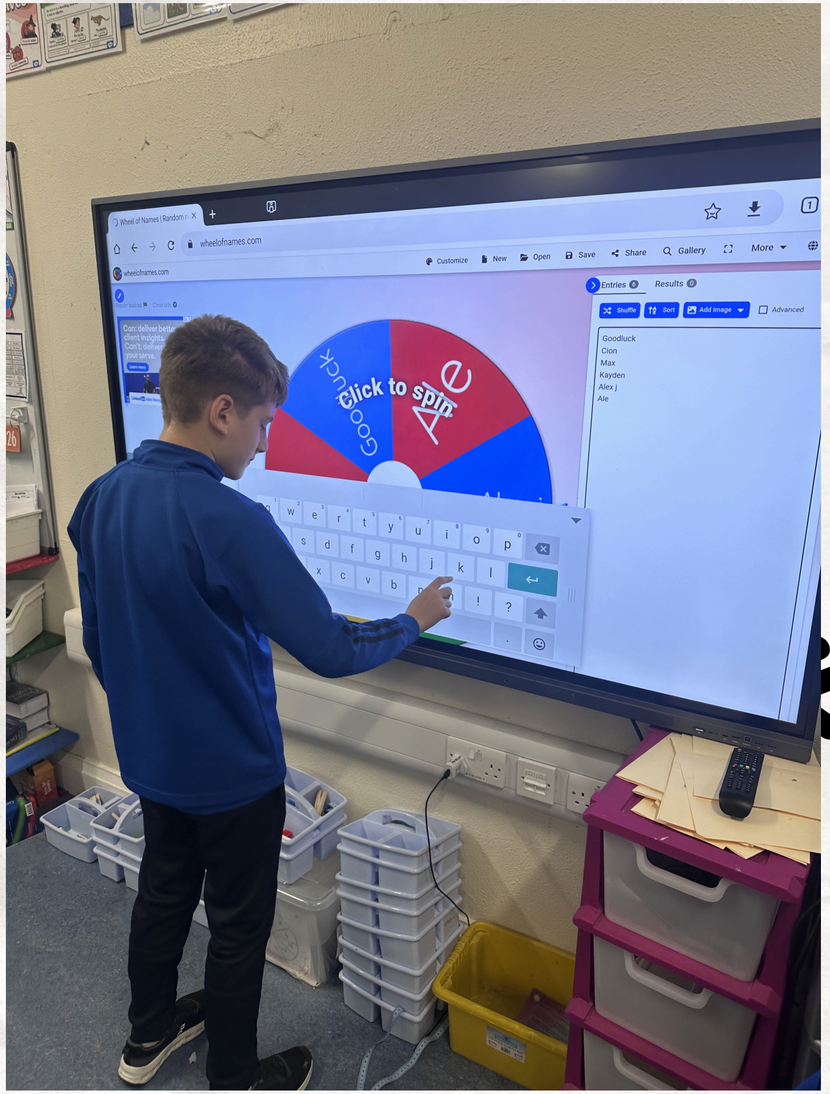
We had 2 groups.
Doodle Group & Non-Doodle Group.
We first did the wheel to choose which colour card would have which group. We had 11 in one group and 12 in the other.

Randomising

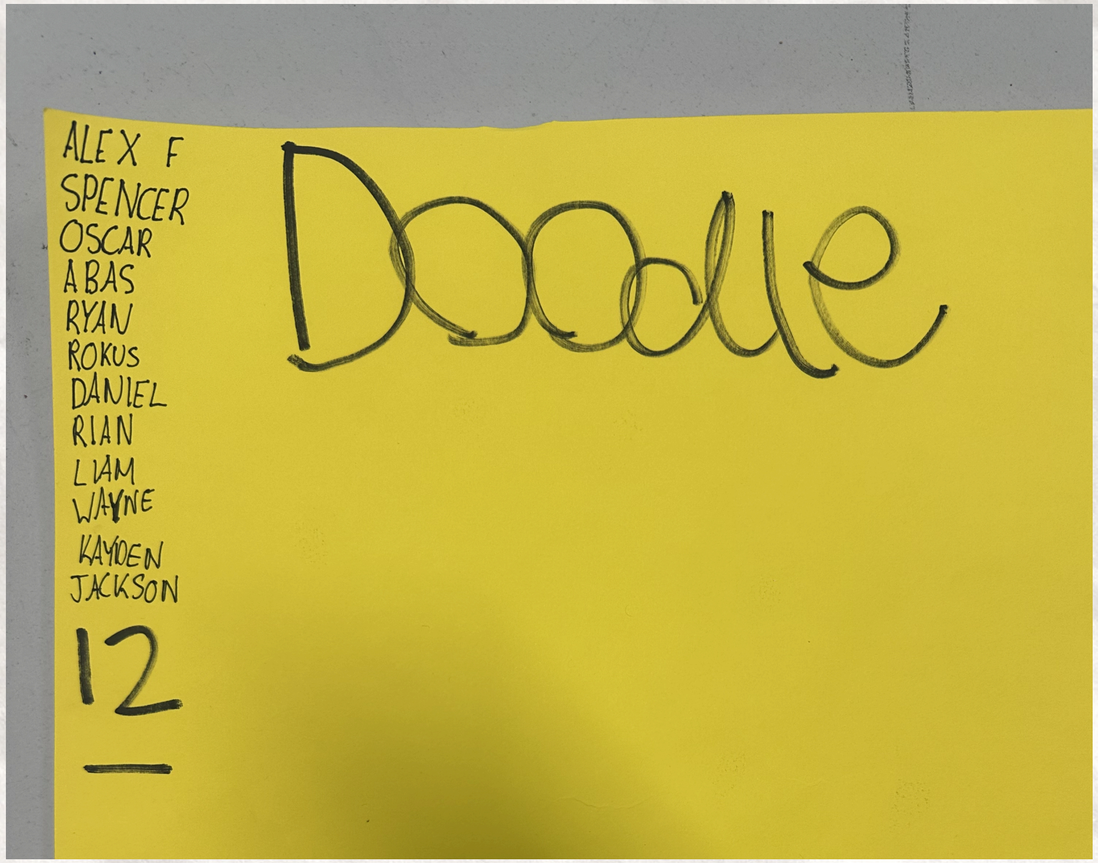
We then entered all the names onto the Wheel of Names. As we spun the wheel we wrote the names in alternating groups on the coloured card and then eliminated them.

