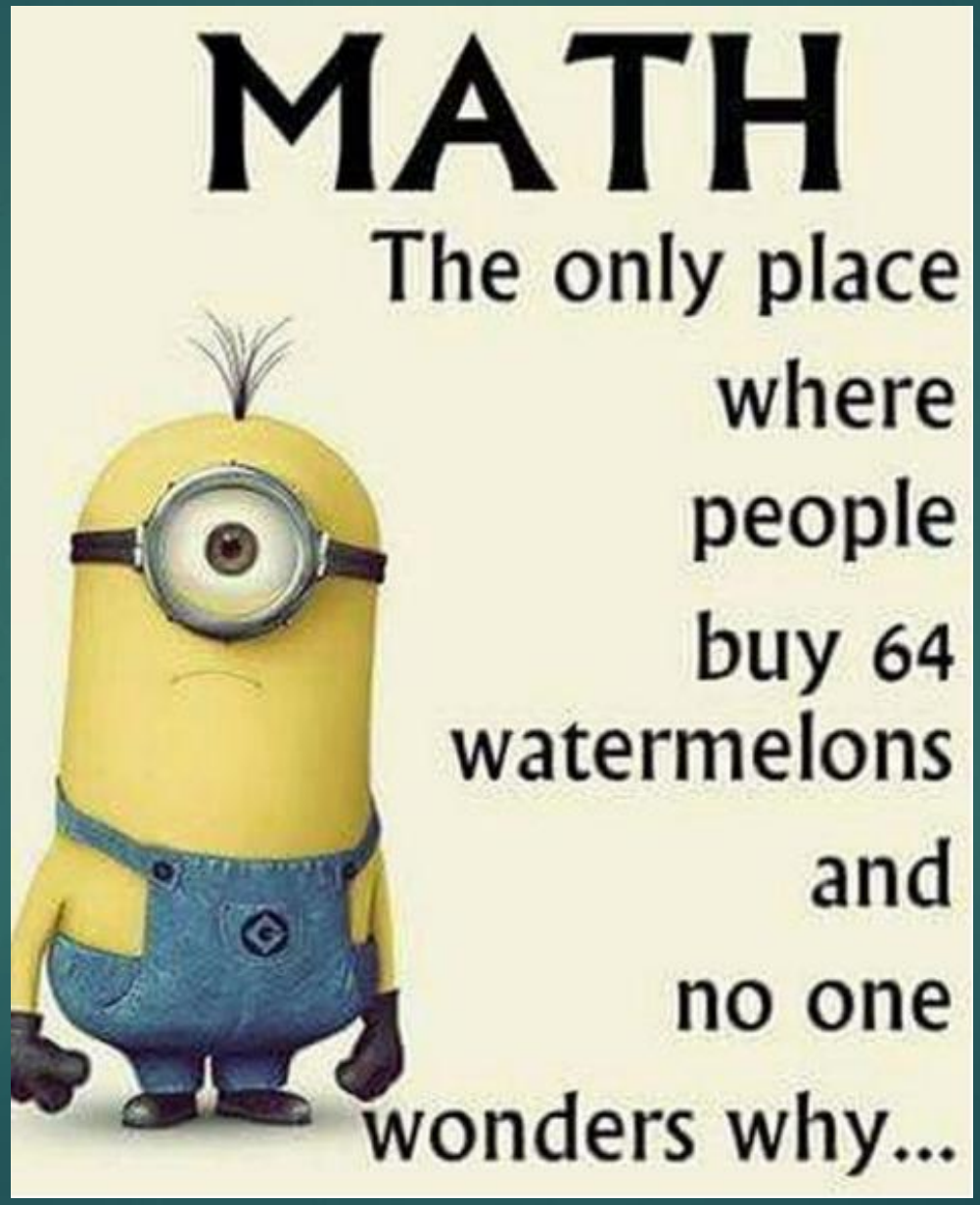
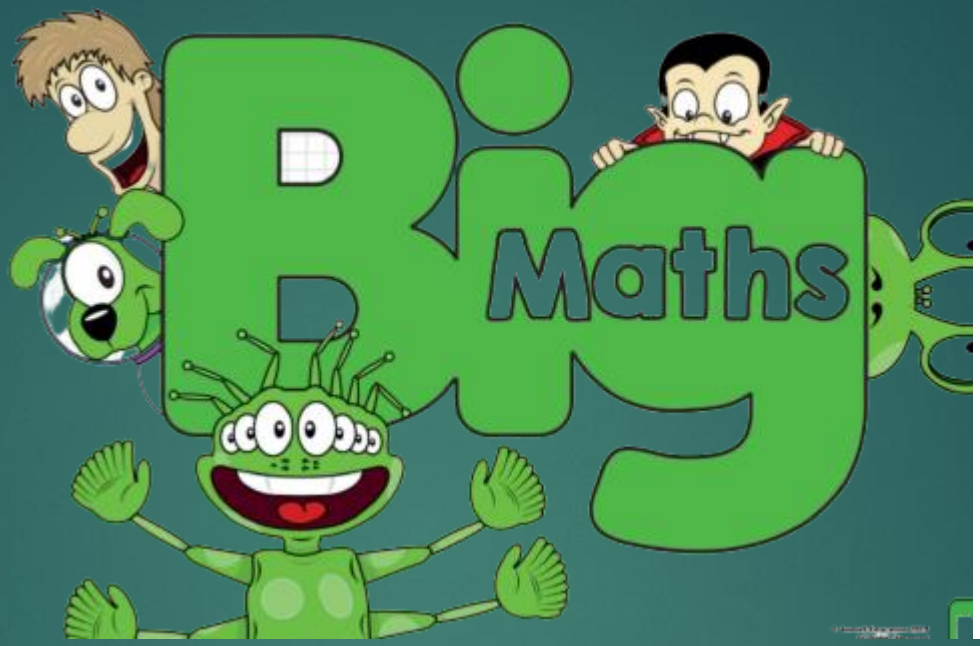
Maths at Embleton


MATH
The only place
where
people
buy 64
watermelons
and
no one
wonders why...

- The approach to teaching mathematics is that recommended by the Guidelines of the National Curriculum and is based on four key principles:
- dedicated mathematics lessons or practice time every day;
- direct teaching and interactive oral work with the whole class and groups;
- an emphasis on mental calculation;
- fluency in, and mastery of, learned concepts before moving on to new areas.

- Our maths lessons are framed around the National Curriculum
- Big Maths to support fluency
- White Rose Maths to encourage learning using a variety of question-types.
- All children have Numbots and Timestable Rockstars log ins, which are regularly accessed at school.
- Use of TTRS and Numbots at home, daily, is encouraged.
- Children also have Mathshed log-ins to practise aspects of maths taught in school.

new puma primary



White Rose Maths

Times Tables Rock Stars

NUMBOTS

Big Maths


CLIC Challenge Completed!
Learn Its Challenge Completed
SAFE Challenge Completed!
View the answers for your last challenges
BEAT THAT!
CLIC 16:
6/10
Learn Its 12, 13 & 14:
11/28
SAFE 13:
7/10
0:26

- Big Maths is a teaching programme to help children to become numerate.
- Problem solving and word problems cannot be solved until children can manipulate numbers and understand how the number system works.
- Big Maths lessons are fast-paced and fun. This is to help the children become more confident and successful at maths.
- There is a strong emphasis on developing instant recall of number facts, including number bonds and times tables.

