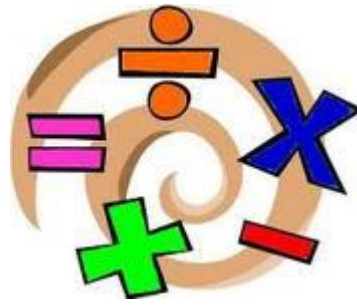# Maths guide for parents and carers of mathematicians in Year 1

Contents

- *Introduction, do's and don'ts*
- *Overview of the year – key concepts that your child will be learning in mathematics*
- *Methods of calculation taught& mental strategies*
- *Vocabulary – mathematical words they need to know*
- *Maths at home, games and internet links*
- *Key objectives your child should know by the end of the year*

This booklet has been written to help you understand how mathematics is taught in school. It also gives practical ideas and suggestions for helping your child at home, and outlines what your child will be learning this year.

We know that you are keen to help with your child's maths education but may find you do not understand what their child is doing at school. Methods we teach might be different from the way you were taught. Many of you might feel less confident in mathematics because you did not understand it or enjoy the subject when you were at school. We all want your children to feel the opposite. We want them to feel confident in their mathematical abilities and to enjoy maths lessons. Children are taught why the methods work, not just how to perform them. It is the difference between telling someone directions and giving them a map.

We hope that you use this guide to help you support your child with maths at home. If you have any questions about anything in this guide, please ask your child's teacher or Becca Wall (maths coordinator) and we will be more than happy to talk things through.

Reference materials include: Mathematical Vocabulary booklet (DfE), target setting booklet (DfE), Maths for Mums & Dads (Rob Eastaway& Mike Askew), the latter of which is a well worth reading.

Some Do's and Don'ts

- Make maths 'hands on'—remember the three C's of everyday maths: cash, clocks and cooking. All three are perfect opportunities to practise maths (see maths at home section)
- Recognise there's more than one way of doing a calculation. Children's methods may seem long-winded or confusing, but you should always let them try their own way of solving a problem – it's how they will learn to understand maths rather than finding quick short-cuts.
- Discuss how one method may not be appropriate for all calculations e.g. you would use different methods to find 3,786+4,999 and 3,786 + 4,568.
- Don't expect children to 'get it' after you've explained to once—it can take a long time for the penny to drop. It is perfectly normal for children not to recognise a concept learnt in a new context.
- When a child gets a question wrong, it is tempting to tell them they are wrong and how to correct it. Why not ask them to explain their method and help them spot their mistake.
- Similarly if a child gets a question right, get them to explain how they reached their answer, perhaps pretending not to understand their reasoning.
- Make maths a casual part of what you do while you're doing something else. Instead of making maths formal, find ways to sneak it in e.g. How many more plates do I need? Have we got enough for the bread and milk? Did you see the number 23 bus? I was wondering, is 23 a prime number?
- Don't accept it if your child says they are bad at maths and don't say that you are bad at maths either —this can give the message that maths is difficult, not enjoyable and ultimately not important for success in life. This just isn't true; as adults we deal with mathematics every day in cooking, shopping, sharing, games, parking… the list is endless. If you are positive your child will be too.

OVERVIEW OF MATHS IN YEAR 1

This outlines what the children will be learning over the course of the year:

Problem solving

- ✤ Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money; recognise the value of coins
- ✤ Record my mathematical working out using practical materials like counters and diagrams.
- ✤ Answer a question by selecting and using suitable equipment, and sorting information, shapes or objects; display results using tables and pictures
- ✤ Describe simple patterns and relationships involving numbers or shapes; decide whether examples satisfy given conditions

Number and place value

- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
- given a number, identify one more and one less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- read and write numbers from 1 to 20 in numerals and words.

Number facts

- ✤ **Derive and recall all pairs of numbers with a total of 10 and addition facts for totals to at least 5; work out the corresponding subtraction facts**
- ✤ **Use knowledge of counting in twos, fives and tens to derive the multiples of 2, 5 and 10 to the tenth multiple**
- ✤ **Recall the doubles of all numbers to at least 10**

Calculation (see following pages for methods)

- read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.
- solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.
- recognise, find and name a half as one of two equal parts of an object, shape or quantity

- recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

<u>Shape, space and measure</u>

- compare, describe and solve practical problems for:
    - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
    - mass/weight [for example, heavy/light, heavier than, lighter than]
    - capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
    - time [for example, quicker, slower, earlier, later]
- measure and begin to record the following:
    - lengths and heights
    - mass/weight
    - capacity and volume
    - time (hours, minutes, seconds)
- recognise and know the value of different denominations of coins and notes
- sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
- recognise and use language relating to dates, including days of the week, weeks, months and years
- tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
- recognise and name common 2-D and 3-D shapes, including:
    - 2-D shapes [for example, rectangles (including squares), circles and triangles]
- 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].
- describe position, direction and movement, including whole, half, quarter and three-quarter turns.

METHODS OF CALCULATION

If you would like to see detail of how these methods progress through each year group, please ask your child's teacher for our school calculation policy. If you use different methods, feel free to discuss these with your child but allow them to explain what they have learnt at school too.

MANY MENTAL CALCULATION STRATEGIES WILL CONTINUE TO BE USED THROUGHOUT YOUR CHILD'S SCHOOLING. THEY ARE NOT REPLACED BY WRITTEN METHODS.

