

Maths parent guide - LKS2 (Year 3 + Year 4)

2022/23

Workshop overview

- ❖ Maths at Star Primary
- ❖ Teaching for Mastery approach
- ❖ Maths - No Problem! scheme of work
- ❖ Maths in KS2 - MTC/SATs
- ❖ Times Table badges
- ❖ Interactive apps
- ❖ Practical tips and advice
- ❖ Questions



Maths at Star



At Star Primary, we strive to equip our children with a deep and meaningful understanding of core mathematical concepts. Depth of understanding is at the heart of all of our curriculum. Without a deep understanding, knowledge will remain in the short term memory and require regular revisiting and revising.

Through rich and motivating experiences such as Outdoor Maths Week and Rock Stars Day coupled with incentives such as our Times Tables Badges and an exciting scheme of work - we aim for every learner to genuinely enjoy the subject and learn fundamental life skills.



Teaching for Mastery approach

At Star Primary, we have adopted the Teaching for Mastery approach. This approach describes ideal classroom practice based upon years of research which allow for pupils to acquire a deep, long-term, secure and adaptable understanding of the subject. Some of the approaches include:

- Whole class teaching - avoiding labels
- Small, logical steps
- CPA approach
- Depth and breadth over acceleration

Maths - No Problem!



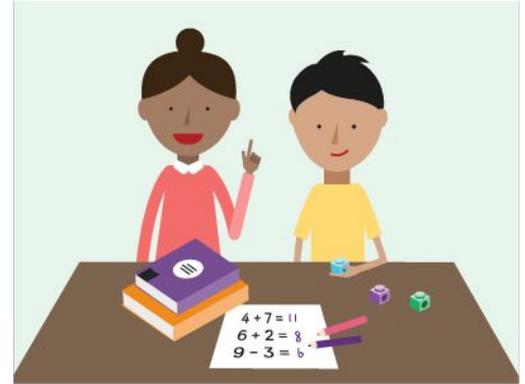
All children in Reception - Year 6 are taught the national curriculum through a scheme of work called Maths - No Problem!

Maths - No Problem! is a scheme of adapted from the curriculum taught in Singapore and is fully aligned with the UK national curriculum. Singapore regularly tops international league tables for mathematics in both primary and secondary education and the UK has sought to adopt their approach.

Maths - No Problem!

Maths - No Problem! lessons have some very common features:

- Explore task/Master/Guided Practice
- Links to “real life” scenarios
- CPA approach
- Opportunities for whole class, paired and independent work
- High aspirations for all learners



Explore task

Solving Problems on Duration of Time

Lesson
4

Explore

The watch shows the time the children arrived at the park.



I stayed at the park for 2 hours.



Ruby

I stayed at the park for 1 hour 20 minutes.



Ravi

I stayed at the park for 45 minutes.



Charles

At what time did each of them leave the park?

MNP lessons always begin with an Explore task. These are often open ended questions/tasks which generate excitement and support the children to speculate what they might be learning to do in the lesson.

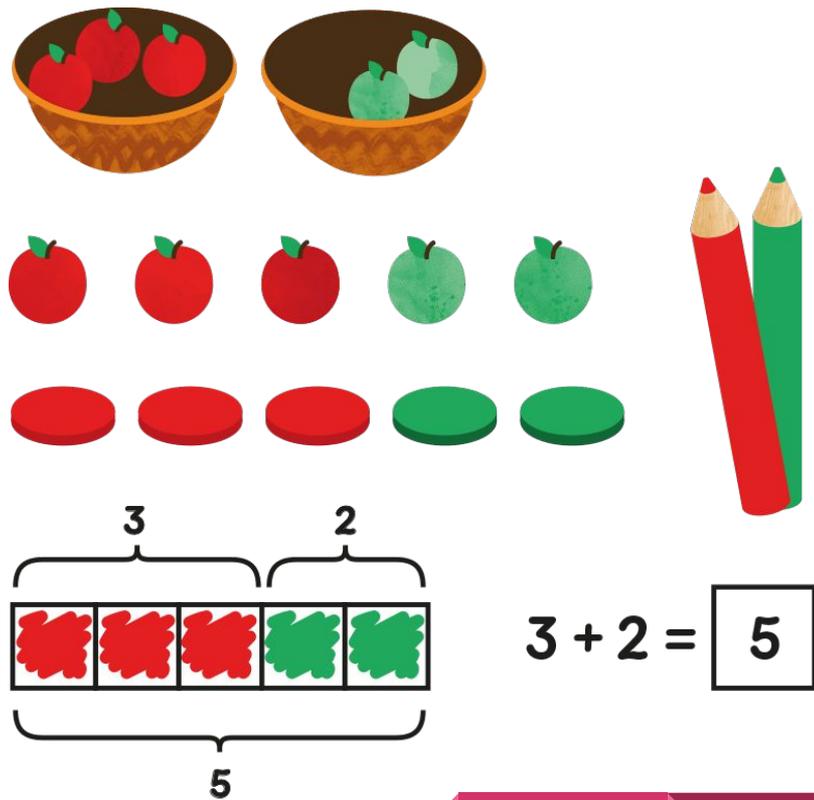
These tasks also serve the very useful purpose of teachers being able to assess how much prior knowledge the children can recall.