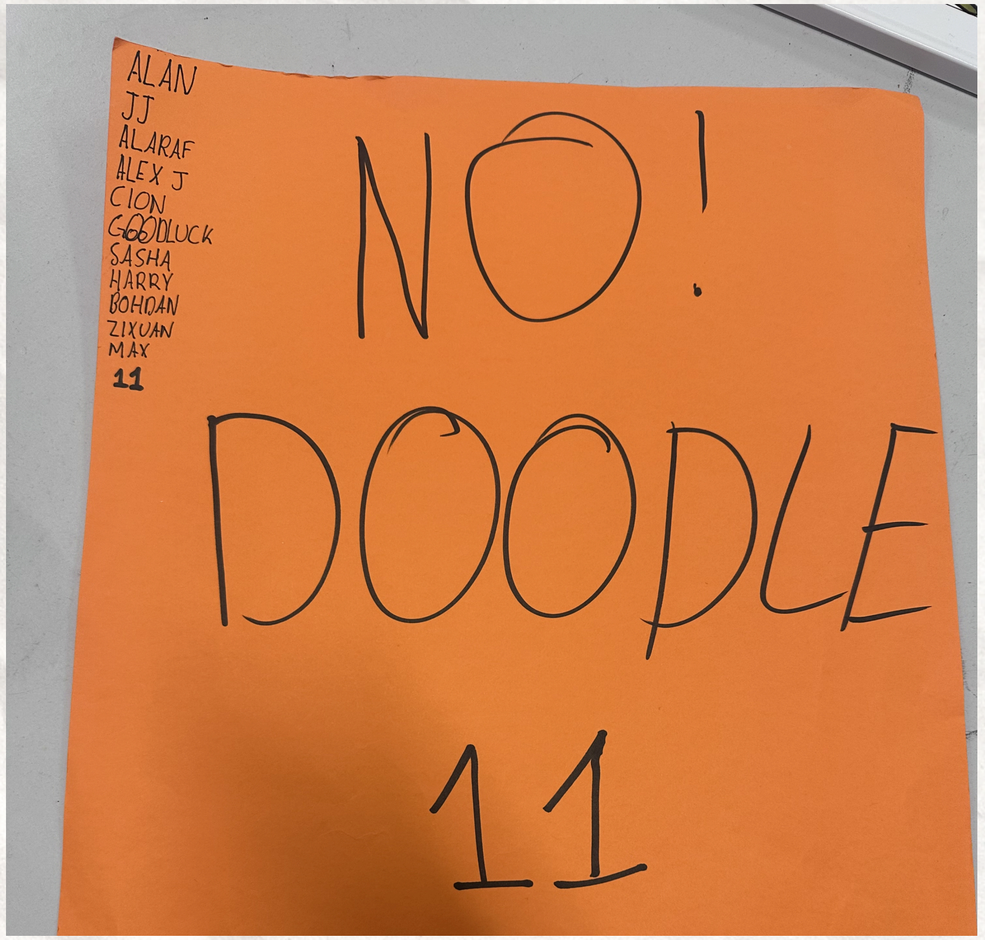
Wheel of Names





Final Groups





Step 6 – Blinding

We didn't want to spill the beans and give too much information away to the 6th class boys before the trial. When we were explaining to them about the trial we didn't mention anything about doodling. We just mentioned 'certain activities'

On the day of the trial, each group were kept separate and were not allowed to talk to each other about it until after they had finished.

When marking the questionnaire, we made sure that the person marking the questions didn't know which boys were in the doodling group and which weren't. This way, they wouldn't (even accidentally) be more generous or stricter with one group.

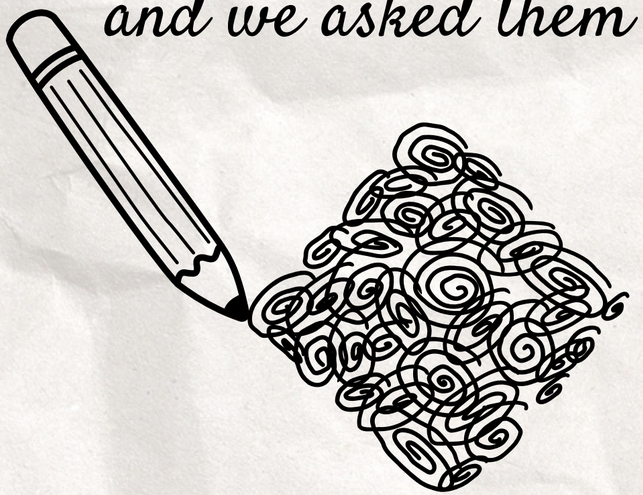
Step 7- Conducting our Study

On the day of the trial we went into 6th class and we split the class into their groups. We asked the doodling group to stay in the halla with their teacher while the non-doodle group stayed in the room with us. We asked them to clear their tables and get ready to listen to the story.

The story was read and they listened. Once it was finished we gave out the questionnaire for them to complete. We went around the room and made sure everyone was trying to answer the questions.

Step 7- Conducting our Study

Once they were finished, we gathered up the sheets and then thanked them for taking part and asked them to leave the room. We asked the Doodle group to come back to the room. When they arrived, we gave out a pre-prepared doodling sheet and we asked them to get something to write with.



We told them that they will be listening to a story and doodling at the same time and then at the end they would get a questionnaire to complete based on the story.

Step 7- Conducting our Study

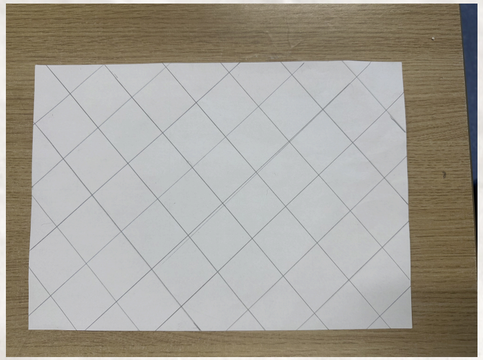
Once they were finished, again we handed out the questionnaire and went around to make sure everyone was answering. We collected the answer sheets. We also collected the doodling sheets because we were interested to see what kind of doodles people were drawing.

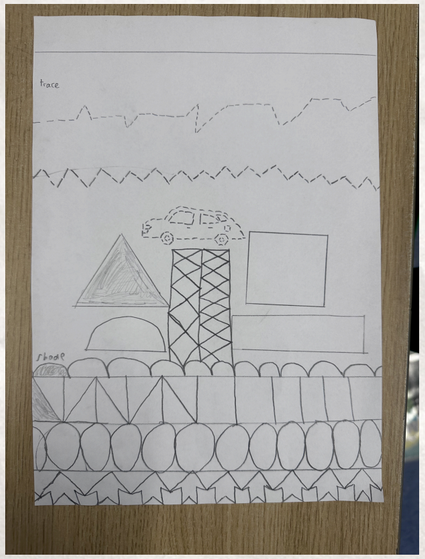
We thanked them for taking part and we went back to our classroom with the question sheets and doodle sheets.

