Maths Parent Workshop

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The Maths Curriculum at Wallace Fields Junior School

The National Curriculum for Mathematics aims to ensure all pupils:

- Become **FLUENT** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- **REASON MATHEMATICALLY** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- Can **SOLVE PROBLEMS** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The Maths Curriculum at Wallace Fields Junior School

- **High expectations**
- **Progression**
- **Conceptual development of number**
- Fewer things in more depth in Primary - **mastery approach**
- All pupils expected to **build firm foundations** and not be accelerated into subsequent years curriculums

What happens at WFJS?

- Daily lessons lasting one hour
- Lower school have an additional 40 minutes which focuses on fluency and core mathematical skills. This includes times table practice ahead of the MTC (Multiplication Tables Check) at the end of Year 4.
- Greater time spent on learning key skills, broadening and developing a deeper understanding, asking the children to reason and challenge throughout
- Times table revision factored into lesson time
- Speedy maths regularly which reinforces key fluency, mental mathematics skills and enables retention for learning key facts

Beginning of a maths lesson

Focus on fluency or mental strategies through a variety of activities such as:

- Quick recall of numbers or facts through games, use of apparatus, follow me activities and/or practice skills from previous lessons, including reasoning activities where appropriate
- Number mats to consolidate skills and vocabulary
- Mental arithmetic activities
- TTRS times tables tests and practice

During the lesson

We embed the children's understanding of key concepts by:

• Developing a key skill or new learning through teaching and practise of said skills – initially utilising fluency practise and then moving on to reasoning and problem solving using those key skills.

• Use of kinaesthetic ways of learning so children build, draw, watch, say and write during these sessions, as well as use a plethora of equipment to support their learning.

• Utilising group, paired and individual activities

• Use of mini whiteboards, equipment, problem solving activities, reasoning discussions and sometimes text books

End of the lesson - reflection

A plenary is a time to reflect on what has been learnt and can be used at times throughout the lesson to draw together ideas and help others understand key skills.

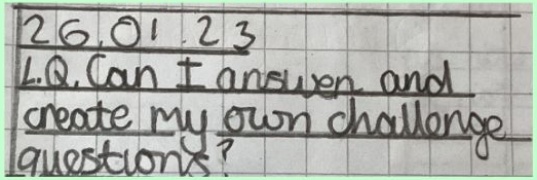
Plenaries are not always left to the end of the lesson, with more and more teachers now utilising mini plenaries throughout their teaching to support and assess all the learners in their group, including the children self-marking work and editing.

Teachers can also use this time to challenge those learners that are demonstrating that they understand the learning quickly.

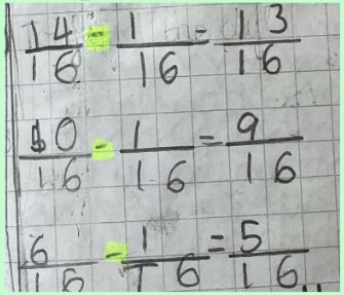
Plenaries give the children time to use their purple pen to write a problem of their own, a rule, a reflection, an idea, a prediction using reasoning and/or problem solving to develop and consolidate key learning.

Maths book expectations:

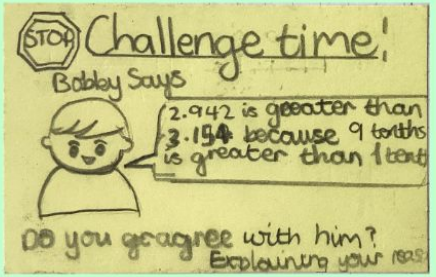
Date and LQ



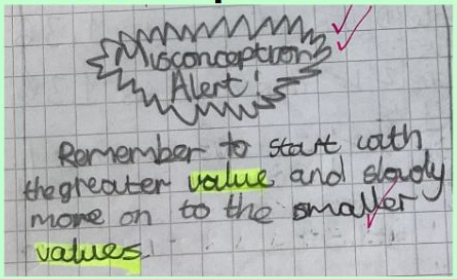
Digits in a box



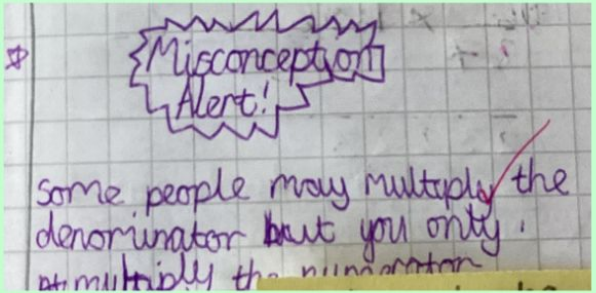
Creating own challenge questions



Misconception Alert



Purple pen reflections



Problem solving using reasoning and visualisation

A machine makes 2,734 boxes every hour.

