



# MATHS WORKSHOP FOR PARENTS

WEDNESDAY 26<sup>TH</sup>  
SEPTEMBER 2019

PAULA CRABB

MATHS LEAD



IT IS IMPORTANT TO KNOW THAT :

EDUCATING A CHILD IS A PARTNERSHIP  
BETWEEN PARENTS AND THE CHILD'S  
SCHOOL.



# THE MATHS CURRICULUM

Maths



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.

# What is in there?

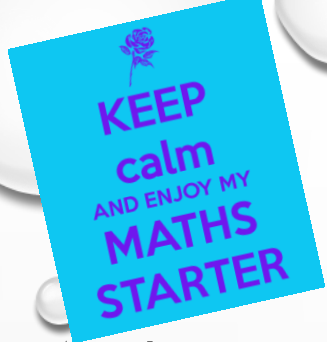


1. HIGHER EXPECTATION OVERALL - benchmarked against age-related expectations across this and other countries
2. PROGRESSION TO BE SHOWN YEAR-BY-YEAR – rather than whole key stages
3. CONCEPTUAL DEVELOPMENT OF NUMBER ADDRESSED IN DETAIL, especially in relation to arithmetic and proportionality
4. FEWER THINGS IN MORE DEPTH IN PRIMARY so data is less prominent and probability not introduced till key stage 3
5. ALL PUPILS EXPECTED TO BUILD FIRM FOUNDATIONS and not be accelerated into subsequent years curriculum
6. INTRODUCTION OF FORMAL ALGEBRA

# What happens at school?



- We have daily lessons that are 1 hour long ( 5 hours in total)
- We are building in an extra 40 min fluency lesson where the focus will be core fluency mathematical skills – particularly multiplication tables and key skills such as multiplying/dividing by 10, 100 and 100 in the lower school
- We spend much longer learning key skills, broadening and developing deeper understanding, asking children to reason throughout
- We will continue with weekly times tables tests, especially focused upon in the lower school to set firm foundations
- We carry out Speedy Maths activities every day, just after lunch to reinforce key fluency, mental mathematics skills and enable retention of learning for key facts



# The start of our lessons

We begin our lessons with 'quick start' activities that give the children the opportunity to practise mental strategies through activities such as:

- 'Big Maths, Beat That!' (In Y3)
- 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
- Times tables tests and practice to ensure that certificates are being checked off by the teacher/TA

# OUR MAIN ACTIVITIES



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

# PLENARY



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.



# PROBLEM SOLVING USING REASONING AND VISUALISATION

- The bar model, which we also refer to as the ‘part, part, whole model’, is a tool to help solve arithmetic and algebraic word problems. It is a common problem solving tool used in Singapore and other parts of the world. Surprisingly, it actually originates from Britain and was apparently used quite widely in 20s and 30s!
- Put simply, it is a diagram or a bar can be a valuable representation to enable children to represent the problems in such a way that the mathematical structures are exposed for more visual learners.
- This enables pupils to ‘see’ the problem clearly and to then recognise the strategy they need to solve the problem.
- **It is not a calculation tool.**

Amy had some shells. She gave 70 to her friend.  
She had 80 left.

How many did she have to begin with?

70	80
150	

What if she gave 50 to her friend?

What if she gave 65 to her friend?

What if she gave 87 to her friend?

What if she gave 113 to her friend?



# OTHER ACTIVITIES

- Snap group – a very small support group who work with specialised TA for 10 minutes each day.
- Key children are asked to go to the ICT three times a week to practise key concepts utilising *Mathletics* and new this year, *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 – building through the year.
- Group use of ICT suite for lesson allowing access to the computers. We also now have *Chrome Books* which can be utilised across groups.
- Assessment- oral, written, computer
- Homework- reinforcing what has been learnt.
- *Mathletics & Times tables Rockstars* – homework support and fun!

# CROSS CURRICULAR- HOW MUCH DO WE USE MATHS IN OTHER SUBJECTS?

- **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

# PARENTS- HOW CAN I HELP?

- Take time to play and talk with your child in a positive way – try not to say ‘I could never do maths...’ your children may start believing this for themselves.
- Always praise what they’re doing and take an interest in your child’s homework – ask them to explain what they have been doing.
- 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.



# MATHLETICS!



MATHLETICS

Every child will have access to Mathletics

[www.mathletics.co.uk](http://www.mathletics.co.uk).

They should all have their user name 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 may select some activities for them to work on.

There are also lots of fun activities and problems that the children can have a go at, at home, such as Rainforest Maths, problem solving games.

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

NEW THIS  
YEAR!