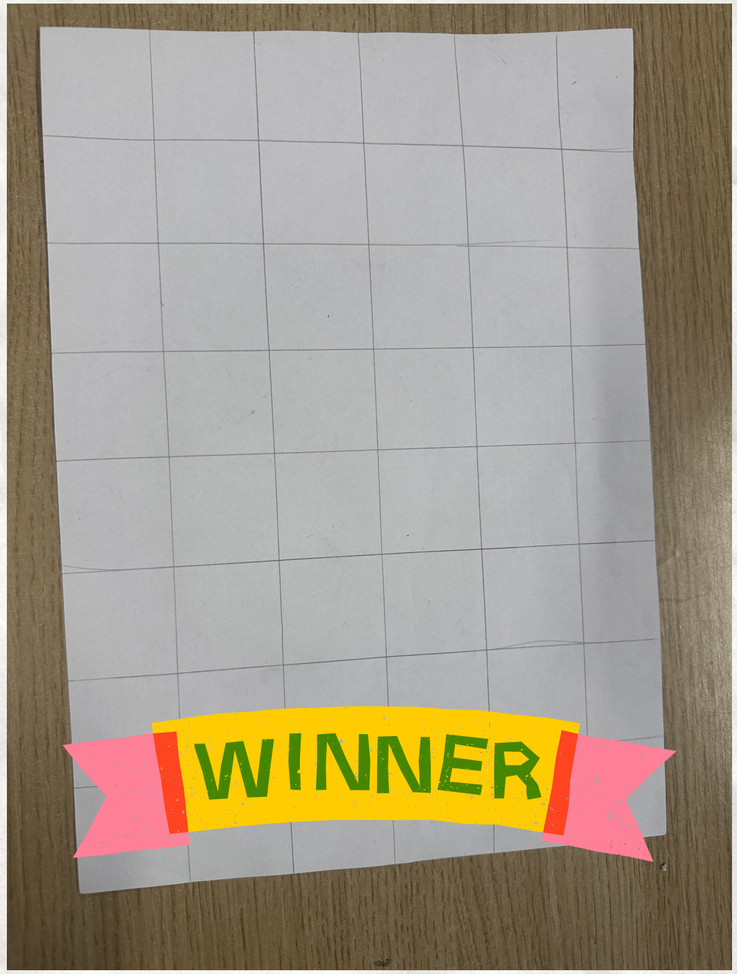
Step 7- Conducting our Study

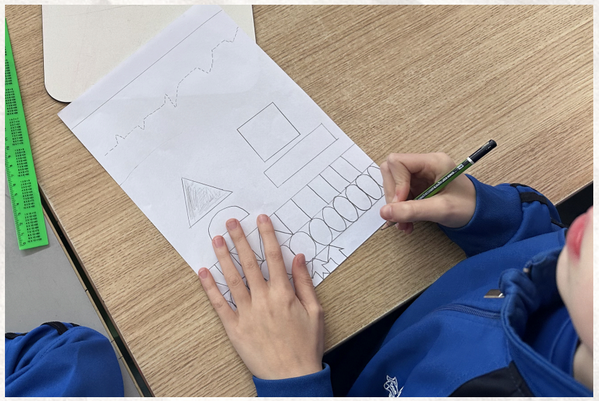
Each person in our class was randomly given an answer sheet to correct. We did not know who was in each group. This made sure there was no bias in the correcting.

We added up all the totals and then we added the scores to a spreadsheet.









Doodling Sheet

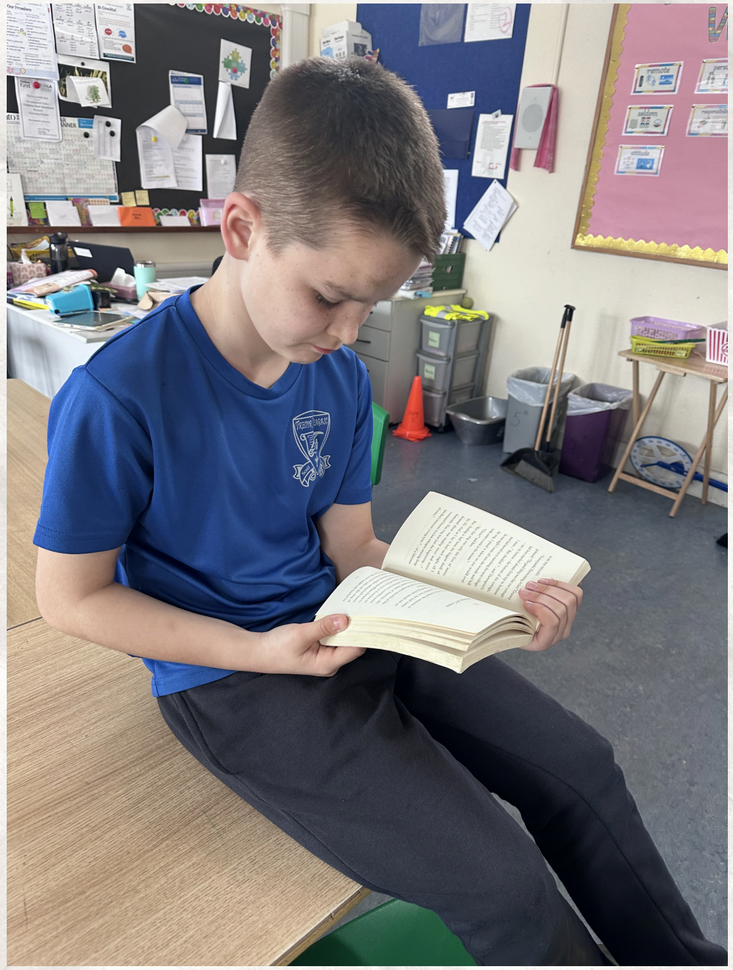
When we were deciding what kind of paper we would give the doodle groups. Some students designed their own doodle pages. We voted as a group about which one would work best. This was then photocopied by our teacher for the Doodle group.