Children should be encouraged to

- **consider if a mental calculation would be appropriate before using written methods.**
- **approximate their answers before calculating.**
- **check their answers after calculation using an appropriate strategy.**

ADDITION

Sum	Plus	Altogether	Total

Mental Calculation Strategies for Addition

These are a **selection** of mental calculation strategies which should continue to be practiced and used in lessons right up to year 6.

Mental recall of number bonds

$6 + 4 = 10$ $\square + 3 = 10$

$25 + 75 = 100$ $19 + \square = 20$

Using number bonds to add many numbers

$5 + 2 + 8 + 9 + 1$ combine 9 and 1, 8 and 2 to see the answer is 25

Use near doubles

$6 + 7 =$ double $6 + 1 = 13$

Addition using partitioning and recombining

$34 + 45 = (30 + 40) + (4 + 5) = 79$

Counting on or back in repeated steps of 1, 10, 100, 1000

$86 + 57 = 143$ (by counting on in tens and then in ones)

$460 - 300 = 160$ (by counting back in hundreds)

Add the nearest multiple of 10, 100 and 1000 and adjust

$24 + 19 = 24 + 20 - 1 = 43$

$458 + 71 = 458 + 70 + 1 = 529$

36 + 19 = 55   19 + 36 = 55

55 − 19 = 36   55 − 36 = 19

Recording addition

Children are encouraged to develop a **mental picture** of the number system in their heads to use for calculation. They develop ways of recording calculations using pictures, etc.
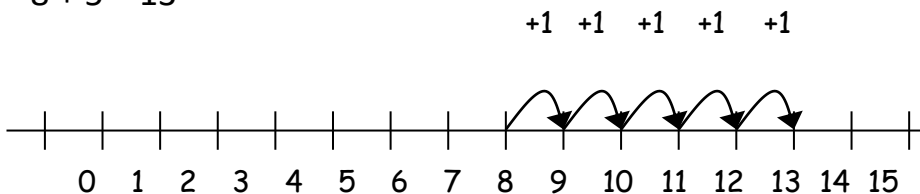
They use number lines, number squares and other practical resources to support calculation and teachers *demonstrate* the use of the number line to represent a '**number sentence**'.
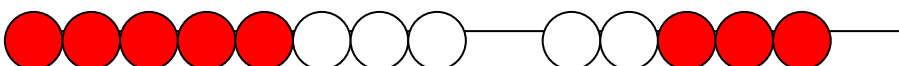
3 + 2 = 5
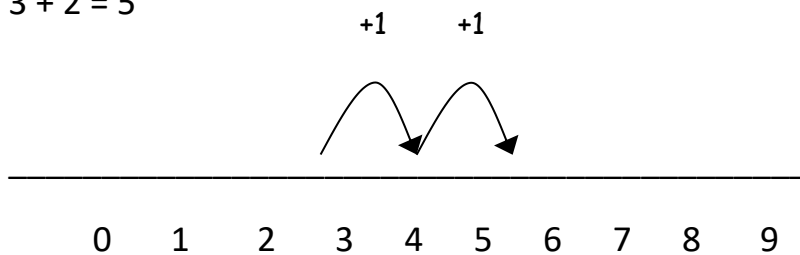
Children then begin to use numbered lines to support their own calculations using a numbered line to count on in ones. Some children may be able to count on in 2s.

8 + 5 = 13

Bead strings or bead bars can be used to illustrate addition including bridging through ten by counting on 2 then counting on 3.

The 100 square should be introduced with children using it to count on in 1s and to count forward or back in multiples of 2, 5 and 10.

Dienes apparatus, as well as a bead string, should be used to show the first stages of partitioning eg.
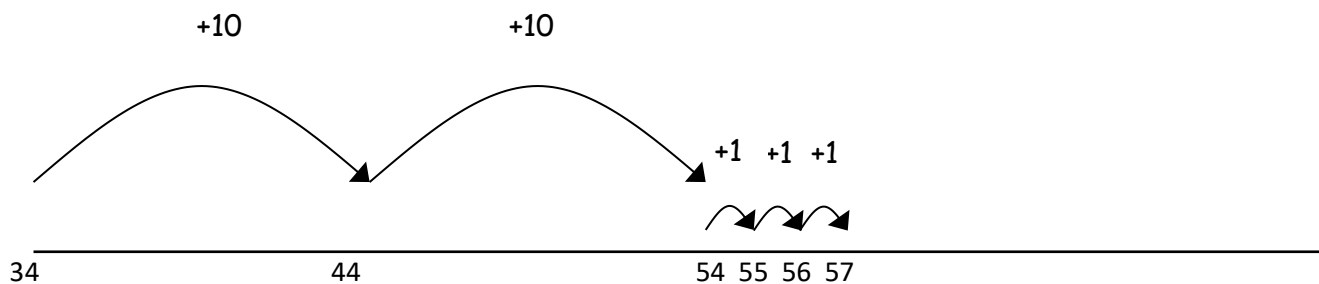
23 is 20 and 3 more

Children will be shown '**spider counting**' using a 100 square as a further step if they are confident with the methods above. This will be the basis of the work in year 2 as well.eg. 26 + 30 (three tens) = 56. The spider can only move up or down in tens. This can then be used to help add multiples of ten and adjust.

Children will begin to use 'empty number lines' as an alternative image themselves starting with the larger number and counting on.

