

Mistakes
Allow
Thinking to
Happen

MATHEMATICS
is not about
numbers, equations,
computations, or
algorithms:
it is about
UNDERSTANDING.

William Paul Thurston

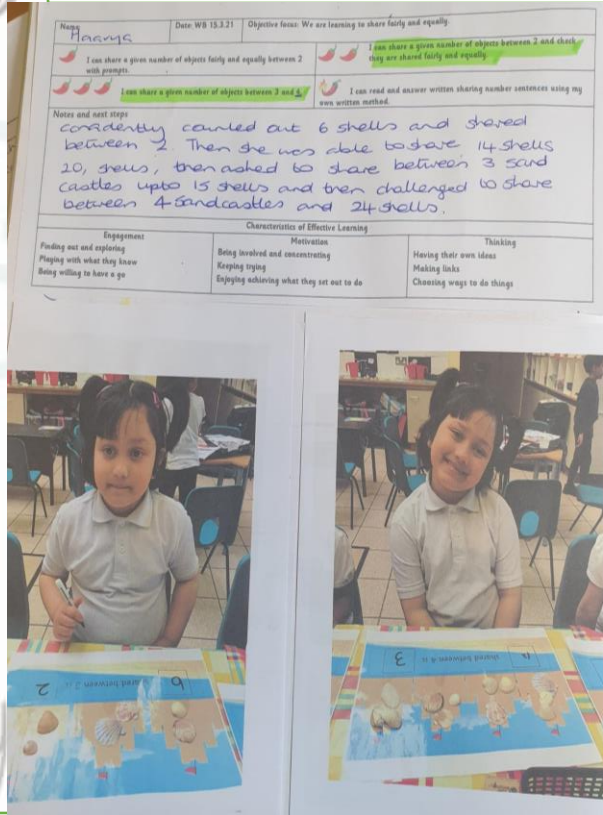
Celebrating Maths

The only way to
learn mathematics
is to
do mathematics!



ABBEY MEAD
PRIMARY ACADEMY

EYFS



Name: Haanya	Date: WB 15.3.21	Objective focus: We are learning to share fairly and equally
I can share a given number of objects fairly and equally between 2 with prompts.	I can share a given number of objects between 3 and check they are shared fairly and equally.	
I can share a given number of objects between 3 and 4.	I can read and answer written sharing number sentences using my own written method.	
Notes and next steps consistently counted out 6 shells and shared between 2. Then she was able to share 14 shells 20, shells, then asked to share between 3 sand castles upto 15 shells and then challenged to share between 4 sandcastles and 24 shells.		
Characteristics of Effective Learning		
Engagement Finding out and exploring Playing with what they know Being willing to have a go	Motivation Being involved and concentrating Keeping trying Enjoying achieving what they set out to do	Thinking Having their own ideas Making links Choosing ways to do things



Pupils are exposed to a variety of Maths resources/activities during free time

Teacher's challenge pupils in each lesson and ask them to explain their reasoning.

Name: Haanya	Date: WB 7.12.20	Objective Focus: We are learning to take away
I can take away a set of objects from a given number	I can take away objects from a larger group and say how many are left.	
I can count back to subtract	I can say why you have to subtract a small number from a big number	
Notes and next steps Haanya knew to count out and take away 1 from the given number, but needed reminding of the steps. Taking away more than one with a couple of demonstrations Haanya was able to do 8-4 independently. She then did 12-6 too! As a group we counted back from 10. After a few demonstrations Haanya was able to do 11-9 counting back to subtract. When asked to do 7-8 Haanya said there was not enough so it's zero.		
Characteristics of Effective Learning		
Engagement Finding out and exploring Playing with what they know Being willing to have a go	Motivation Being involved and concentrating Keeping trying Enjoying achieving what they set out to do	Thinking Having their own ideas Making links Choosing ways to do things



Foundation books showcase both group work and 'free work' which children select and work independently.