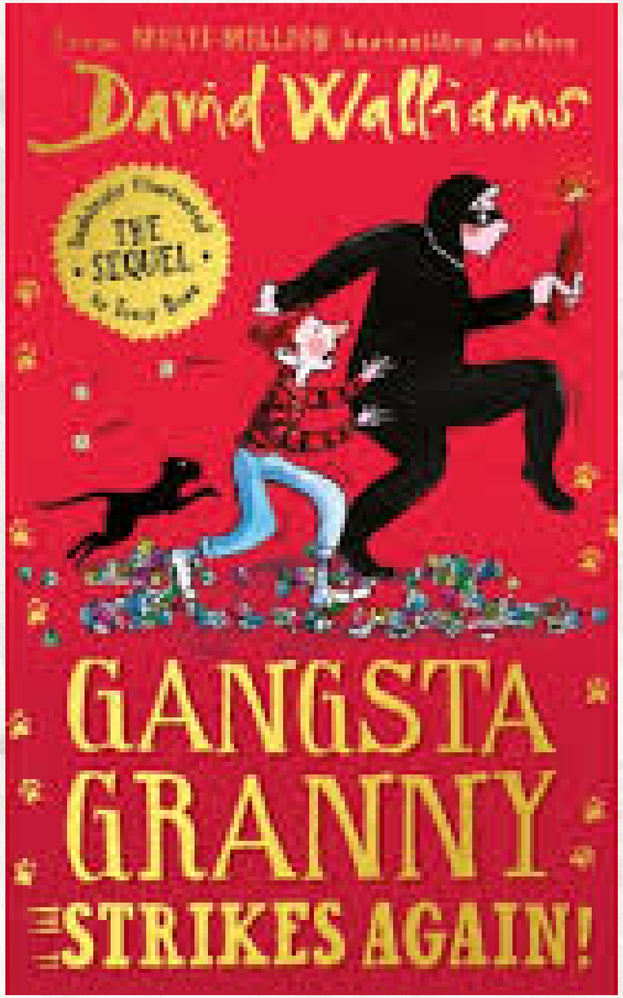
Reading Material

A group of boys were tasked with choosing what would be listened to for the trial.

They chose 'Gangsta Granny' by David Walliams.

They chose this because they thought it was a funny book that would be interesting to read as well as being at the 6th class level.





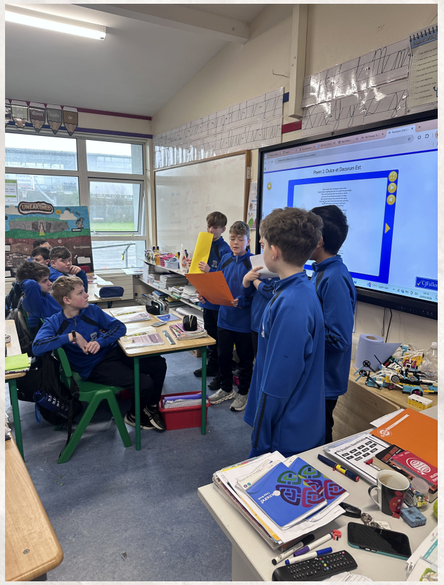
Questionnaire

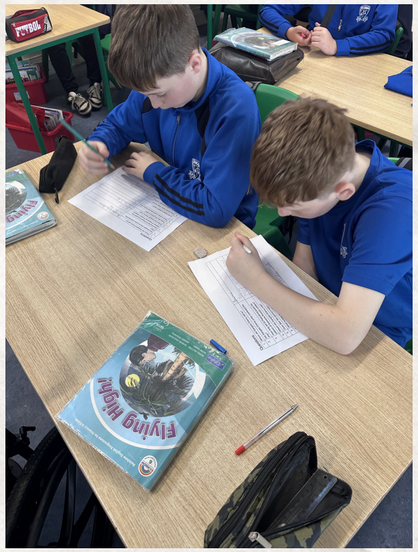
Some of us came up with the questions based on the chapters chosen. We realised after we went through the questions that one of them didn't make sense so we eliminated that one.

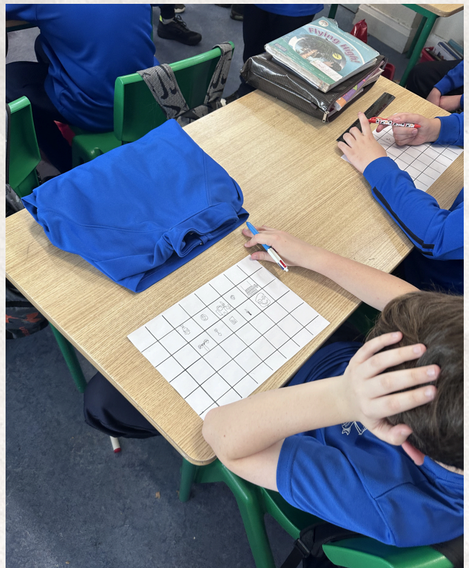
Questions

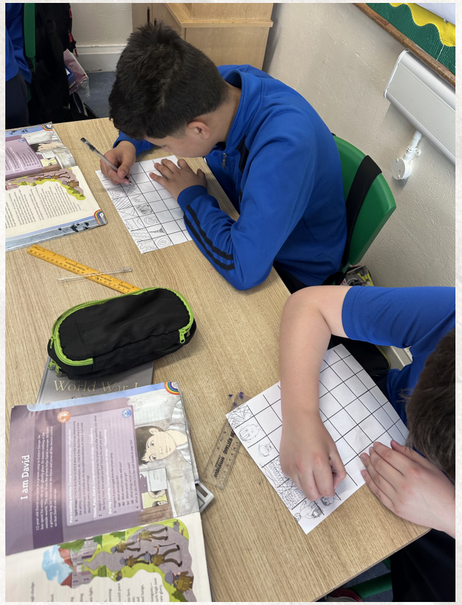
1.	Where did Gangsta Granny sail to?	
2.	Did Gangsta Granny jump overboard the ship?	
3.	How long did St Petersburg guard the platoon of fearsome Russian soldiers?	
4.	Where did Gangsta Granny hide?	
5.	Does Ben like granny's tails?	
6.	What number house does Mr Parker live?	
7.	Is Mr Parker a retired mayor?	
8.		
9.	Was the Indian maharajah wealthy?	
10.	What was the name of the magazine Ben was reading?	