✓ First counting on in tens and ones.
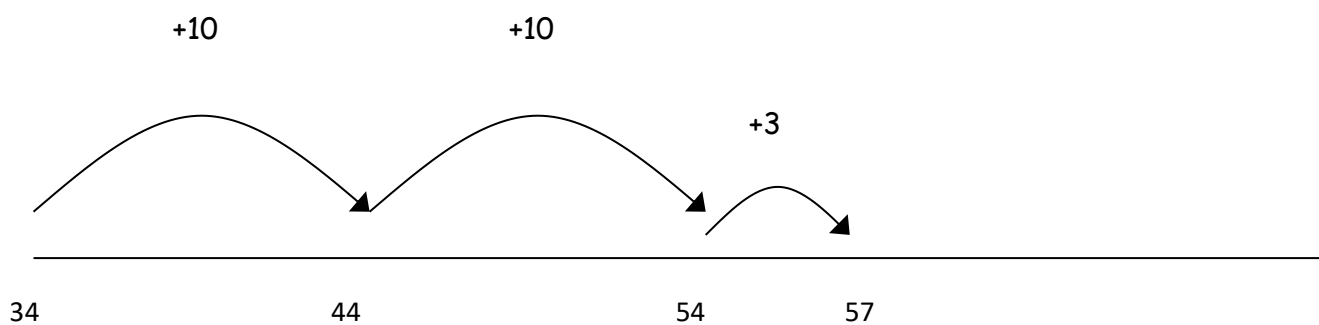
34 + 23 = 57

+10   +10
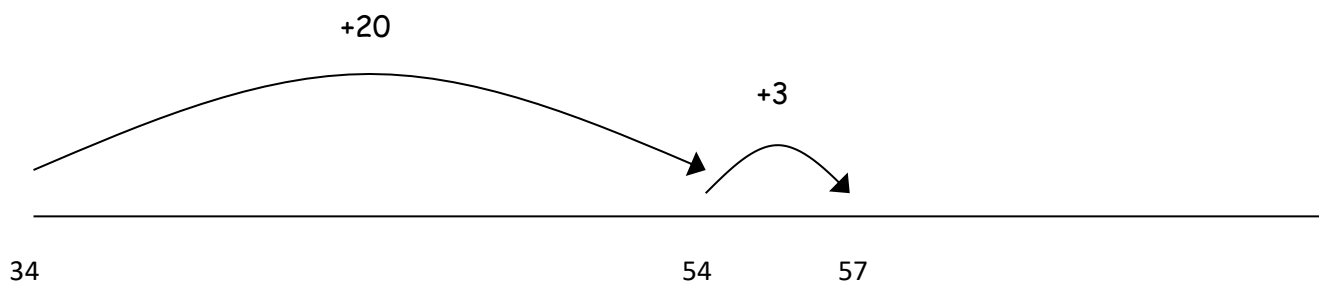
+1 +1 +1

34   44   54 55 56 57

✓ Then helping children to become more efficient by adding the units in one jump (by using the known fact 4 + 3 = 7).

34 + 23 = 57

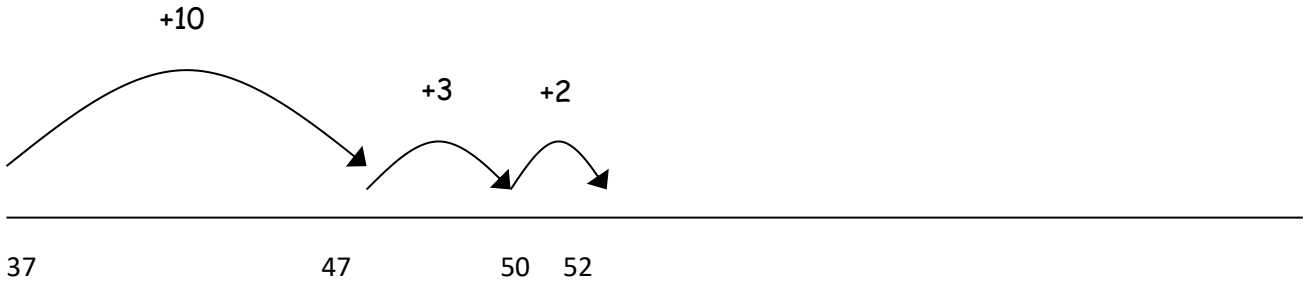+10   +10

+3

34   44   54   57

✓ Followed by adding the tens in one jump and the units in one jump.

34 + 23 = 57

+20

+3

34   54   57

✓ Bridging through ten can help children become more efficient.

37+15=52

Children should begin to know that these words mean addition: add, sum, plus, altogether and total.

SUBTRACTION

| Minus | Take-away | Less | Reduce | Find the difference |

Mental Calculation Strategies for Subtraction
These are a **selection** of mental calculation strategies taught throughout the school:

Mental recall of addition and subtraction facts
$10 - 6 = 4$ $17 - \square = 11$
$20 - 17 = 3$ $10 - \square = 2$

Find a small difference by counting up
$82 - 79 = 3$

Counting on or back in repeated steps of 1, 10, 100,
$86 - 52 = 34$ (by counting back in tens and then in ones)

Subtract the nearest multiple of 10, 100 and 1000 and adjust
$24 - 19 = 24 - 20 + 1 = 5$
$458 - 71 = 458 - 70 - 1 = 387$

Use the relationship between addition and subtraction
$36 + 19 = 55$ $19 + 36 = 55$
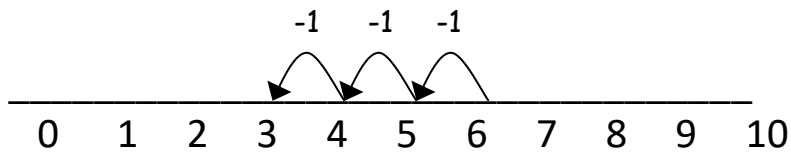$55 - 19 = 36$ $55 - 36 = 19$