The machine works for 3 hours each day.

a) How many boxes will it make in 12 days?

b) Compare methods with a partner. Were there any other ways you could have worked out the answer?

Caleb has been practicing column addition.
Mark his work and explain any errors he has made.

	1	2	3	6	2
+	1	8	9	7	7
	2	0	2	3	9

	5	2	3	6	
+	1	9	4	7	2
	7	1	8	3	2

More maths at WFJS

- Snap group – a very small support group who work with specialised TA for 10 minutes each day.
- Number Sense – providing individuals with the opportunity to revisit maths learning and create stronger foundations
- Key children are asked to go to use technology three times a week to practise key concepts utilising Mathletics and Times Tables Rock Stars.
- Speedy Maths Books – every day practice at speed and mental arithmetic outside of the maths lesson. This covers all of the mental arithmetic that each child should know by the end of each year group.
- Chromebooks can be utilised across groups to support learning.
- Assessment- oral, written, computer.
- Homework- reinforcing what has been learnt. Mathletics & Times tables Rockstars – homework support and fun!

Cross curricular - how much do we *really* use maths in other subjects? (A lot!)

- Science – measuring, constructing tables of data, drawing graphs
- Art – repeating patterns, shapes, translation and sequences
- History – timelines, dates, ages, periods of reign
- English – sequencing (instructional writing and language), counting syllables (haiku), identifying patterns and beats in lines and words
- Geography – distances, populations, temperatures, directional language, reading from Ordnance Survey Maps
- Music – counting beats
- PE and Games – timing, distances, shape, symmetrical and asymmetrical balances

Helping at home

Other useful Maths Websites for Children
http://amathsdictionaryforkids.com
http://www.bbc.co.uk/bitesize/ks1/maths
http://www.bbc.co.uk/bitesize/ks2/maths
http://www.ictgames.com/resources.html
http://www.ilovemathsgames.com
http://www.mathsisfun.com/index.htm
http://www.mathszone.co.uk
http://www.multiplication.com
http://www.primarygames.co.uk
http://resources.woodlands-junior.kent.sch.uk/maths
http://www.topmarks.co.uk
https://www.tutorhunt.com/tutor-bot/

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- Positivity around maths and using positive language (challenging rather than hard)

- Always praise what they're doing and take an interest in your child's homework – ask them to explain!

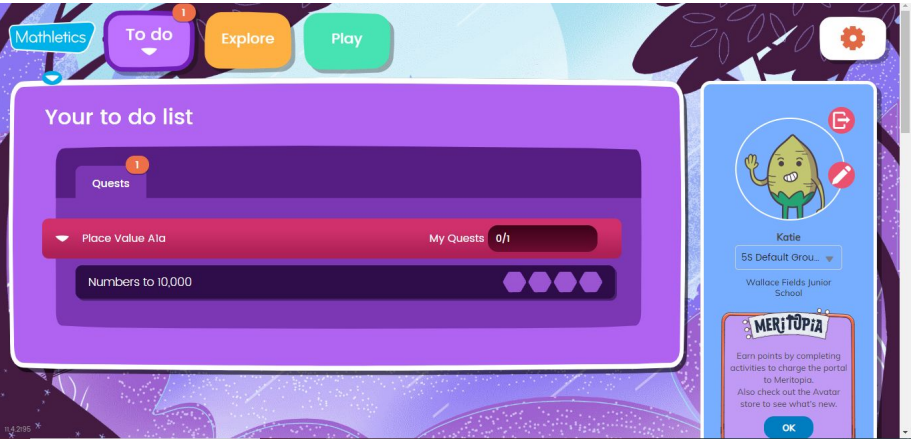
- Look at http://www.oxfordowl.co.uk/home/maths-owl/maths and https://www.topmarks.co.uk/maths-games/7-11-years - in particular the money resources - the children hardly see money these days! Yet it is fundamental that they learn how to manage, use and calculate with money.