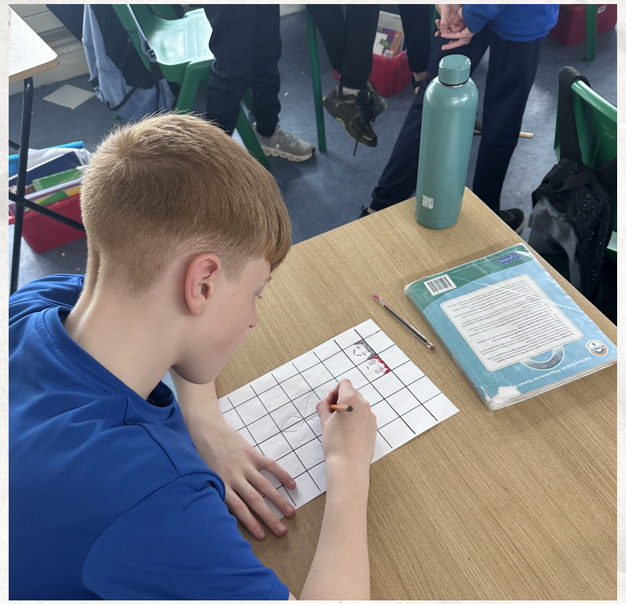
Pictures from the trial



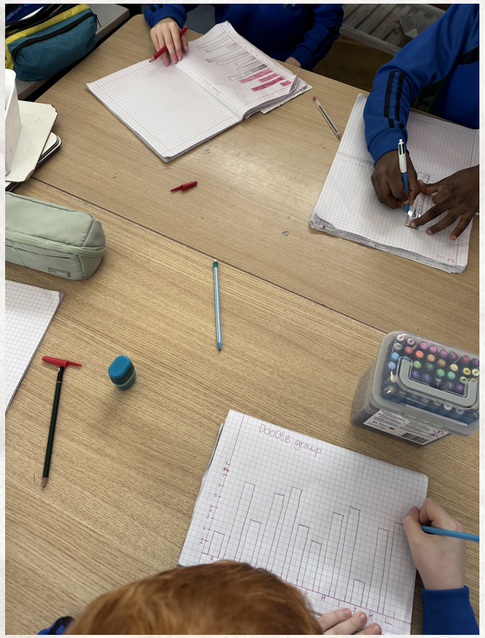


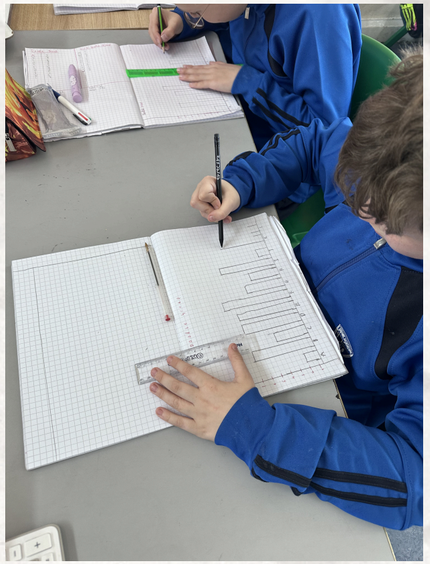


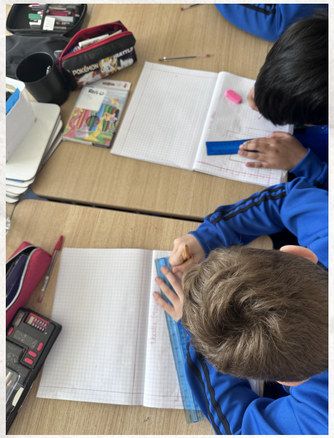


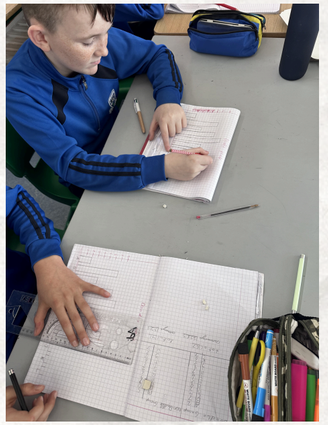


Correcting and Analysing the Data









Step 8- Report the Findings

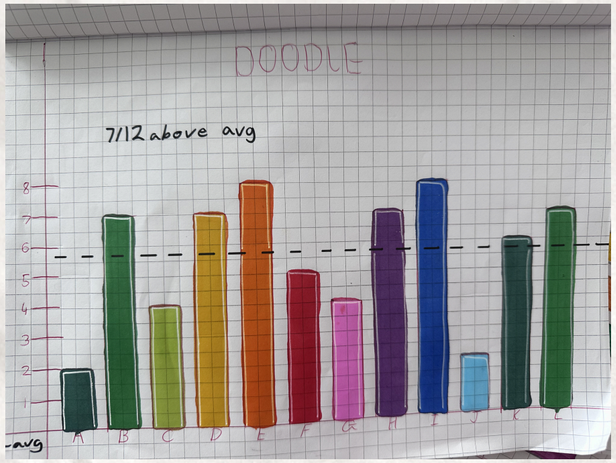
We gathered all the results on a spreadsheet and we worked out the average score for each group.

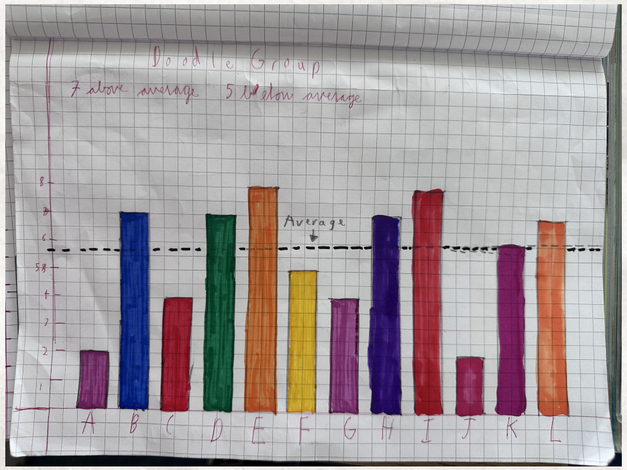
Our findings showed that the group who doodled while listening to the story achieved a higher average score on the memory test than the group who did not doodle. This suggests that doodling may have helped us to focus better and retain more information, leading to improved recall of details from the story compared to simply listening without doodling.