Big Maths Characters

Squiggleworth

Pim

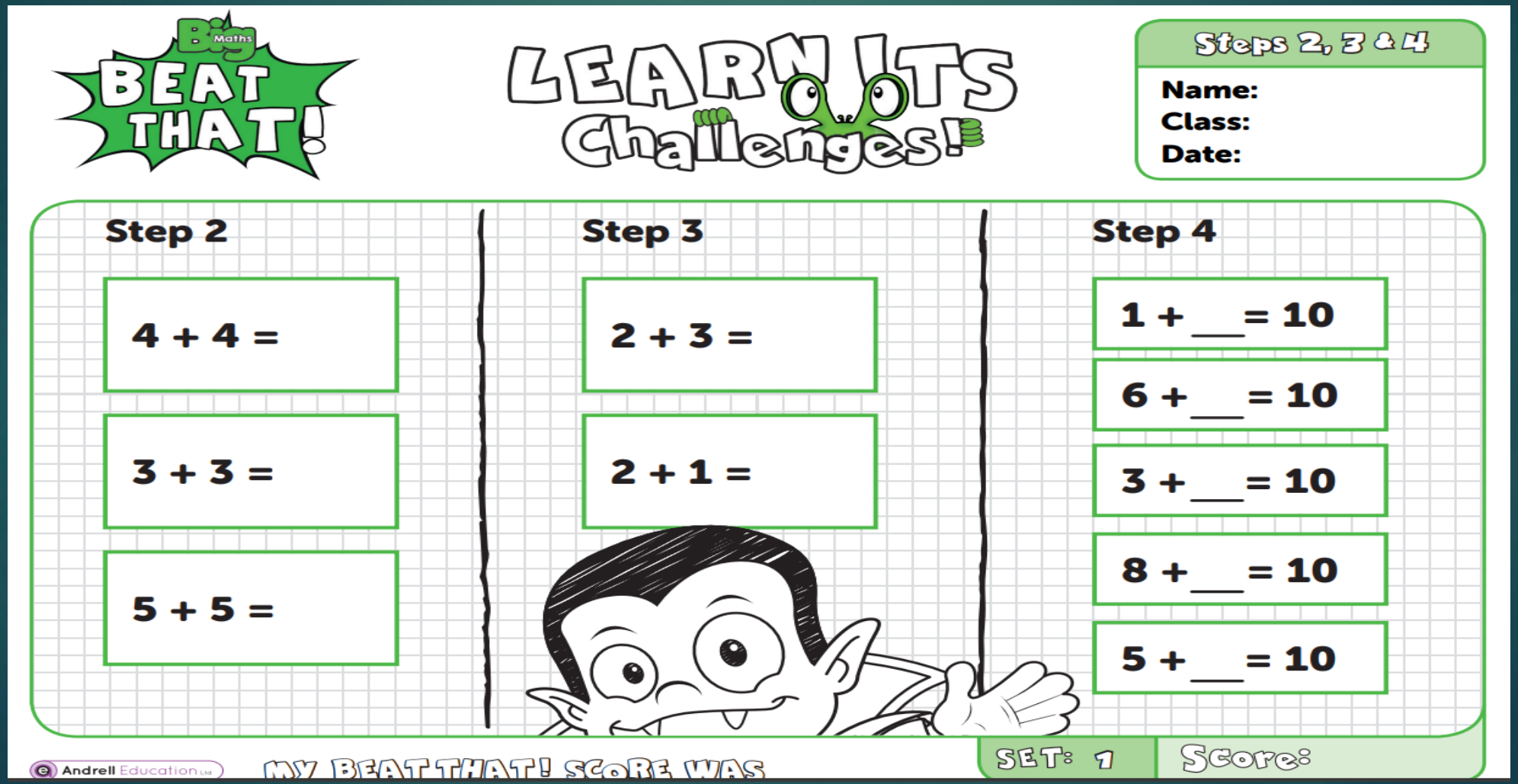
Pom

Mully

Count Fourways

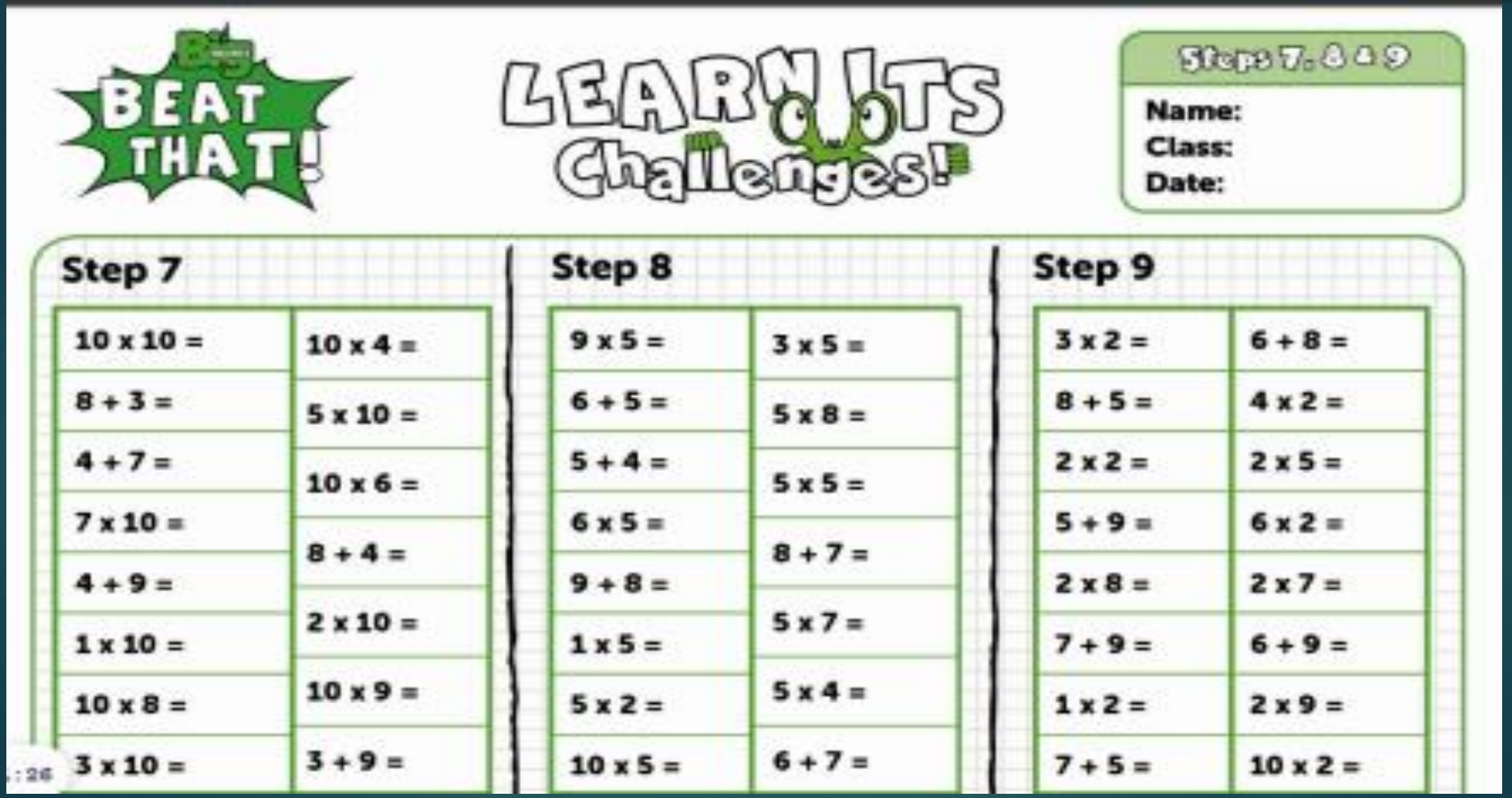
Learn Its

The Learn Its Challenges: Cover all the number facts children need.



Learn Its

The Learn Its Challenges: Cover all the number facts children need.



BEAT THAT!

LEARN ITS Challenges!