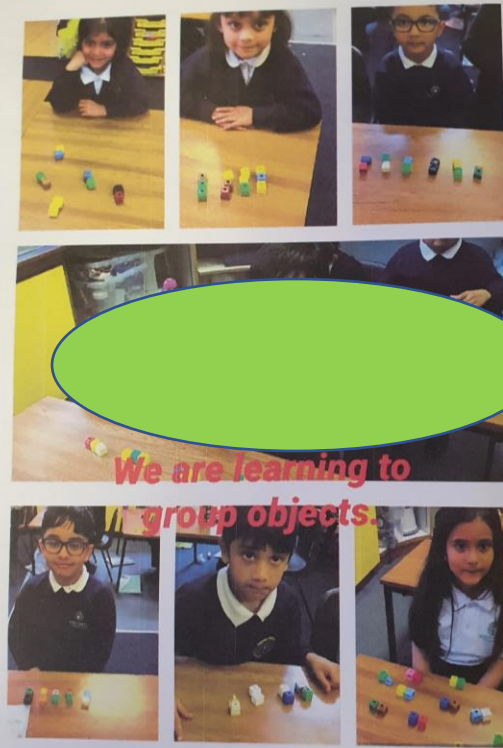
Year 1

Grouping Learning Journey

- Practical** – Using cubes to explore making equal groups.
- Pictorial** – Using pictures to explore grouping.
- Fluency** – Practising pictorial and written questions.
- Reasoning and problem solving** – Using grouping to solve problems.

Learning journeys incorporate the practical, pictorial, fluency and reasoning element

Books in year 1 showcase how practical resources and pictorial representations are used to reinforce learning and ensure that the children have a good conceptual understanding.



We are learning to group objects.

Children are learning to group objects into equal groups using cubes.

Errors or misconceptions are quickly picked up and addressed to ensure children are secure with their learning.

Fluency – we are learning to practise fluency when grouping. 19.05.21

1. Complete the table. Use cubes if you need to.

	$\frac{50}{10}$ has been sorted into 5 equal groups of 10.
	$\frac{30}{5}$ has been sorted into 6 equal groups of 5.
	$\frac{14}{2}$ has been sorted into 7 equal groups of 2.
	$\frac{70}{7}$ has been sorted into 10 equal groups of 7.

2. How many equal groups can you make? Use a different colour for each group to help you.

	I can make 2 equal groups of 5.
	I can make 4 equal groups of 1.
	I can make 2 equal groups of 1.

Year 2

Books in year 2 show learning is adapted to the needs of children. All pupils have different starting points based on their understanding/ assessment and teacher assessment.

Week beginning: 17.5.21
LO: To find one third of different quantities
* I can find 1/3 of numbers using physical resources
* I can find 1/3 of different numbers
* I can find 1/3 of different numbers and find the inverse to compare amounts

Red	Green	Gold
One third of 21	1/3 of 15 =	1/3 of = 3
One third of 15	1/3 of 33 =	1/3 of = 6
One third of 9	1/3 of 18 =	1/3 of = 15
One third of 33	1/3 of 27 =	1/3 of = 14
One third of 12	1/3 of 36 =	1/3 of = 7
One third of 18	1/3 of 30 =	1/3 of = 12

$\frac{1}{3}$ of 15 = 5

$\frac{1}{3}$ of 33 = 11

$\frac{1}{3}$ of 18 = 6

$\frac{1}{3}$ of 27 = 9

$\frac{1}{3}$ of 36 = 12

$\frac{1}{3}$ of 30 = 10

Great use of pictorial representations to evidence conceptual understanding.

Reasoning - we are learning to use grouping to solve problems. 20.05.21

There are 10 mittens. Tej says if you put them into groups of 2 you would have 6 groups.

Correct ☒ Incorrect ☐ 5 groups

How do you know?
No, because if there are 10 mittens then we can't put them into groups of 6.

There are 20 flowers. Mila says if you put them into groups of 5 you would have 3 groups.

Correct ☒ Incorrect ☐ 5 groups

How do you know?
No, because if we did groups of 5 then we wouldn't get the only number 5.

There are 16 sweets. Parin says if you put them into groups of 4 you would have 4 groups.

Correct ☒ Incorrect ☐

How do you know?
Yes, because if I did 4 then the answer is 4.

This is a great example of the reasoning questions which children are exposed to and also how they are using pictorial representations to help them answer them

All year 2 pupils are given sentence starters to help them support them when answering reasoning questions

Sentence starters

I know that the next one is... because ...

