Supporting and learning together

Addition and multiplication

Key Stage 1

Aims of today

- To outline the KS1 Maths curriculum for addition and multiplication
- To share how your children are learning Maths in school and methods to support this
- To give you some ideas of how to help your child's Maths learning at home
- To answer any questions you may have about Maths in our school

National Curriculum

The aim of the National Curriculum aims to ensure that children are fluent, can reason mathematically and solve problems

Year 1 Addition

Children need to:

- 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 = ? – 9

National Curriculum

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Year 2 Addition

Children need to:

- solve problems with addition and subtraction using concrete objects and pictorial representations
- apply their increasing knowledge of mental and written methods
- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally
- show that addition of two numbers can be done in any order (commutative)
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations

National Curriculum

Year 1 Multiplication

Children need to:

- 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.

National Curriculum

Year 2 Multiplication

Children need to:

- recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
- show that multiplication of two numbers can be done in any order (commutative)
- solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication facts, including problems in contexts.

Weekly times tables session

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception (For ELG)	*Recall number pairs to 5 (with subtraction facts) and no visual support, recall some pairs to 10, recall double facts to 10*					
Year 1	Review pairs to 5 Pairs to 10 Double facts to 10	Counting in 10s	Counting in 5s	Counting in 2s	Mixed counting – 10s, 5s, 2s x1	
Year 2	Review counting in 2s, 5s and 10s. x10	x5	x2	Division facts for x10, x5, x2	Mixed times tables for 10, 5, 2 and division facts	
Year 3	Review x10, x5, x2	x4	x8	x3	Mixed times tables for 4, 8, 3 and division facts Review x10, x5, x2	
Year 4	Review x10, x5, x2 x4, x8, x3 X6	x9	x7	x11 x12	Year 4 test RECAP	Division facts for all
Year 5 / 6	Review all tables and corresponding division facts where necessary					

Why is addition and multiplication important?

Addition and multiplication skills underpin many areas of Maths…

Area

Fractions

Decimals

Subtraction

Algebra

Division

Percentages

Why is addition and multiplication important?

Addition and multiplication skills are needed in everyday life…

Party planning –
Let's say that 8 friends are coming to your party and you are getting food. How much food will each friend get?

Cooking & baking

Equipment for building

Maths at Merrylands uses the principles of 'Concrete, Pictorial, Abstract' (CPA):

- 'Concrete' – where the children use equipment, such as blocks and counters, that can be moved and manipulated to represent calculations
- 'Pictorial' - where the children may use or draw pictures to represent calculations
- 'Abstract' - where the children use numbers and symbols to show calculations.

To achieve mastery in Maths children need to be able to demonstrate:

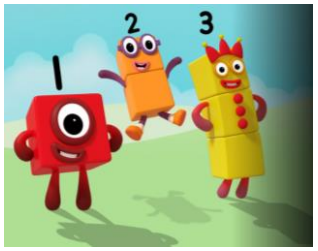
- *Fluency – recalling key mathematical facts and methods efficiently*
- *Reasoning – being able to talk, explain and challenge their own answers and others*
- *Problem solving – applying their mathematical skills to make connections so they can answer a multi step problem*

Supporting at home

Supporting at home

- Make your own pairs or snap cards

1 × 2 ●●	2
2 × 2 ●● ●●	4
3 × 2 ●● ●● ●●	6



- Sing multiplication songs

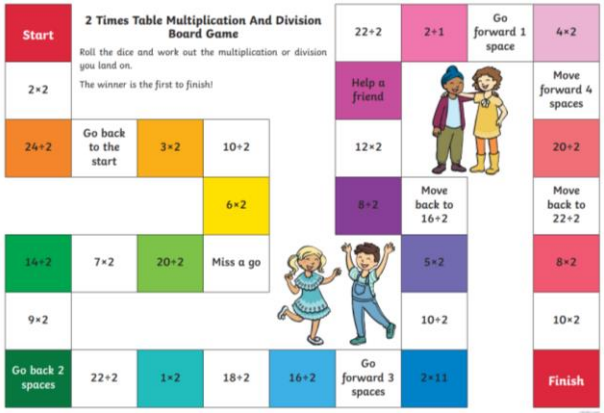
https://www.bbc.co.uk/teach/supermovers/ks1-maths-collection/z6v4scw

- Watch multiplication videos –

https://www.bbc.co.uk/iplayer/episodes/b08bzfnh/numberblocks?seriesId=m000t16j

Supporting at home

- Create your own board games



- Work out quantities needed for building something e.g. how many screws do I need?