Steps 7, 8 & 9

Name:
Class:
Date:

Step 7

10 x 10 =	10 x 4 =
8 + 3 =	5 x 10 =
4 + 7 =	10 x 6 =
7 x 10 =	8 + 4 =
4 + 9 =	2 x 10 =
1 x 10 =	10 x 9 =
10 x 8 =	3 + 9 =
3 x 10 =	

Step 8

9 x 5 =	3 x 5 =
6 + 5 =	5 x 8 =
5 + 4 =	5 x 5 =
6 x 5 =	8 + 7 =
9 + 8 =	5 x 7 =
1 x 5 =	5 x 4 =
5 x 2 =	6 + 7 =
10 x 5 =	

Step 9

3 x 2 =	6 + 8 =
8 + 5 =	4 x 2 =
2 x 2 =	2 x 5 =
5 + 9 =	6 x 2 =
2 x 8 =	2 x 7 =
7 + 9 =	6 + 9 =
1 x 2 =	2 x 9 =
7 + 5 =	10 x 2 =

Big Maths BEAT THAT!

LEARN ITS Challenges! ULTIMATE

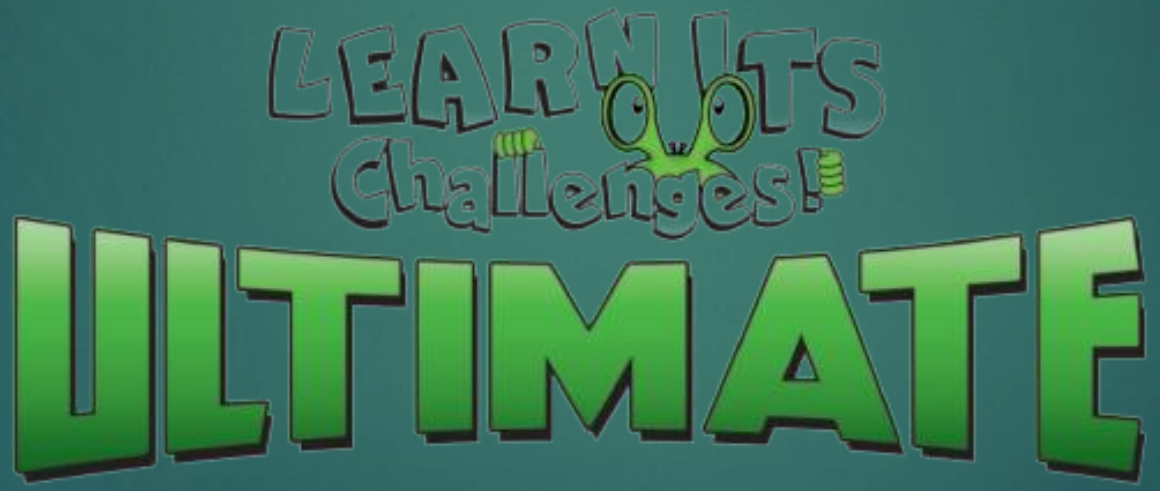
Ultimate Challenge

Name:
Class:
Date:

8 x 9 =	4 x 7 =	6 x 9 =	3 x 8 =	9 + 9 =	2 x 7 =	3 x 3 =	9 x 7 =
5 + 7 =	6 + 3 =	6 + 9 =	2 x 4 =	7 + 7 =	3 x 7 =	3 x 5 =	2 + 7 =
2 + 4 =	7 x 7 =	7 + 9 =	5 + 5 =	7 + 8 =	2 x 5 =	4 x 4 =	6 + 8 =
2 + 5 =	6 x 6 =	2 x 3 =	2 x 6 =	9 + 4 =	8 x 5 =	7 x 8 =	8 x 8 =
9 x 9 =	5 x 9 =	8 x 2 =	5 x 5 =	2 + 2 =	2 + 6 =	5 + 6 =	2 + 8 =
8 + 5 =	4 + 5 =	3 + 9 =	4 + 4 =	3 + 8 =	4 x 6 =	3 + 5 =	4 + 8 =
3 + 7 =	3 + 3 =	6 + 6 =	7 x 5 =	2 x 9 =	8 + 9 =	8 + 8 =	2 + 3 =
5 + 9 =	4 + 6 =	5 x 6 =	4 x 5 =	4 x 9 =	3 x 4 =	4 + 3 =	6 x 7 =
6 x 8 =	3 x 9 =	4 + 7 =	2 x 2 =	6 + 7 =	3 x 6 =	4 x 8 =	2 + 9 =

Your turn

- Please find a Big Maths Ultimate and I will time you for 2 minutes.



Big Maths BEAT THAT!

LEARN ITS Challenges! ULTIMATE

Ultimate Challenge

Name:
Class:
Date:

5 + 7 = 12	3 + 6 = 9	3 x 7 = 21	2 + 7 = 9	7 + 7 = 14	6 + 9 = 15	4 x 2 = 8	3 x 5 = 15
8 x 6 = 48	9 x 3 = 27	3 x 6 = 18	3 + 8 = 11	7 + 6 = 13	4 + 7 = 11	2 x 2 = 4	4 x 8 = 32
9 x 9 = 81	5 x 9 = 45	2 + 6 = 8	2 + 8 = 10	2 + 2 = 4	2 x 8 = 16	5 x 5 = 25	5 + 6 = 11
8 x 9 = 72	4 x 7 = 28	2 x 7 = 14	9 x 7 = 63	9 + 9 = 18	6 x 9 = 54	3 x 8 = 24	3 x 3 = 9
5 + 9 = 14	4 + 6 = 10	3 x 4 = 12	6 x 7 = 42	4 x 9 = 36	5 x 6 = 30	4 x 5 = 20	3 + 4 = 7
2 + 4 = 6	7 x 7 = 49	2 x 5 = 10	6 + 8 = 14	7 + 8 = 15	7 + 9 = 16	5 + 5 = 10	4 x 4 = 16
3 + 7 = 10	3 + 3 = 6	8 + 9 = 17	3 + 2 = 5	2 x 9 = 18	6 + 6 = 12	5 x 7 = 35	8 + 8 = 16
5 + 8 = 13	4 + 5 = 9	6 x 4 = 24	4 + 8 = 12	2 + 9 = 11	9 + 3 = 12	4 + 4 = 8	3 + 5 = 8
2 + 5 = 7	6 x 6 = 36	5 x 8 = 40	8 x 8 = 64	4 + 9 = 13	2 x 3 = 6	2 x 6 = 12	8 x 7 = 56

CLIC

- Counting
- Learn Its
- It's Nothing New
- Calculation

- We, as a school, have two 30 minute CLIC sessions a week.

Big Maths BEAT THAT!

CLIC 7 SET: 1

Name:

Class:

Date:

1 Complete the sequence

300, 400, ☐, ☐, 700

2 30 + 40 =

3 Double 34 is

4 Double 70 is

5 Half of 70 is

6 Write the fact family for:

30 + 40 = 70

.....

.....

.....

7 60 + 10 =

8 73 + 10 =

9 80 - 10 =

10 43 - 10 =

The Big Maths CLIC

BEAT THAT!

CLIC 11 SET 1

Name:

Class:

Date:

1 Complete the sequence

12, ☐, 20,

☐, ☐.

2 Double 400 is

3 Double 900 is

4 30 x 50 =

5 Write your coin card for... x21

x 21	
1	
2	
5	
10	
20	
50	
100	

6 Mully is hiding behind the biggest multiple of 4 without going past 50

7 423 + 25 =

8 526 + 49 =

9
$$\begin{array}{r} 442 \\ +\ 36 \\ \hline \end{array}$$

10
$$\begin{array}{r} 981 \\ -\ 32 \\ \hline \end{array}$$

Big Maths BEAT THAT!