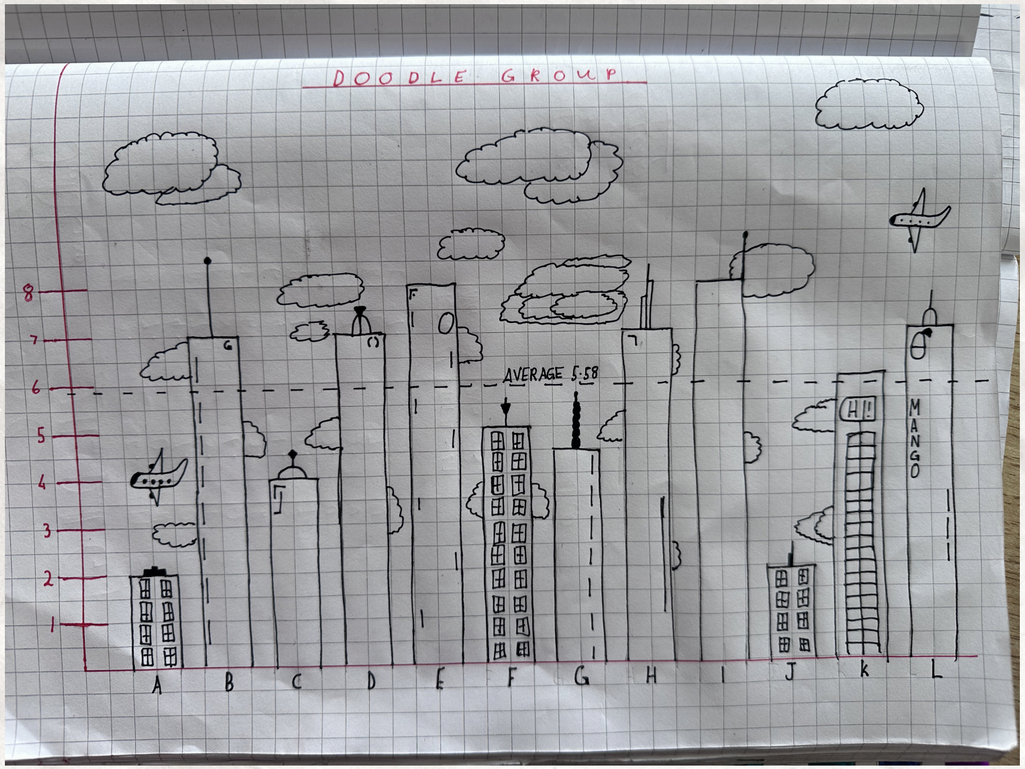
Step 8- Report the Findings

Doodle Group			Non-Doodle Group		
	A	2		M	5
	B	7		N	0
	C	4		O	7
	D	7		P	3
	E	8		Q	6
	F	5		R	2
	G	4		S	1
	H	7		T	6
	I	8		U	2
	J	2		V	2
	K	6		W	7
	L	7			
Total		67	Total		41
Average		5.58	Average		3.73