CPA approach

Concrete - pictorial - abstract

Both children and adults can find maths tricky as it's very abstract in nature. The CPA approach involves introducing abstract problems in a concrete way first before moving on to represent the mathematics in a pictorial way too.

This way, children will be able to construct meaning and make strong links between the concrete manipulatives and the abstract learning within their unit of work.

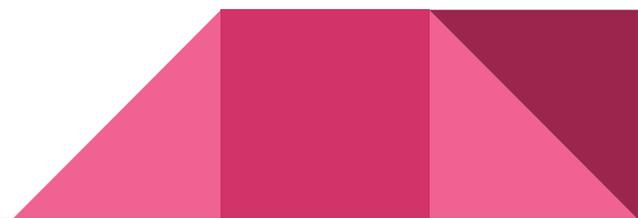
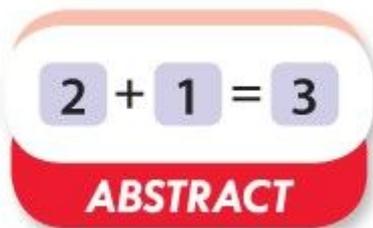
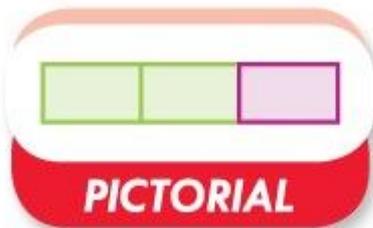
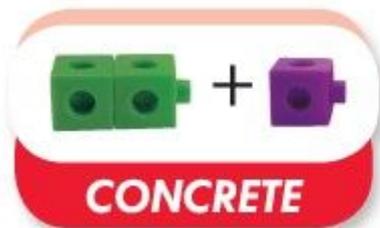




CPA approach - demonstration

Place value chart [link](#)

Number disk [link](#)



Independent task

Name: _____ Class: _____ Date: _____

Worksheet 7

Making Number Pairs

1 



+ = $\frac{6}{7}$

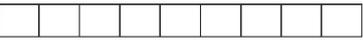
Shade to show another number pair for $\frac{6}{7}$.

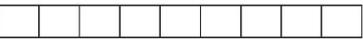




+ = $\frac{6}{7}$

2 Shade to show a number pair for $\frac{6}{9}$.





+ = $\frac{6}{9}$

Fractions

Page 137

3 Fill in the blanks.

(a) + $\frac{3}{5} = \frac{4}{5}$

$\frac{2}{5} +$ = $\frac{4}{5}$

(b) + $\frac{6}{11} = \frac{8}{11}$

+ $\frac{3}{11} = \frac{8}{11}$

(c) $\frac{4}{9} +$ = $\frac{10}{9}$

+ $\frac{3}{9} = \frac{10}{9}$

(d) $\frac{1}{4} +$ = $\frac{12}{16}$

+ $\frac{1}{2} = \frac{12}{16}$

Fractions

Page 138

In a typical MNP lesson, the children will spend the final portion of the lesson completing an independent task.

The independent task is designed so that the children can apply their learning from the day's lesson. As the task progresses, the questions increase in complexity and challenge.

Maths in KS2

Alongside the Maths - No Problem! scheme of work, the children undertake assessments such as arithmetic tests and mental maths tests.

These short, regular assessments aim to equip the children with the strategies necessary to have a strong command of the 4 operations (addition, subtraction, multiplication and division) as well as the ability to use efficient mental strategies too.

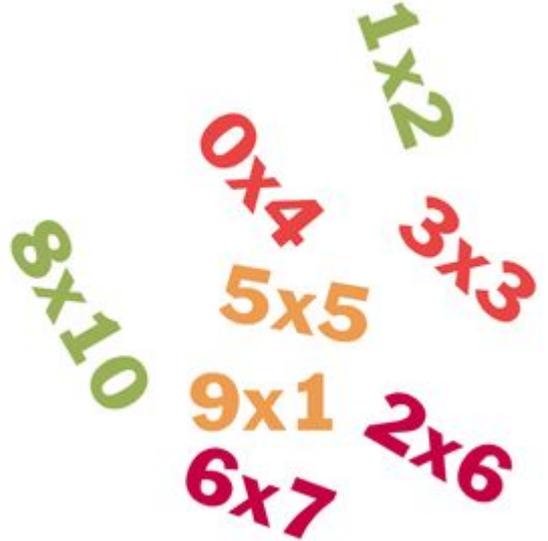


Multiplication Times Tables Check - Year 4

The government have made it statutory for all primary schools to administer an assessment called the Multiplication Times Tables check in the summer term in year 4.