CLIC 19 SET: 1

Name:

Class:

Date:

1 Place in order

1.444 1.71 1.6

2

4

-10

The gap is

3 8.67 + 9.8 =

4 5.6 - 3.75 =

5 6 x 2.37 =

6 43.8 ÷ 6 =

7 8.689 + 6.54 =

8 8.625 - 4.8 =

9

$$\begin{array}{r} 5.24 \\ \times\ 26 \\ \hline \end{array}$$

10 22) 6721

The Big Maths CLIC

SAFE

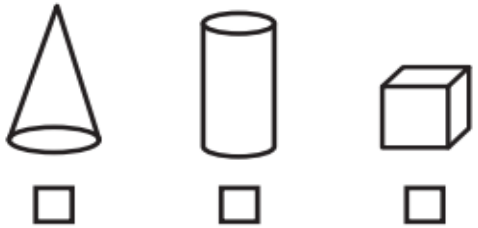
- Shape
- Amounts
- Fractions
- Exploring data

- Safe sessions happen once a week.

SAFE 6 | SET: 1 | /10

1 Tick the circle

2 Tick the cube



3 Use the least coins to make 17p

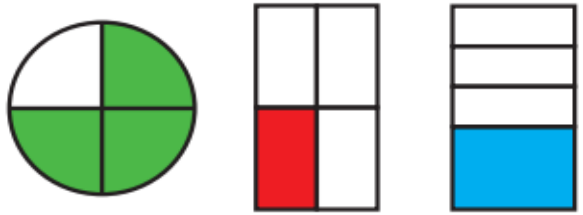
4

Half past 9 ☐

Six o' clock ☐

Half past 3 ☐

5 Tick if one quarter is shaded



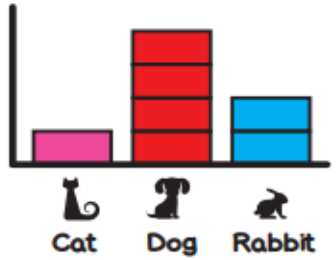
6 Tick if one third is shaded

7

Cars	𝍸 ||
Vans	𝍸 𝍸 |||
Bikes	||

How many cars?

8



How many cats are there?

9 Which is odd?

13 42 10 86

10 3 + ☺ = 10

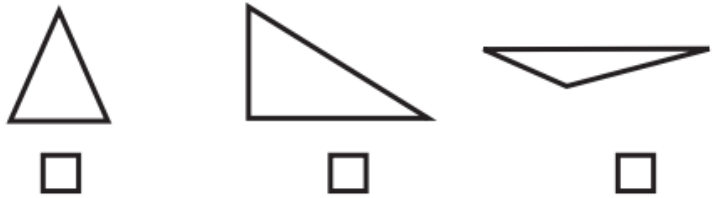
☺ =

MY LAST SCORE?! .....

HAVE I BEAT THAT?! .....

SAFE 13 | WK: 1 | /10

1 Tick the isosceles triangle



2 What is the perimeter?

5cm

_____ cm

3

4 kg = _____ g

$4\frac{1}{2}$ kg = _____ g

$4\frac{1}{4}$ kg = _____ g

4 How many days from September 5th until October 22nd?

5

4 hours = _____ minutes

3 minutes = _____ seconds

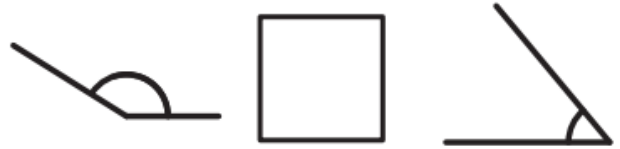
_____ months = 5 years

_____ days = 4 weeks

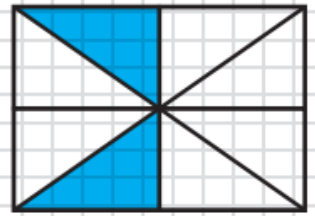
6 Which of these 3 analogue clocks show the equivalent time?

15:08

7 Use the correct symbol below



8 What fraction of the shape is shaded?



$\frac{1}{2}$ $\frac{1}{4}$ $\frac{2}{4}$

9 $\frac{4}{5} + \frac{3}{5} =$

10

$\frac{3}{7}$ + _____ = 1

1 - _____ = $\frac{2}{5}$

$53\frac{2}{3}$ + _____ = 60

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

Why use Big Maths?

- All teachers provide common and consistent messages throughout the school.
- This provides children moving through the school with a smoother numeracy development journey and therefore more rapid progress.

- White Rose Maths lessons meet all national curriculum guidelines in a fun, inclusive and age-appropriate way.

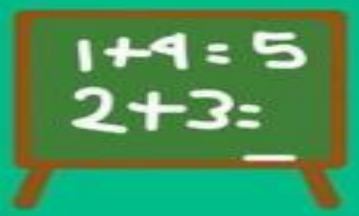
Concrete Pictorial Abstract

- At the heart of our mastery approach is the Concrete Pictorial Abstract (CPA) approach.
- Research shows that when children are introduced to a new concept, working with concrete physical resources and pictorial representations leads to a better understanding of abstract concepts.
- We use CPA throughout our schemes of learning.

The CPA Approach

CONCRETE -
using physical objects
to solve maths problems.

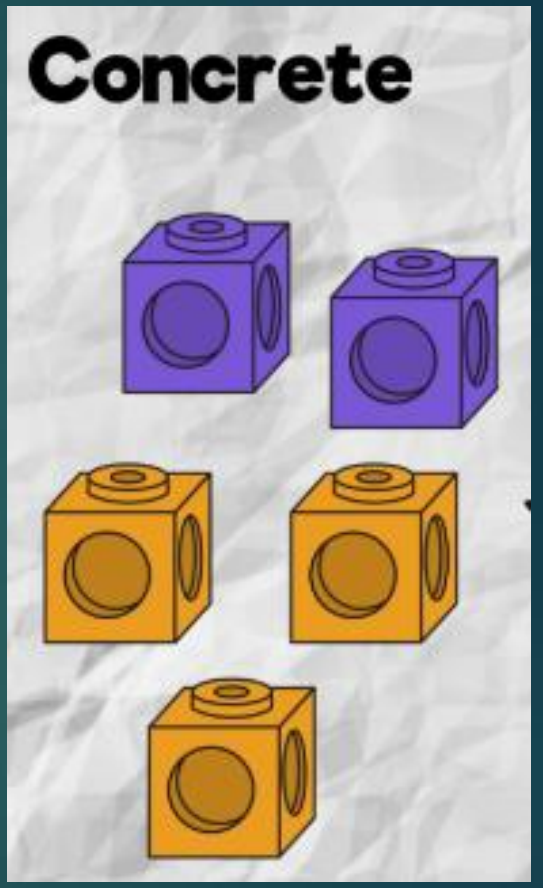
PICTORIAL -
using drawings
to solve maths problems.