Doodle Group Scores

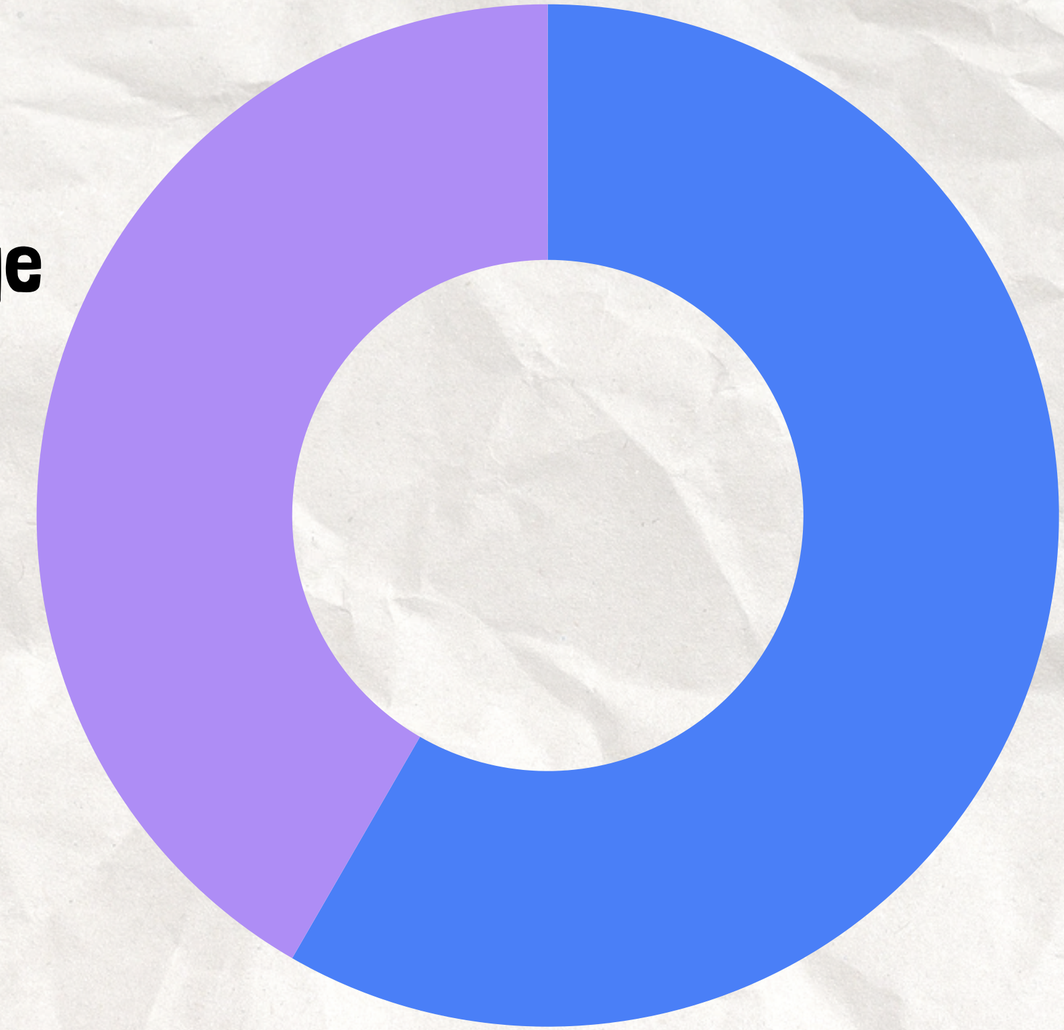






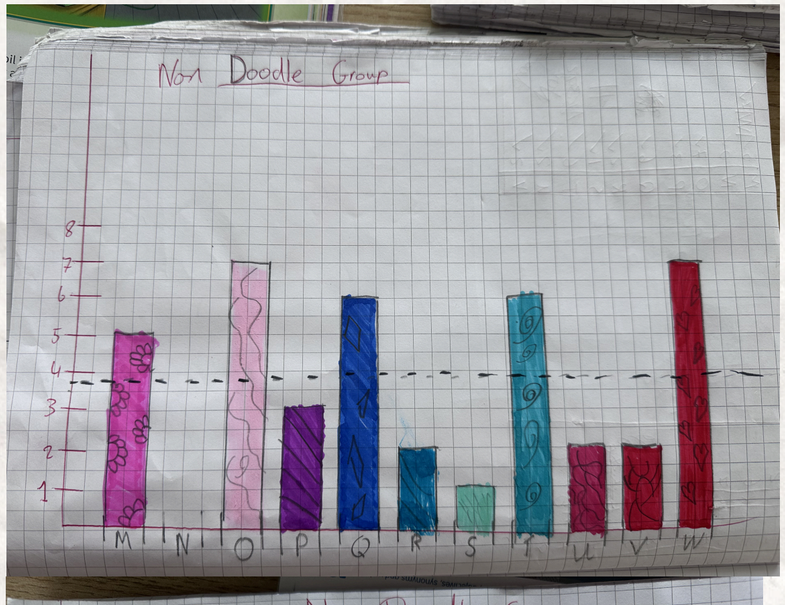
Doodle Group Scores

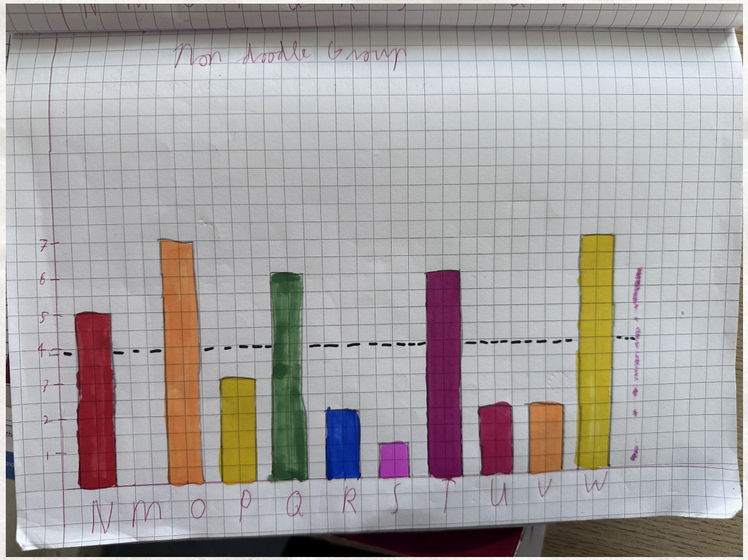
Below Average
41.7%

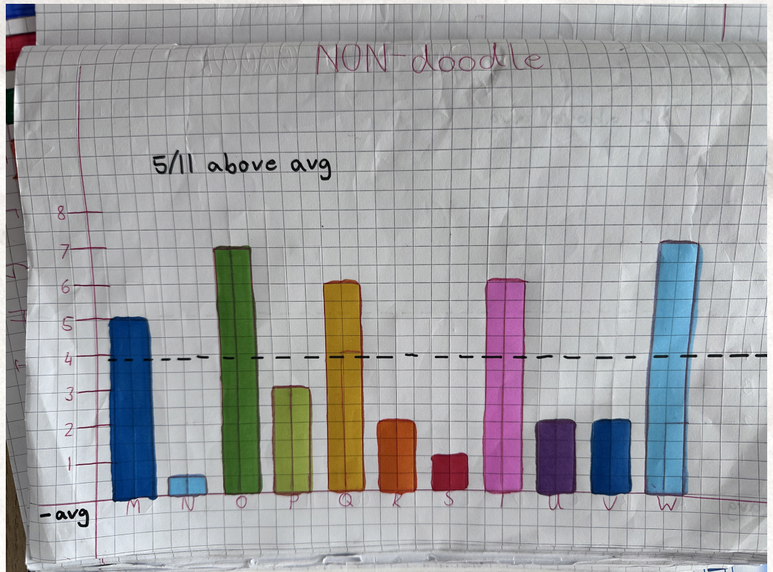


Above Average
58.3%

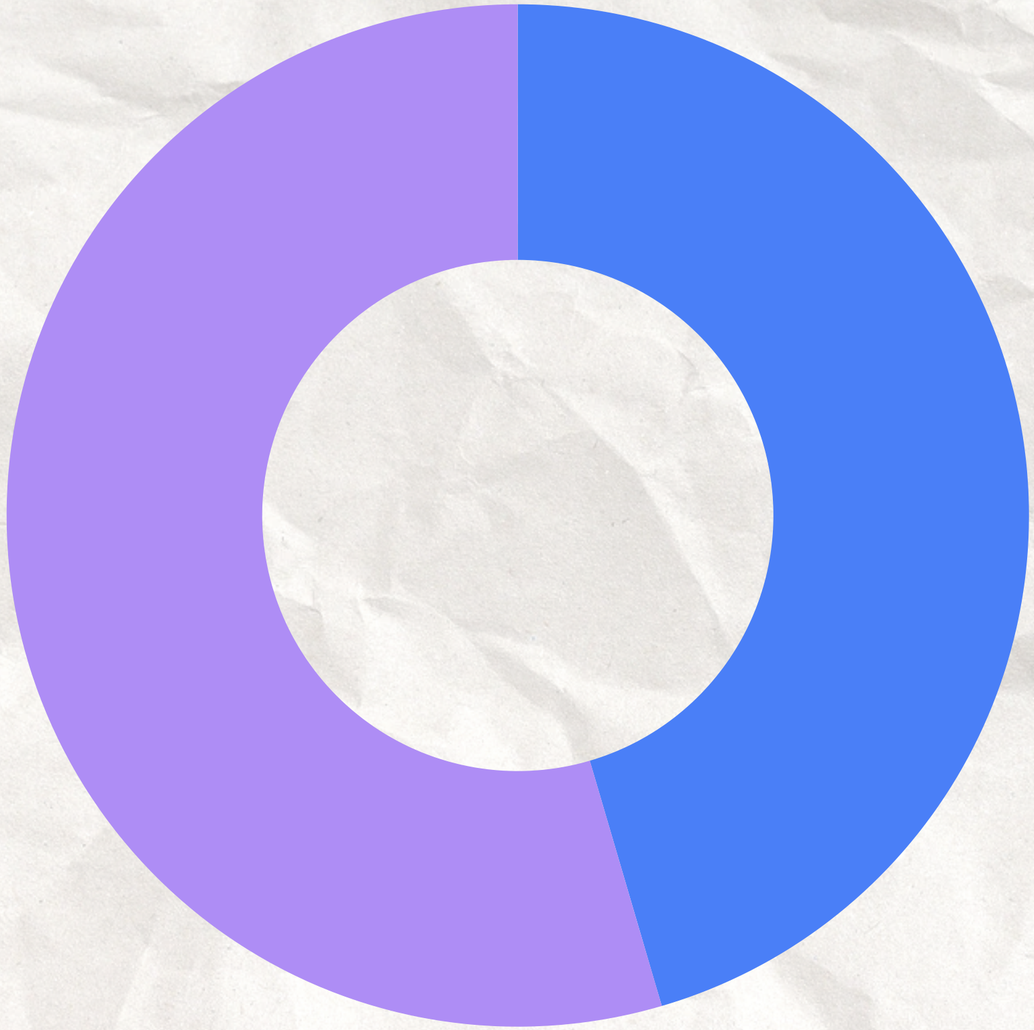
Non-Doodle Group Scores







Non-Doodle Group Scores

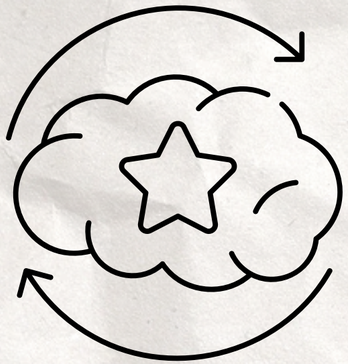


Above Average
45.5%

Below Average
54.5%

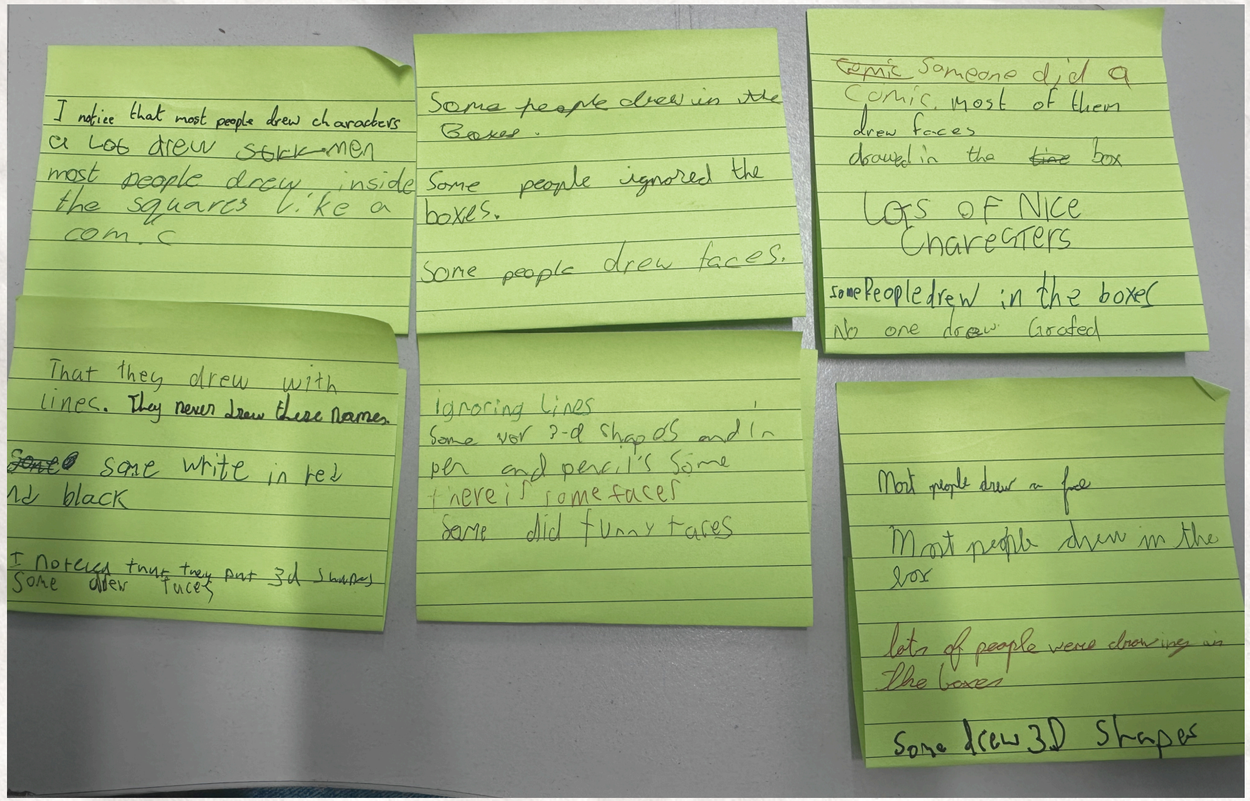
Overall

When we look at both groups together, we can see a bit of a pattern. The doodle group had more boys scoring above average, while the non-doodle group had more scoring below average. This suggests that doodling might have helped with remembering the story. However, the difference isn't massive, and both groups still had a mix of high and low scores. So overall, it looks like doodling gave a small advantage, but it didn't work for everyone and isn't a guaranteed way to improve memory.



Doodle observations

Here are some of the observations we made on the doodles that were done. Faces were the most popular doodle. We also noticed that some of the participants didn't use the boxes and a couple of them turned the page over and used the blank side.



Changes we would make

After the trial we chatted about how it went.

Some changes we discussed were;

1. Offering a choice of paper to doodle on.
2. We considered changing the story to one nobody knew.
3. Shortening the length of the reading piece.
4. Giving more options for pen/pencil to doodle with.

Limitations

We noticed some issues when we had finished the trial.

Some people already read the story and this could have impacted their results on the questionnaire.
We could have done a survey before hand to check if they had read it before.

We could also have done a pre-test questionnaire to check the boys knowlegde of the story. We thought the risk here then would be that they would know the questions before hand.