Recording subtraction

Children are encouraged to develop a **mental picture** of the number system in their heads to use for calculation. They develop ways of recording calculations using pictures etc.
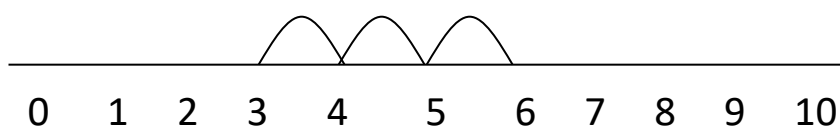

They use numberlines and practical resources to support calculation. Teachers *demonstrate* the use of the numberline.
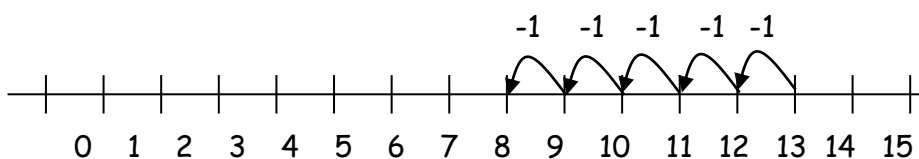
$6 - 3 = 3$

The numberline should also be used to show that 6 - 3 means the 'difference between 6 and 3' or 'the difference between 3 and 6' and how many jumps they are apart.
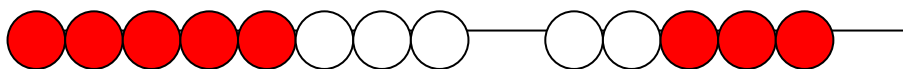

Children then begin to use numbered lines to support their own calculations - using a numbered line to count back in ones.

$13 - 5 = 8$

Bead strings or bead bars can be used to illustrate subtraction including bridging through ten by counting back 3 then counting back 2.
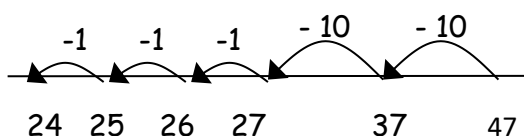
$13 - 5 = 8$

Children who are very confident will begin to use empty number lines to support calculations.

Counting back – 'rob the bank'.
Children will remember the concept of robbing the bank problems as the robber steals in 1s and 10s. When we've found out how much is left, we can catch the robber and say 'take him away'!
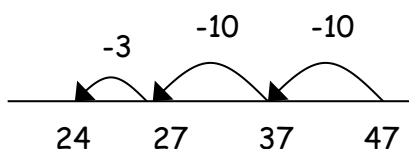
✓ First counting back in tens and ones.

$47 - 23 = 24$
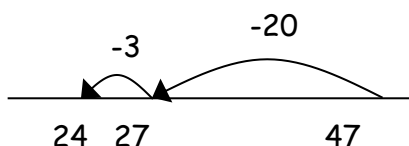

✓ Then helping children to become more efficient by subtracting the units in one jump (by using the known fact $7 - 3 = 4$).
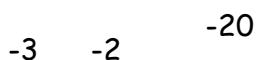
$47 - 23 = 24$

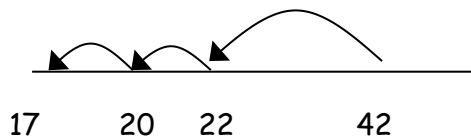✓ Subtracting the tens in one jump and the units in one jump.

$47 - 23 = 24$

✓ Bridging through ten can help children become more efficient.

$42 - 25 = 17$

17   20 22   42

MULTIPLICATION

| Times | Lots of... | Product | Double | Groups of... |
| Multiple | | Repeated addition | | Array |

Doubling and halving
Applying the knowledge of doubles and halves to known facts.
e.g. 8 x 4 is double 4 x 4
Using multiplication facts
Year 1-2   2 times table
                10 times table
                5 times table

Using and applying division facts
Children should be able to utilise their tables knowledge to derive other facts.
e.g. If I know 3 x 7 = 21, what else do I know?
30 x 7 = 210, 300 x 7 = 2100, 3000 x 7 = 21 000, 0.3 x 7 = 2.1 etc

Use closely related facts already known
13 x 11 = (13 x 10) + (13 x 1)
       = 130 + 13 = 143

Multiplying by 10 or 100
Knowing that the effect of multiplying by 10 is a shift in the digits one place to the left.
Knowing that the effect of multiplying by 100 is a shift in the digits two places to the left.
Partitioning
23 x 4 = (20 x 4) + (3 x 4)
       = 80 + 12
       =92
Use of factors
8 x 12 = 8 x 4 x 3

Written methods of multiplication
Children will experience equal groups of objects and will count in 2s and 10s and begin to count in 5s. They will work on practical problem solving activities involving equal sets or groups.

Children will count on in 2s, 5s and 10s use 'finger multiplication' – each finger today is worth 2. How many if I hold up 4 fingers?