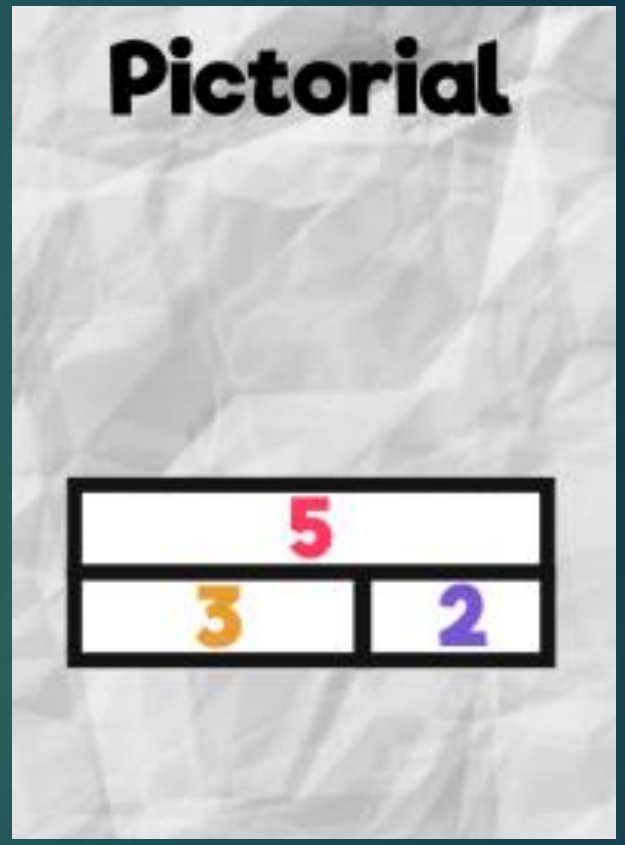
ABSTRACT -
solving maths problems
using only numbers.

www.thirdspacelearning.com

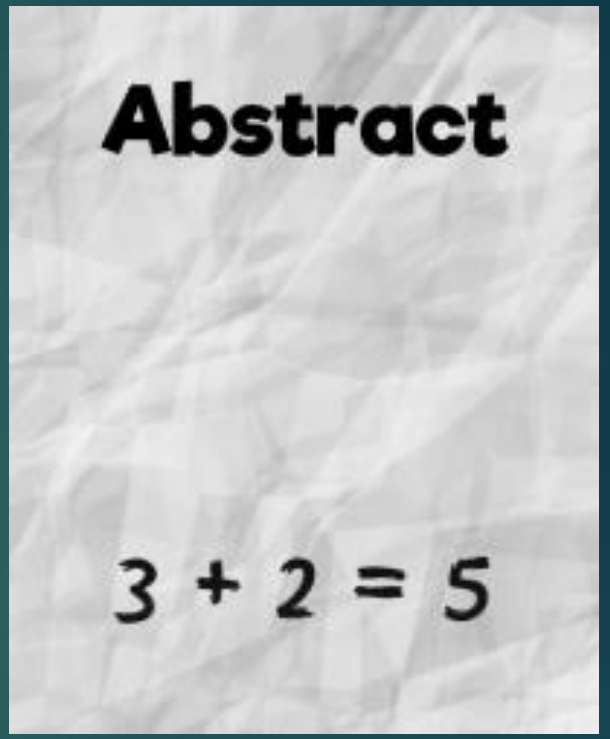
- **C is for concrete**. New concepts are introduced through the use of physical objects or practical equipment. These can be physically handled, enabling children to explore different mathematical concepts. These are sometimes referred to as maths manipulatives and can include ordinary household items such as straws or dice, or specific mathematical resources such as Numicon.



- **P is for pictorial**. Once children are confident with a concept using concrete resources, they progress to pictorial representations. By doing this, they are no longer manipulating the physical resources, but still benefit from the visual support the resources provides.



- **A is for abstract**. Once children have a secure understanding of the concept through the use of concrete resources and visual images, they are then able to move on to the abstract stage. Here, children are using symbols to solve problems. To be able to access this stage effectively, children need access to the previous two stages alongside it.

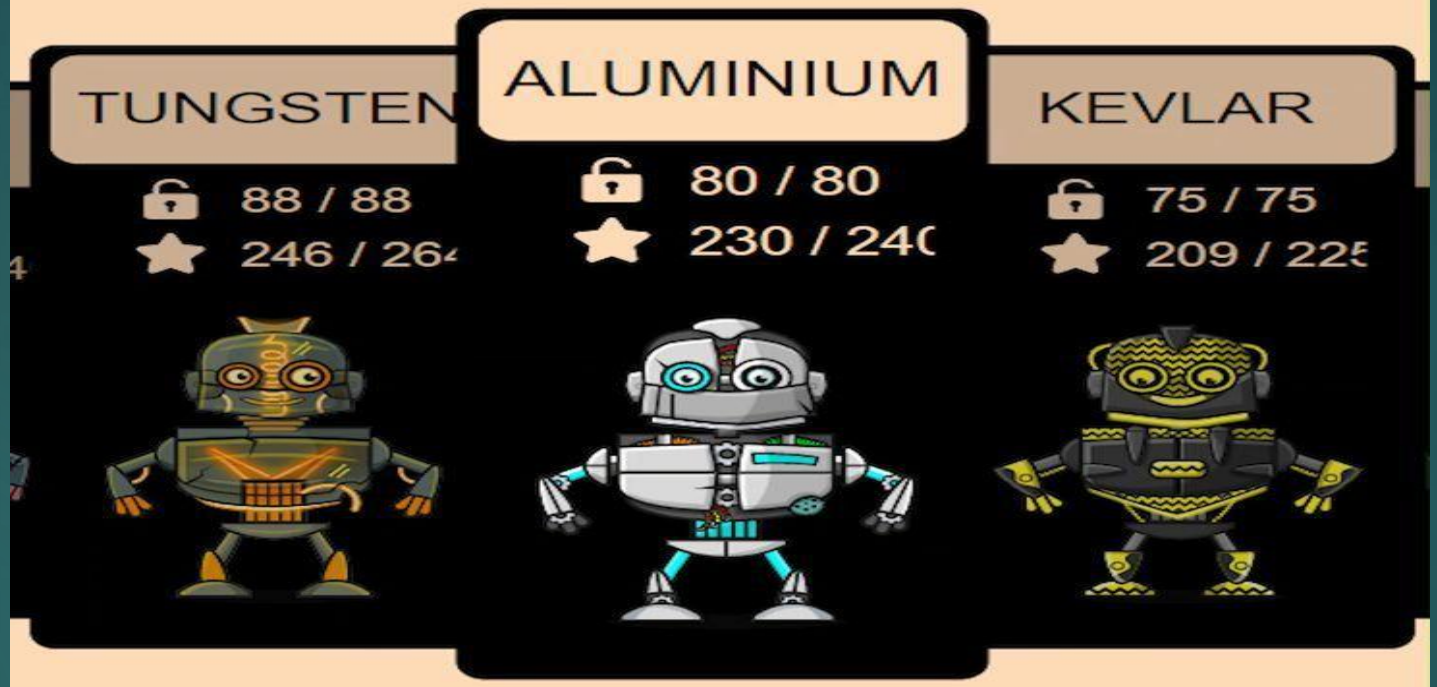


	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn term	Number **Place value** FREE TRIAL VIEW			Number **Addition and subtraction** VIEW		Number **Multiplication and division A** VIEW			Number **Fractions A** VIEW			
Spring term	Number **Multiplication and division B** VIEW			Number **Fractions B** VIEW		Number **Decimals and percentages** VIEW			Measurement **Perimeter and area** VIEW		Statistics VIEW	
Summer term	Geometry **Shape** VIEW			Geometry **Position and direction** VIEW		Number **Decimals** VIEW			Number **Negative numbers** VIEW	Measurement **Converting units** VIEW		Measurement **Volume** VIEW

Ed Shed - Year 5 Autumn 1 Block 1

Lesson 1 - To be able to use Roman Numerals up to 1,000
Lesson 2 - To be able to explore numbers up to 10,000
Lesson 3 - To be able to explore numbers up to 100,000
Lesson 4 - To be able to explore numbers up to 1,000,000
Lesson 5 - To be able to read, represent and write numbers up to 1,000,000
Lesson 6 - To be able to count in powers of 10
Lesson 7 - To be able to find 1, 10, 100, 1,000, 10,000 and 100,000 more and less than a number
Lesson 8 - To be able to partition numbers up to 1,000,000
Lesson 9 - To be able to use a number line for numbers up to 1,000,000
Lesson 10 - To be able to compare and order numbers up to 100,000

- NumBots is all about every child achieving the ability to recall and fluency in mental addition and subtraction, so that they move from counting to calculating.
- The aim is so children are able to add and subtract two digit numbers and that they don't need to use their fingers.