Not everyone in the doodle group was keen on doodling and some just scribbled rather than doodling.

Class Reaction to our results

We were really hoping that the doodling group would come out on top. Our teacher is always asking us to stop doodling and listen in class. We were excited to prove to her that maybe doodling is going to help us remember more while listening in class.

After we calculated the average, everyone in the class was cheering that the doodle group did better than the non doodle group.

Now it's time to convince our teacher that doodling in class could actually help us!!

Summary

For our project, we wanted to find out if doodling helps us remember things better. We worked with 27 sixth class boys and split them into two groups. One group doodled while listening to a story, and the other group just listened normally. After that, everyone did the same memory test based on the story. When we compared the results, the doodle group did slightly better overall, with more boys scoring above average. However, both groups had a mix of high and low scores, so doodling seemed to help a bit, but not for everyone.

Reporting our findings

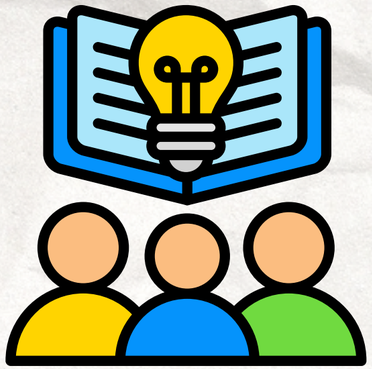
We plan to present our project to the other classes in the school in the whole school assembly. We are excited to show what we've done.

Final Note

We really enjoyed doing this project because it was interesting and different from our usual classwork.

It was fun to take part in the experiment and see how something simple like doodling could affect our memory.

We also liked comparing the results and discussing what they meant, as it made us feel like real researchers.



Thank You!

We hope you enjoyed our project. Thanks for reading.

Mrs. Lohan's

5th Class

St. Patrick's Boys N.S.

Limerick.