



# BIG MATHS

## A GUIDE FOR PARENTS AND CARERS

Big Maths is a teaching programme used at Hazlehurst 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 make them more confident and more successful. There is a strong emphasis on developing instant recall of number facts, including number bonds and times tables.

### CLIC SESSIONS

This stands for '**C**ounting', '**L**earn Its', '**I**t's Nothing New' and '**C**alculation'. Maths lessons contain each of these elements.

### 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 with your child, make sure you go 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  $\times 2$ ,  $\times 5$ ,  $\times 10$  tables
- Year 3 – focus on  $\times 3$   $\times 4$   $\times 8$  tables facts
- Year 4 – all  $\times$  table facts especially  $\times 12$  and  $\times 11$
- Year 5 and 6 - all 72 Learn Its.

Please work at home to make sure they really **do** know their Learn Its and their Switchers with INSTANT RECALL (no fingers!)

## Big Maths Beat That

Big Maths Beat That is a weekly timed test of your child's Learn Its. 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 their Learn Its while at home, on the journey to school and throughout the day at weekend! Little and very often is the key to success, so the information enters the long term memory.

$4+2=6$	$2+8=10$	$3+7=10$
$5+2=7$	$1+9=10$	$6+6=12$
$5+5=10$	$9+9=18$	$4+3=7$
$8+8=16$	$4+6=10$	$6+2=8$
$6+3=9$	$7+7=14$	$5+3=8$
$9+2=11$		$7+2=9$

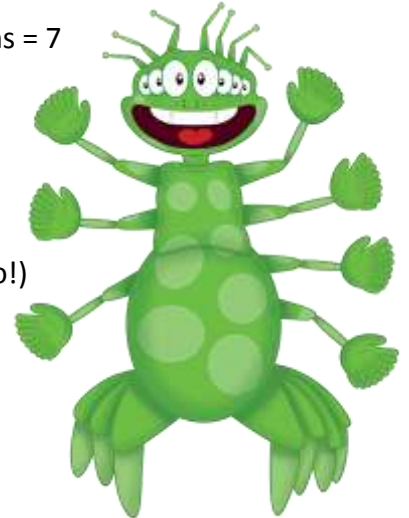
## It's Nothing New

This is the most important aspect of CLIC. 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 unit 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  $30 + 40 = 70$ .

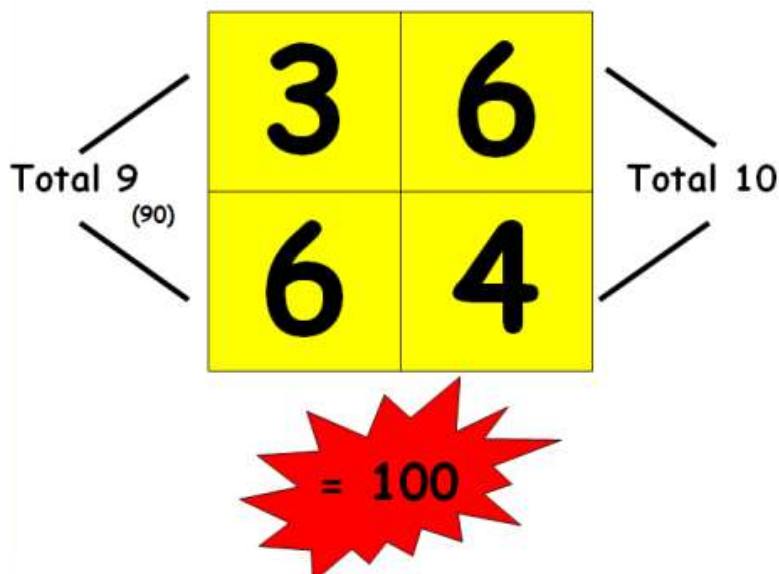
Following this principle with young children leads to a deeper understanding and of how numbers works (and they think it is fun too!)

The idea is that 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.




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 equal to 1.0



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

Smile Multiplication 

$$\underline{30} \times \underline{80} = \underline{2400}$$

24

- Do the tables bit
- Count the zeros in the question
- Put the zeros on your answer!

**'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.

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

This aspect of CLIC is when the teacher will focus on developing the 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.

## How can you help?

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

- Help your child practise their Learn Its at home – a few minutes a 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 (Don't tell your child you were no good at maths when you were at school – they will think they should be the same!)



If you have any questions or concerns please see your child's class teacher in the first instance, or Mrs Knowles, the school's Maths Co-ordinator.

For further information about the school curriculum and ways to help at home, please go to the school website [www.hazlehurstschool.co.uk](http://www.hazlehurstschool.co.uk)

The Curriculum Newsletter for your child's class has lots of ideas and the Links page will take you to lots of useful external websites.

[http://www.hazlehurstschool.co.uk/html/curriculum\\_news.html](http://www.hazlehurstschool.co.uk/html/curriculum_news.html)

<http://www.hazlehurstschool.co.uk/html/links.html>