This is different because...

This can't work because ...

All the numbers begin with...

Because... then I think...

When I tried ... I noticed...

I wondered why ...

I used the inverse of...

I used the fact that ...

ANSWER IT!
What is the answer to the question you've been given?

PROVE IT!
Show how you know that is the answer with pictures, diagrams, calculations or in another way.

EXPLAIN IT!
Write some sentences that make it clear why you came to your answer

I checked by ...

I already know... so...

I started by...

I was systematic because I...

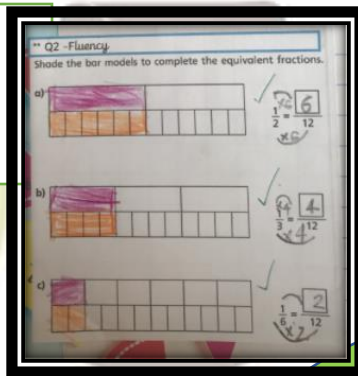
If this is true, then ...

I think this because ...

The pattern looks like ...

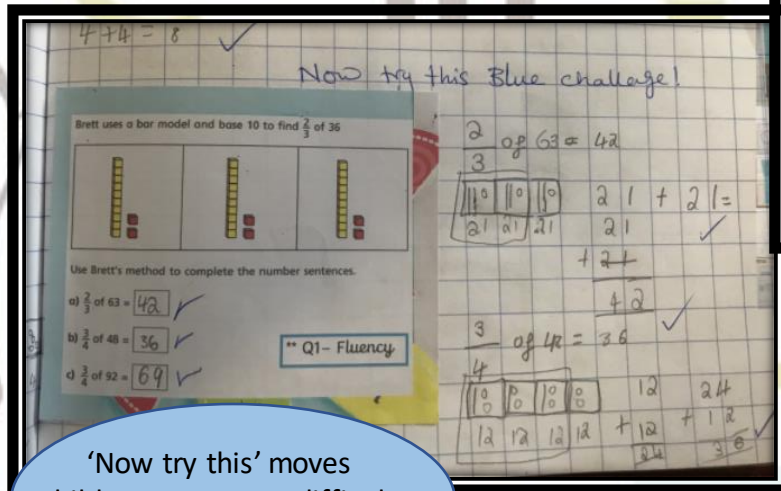
I decided to because...

Year 3

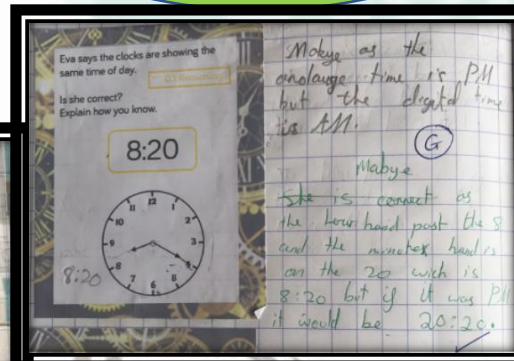


Pupils have the opportunity to use practical/visual resources to complete their work

There are a fantastic range of reasoning and problem solving questions across all classes. This allows the children to apply the skills that they have learnt.

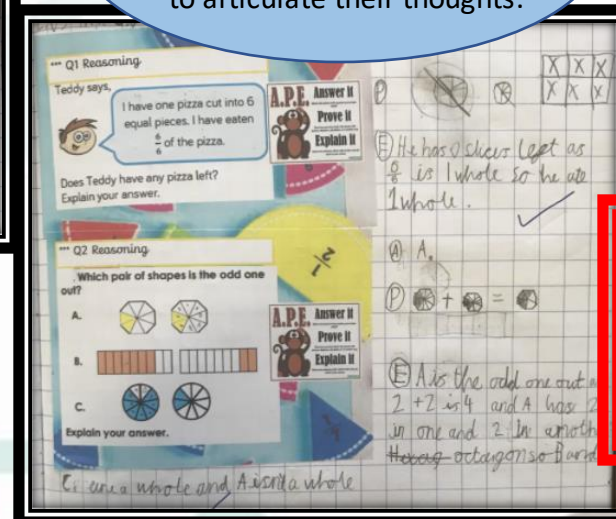


'Now try this' moves children onto more difficult problems!