TUNGSTEN
88 / 88
246 / 264
ALUMINIUM
80 / 80
230 / 240
KEVLAR
75 / 75
209 / 225

NUMBOTS

TTRS

- Times Tables Rock Stars is a learning platform that helps pupils practise and recall their times tables playing online adaptive question-based games via the app and browser.


WHAT'S YOUR ROCK STATUS?
Rock Hero
Rock Legend
Rock Star
Headliner
Support Act
Breakthrough Artist
Unsigned Act
Gigger
Busker
Garage Rocker
Wannabe

- Having a secure understanding of the times tables facts and related division calculations up to 12x12 aids children in their mathematical learning within a wide range of different concepts.

- Times Table Rock Stars is an exciting game which helps children to learn and practise their times tables. Through a "little and often" approach, children secure their times table knowledge whilst having fun! We recommend approximately 5 minutes practice a day, 4 or 5 times a week. You can download the app from the app store or play on the Times Table Rock Stars game on their website.

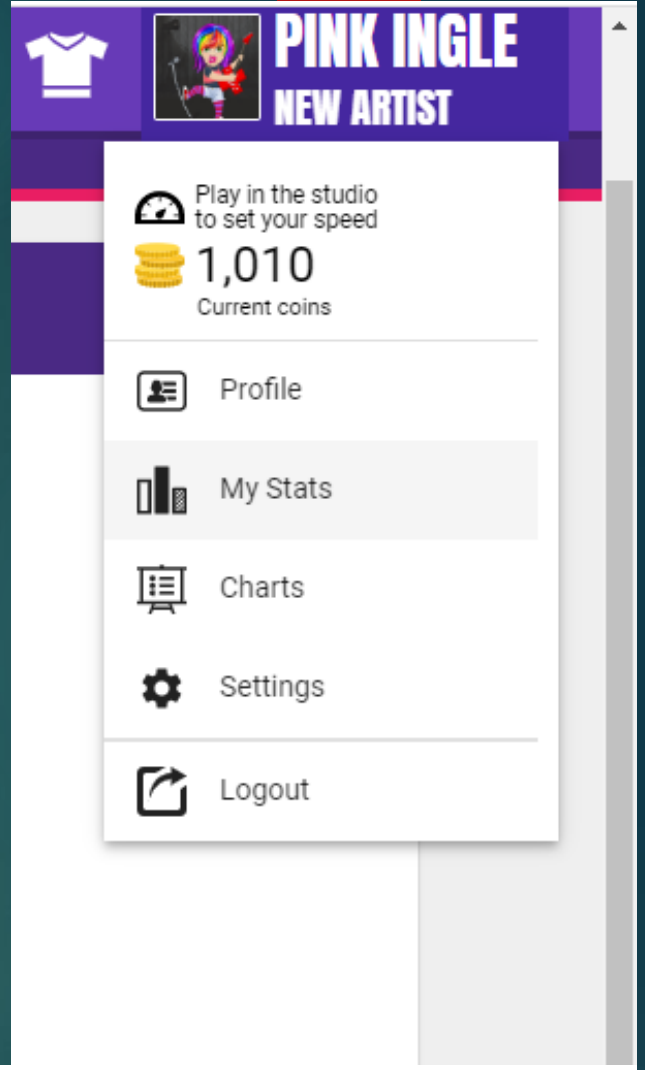
- There are 9 different game modes each with unique features.

What are the different Game Modes?

Single Player	
Jamming 4 or 8 coins/correct answer	The only game mode without a timer, players chose the table and operation (× or ÷ or both) they want to practise. Answer 10, 20 or 30 questions.
Gig 10 coins per correct answer	Gig games last 5 minutes and contain up to 100 questions, which come in 'waves', starting with the 10s, then the 2s, 5s, 3s, 4s, 8s, 6s, 7s, 9s, 11s and 12s. Novices are not expected to get past the 5s. Gigs provide the child (and their teacher) with a simple measure of their current skills, which is why learners should concentrate fully for the whole Gig as they won't get another try until next month.
Garage 10 coins per correct answer	Players are given a personalised set of 6 multiplication questions (and their matching division questions) in each round. The questions they get keep adjusting to provide the best fit for every learner's needs. This is probably the best game made for improving their recall while they're still learning.
Studio 1 coin per correct answer	Here your child earns their Rock Status, which is based on their Studio Speed. The faster they are the better their status. Studio Speed is the average of their most recent 10 Studio games. Suitable for confident players.

Studio 1 coin per correct answer	Here your child earns their Rock Status, which is based on their Studio Speed. The faster they are the better their status. Studio Speed is the average of their most recent 10 Studio games. Suitable for confident players.
Soundcheck 5 coins per correct answer	Soundcheck games ask 25 multiplication questions (up to 12×12), allowing 6 seconds for each question. Suitable for confident players.
Multi Player	
Festival 1 coin per correct answer	Children compete against others from around the world, with their identities protected behind their rock names. Suitable for confident players.
Arena 1 coin per correct answer	Children race against other members of their class who are logged in and choose the same arena name at the same time. Arena games use the same smart question algorithm as Garage games.
Rock Slam 1 coin per correct answer	Players challenge their classmates or teachers to answer as many questions as they can in 60 seconds, setting a score for the challengee to beat. Pupils don't need to be online at the same time.
Tournaments	**Battle of the Bands** – groups of children within the same school (usually classes, year groups or teams) compete to have the highest *average* score per player. **Top of the Rocks** – like a Battle of the Bands *between* schools. The winning class or school is the one with the most correct answers per person. **Important**: Each correct answer (in any game mode) earns 1 point towards the team's total in addition to the coins earned. For example, in Garage games each correct answer is worth 1 point for the team and 10 coins for the player.

- Checking your child's progress is easy:
- When your child has logged in, select their avatar in the top right hand corner and then select the 'My Stats' option.
- In the effort tab, you can see how many minutes the children have played.
- Under fluency, you can see how quickly your child is able to answer each question and how confident they are with their individual times table knowledge.