- Take advantage of talking to your child's teacher at parents evening to ask how you can specifically help your child at home

Homework

- Times Tables Rockstars ten sessions per week.
- Mathletics Quest linked to learning in the classroom
- *Ask your children to explain what they have been doing in their lessons and what methods they have been using.*
- *Our Calculation Policy is available, so you can see the processes and methods that we are teaching in school.*

Mathletics



Every child has access to Mathletics www.mathletics.co.uk.

They should all have their username and password added in the front of their reading record or homework diary over the first few weeks of school.

Not only does this site have Mathletics live, where your child can challenge another child to timed quick recall of number facts, but it also has a curriculum section, where their group teacher will select some activities for them to work on.

There is also the concept search tool which can help to go over key ideas at home if your children are stuck!

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https://twitter.com/wallacefieldsjs/status/1504896161815089153?cxt=HHwWgsCyzb_Fu-IpAAAA

Mental health

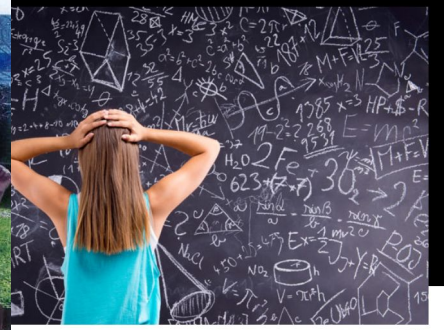
How to tackle post-Covid maths anxiety in primary schools

For World Maths Day, year 5 teacher, Katie Serjeant sets out her top tips for helping children overcome anxiety related to numbers

Katie Serjeant
maths lead and year 5 teacher, Wallace Fields Junior School

8 Mar 2023, 12:30

See discussion



VIEW FROM THE CLASSROOM

Breaking down barriers for girls in maths

In our second View from the classroom feature this month, we're delighted to speak to Katie Serjeant, year 5 teacher and Maths lead at Wallace Fields Junior School in Epsom, who tells us why it was so important to get involved in this year's World Maths Day.

Tell us about your school

Based in the London Borough of Epsom, Wallace Fields Junior School provides a rich and vibrant learning environment for around 300 primary-aged pupils, preparing them with the skills and attributes needed to thrive in secondary school and beyond. We encourage children to believe they can dream more, learn more, do more and become more: every child, no matter their gender, background or ability, is capable of brilliant things and reaching their full potential. Therefore, an integral part of our teaching and learning centres around equality and inclusivity. We celebrate inclusion and respect for one another and impress upon our pupils that they can achieve without limits; there is no boundary for their aspirations. This ethos runs through all aspects of our curriculum and wider school culture.

What does maths learning look like at Wallace Junior School?

We promote a sense of curiosity in our pupils and willingness to explore, investigate, question and learn – and this value is especially important in our maths lessons. As a maths lead, I know from experience how quickly children can develop a 'love' or 'hate' relationship with maths, based on misconceptions of the subject being more difficult than perhaps English or Geography. As a result, many children will cast themselves as 'good' or 'bad' at numbers before they've even tried, leading to low self-esteem in the classroom. This is particularly true for female pupils, who despite being just as capable if not more than their male peers in maths, are still less likely to pursue science, technology, engineering and maths (STEM) subjects in school. Dangerous stereotypes of maths being too 'hard' for girls or a 'boy's subject' threaten to maintain the lower levels of engagement girls have with the subject. With children as young as six years old also experiencing anxiety related to numbers, it was clear when developing our maths curriculum that we needed an approach that would build pupils' confidence and self-ownership with their learning, to show that every child can be a maths child.

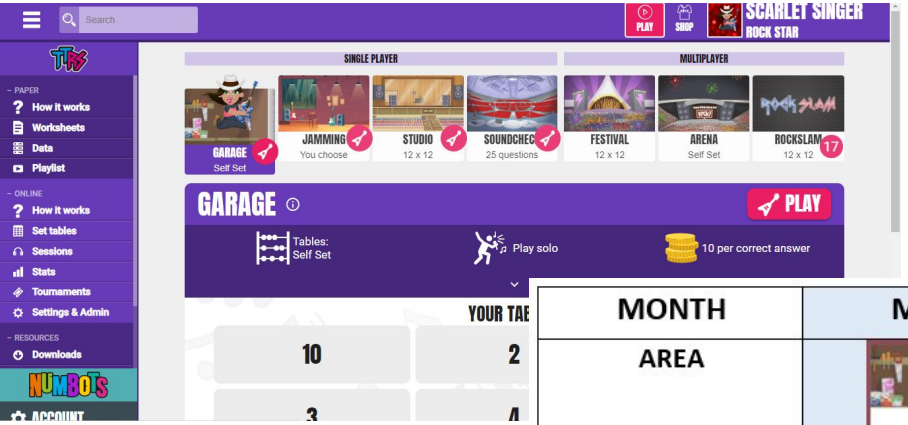
A core element of our maths approach is supporting each child to recognise and believe in their potential to do well in the subject, and dispelling the myth that only a certain type of learner can excel in maths. Underlying this is a commitment to making maths fun and sociable for children, to help them develop a positive relationship with this subject from an early age. Over the past year we've implemented several new initiatives to address this and build all our children's confidence with numbers, particularly the female pupils.