Children will develop their understanding of multiplication and use jottings to support calculation:

✓ **Repeated addition**

3 times 5   is   5+5+5=15   or   3 lots of 5   or   5 x 3

Repeated addition can be shown easily on a number line:

5 x 3 = 5 + 5 + 5
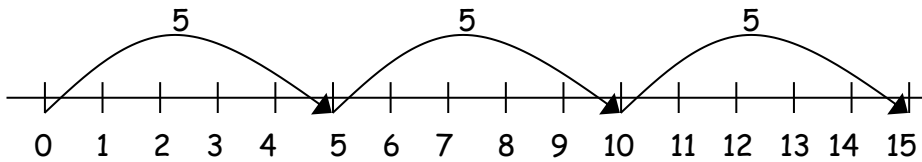
and on a bead bar:

5 x 3 = 5 + 5 + 5
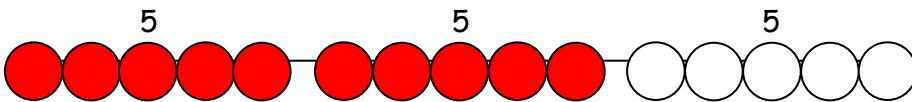
✓ **Commutativity**

Children who are confident might begin to see that 3 x 5 has the same answer as 5 x 3. This can also be shown on the number line:
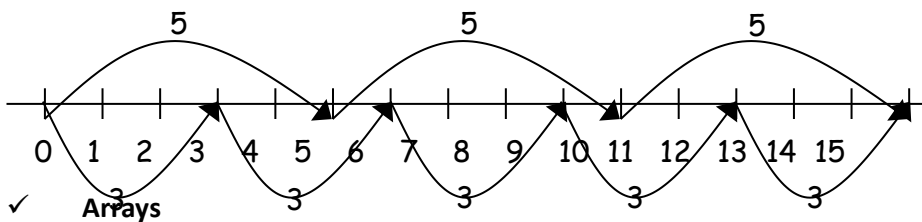
✓ **Arrays**

Children who are confident might be able to model a multiplication calculation using an array. This knowledge will support with the development of the grid method later on.

5 x 3 = 15

3 x 5 = 15
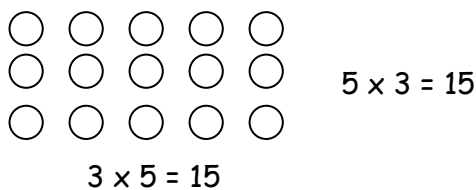
Children will also learn how to double (0-10) and halve (0-20) using objects to support initial understanding.

DIVISION

Share   group   lots of   split   divide into

Mental Calculation Strategies for Division

Doubling and halving
Knowing that halving is dividing by 2
Deriving and recalling division facts that relate to the 2 x table.

Written methods of division
Children will understand equal groups and share items out in play and problem solving. They will count in 2s and 10s and later in 5s, using cubes, objects and jottings.

Children will develop their understanding of division and use jottings to support calculation

✓   **Sharing equally**

6 sweets shared between 2 people, how many do they each get?

VOCABULARY

Numbers and the number system

COUNTING, PROPERTIES OF NUMBERS AND NUMBER SEQUENCES

number
zero, one, two, three... to twenty and beyond
zero, ten, twenty... one hundred
none
how many...?
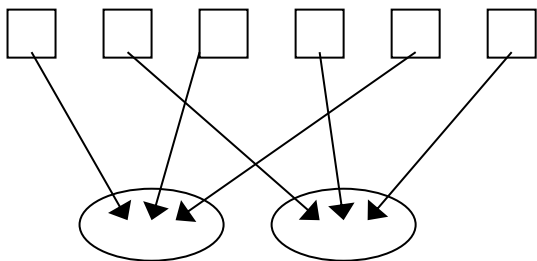count, count (up) to
count on (from, to)
count back (from, to)
count in ones, twos... tens...
more, less, many, few
odd, even
every other
how many times?
pattern, pair

PLACE VALUE AND ORDERING

units, ones
tens
exchange
digit
'teens' number
the same number as, as many as
equal to
Of two objects/amounts:
greater, more, larger, bigger
less, fewer, smaller
Of three or more objects/amounts:
greatest, most, biggest, largest
least, fewest, smallest
one more, ten more
one less, ten less
compare
order
size
first, second, third... tenth, eleventh... twentieth
last, last but one
before, after
next
between, half-way between
above, below

ESTIMATING

guess how many, estimate
nearly, roughly, close to
about the same as
just over, just under
too many, too few, enough, not enough

Calculations

ADDITION AND SUBTRACTION

+, add, more, plus
make, sum, total
altogether
score
double, near double
one more, two more... ten more
how many more to make...?
how many more is... than...?
how much more is...?
–, subtract, take (away), minus
leave
how many are left/left over?
how many have gone?
one less, two less, ten less...
how many fewer is... than...?
how much less is...?
difference between
half, halve
=, equals, sign, is the same as

Solving problems

MAKING DECISIONS AND REASONING
pattern
puzzle
answer
right, wrong
what could we try next?
how did you work it out?
count out, share out, left, left over
number sentence
sign, operation

MONEY
money
coin
penny, pence, pound
price
cost
buy
sell
spend, spent
pay
change
dear, costs more
cheap, costs less, cheaper
costs the same as
how much...? how many...?
total

Organising and using data
count, sort, vote
group, set
list
same, different
table

Measures, shape and space

MEASURES (GENERAL)
measure
size
compare
guess, estimate
enough, not enough
too much, too little
too many, too few
nearly, roughly, close to, about the same as
just over, just under

LENGTH
length, width, height, depth
long, short, tall
high, low
wide, narrow
deep, shallow
thick, thin
longer, shorter, taller, higher... and so on
longest, shortest, tallest, highest... and so on
far, near, close
metre
ruler, metre stick

MASS
weigh, weighs, balances
heavy/light, heavier/lighter, heaviest/lightest
balance, scales, weight