new
puma
primary

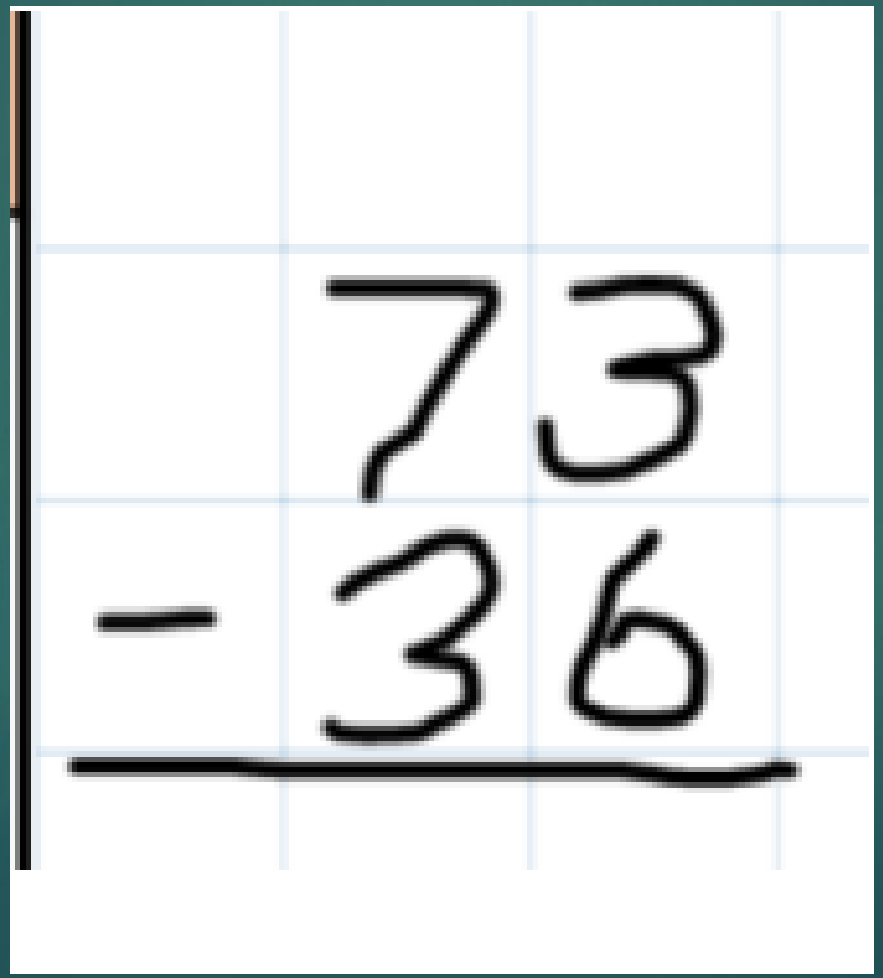
- PUMA (Progress in Understanding Mathematics Assessment) is a termly mathematics assessment for ages 4–11, standardised on over 10,000 learners to reliably benchmark performance and track progress against national averages.

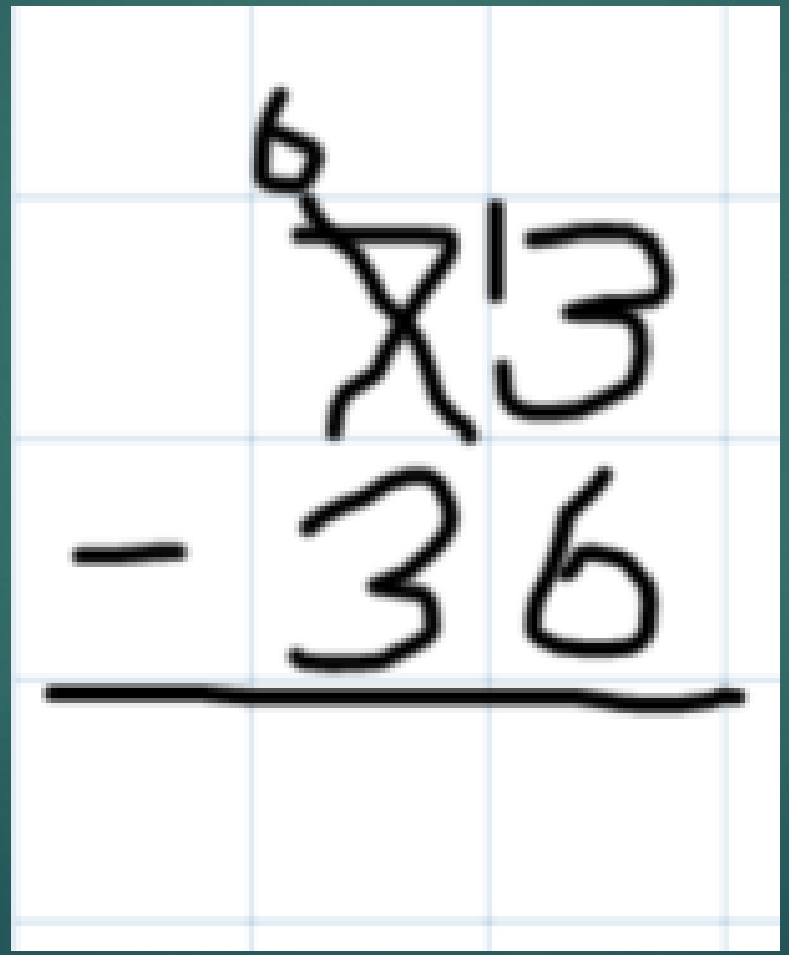
Some Maths Specific Vocabulary

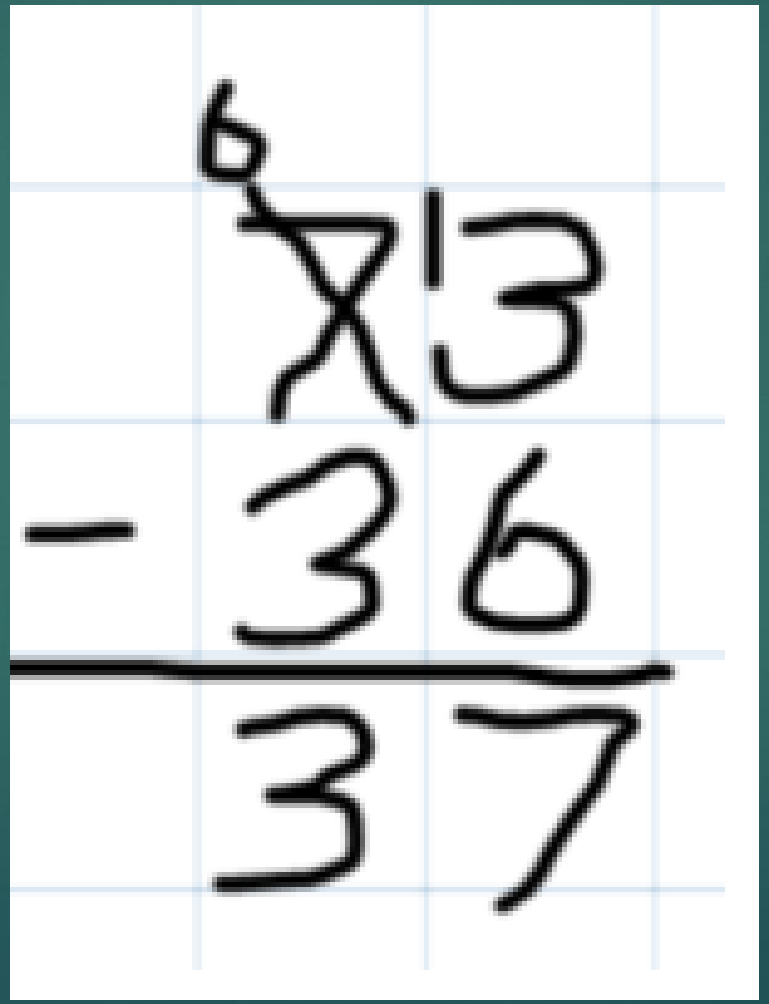
- Add – plus, together, more
- Subtract – less than, take away, minus
- Divide – share, group, divisible
- Multiply – product, times, lots of