Errors or misconceptions are addressed to ensure children are secure with their learning.

Evidence of APE (answer, prove and explain) has been used to encourage children to articulate their thoughts.



Year 4

RPS

Mo has a metre-long piece of ribbon. He cuts off a piece of ribbon 24 cm long. What is the length of the remaining ribbon?

The length of the remaining ribbon is 0.76 m.

RPS

Fill in the missing numbers.

a) $0.1 + \boxed{0.9} = 1$ ✓ d) $0.15 + 0.64 + \boxed{0.21} = 1$ ✓

b) $\boxed{0.99} + 0.01 = 1$ ✓ e) $0.15 + \boxed{0.2} + 0.65 = 1$ ✓

c) $0.01 + \boxed{0.97} = 1$ ✓ f) $\boxed{0.46} + 0.04 + 0.5 = 1$ ✓

RPS

Great evidence of peer marking to allow children to check answers and discuss understanding therefore allowing them to move on.

Rounding
You have to Round to the nearest 10, or 100 or 1000.

Ordering 4 digit numbers
Ascendents means it is getting Biser And Desentes if something is more or less so you count if something is more or less.

Place value

Partitioning
568
500 60 8

Comparing 4 digit numbers
25 50 75 100 25
100 < 150

Roman numerals
I=1
V=5
X=10
L=50
C=100
D=500
M=1000

Negative numbers
0 -1 -2 -3 -4 -5

Mind maps are used at the end of each topic so that the pupils can showcase what they have learnt.

Year 3 recap

L.O. To accurately represent numbers to 1000 on a number line.

Children used chalk to complete the activity which involved drawing a variety of number lines up to 1000. They had to think about how many intervals were needed to make the number line correct as well as the numbers that were needed to fill the sections.

Year 4 1st unit assessment

Decimals

Name: Nestor

1 The hundred square represents one whole. How much of the hundred square is shaded? Give your answer as a fraction. 1/100

How much of the hundred square is not shaded? Give your answer as a decimal. 0.99

2 Complete the part-whole models.

3 Toby is making 1.42 on the place value grid.

Ones	Tenths	Hundredths
1	4	2

Draw counters to complete Toby's number.

End of block assessments are used to monitor the progress children have made.

RPS

5 Annie and Dexter are comparing the decimals 4.12 and 4.8

Annie: 4.12 is greater than 4.8, because 12 is bigger than 8

Dexter: 4.12 is smaller than 4.8, because 12 hundredths is less than 8 tenths.

Who do you agree with? Dexter

Explain your answer.

Annie is doing the tenths and hundredths together. 4.12 is smaller than 4.8 so Dexter is correct.

Reasoning / problem solving questions allow children to deepen their understanding and apply their skills.

Year 5

1) Complete these calculations.

a)

	Ones	Tenths	Hundredths	Thousandths
2	3	4		
+	3	4	6	2
	5	8	0	2

b)

4	3			
+	2	7	2	5
	7	0	2	5
	1			

c) $3.142 + 4.08 = 7.822$ ✓

d) $2.03 + 6.109 = 8.139$ ✓

Children have opportunity to peer mark their work.

Children take pride in their books and ensure the presentation is of a high standard!

Date: 21/4/21

LO: Add fractions—varied fluency and initial challenge

RPS 1—word problems

Alex and Huan are eating a cake.
Alex eats $\frac{4}{7}$ of the cake.
Huan eats $\frac{2}{7}$ of the cake.
What fraction of the cake have they eaten altogether?
 $\frac{4}{7} + \frac{2}{7} = \frac{6}{7}$

Three friends are having a cupcake eating competition.
The winner eats $\frac{1}{3}$ of the tray of cupcakes.
The runner-up eats $\frac{2}{5}$ of the tray of cupcakes.
The person in last place only manages to eat $\frac{1}{5}$ of the tray of cupcakes before finishing it.
What fraction of the tray of cupcakes did they eat altogether?
 $\frac{1}{3} + \frac{2}{5} + \frac{1}{5} = \frac{8}{15}$

Complete the part-whole models.

a) $\frac{4}{9} + \frac{2}{9} = \frac{6}{9}$ ✓

b) $\frac{4}{6} + \frac{2}{6} = \frac{6}{6}$ ✓

c) $\frac{6}{6} = \frac{1}{1}$ ✓

Challenge—
Add the fractions and then give your answers as a mixed number. Use the bar models to help.