CAPACITY
full
half full
empty
holds
container

TIME

time
days of the week: Monday, Tuesday...
seasons: spring, summer, autumn, winter
day, week, month, year
weekend, birthday, holiday
morning, afternoon, evening
night, midnight
bedtime, dinnertime, playtime
today, yesterday, tomorrow
before, after
next, last
now, soon, early, late
quick, quicker, quickest, quickly
fast, faster, fastest
slow, slower, slowest, slowly
old, older, oldest
new, newer, newest
takes longer, takes less time
hour, o'clock, half past
clock, watch, hands
how long ago?
how long will it be to...?
how long will it take to...?
how often?
always, never, often, sometimes, usually
once, twice

SHAPE AND SPACE

shape, pattern
flat
curved, straight
round
hollow, solid
corner
point, pointed
face, side, edge, end
sort
make, build, draw

3D SHAPES

cube
cuboid
pyramid
sphere
cone
cylinder

2D SHAPES

circle
triangle
square
rectangle
star

PATTERNS AND SYMMETRY

size
bigger, larger, smaller
symmetrical
pattern
repeating pattern
match

POSITION, DIRECTION AND MOVEMENT

position
over, under, underneath
above, below
top, bottom, side
on, in
outside, inside
around
in front, behind
front, back
before, after
beside, next to
opposite
apart
between
middle, edge
centre
corner
direction
journey
left, right
up, down
forwards, backwards, sideways
across
close, far, near
along
through
to, from, towards, away from
movement
slide
roll
turn, whole turn, half turn
stretch, bend

Instructions

listen
join in
say

think
imagine
remember

start from
start with
start at

look at
point to
show me

put, place
fit
arrange
rearrange
change, change over
split
separate

carry on, continue
repeat
what comes next?

find
choose
collect

use
make
build

tell me
describe
pick out
talk about
explain
show me

read
write
record
trace
copy
complete
finish, end

fill in
shade
colour

tick, cross
draw
draw a line between
join (up)
ring
arrow

cost
count
work out
answer
check

General

same number/s
different number/s
missing number/s
number facts

number line, number track
number square
number cards
abacus
counters, cubes, blocks, rods
die, dice
dominoes
pegs, peg board

same way, different way
best way, another way
in order, in a different order

not
all, every, each

20

MATHS AT HOME

Maths props to have in the house

Tape measure and ruler - get your child involved when completing DIY.

Bar of chocolate (with squares) - good for showing multiplication and fractions.

Magnet numbers - a great way for impromptu maths in the house.

Chess & draughts – a great turn taking game involving strategy.

Dartboard - darts teaches not only addition, subtraction and multiplication but also raises discussions of what is needed to finish the game.

Unusual dice - they don't have to be 6 sided.

Dominoes - another great game to show combinations of numbers

Guess who - this game shows how to group characters into categories and can be extended to shapes and numbers.

Thermometer - shows both positive and negative numbers to discuss

A prominent clock - use both an analogue and digital clock. Can you compare the two?

A wall calendar - not only good for noticing days and months, but also for finding patterns eg. The 7 x table since there are 7 days in a week

Board games with dice or spinner

Pack of playing cards - not only can you learn about counting but also chance and probability.

Calculator - you can discover so many patterns with calculators, not just basic computation.

Measuring jug - discover both imperial and metric ways of measuring.

Scales - traditional balances can show counting as well as measuring.

Dried beans, pasta - useful for counting, dividing and finding the difference

Money – count with coins and discuss all the ways of making an amount of money with different coins.

Some fun ideas to try at home

Shape activity

At home, or when you are out, look at the surface of shapes.

- Ask your child – what shape is this plate, this mirror, the bath mat, the tea towel, the window, the door, the red traffic light, and so on.
- Choose a shape for the week, e.g. a square. How many of these shapes can your child spot during the week, at home and when you are out?
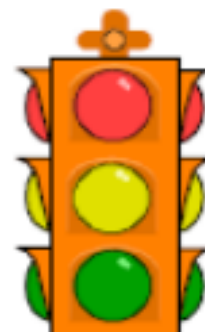
Dice game

You need a 1–6 dice, paper and pencil.

- Take turns.
- Choose a number between 1 and 10 and write it down.
- Throw the dice and say the dice number.
- Work out the difference between the chosen number and the dice number, e.g. if you wrote down a 2 and the dice shows 5, the difference is 3.