Supporting at home

- Matching pairs of objects around the house

- Chanting forwards and backwards in 2s, 5s or 10s - while being physical e.g. kicking a ball, walking, jumping etc.

https://play.ttrockstars.com/ttrs/online/play?mode=garage

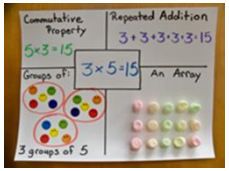
http://www.merrylandsprimaryschool.co.uk/ParentsInfo.php

https://www.topmarks.co.uk/maths-games/5-7-years/times-tables

Lesson outline

In KS1 we work towards this type of lesson:

- A mental maths starter
- Introduce learning and recap prior knowledge
- Model skills needed and vocabulary
- Answer a question as a class using skills and correct vocabulary
- Children to independently answer a question
- Discuss as a class
- Children then answer a range of questions linked to new learning
- Discuss new learning and address misconceptions



Lesson

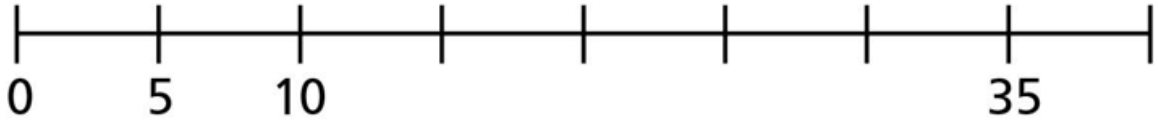
Mental starter

- Super movers – each lesson has a mental maths starter

https://www.bbc.co.uk/teach/supermovers/ks1-maths-the-5-times-table/zhbm47h

Lesson

a) Complete the number line.



b) Which times-table does the number line show?

Tick your answer.

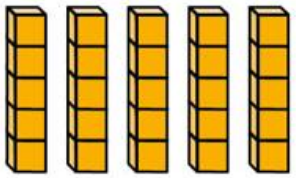
1 times-table 2 times-table

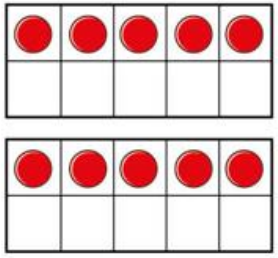
5 times-table

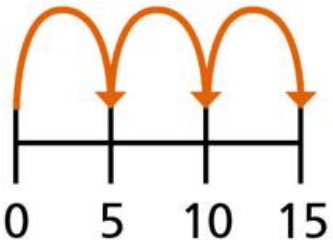
How do you know?

Lesson

a) Match the picture to the times-table fact.







3 × 5

2 × 5

1 × 5

5 × 5

Lesson

How much money does Ron have?

Complete the multiplication.

$\square \times \square = \square$

Ron has $\square$ p.

Activity - Year 1

How many socks are there?

There are ___ socks in total.

How many gloves are there?

There are ___ gloves in total.

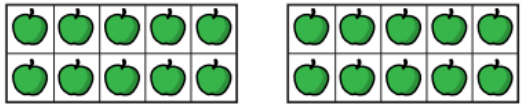
How many muffins are there altogether?

There are ☐ muffins on each tray.

There are ☐ trays.

There are ☐ muffins altogether.

How many apples are there altogether?

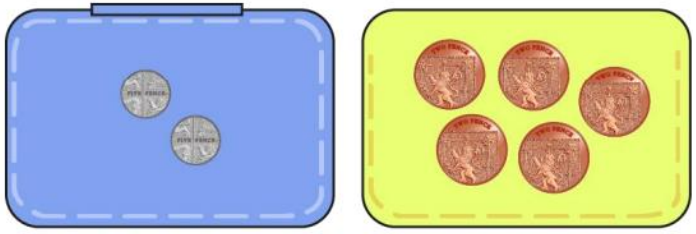


There are ☐ apples on each ten frame.

There are ☐ ten frames.

There are ☐ apples altogether.

- *'Which purse would you rather have?'*



A

B

Activity - Year 2

Complete:

Three 2s	Draw It	Addition	Multiplication
There are 3 equal groups with 2 in each group.			

2×5
$5 + 5$
5×2

Each calculation could explain the image.

Explain why.

Completing multiplication equations:

'In each vase there are five flowers.'

$1 \times 5 = 5$ $\quad$ $5 \times 1 = 5$

- *'How many flowers are there in four vases?'*

$4 \times 5 =$ ☐ $\quad$ $5 \times 4 =$ ☐

- *'How many flowers are there in eight vases?'*

☐ $\times 5 =$ ☐ $\quad$ $5 \times$ ☐ $=$ ☐

- *'How many flowers are there in twelve vases?'*

☐ $\times$ ☐ $=$ ☐ $\quad$ ☐ $\times$ ☐ $=$ ☐

- *'How many vases are needed to hold 30 flowers?'*

☐ $\times 5 = 30$ $\quad$ $5 \times$ ☐ $= 30$

Missing-number sequences/problems:

'Fill in the missing numbers.'

0	5	10	15	20								

60	55	50										

Any questions