“The purpose of the MTC is to determine whether pupils can recall their times tables fluently, which is essential for future success in mathematics. It will help schools to identify pupils who have not yet mastered their times tables, so that additional support can be provided.” -

<https://www.gov.uk/government/collections/multiplication-times-tables-check>



Multiplication Times Tables Check - Year 4

In this assessment, the children are asked a series of questions on all times tables from x2 - x12. The government expectation is that all pupils are fluent in these times tables by the end of year 4.

We have devised a times table map so that times tables are secure ahead of the MTC:

Year Group	All children to know by the end of the year
Year 1	x2, x10
Year 2	x3, x4, x5
Year 3	x6, x8, x11
Year 4	x7, x9, x12
Years 5 and 6	Revise multiplication and division facts of all times tables

SATs - end of year 6

At the end of year 6, all primary aged children sit statutory tests known as SATs. In maths, the children will sit 3 papers:

- Paper 1 - An arithmetic paper
- Paper 2 - A reasoning paper
- Paper 3 - An additional reasoning paper

Maths in year 6 follows our Teaching for Mastery philosophy but there is an additional focus on providing our pupils with lots of opportunities to apply their learning to SATs style questions too.

2019 national curriculum tests

Key stage 2

Mathematics

Paper 1: arithmetic

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						
DfE number						

Times Tables Badges

We want to incentivise our children to want to become fluent in their times tables. One of the ways in which we do so is by awarding times table badges.

Here are the times tables which need to be fluent in order to earn the badges:



KS2 Times Tables Badges

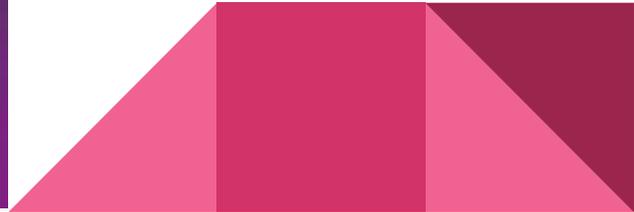
Bronze badge: x2, x3, x4, x5, x10, x11

Silver badge: x2, x3, x4, x5, x6, x8, x10 and x11

Gold badge: All times tables from x2 to x12

Interactive apps

All children in KS2 have a login for two interactive maths apps - Mathletics and Times Tables Rock Stars. These apps allow children to work on their number fluency in a way which is fun, motivating and enjoyable.



Mathletics

Mathletics allows pupils to access practice tasks across their year group specific curriculum.

In addition to this, the “Live Mathletics” function gives our pupils the opportunity to answer quick fire questions against their classmates or pupils at schools across the world!



Mathletics

By completing tasks, the children earn points which they can spend on designing their avatar. The crazier the hat the better!

Furthermore, if they collect enough points over a week - they can also earn certificates.

In addition, if they achieve enough points in any 24hr period to rank in the top 100 Mathletics users around the world - they will earn a place in the Mathletics Hall of Fame!



Mathletics certificates:

Bronze - 1000 points earned in a week.

Silver - Once 5 bronze certificates are achieved, the children earn a silver certificate.

Gold - Once 4 silver certificates are achieved, the children then earn the much coveted gold certificate!

Times Tables Rock Stars



TTRS is a carefully sequenced programme of daily times tables practice.

The children focus on key times tables for different periods of the year and consolidation weeks are also factored in. This programme ensures children get practice in key times tables in an interactive and motivating way.

Teaches can set challenges such as class or year group “battles” and the children can become a “Rock Hero” if they earn enough points!

Practical tips and advice

1. Start with an positive outlook



Have you ever caught yourself say “I can’t do maths” or “I was terrible at maths in school”? You may be saying it in jest but there’s a chance your children may take these comments to heart.

Being positive about the subject can go a very long way!

Practical tips and advice

2. Use maths talk regularly

Mathematics is happening all around us! Why not use these opportunities to actively use maths talk?

Meal times are a great time to have fun with maths e.g. “If I doubled the amount of nuggets you have on your plate - how many would you have?” or “If I halved the amount of peas on your plate, how many peas would you have?”



Practical tips and advice

3. Play maths games together



Many games are engaging and practice core mathematical skills. Jigsaw puzzles develop an awareness of different shapes and encourages logical thinking. Board games involving dice develop counting skills.

Chess, scrabble and darts also develop core mathematical skills too!