You could also draw a number line to help your child to see the difference between the two numbers.

```
        3
      ⌒⌒⌒
├──┬──┬──┬──┬──┬──┬──┬──┬──┬──┤
0   1   2   3   4   5   6   7   8   9   10
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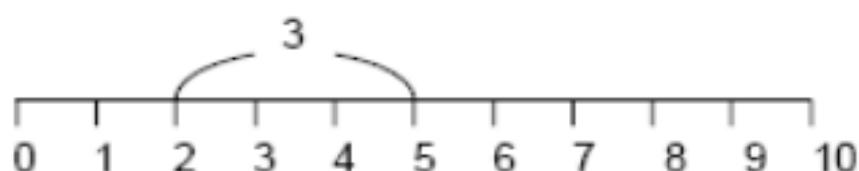
How old?

Start with your child's age. Ask your child:

How old will you be when you are 1 year older?
How old were you last year?
How old will you be 10 years from now?

and so on.

Some fun ideas to try at home

Track games
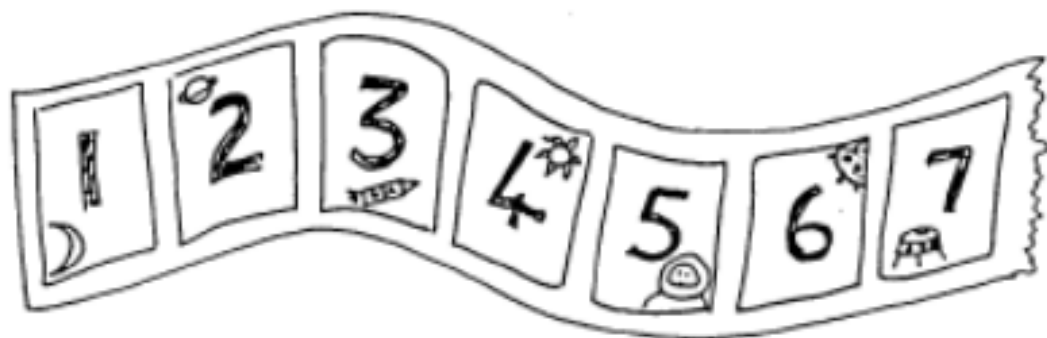
Make a number track to 20, or longer. Make it relevant to your child's interests – sea world, space, monsters… Then play games on it.

- Throw a dice. Move along that number of spaces. BUT before you move, you must work out what number you will land on. If you are wrong, you don't move! The winner is the first to land exactly on 20. Now play going backwards to 1.
- Throw a dice. Find a number on the track that goes with the number thrown to make either 10 or 20. Put a counter on it, e.g. you throw a '4' and put a counter on either 6 or 16. If someone else's counter is there already, you may replace it with yours! The winner is the first person to have a counter on 8 different numbers.

Cupboard maths

- Choose two tins or packets from your food cupboard.
- Ask your child to hold one in each hand and tell you which is heavier, and which is lighter. (Check by reading the weight on each tin or packet.)
- If he / she is right, they keep the lighter one. Then choose another item from the cupboard, trying to find one that is lighter still.
- Carry on until your child has found the lightest item in the cupboard. It might be suitable to eat as a prize!

Some fun ideas to try at home

Takings

For this game you will need a dice and a collection of small things such as Lego bricks, sticky shapes or dried beans. You will also need pencil and paper.

- Take turns.
- Roll a dice. Take that number of beans. Write down the number.
- Keep rolling the dice and taking that number of beans. BUT, before you take them, you must write down your new total. For example, Sally has 7. She throws 4. She has to work out how many she will have now. She starts counting from seven: *eight, nine, ten, eleven.* She writes 11.
- You can only take your beans if you are right.
- The first person to collect 20 beans wins!

Secret numbers

0123456789

- Write the numbers 0 to 20 on a sheet of paper.
- Ask your child secretly to choose a number on the paper. Then ask him / her some questions to find out what the secret number is, e.g.

    Is it less than 10?
    Is it between 10 and 20?
    Does it have a 5 in it?

    He / she may answer only yes or no.
- Once you have guessed the number, it is your turn to choose a number. Your child asks the questions.

For an easier game, use numbers up to 10. For a harder game, use only 5 questions, or use bigger numbers.

Calculator costs

Use a calculator to find the cost of one sweet:

Clues:

1. Enter the cost of the packet of sweets on the calculator display, for example 35 pence.

2. Press the divide ÷ button

3. Count the number of sweets in the packet, and enter this number on the calculator, for example 42 (sweets).

4. Press the equals = button

5. The answer is 0.833 (pence), which is less than 1p for each sweet.

Now use your calculator to find the cost of:

- One stick of chewing gum;
- One finger of a chocolate bar;
- One segment of a tangerine;

MATHS AT HOME FOR ANY AGE

SHOPPING

£   Looking at prices

£   Calculating change – which coins, different combinations.

£   Weighing fruit and vegetables in the supermarket.

£   Counting pocket money.

£   Reading labels on bottles, packets, in order to discuss capacity, weight, shape and colour.

£   Estimating the final bill at the end of shopping while waiting at the cash out.

£   Calculating the cost of the family going to the swimming baths, etc.

Time

- Looking at the clock – identify the numbers telling the time using analogue and digital clocks.
- Calculating how long a journey will take looking at train/bus/airline timetables.
- Using TV guide to calculate the length of programmes.
- Programming the video or the microwave.
- Looking at the posting times on the post box.
- Discussing events in the day e.g. teatime, bed time, bath time.
- Setting an alarm clock.

Starting off

Discuss with the family what would be the most popular outings. Countryside, seaside, a theme park, a museum, a tourist attraction or just a picnic in the local park?

Which outings can you reach from home in…?

- Less than 1 hour
- Between 1 and 2 hours
- More than 2 hours

SEQUENCING

- The main events of the day;
- Routines and what comes next;
- The parts of a recipe, set of instructions;
- Getting dressed;
- Tying shoe laces;
- Imagine you have a week to do whatever you wish. Plan your week on the timetable

MEASUREMENT

- ❍ Calculating distances in a journey e.g. how much further?
- ❍ Calculating heights of family members – who is the tallest?
- ❍ Measuring weights of ingredients for baking.
- ❍ Playing with plastic jugs and containers in the bath.