$\frac{3}{7} + \frac{6}{7} = 1 \frac{9}{7} = 1 \frac{1}{7}$ ✓

$\frac{4}{5} + \frac{3}{5} = 1 \frac{7}{5} = 1 \frac{1}{5}$ ✓

RPS 2

Nicola and Nisha are solving:

$\frac{4}{7} + \frac{2}{7}$

Nicola says, The answer is $\frac{6}{7}$

Nisha says, The answer is $\frac{6}{14}$

Who do you agree with? Explain why.

Nicola is correct because she said $\frac{4}{7} + \frac{2}{7} = \frac{6}{7}$ and Nisha said $\frac{6}{14}$ because she is wrong. What did she do wrong? because she double the denominator.

RPS 3

5a. This is the answer.

What fractions could you have added together to get this answer?

$\frac{3}{10} + \frac{3}{10} = \frac{6}{10}$ ✓

$\frac{4}{10} + \frac{2}{10} = \frac{6}{10}$ ✓

$\frac{5}{10} + \frac{1}{10} = \frac{6}{10}$ ✓

$\frac{1}{10} + \frac{2}{10} + \frac{3}{10} = \frac{6}{10}$ ✓

$\frac{3}{10}$ ✓

Shane attempted the final challenge verbally.

RPS 3

5a. This is the answer.

What fractions could you have added together to get this answer?

$\frac{3}{10} + \frac{3}{10} = \frac{6}{10}$ ✓

$\frac{4}{10} + \frac{2}{10} = \frac{6}{10}$ ✓

$\frac{5}{10} + \frac{1}{10} = \frac{6}{10}$ ✓

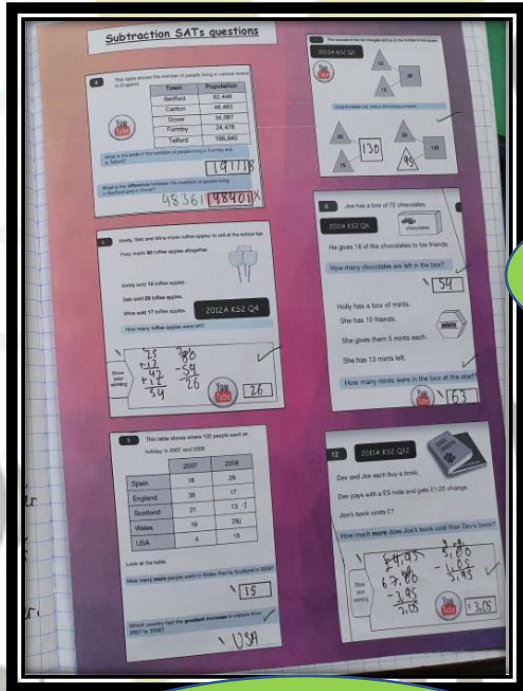
$\frac{1}{10} + \frac{2}{10} + \frac{3}{10} = \frac{6}{10}$ ✓

$\frac{3}{10}$ ✓

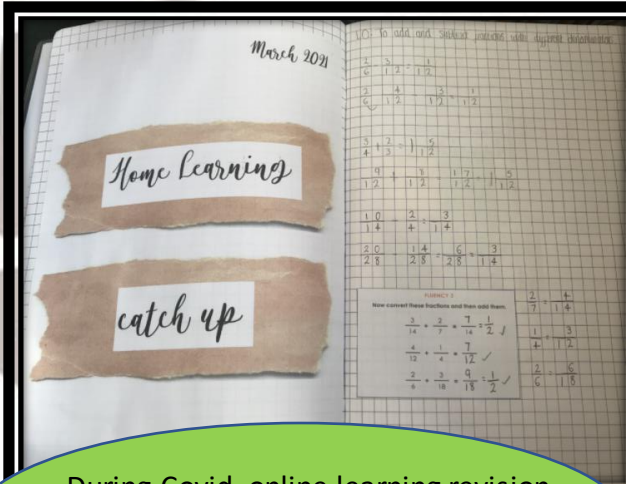
More examples of reasoning and problem solving questions to allow children to deepen their thinking.