Practical tips and advice



4. Practice reading the time

As the world becomes more technologically savvy and advanced, analogue clocks can be forgotten! Why not ensure your child can accurately read an analogue clock by reading the time each time you walk past such clocks on the side of a building for example?

You could extend your children further by asking them questions such as:

- What will the time be in half an hour?
- How long will it be until it's 10 o'clock?

Practical tips and advice

5. Times tables: Practice, practice, practice!

Being fluent in key times tables is essential for children to access more complex mathematics. As well as encouraging your child to access the interactive apps we offer, why not introduce some times tables practice at different points of the day?

For example, it could be a great way to speed up your commute to school or practice as you prepare a meal. You can add extra challenge by asking your children to recite their times tables backwards!

BROTHER CREATIVECENTER

x1	x2	x3	x4	x5	x6
1 x 1 =	1 x 2 =	1 x 3 =	1 x 4 =	1 x 5 =	1 x 6 =
2 x 1 =	2 x 2 =	2 x 3 =	2 x 4 =	2 x 5 =	2 x 6 =
3 x 1 =	3 x 2 =	3 x 3 =	3 x 4 =	3 x 5 =	3 x 6 =
4 x 1 =	4 x 2 =	4 x 3 =	4 x 4 =	4 x 5 =	4 x 6 =
5 x 1 =	5 x 2 =	5 x 3 =	5 x 4 =	5 x 5 =	5 x 6 =
6 x 1 =	6 x 2 =	6 x 3 =	6 x 4 =	6 x 5 =	6 x 6 =
7 x 1 =	7 x 2 =	7 x 3 =	7 x 4 =	7 x 5 =	7 x 6 =
8 x 1 =	8 x 2 =	8 x 3 =	8 x 4 =	8 x 5 =	8 x 6 =
9 x 1 =	9 x 2 =	9 x 3 =	9 x 4 =	9 x 5 =	9 x 6 =
10 x 1 =	10 x 2 =	10 x 3 =	10 x 4 =	10 x 5 =	10 x 6 =
11 x 1 =	11 x 2 =	11 x 3 =	11 x 4 =	11 x 5 =	11 x 6 =
12 x 1 =	12 x 2 =	12 x 3 =	12 x 4 =	12 x 5 =	12 x 6 =

x7	x8	x9	x10	x11	x12
1 x 7 =	1 x 8 =	1 x 9 =	1 x 10 =	1 x 11 =	1 x 12 =
2 x 7 =	2 x 8 =	2 x 9 =	2 x 10 =	2 x 11 =	2 x 12 =
3 x 7 =	3 x 8 =	3 x 9 =	3 x 10 =	3 x 11 =	3 x 12 =
4 x 7 =	4 x 8 =	4 x 9 =	4 x 10 =	4 x 11 =	4 x 12 =
5 x 7 =	5 x 8 =	5 x 9 =	5 x 10 =	5 x 11 =	5 x 12 =
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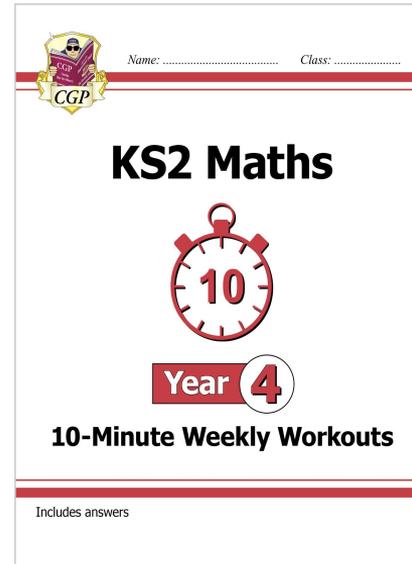
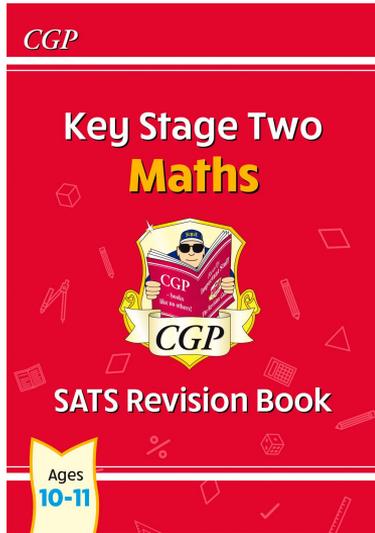
Practical tips and advice - extra support

Here are resources you could use at home:

Here are some books that you can purchase if you would like to.

There is a range of books on the CGP website you may wish to look into:

<https://www.cgpbooks.co.uk/primary-books/maths>



Questions?



Contact information

If you have any further questions, please feel free to email us at:

info@star.newham.sch.uk

Please make the title of your email: FAO Maths Team