- ❍ Comparing sizes of clothes – bigger than, smaller than.
- ❍ Wrapping parcels – what amount of paper, string do we need?
- ❍ Reading the scale on weighing machines and calculating the calibrations.
- ❍ Measuring ingredients out for a recipe using different types of spoons
- ❍ Estimating the quantity of milk from a cow/herd.
- ❍ Estimate the amount of time to harvest a field

Weigh your child on the bathroom scales.

Weigh them again while they are holding the family pet. Can they work out how much heavier they are?

Can you find two things heavier than your child and two things lighter than your child around the house?

COUNTING

- ◆ Collections of objects – shells, buttons, pretty stones.
- ◆ Cars on a journey e.g. how many red cars?
- ◆ Animals in a field e.g. sheep, cows.
- ◆ Stairs up to bed, steps etc.
- ◆ Sports scores – cricket averages, goal averages.
- ◆ Pages in a storybook.
- ◆ Counting up to 10, 20, and 100 – backwards and forwards.
- ◆ Counting buttons, shoes, socks as a child gets dressed.
- ◆ Tidy a cupboard or shelf and count the contents e.g. tins, shoes, etc.
- ◆ Counting particular vehicles on a journey e.g. Eddie Stobartlorries, motorbikes, etc.
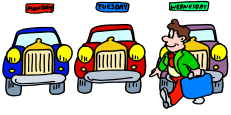
Beat the clock

Time your child as they do one of the following:

- Count back from 100 in tens.
- Count back from 75 in fives.
- Starting at six, count up in tens to 206.
- Starting at 39, count up in twenties to 239.
- Starting at 67, count up in thirties to 367.

Can they beat their record?

REASONING

? Laying the table for four people, 'How many knives, forks and spoons will I need altogether?

? Planning a TV viewing session, 'How long will the programme last?'

- How many rectangles can you count?
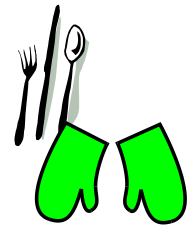
SORTING AND MATCHING

✧ Setting the table and sorting cutlery. This teaches 1 to 1 correspondence and is helpful for you!
✧ Sorting clothes for washing – size, colour.
✧ Matching pairs of socks, gloves, shoes.
✧ Sorting groceries.

ACTIVITIES USING NUMBERS AROUND US

❋ Using car number plates – add the digits to find biggest, smallest and total.
❋ Sharing out sweets, toys etc in groups of 2, 3, 4, 5, 6 etc to help with times tables.
❋ Using telephone numbers – value of each digit.
❋ Using sandwiches to show fractions ½, ¼.
❋ Using a round sandwich cake to show fractions ½, ¼, 1/6, 1/8 etc.
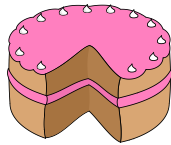
Pizza please!

Your pizza costs £3.60. Cut it into six equal slices.

How much does each slice cost?

The answer is that each slice costs 60p.

- How much is half a slice?
- How much do two slices cost?
- How much does half (1/2) of the whole pizza cost?

What if you cut your pizza into four equal slices (quarters)?

- How much does one slice (1/4) cost now?
- How much does half cost now?
- Is it the same, more or less than above?

GAMES AND INTERNET LINKS

WEB SITES

✎ www.mathletics.co.uk has mental maths games played live against children from around the world and tutorials and homework sections. Your child's teacher will give your child a login and username.
✎ http://nrich.maths.org/public/ has heaps of problems for KS1 and 2 which they call 'stage 1' and 'stage 2'
✎ http://www.mathszone.co.uk/ has links organised by maths area and key objective.
✎ www.counton.org has lots of ideas and games to play.
✎ www.learn.co.ukhelp for all children with reading, maths and revision.
✎ www.bbc.co.uk/schools games to play and links to many subjects.
✎ http://www.beam.co.uk/mathsofthemonth.php has problem solving activities for each age.

NUMBER GAMES

◎   Skipping – every skip count 2, 3, 4 etc.
◎   Hop scotch
◎   Ludo
◎   Snakes and ladders
◎   Dominoes
◎   Cards – number sequences
◎   Cards – Rummy, Patience, Pontoon, Snap
◎   Bingo
◎   Yahtzee
◎   Darts
◎   Heads & Tails and keep a tally
◎   Chess and draughts
◎   Monopoly
◎   Computer programmes
◎   Beetle
◎   Connect 4
◎   Counting games to practise times tables
◎   I spy a number in town, on a journey
◎   Number jigsaws
◎   Clock golf, croquet, crazy golf on holiday to help counting
◎   Snooker and pool
◎   Number Lotto
◎   Dot to dot with numbers
◎   Skittles
◎   Happy families
◎   Whist
◎   Cribbage
◎   Number crosswords, dot to dot, puzzles

Learning intentions by the end of the year

By the end of Year 1, most children should be able to…

- [ ] Count at least 20 everyday objects.

- [ ] Count forwards and backwards in ones, starting from a small number.

- [ ] Count forwards and backwards in tens (zero, ten, twenty, thirty…)

- [ ] Read and write numbers to at least 20.

- [ ] Put the numbers 0 to 20 in order.

- [ ] Use the words *first, second, third...*

- [ ] Given a number from 10 to 20, say the number that is 1 more, 1 less, 10 more, 10 less.

- [ ] Use the words *add, sum, total, take away, subtract, difference between…* in practical situations.

- [ ] Know by heart all pairs of numbers that make 10, e.g. $3 + 7$, $8 + 2$.

- [ ] Add and subtract two numbers under 10.

- [ ] Compare two objects or containers, and say which is longer or shorter, or heavier or lighter, or which holds more.

- [ ] Name and describe simple flat and solid shapes, e.g. *It's got 3 corners.*