Alongside Spelling Shed, we have bought in to Times Tables Rockstars this year 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.

Your children will be in a 'band' and they will have to work their way up from being a busker to potentially being a stadium rockstar through specific and consistent practise! The praise for this resource has been very high from schools that use it and we will be endeavoring to embed this during the course of the autumn term to ensure the progress well for their ongoing maths understanding!

# LEARNING TIMES TABLES

Your child will also be expected to try to achieve their **bronze, silver and gold times tables certificates** again this year and there will be a **platinum certificate** for those children who want to show that they can learn their square numbers to  $12 \times 12$ , their prime numbers to 100 and their cube numbers to 100 too.

Talk to your children about which times tables they are on and encourage and help them with their learning of these facts.

The government have carried out a trial year – which we took part in – and have confirmed that the full tests will run from 2019/2020 – which does mean that the current Year 4 children will be completing these tests during a 3 week period in June 2020. They will be completed through an online test and have 6 seconds to complete each question.

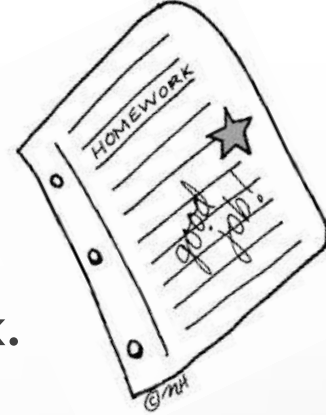


# RESOURCES



- Use Times tables Rockstars little and often – we will be asking the children to complete three 10 minute sessions per week.
- Write times tables out on paper or use books from bookshops such as WHSmith.
- Listen and recite with a rhythm – Mathletics have some songs. Use times tables CDs, clapping or stepping out along an imaginary number line ( e.g. on the way back or to school.) Packs of cards and dice are also great to use for quick fire games.
- Allow children to count up or down while gathering objects. (e.g. socks, apples, cakes, pegs, conkers.)
- Use some of the internet resources we can supply and websites to help discussion – for example BBC Bitesize, NRich games and activities, Oxford Owl, Maths4MumsandDads website, Top Marks great website for interactive games.

# HOMework!



- Times Tables Rockstars three times per week.
- Ask your children to explain what they have been doing in their lessons and what methods they have been using.
- Read the homework sheet, ask the children to discuss any steps to success or instructions and examples that are on it.
- Our Calculation Policy is available, so you can see the processes and methods that we are teaching in school. It is to be renewed and checked this year, but current one is available at: <http://www.wallacefields-jun.surrey.sch.uk/>
- Come in and talk to the teacher or email them with any concerns.

# Please don't forget the importance of snakes and ladders and other board games!

Allows for discussions on how to move along the board:

- count on from where you landed ( e.g. 26 and 6 means I am on 32!)
- add the score of the dice to where you start (e.g. 35 add 5 is 40!)
- use monopoly to gain and spend money.



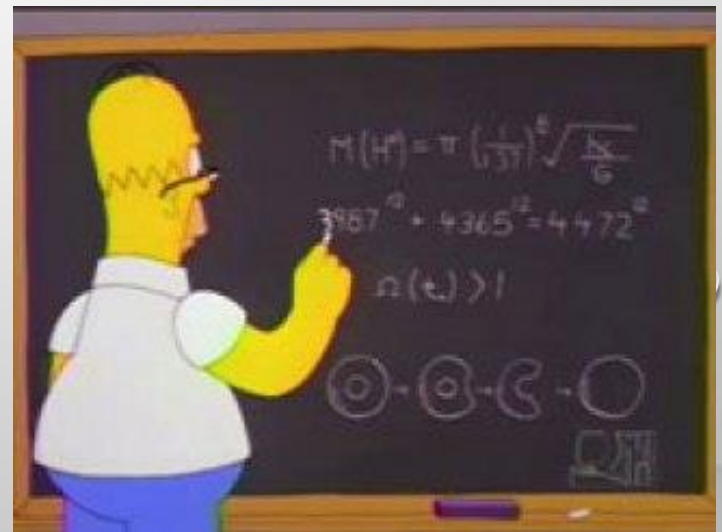
# Just a pack of cards?



- Use cards to familiarise children with 1-9 digits and what they look like as objects.
- Play snap so children recognise those digits.
- Play games where scores have to be added up and compared.
- Use them to learn tables by turned over the cards and multiplying it by the chosen times table.
- Make or buy a set of times table cards to play snap with.

# FINALLY, TO SUM UP.....

- Encourage your child with a positive attitude to maths.
- Highlight how 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!



THANK YOU FOR COMING AND FOR  
YOUR ONGOING SUPPORT!

