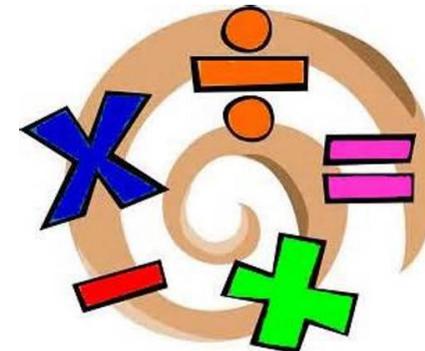


Culworth and Boddington Primary Academies



**Calculation handbook for parents with
children in early years**



Progression towards standard written methods of calculation

INTRODUCTION

This calculation handbook has been written in line with the school calculation policy and the programmes of study taken from the revised National Curriculum for Mathematics (2014). It provides guidance on appropriate calculation methods and progression for each year group. The content is set out in yearly blocks under the following headings: addition, subtraction, multiplication and division.

Statements taken directly from the programme of study are listed in italics at the top of each section.

The Federation of Culworth and Boddington C of E Primary Academies uses the Big Maths resources to teach mental calculation strategies, including the key number facts that children will need to know called 'learnits.'

Children will use mental methods as their first port of call, when appropriate, but for calculations they cannot do in their heads, they will need to use an efficient method accurately and with confidence.

Within school, children will be given opportunities to deepen their understanding of concepts through a range of problems and real life situations, rather than moving on to the content of the next year group.

"Decision about when to progress should always be based on the security of pupils understanding and their readiness to progress to the next stage."

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AIMS OF THE HANDBOOK

- To enable parents to have a secure knowledge and understanding of the informal (mental) and formal written methods of calculations for all four operations taught in school.

Addition - Early stages

- *Say a number which is one more than a given number*
- *Use quantities and objects to add 2 single digit numbers by counting on*

Children will engage in a wide variety of songs and rhymes, games and activities. They will begin to relate addition to combining two groups of objects, first by counting all and then by counting on from the largest number.

In practical activities and through discussion they will begin to use the vocabulary involved in addition.

For example:

'You have five apples and I have three apples. How many apples altogether?'

Suggested songs and rhymes for counting up.

One, Two Buckle My Shoe

One, two buckle my shoe
Three, four knock on the door
Five, six pick up sticks
Nine, ten a big fat hen.....

One banana, two banana

One banana, two bananas,
Three bananas, more
Four bananas, five bananas,
Six bananas, more.
Seven bananas, eight bananas,
Nine bananas, more
Ten yellow bananas!

Turtles

One baby turtle alone and new
Finds a friend, and then there are two.
Two baby turtles crawl down to the sea.
They find another, and then there are three.
Three baby turtles crawl along the shore.
They find another, and then there are four.
Four baby turtles go for a dive.
Up swims another, and then there are five.

Rhyme to help children write numbers

Number 1 is big and tall, stand him up so he won't fall.
Number 2 goes backwards and along, please make sure you don't go wrong.
Two little curls for number 3, one for you and one for me.
Number 4 goes down and across, give him a stick so he's the boss.
Number 5 is a funny chap, down fat tummy and give him a hat.
Number 6 looks like a curl in your hair, twiddle it around to show that it's there,
Number 7 starts with a hat, then goes down just like that,
Number eight makes an 'S' then go back to join it up.
Number 9 is like a ball on a stick, start with a 'C' then go up and down quick.
Number 10, that's a lot of fun, write 1 and a nought and now it's all done!

Beach Counting

One for the sun that shone in the sky.
Two for the ships that sailed on by.
Three for the castles I built on the sand.
Four for the seashells I held in my hand.
Five for the points on the starfish I saw.
Six for the crabs that scuttled ashore.
Seven for the waves that I managed to beat.
Eight for the pebbles I perched on my feet.
Nine for the boats that bobbed on the sea.
Ten for my toes that were wiggling free.

I Can Count

I can count, want to see?
Here's my fingers- one, two, three (*Hold up fingers as you count*)
Four and five, this hand is done.
Now I'll count the other one.
Six, seven, eight and nine (*Hold up fingers on other hand*)
Just one more, I'm doing fine.
The last little finger is number ten.
Now I'll count them all again.
One, two, three, four, five, six, seven, eight, nine, ten!

Subtraction - Early Stages

Children will engage in a variety of counting songs and rhymes and practical activities.

In practical activities and through discussion they will begin to use the vocabulary associated with subtraction.

They will find one less than a given number.

They will begin to relate subtraction to 'taking away' using objects to count 'how many are left' after some have been taken away.

$$6 - 2 = 4$$

'Take two apples away. How many left?'

Children will begin to count back from a given number.

