



## BIG MATHS

### A GUIDE FOR PARENTS AND CARERS

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. The children are introduced to child-friendly terms, such as 'Switchers' and 'Learn Its', to help them manipulate numbers and 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.

#### CLIC

CLIC stands for 'Counting', 'Learn Its', 'It's Nothing New' and 'Calculation'. Every class will start the lesson with 10-15 minutes of the first 3 skills (Counting, Learn Its, It's Nothing New) before the main learning (Calculation).

#### Counting

Children will count forwards and backwards in all kinds of steps depending on their level e.g. in 1s, 2s, 3s, 6s or even 25s! When practising counting at home, make sure your child goes forwards and backwards. Don't always start at 0 – make sure they can count on from 75 to 106, for example.



#### Learn Its

'Learn Its' are addition facts and times tables facts. There are 72 Learn Its in total: 36 addition Learn Its and 36 multiplication Learn Its. These are facts that children need to learn off by heart, so when they are asked 'What is 6+4?' they are able to give the answer as quickly as they would be able to tell you their name. As soon as they know  $3 \times 5 = 15$  they also know  $5 \times 3 = 15$  (this is known as a 'Switcher').

#### Addition Learn Its:

+	2	3	4	5	6	7	8	9
2	4							
3	5	6						
4	6	7	8					
5	7	8	9	10				
6	8	9	10	11	12			
7	9	10	11	12	13	14		
8	10	11	12	13	14	15	16	
9	11	12	13	14	15	16	17	18

#### Multiplication Learn Its:

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

#### 'Learn Its' by Year Group

Your child's teacher will focus on the following learning facts in each age group:

- Reception – Doubles of 1, 2, 3, 4, 5,  $2+1=3$ ,  $2+3=5$  and multiples of 10 (counting)
- Year 1 – Doubles of 6, 7, 8, 9,  $2+8=10$ ,  $3+7=10$ ,  $4+6=10$ ,  $4+2=6$ ,  $5+2=7$ ,  $6+2=8$ ,  $7+2=9$ ,  $9+2=11$ ,  $4+3=7$ ,  $5+3=8$ ,  $6+3=9$  and multiples of 5 and 2 (counting)

- Year 2 -3+8, 3+9, 4+7, 4+8, 4+9, 4+5, 5+6, 6+7, 7+8, 8+9, 5+9, 6+9, 7+9, 5+7, 5+8, 6+8 and x2, x5, x10 tables
- Year 3 – focus on x3 x4 x8 tables facts
- Year 4 – all x table facts especially x12 and x11
- Year 5 and 6 -all 72 Learn Its.

Please make your child practises regularly at home to make sure they really do know their Learn Its and their Switchers with INSTANT RECALL (without counting on fingers!).

### It's Nothing New

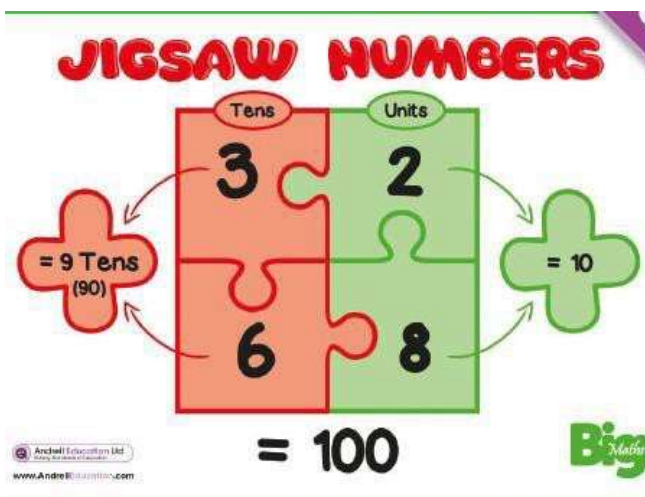
This is the most important aspect of CLI. It is the way children become successful and properly numerate. The idea that 5 *things* and 3 *things* are always 8 *things* is a fundamental concept. Once children understand this concept, we can change the '*thing*' to other units (e.g. 'tens', so that 5 tens + 3 tens = 8 tens). Children begin to learn the concept by counting random units (e.g. bananas, aliens, cats etc). It then becomes much easier to use standard measures (such as ml, m, cm, kg) whilst understanding the underlying number concepts.