Column Method

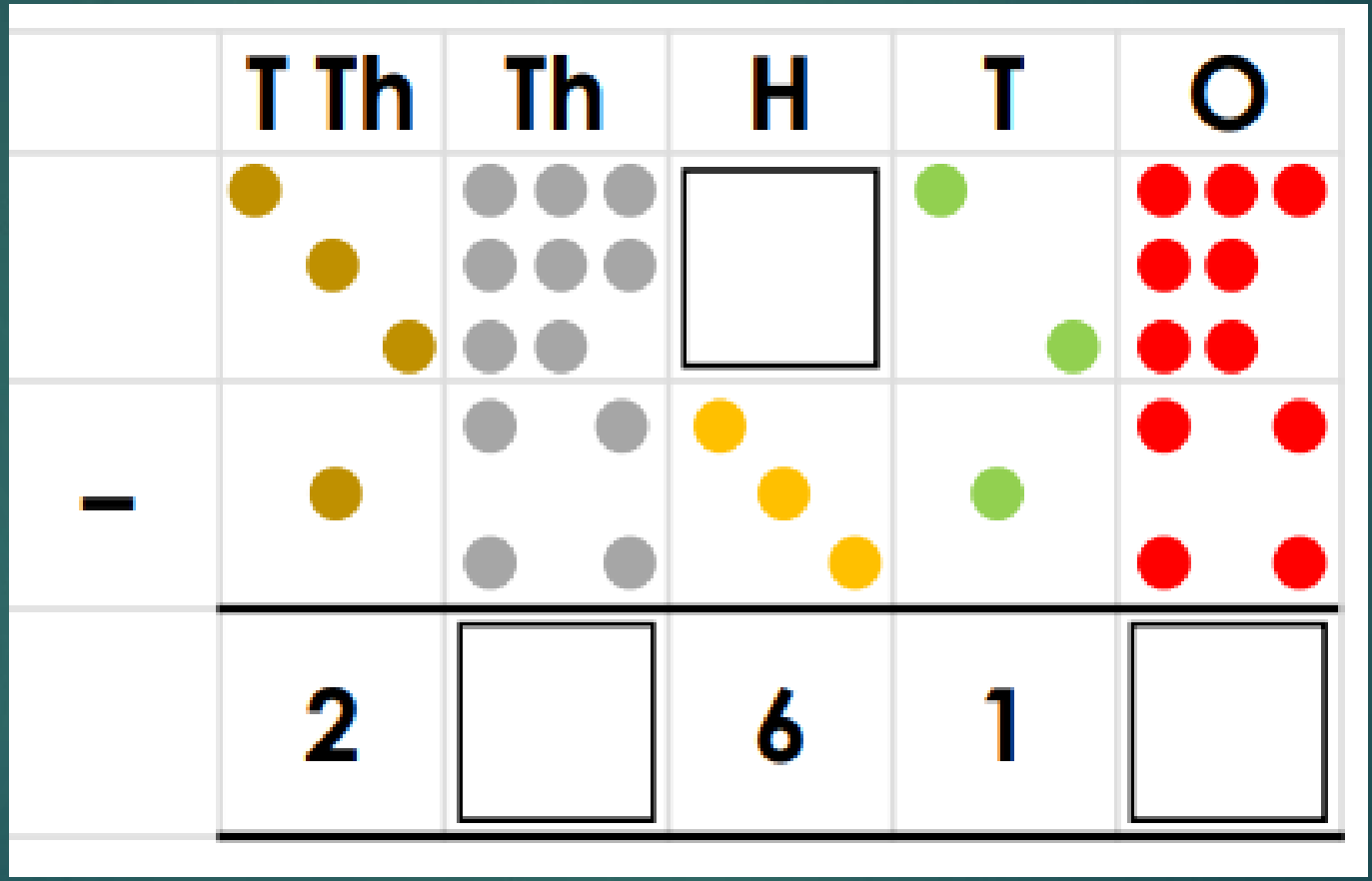
I can subtract numbers with 1dp	8.6 - 4.9
I can solve *any* 5d - 5d	95686 - 54749
I can solve *any* 4d - 4d	5686 - 4749
I can solve *any* 4d - 2d or 3d	5686 - 749
I can solve *any* 3d - 3d	985 - 596
I can solve *any* 3d - 2d	931 - 82
I can solve a 3d - 2d	986 - 42
I can solve *any* 2d - 2d	76 - 48
I can solve a 2d - 2d	96 - 42


73
- 36


6
X 3
- 36


6
x13
- 36
37

Using the inverse



Year 4 Multiplication Tables Check

- The check will be in the form of an online test on an electronic device, such as a tablet or computer, of 25 randomly generated questions on times tables from the 2 - 12 x tables - with a greater emphasis on questions on the 6, 7, 8, 9 and 12 times tables, as this are considered more challenging for children to learn.

Year 6 SATs papers

- Paper 1 – Arithmetic
- Paper 2 – Reasoning
- Paper 3 – Reasoning

SATs

- It is important to note that children's teacher assessments may differ to their SATs results. Some children perform better, others worse, under test conditions.

- SATs results provide a snapshot of how a child has performed on one particular day under test conditions, whereas teacher assessment perhaps may give a more broad overview of a child's ability under 'normal' day-to-day situations.

Curriculum Information

Curriculum Information

Curriculum Overview

Teaching of Reading

Teaching of Maths

Curriculum Policies

Curriculum Information

To find out more about what we are teaching and learning during the term please see the class pages.

As a small school with mixed-age classes, we follow a 2-year rolling curriculum for many subjects to ensure that the curriculum is comprehensively covered.

If you would like further information about the curriculum please speak to any of the teaching staff.

You can find details of the National Curriculum here.

Curriculum Information

Curriculum Information

Curriculum Overview

Teaching of Reading

Teaching of Maths

Curriculum Policies

Teaching of Maths

At Embleton Primary School we use both Big Maths CLIC from Reception to support fluency in the four mathematical operations; and White Rose Maths from Year 1 for the main Maths teaching session.

Big Maths is a teaching approach that makes progress in maths easy and fun. Big Maths has been extremely successful both nationally and internationally with thousands of children learning through daily Big Maths CLIC sessions and the weekly 'Beat That!' challenges.

Big Maths firstly answers the question, 'How do we get children properly numerate as they journey through school?' It provides us with an accurate and simple, but highly effective, framework that guarantees numeracy progress. This framework is known as CLIC (Counting, Learn Its, It's Nothing New and Calculation) and is characterised by accurate steps of progression (known as Progress Drives) that make new learning easy and obvious to children by cashing in on the timeless natural laws of Maths.

Parent Packs for supporting CLIC

- clic6parentpack.pdf
- clic7parentpack.pdf
- clic8parentpack(1).pdf
- clic9parentpack(1).pdf
- clic10parentpack(1).pdf
- clic11parentpack(2).pdf
- clic13parentpack.pdf
- clic14parentpack(1).pdf
- clic15parentpack(1).pdf
- clic16parentpack(1).pdf
- clic17parentpack(2).pdf
- clic18parentpack(2).pdf
- clic19parentpack(1).pdf

Big Maths Learn Its

There are three sets of learn its for each year group.

- learn-its-step-1-poster.pdf
- learn-its-step-2-poster.pdf
- learn-its-step-3-poster.pdf
- learn-its-step-4-poster.pdf
- learn-its-step-5-poster.pdf
- learn-its-step-6-poster.pdf
- learn-its-step-7-poster.pdf
- learn-its-step-8-poster.pdf
- learn-its-step-9-poster.pdf
- learn-its-step-10-poster.pdf
- learn-its-step-11-poster.pdf
- learn-its-step-13-poster-1.pdf

How can you help?

- Help your child practice their Learn Its at home – a few minutes a day is all you need. This can be done through TTRS and NumBots
- Insist that numbers are written the correct way round.
- Point out the maths in everyday life. Include your child in activities involving numbers and measuring, such as shopping, cooking and travelling.
- Praise your child for effort rather than for being "clever". This shows them that by working hard, they can always improve.

- Take away their fear.
- Reassure and praise whenever possible. Positive mindset…
- Play with numbers and shapes through games.
- Seeing mistakes as an opportunity to learn and using them as a discussion point.
- Recognising the **importance** and value of Maths in our everyday lives e.g. managing money and telling the time.

- The link below will take you to the programmes of study for each year group. This shows you what your child will be learning when at school and what a child of that age is expected to achieve by the end of the year (Age Related Expectations).

- National Curriculum Programmes of Study for Key Stage 1 and Key Stage 2