Children work their way through a variety of fluency, reasoning and problem solving questions at their own pace.

Year 6

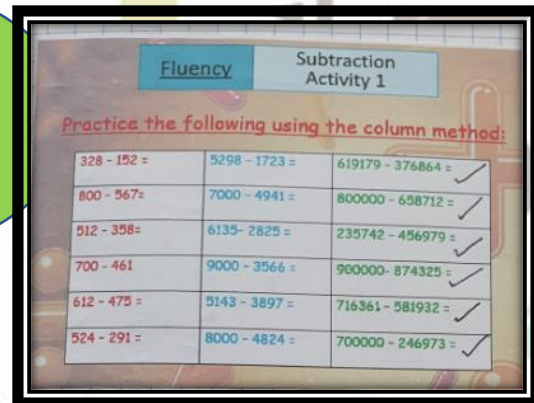


SATs revision has been documented in books to apply skills taught.

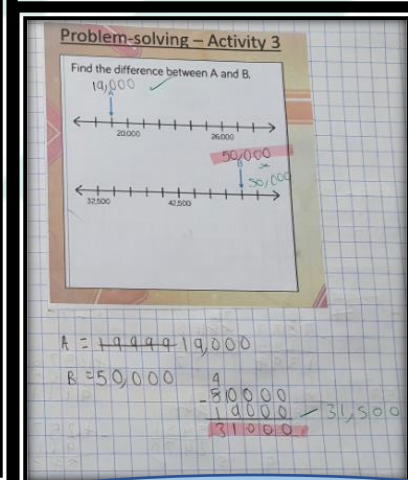
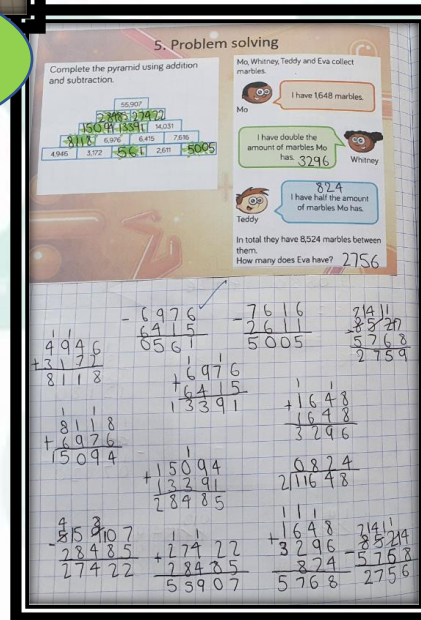


During Covid, online learning revision was carried out to minimise gaps in learning.

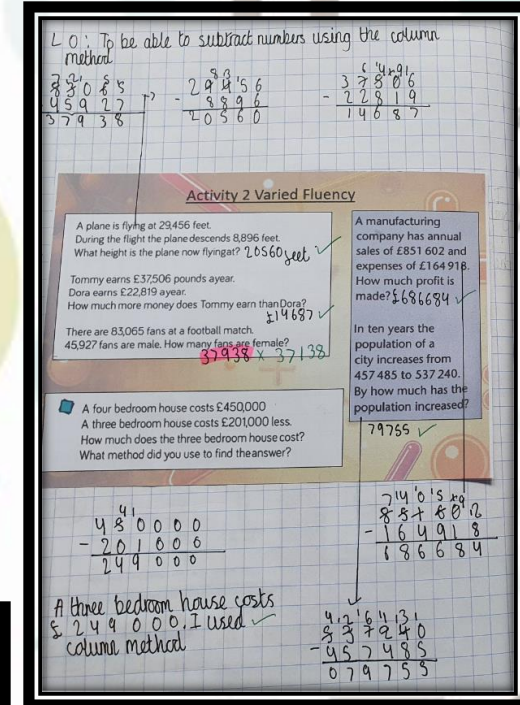
Children have the autonomy to choose their questions when they have built the independence to select appropriately. They challenge themselves as they have access to all the questions.