Suggested songs and rhymes for counting back

Five Little Ducks

Five Little ducks went swimming one day,
Over the hills and far away
Mother duck said,
"Quack, quack, quack quack"
But only four little ducks came back.
(Continue until one little duck)

A Tall Silver Rocket

A tall silver rocket
Is standing on the ground,
Now it's nearly ready
Here comes the sound.
Ten, Nine, Eight....
BLAST OFF

Ten in a Bed

There were ten in the bed,
And the little one said 'roll over, roll over',
So they all rolled over and one fell out.

There were nine in the bed,
And the little one said 'roll over, roll over'
So they all rolled over and one fell out.....'

Five Currant Buns

Five currant buns in a baker's shop,
Big and round with a currant on the top,
Along came a girl with a penny one day,
Bought a currant bun and took it away,
Four currant buns in a baker's shop...
(Continue until one currant bun is left in the baker's shop)

Five Little Speckled Frogs

Five little speckled frogs,
Sat on a speckled log,
Eating some most delicious bugs
Yum, Yum...
One jumped into the pool,
Where it was nice and cool,
Then there were four green speckled
frogs
Glub, Glub,

Four little speckled frogs,
Sat on a speckled log
Eating some most delicious bugs,
Yum Yum...
One jumped into the pool,
Where it was nice and cool
Then there were three green speckled
frogs,
Glub, Glub

(Continue until last verse 'and then
there were no green speckled frogs')

Dinosaurs

Five enormous dinosaurs
Letting out a roar
One went away, and
Then there were four.

Four enormous dinosaurs
Crashing down a tree,
One went away, and
Then there were three.

Three enormous dinosaurs
Eating tiger stew,
One went away, and
Then there were two.

Monkeys on the Bed

Five Little monkeys jumping on the bed
One fell off and bumped his head
Mama called the doctor and the doctor said
"No more monkeys jumping on the bed".

Four little monkeys jumping on the bed....

Two enormous dinosaurs,
Trying to run
One ran away, and then there was one.

One enormous dinosaur,
Afraid to be a hero,
He went away and then there were zero.

Rockets

Rockets shoot off into space,
Hurry up it's quite a race!
Rockets make a big loud boom,
Heading up towards the moon!
Counting down before we go,
10,9,8,7,6,5,4,3,2,1, ZERO!

Five Little Men in a Flying Saucer

Five little men in a flying saucer,
Flew around the world one day,
They looked left and right,
But they didn't like the sight
So one man flew away...WHOOSH.
Four little men in a flying saucer....
(continue singing until the last man has flown away)

Ten Green Bottles

Ten green bottles hanging on the wall,
Ten green bottles hanging on the wall,
And if one green bottle should accidently fall,
There'll be nine green bottles hanging on the wall.

Nine green bottles hanging on the wall,
Nine green bottles hanging on the wall,
And if one green bottle should accidently fall,
There'll be eight green bottles hanging on the wall.
(Continue singing until only one green bottle is left)

One green bottle hanging on the wall,
One green bottle hanging on the wall,
And if that one green bottle should accidently fall,
There'll be no green bottles hanging on the wall.
No green bottles hanging on the wall.

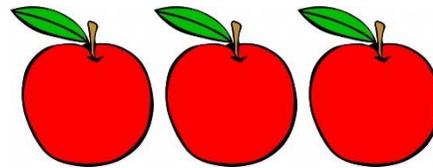
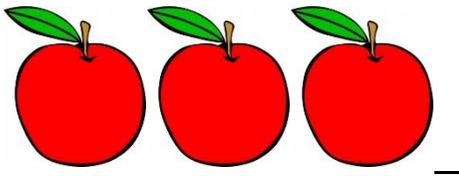
Five Fat Sausages

Five fat sausages sizzling in a pan,
All of a sudden one went BANG!
Four fat sausages sizzling in a pan,
All of a sudden one went BANG!

(Continue singing until the last sausage goes BANG! This could be sang with more sausages to develop subtraction further.)

Multiplication - Early Stages

Children will engage in wide variety of songs and rhymes, games and activities. In practical activities and through discussion they will begin to solve problems involving doubling.



'Three apples for you and three apples for me. How many apples altogether?'

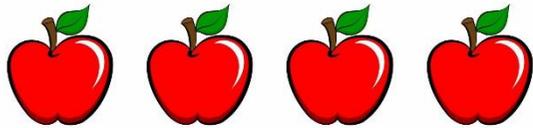
Suggested songs and rhymes for multiplication

Counting in Two's

'Two, four, six, eight
Meet me by the garden gate
If I'm late, don't wait.
Two, four, six, eight'

Division - Early stages

Children will engaged in a wide variety of songs and rhymes, games and activities. In practical activities and through discussion they will begin to solve problems involving halving and sharing.



'Share the apples between two people.'

'Half of the apples for you and half of the apples for me.'