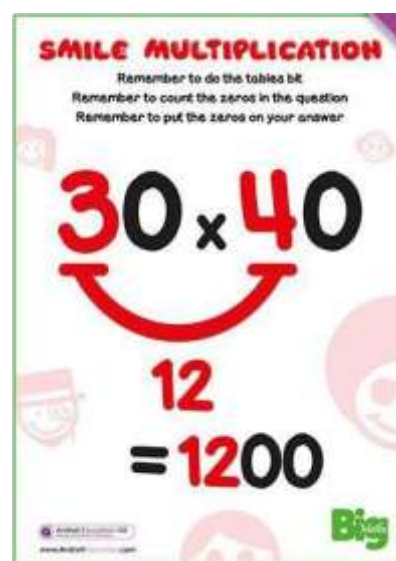
Pim the Alien is used to reinforce this concept. He has **3 arms + 4 arms = 7 arms** and he has **3 hands + 4 hands = 7 hands**. And on each hand he has 10 fingers, so that **3 groups of 10 fingers + 4 groups of 10 fingers = 7 groups of 10 fingers**, which means that **3 tens + 4 tens = 7 tens**, and **30 + 40 = 70**.

Following this principle with young children leads to a deeper understanding and of how numbers work (and they think it is fun too!). The idea is that really the learning 'is nothing new' and children feel able to answer the all sorts of questions with real understanding (e.g. If a child knows double 4, they can use that to find double 40 with confidence). In upper key stage 2, they apply this understanding to fractions and decimals, e.g.  $3/10 + 4/10 = 7/10$  or  $0.3 + 0.4 = 0.7$ .

Strange phrases such as 'Jigsaw Numbers', 'Smile Multiplication' and 'Where's Mully?' are all part of this section of Big Maths.



**Jigsaw Numbers** are a way of adding pairs of numbers to equal 100, or decimals to equal to 1.0



**Smile Multiplication** – is used for multiplying multiples of 10 e.g. 40 x 6.

**'Where's Mully?'** is a game that is played to help children master division, which is traditionally the most challenging of the four operations. Mully Multiple hides behind numbers in a number square and the children have to find him. For e.g., He's hiding behind the biggest multiple of 3 without going over 40. Where's Mully? – he's on 39! The word 'division' is introduced later.

## Calculation

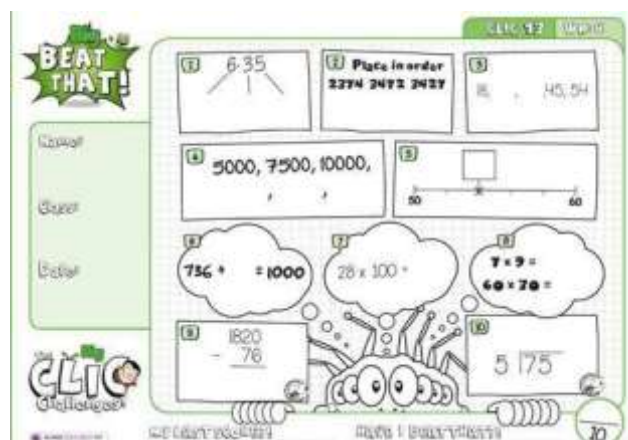
Main maths lessons in Autumn 1, Spring 1 and Summer 1 will focus on calculation, developing children's understanding of addition, subtraction, multiplication and division. Big Maths maps out which steps children should do in a clear order and helps teachers to identify where to go back to if a child needs extra support. It is important not to introduce formal methods such as column addition too early, as children will not understand the reasoning behind the method and are more likely to make place value errors.

## SAFE

'SAFE' stands for 'shape', 'amounts', 'fractions' and 'explaining data'. These are all the other elements of maths that aren't numeric calculation, including time, patterns, angles and graphs. 'Fractions' crosses over with calculation in later year groups as children learn to calculate with fractions, decimals and percentages. SAFE is taught as the main maths lesson in Autumn 2, Spring 2 and Summer 2.

## Big Maths Beat That

Big Maths 'Beat That' is a weekly timed test of your child's Learn Its, which is done in the maths lesson every Friday. The aim is to improve their score each time. You can help your child to improve their scores by asking them to give you instant responses to Learn Its while at home, on the journey to school and throughout the day at weekend! Little but very often is the key to success as this helps the information become secure in the long-term memory.



## How can you help?

Big Maths is a very useful tool to help children become numerate... but we need your support at home.

- Help your child practise their Learn Its – a few minutes every day is all you need.
- Insist that numbers are written the correct way round.
- Congratulate your child if their Big Maths score goes up!
- Make Maths a positive experience and not something to worry about or be afraid of!