Evidence of varied fluency to allow children to practise a skill in different forms. This has been peer marked to allow collaborative working with peers.



There are a range of investigation problem solving questions which allow pupils to systematically explore the problem and provide mathematical justifications. This allows them to build stronger conceptual understanding of connections between mathematical ideas.



Pink is used to highlight errors/misconceptions which have then been corrected in green.

Daily calculations

'We go through the answers as a class and if I have anything wrong, my teacher shows us how to answer it.'

Daily calculations has many benefits for the children.

1. Ensures a smooth and 'ready for learning' attitude at the start of every day.
2. Children have the opportunity to practise their fluency skills. This can consolidate what they have learnt in class or allows fluency to be done earlier, so a maths lesson can focus on the reasoning and problem solving.

8.6.2021

hello Tuesday

Choose which colour you want to start from.

Bronze	Silver	Gold
$1/10 + 2/10 =$	$2/4 + 2/4 =$	$4/6 = ___$
$2/10 + 2/10 =$	$1/3 + 4/3 =$	$2/6 > ___$
$3/10 + 1/10 =$	$5/6 + 3/6 =$	$5/7 < ___$
$7/10 + 1/10 =$	$4/8 + 3/8 =$	$8/10 > ___$
$4/10 + 2/20 =$	$5/9 + 3/9 =$	$7/7 + 2/7 > ___$
$5/10 + 5/10 =$	$3/5 + 2/5 =$	$4/6 - 3/6 < _____$

5b. Rosie is thinking of a fraction.

The numerator is smaller than 6 but larger than 2.

The denominator is half of 20.

What could Rosie's fraction be?

Write three possibilities in words.

Monday

Grab your orange books and start the daily calculations.

Times table facts (bronze)	Focused work (silver)	Understanding check (Gold)	Problem solving challenge:
1. 9×7	1. $10 \times 3 \times 8$	1. $832 + 53,629$	<p>True or false?</p> <p>Two rectangles with the same perimeter can have different areas.</p> <p>Explain your answer.</p>
2. 7×3	2. $6 \times 5 \times 9$	2. $7,346 - 827$	
3. 800×70	3. $4 \times 10 \times 7$	3. 248×7	
4. $140 \div 70$	4. $2 \times 8 \times 10$	4. $2,702 \div 7$	
5. $280 \div 7$	5. $3 \times 7 \times 5$	5. $53,414 \div 17$	

Answers are marked as a class. This allows opportunities to tackle errors, remodel methods and discuss effective methods to use.

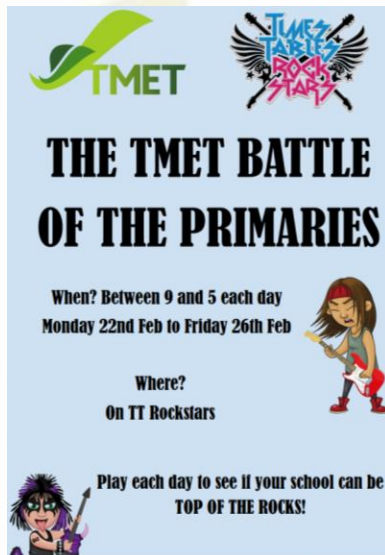
Questions get progressively more difficult in order to challenge the pupils.

There is a problem at the end to allow the pupils to be able to articulate their learning and apply their fluency skills to a context.

Times tables Rockstars

All Children across Abbey took part in a cross trust TT Rockstars competition. Teachers also encouraged the pupils to set up some competitions within year group so they can get used to how the competitions work.

'It is fun because you can learn your timetable in a fun way and time yourself on how quick you can answer the tables.'



BATTLE OF THE PRIMARIES		
TMET Primaries		Finishes in 1 day
< Enrollment School Results Class >		
School average / user		School score
Position	School average / user	
1	North Mead Primary Ac...	1,684
2	Thurnby Lodge Primary ...	1,590
3	Rowlatts Hill Primary A...	1,476
4	Kestrel Mead Primary A...	1,090
5	Abbey Primary Communit...	837
6	Knighton Fields Primary A...	823
7	Willowbrook Primary A...	785