What resources and initiatives do you use to break down barriers to engagement?

A lack of confidence is arguably the biggest

Times Table Rockstars (TTRS)

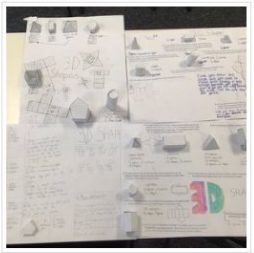
We use TTRS at Wallace Fields as a way of ensuring that your children have plenty of interactive access to lots of times tables activities – a bedrock required for much of the maths that they will have to work with in the upper and secondary school maths.

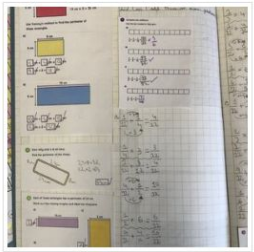


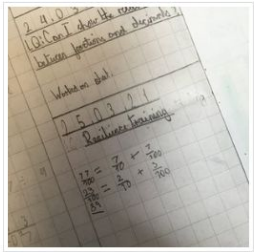
MONTH	March	April	May	June
AREA	 GARAGE	 GARAGE	 STUDIO AND SOUNDCHECK	 SOUNDCHECK
TIME	15 minutes per week	15 minutes per week	10 minutes per week in **Studio** 5 minutes per week in **Soundcheck**	3 games per day

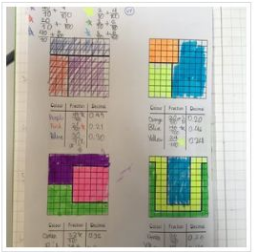
School website:

https://www.wallacefields-jun.surrey.sch.uk/learning/maths









Maths Provision

SEND and Challenge

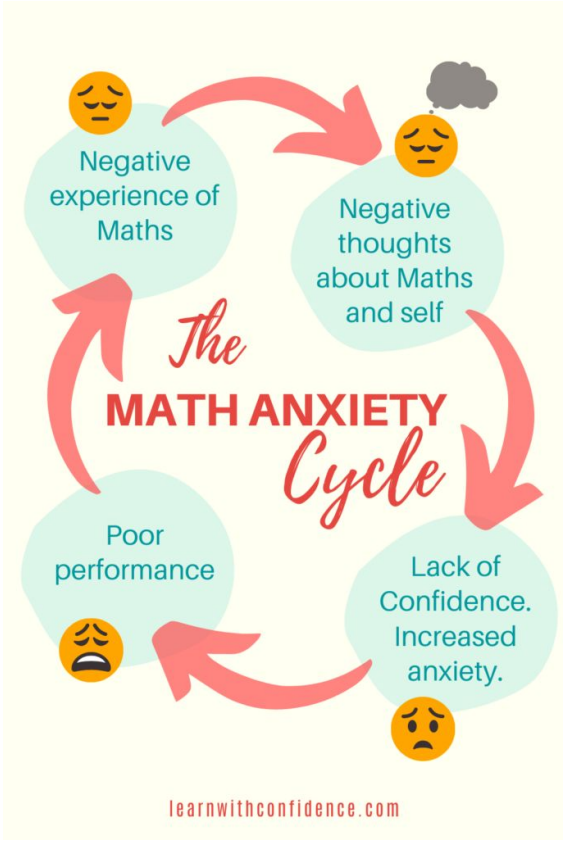
Multiplication Tables

Mathletics

How to videos

Useful links

Maths Anxiety with Anne Okafor



How to tackle post-Covid maths anxiety in primary schools

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8 Mar 2023, 12:30

Thank you so much for all your support with maths at WFJS!

- Encourage your child with a positive attitude to maths.
- Highlight how and where maths is important in real life!
- Work with them, try not to do the work for them.
- Practise for short periods of time not hours upon hours.
- Make it fun!