MIDDLETON PARISH CHURCH SCHOOL

'Excellence, Truth & Grace'

HOW CAN I HELP WITH MATHEMATICS IN YEAR 1?

Year 1 Mathematicians

Mathematics is an essential life skill. Developed across centuries, mathematics is key feature of many parts of the wider world from history to science, engineering to hospitality, retail and beyond. Most forms of employment require the use of mathematics in some form and it is necessary for financial literacy. With this in mind, it is essential that children are engaged in their mathematics learning and are able to see how it fits into the wider world and our every day lives. So what better place to do this than at home! It is essential that the learning which takes place at school is reinforced at home where possible so that children have as many opportunities as possible to secure their learning and remember more.

What can families do?

Maths skills can be developed at home by involving them in everyday activities such as baking, looking at the best supermarket deals or sharing out sweets equally. This also develops their problem solving and reasoning skills! Don't underestimate yourself, or the power you have as a parent getting involved in your child's learning.

- **Positive mindset is EVERYTHING!** You may find yourself from time to time saying 'I was never good at Maths.' Children will pick up and mirror this energy. We would advise parents and carers to use positive language such as 'It's fine to make mistakes, we all do' or 'It's ok that you find this tricky, let's look through it together.' Positivity can go a long way to improving their attitude towards Maths.

- **Use Maths talk every day.** This could be as simple as asking your child to count the chicken nuggets in ones, twos and fives! Then helping to share them out equally. You could further develop their knowledge by asking questions such as: What if I had double this amount? What if you ate 3 of those nuggets? How many would be remaining? Physical objects In every day life really help this process.

-**Develop their memory skills.** It has been found that the younger generation have little need to memorise things such as phone numbers. Start off with something simple like memorising a phone number. Make a game out of it to help develop their memory skills. This will soon develop into memorising times tables, addition facts, subtraction facts and many other mathematical skills.

-**Play maths games together.** Games have always been a fun way to engage children in their learning and a great bonding tool between adults and their children. Simple counting games, or games linked to their current objective in Maths, can support the children in engaging in their learning and retaining what they have learned.

-**Numbers and shapes are EVERYWHERE.** Help your child to recognise that numbers and shapes are everywhere. Asking them what the shape of a sign is on a walk or what number they see on the sign can be really important in developing their knowledge of Maths in real life contexts. This could be developed further by asking questions such as: If you added another ten to the number on the sign, what number would you now have?

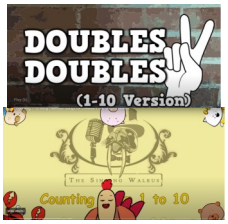
Doodle Maths

Doodle maths is a new tool for us at Parish. Each child has completed a baseline assessment which determines if they have any gaps in their learning. From here it then develops a bespoke programme of learning for each child so that they can close any gaps they have and enable them to become more confident mathematicians. Alongside this, class teachers are also able to set assignments for children to complete at home which further supports the learning taking place in class. All children have been given log-ins for Doodle maths and we expect children to be logging on to practise their mathematics at least three times a week. If you have any further questions about this, please contact the Year 1 team

Other useful websites ....

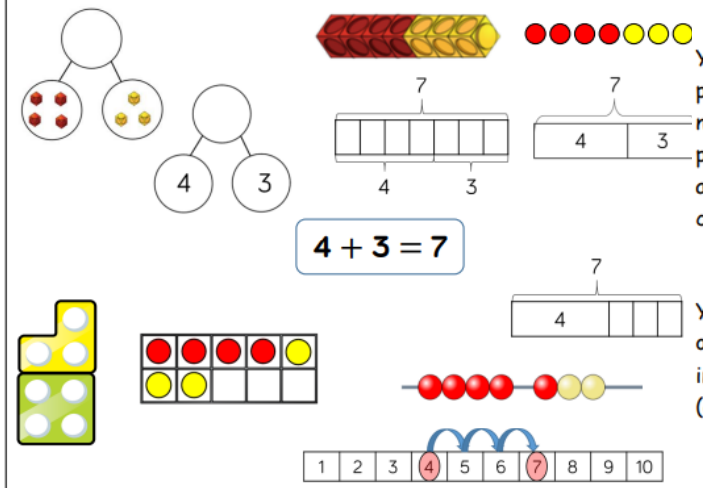
Topmarks offer a range of fun online games for you and your child to practise and range of concepts.

Youtube have a range of songs and rhymes to help practise counting, shapes, adding subtracting and much more!



BBC Bitesize have a range of free games exploring a variety of concepts linked to mathematics in Year 1.

Skill: Add 1-digit numbers within 10

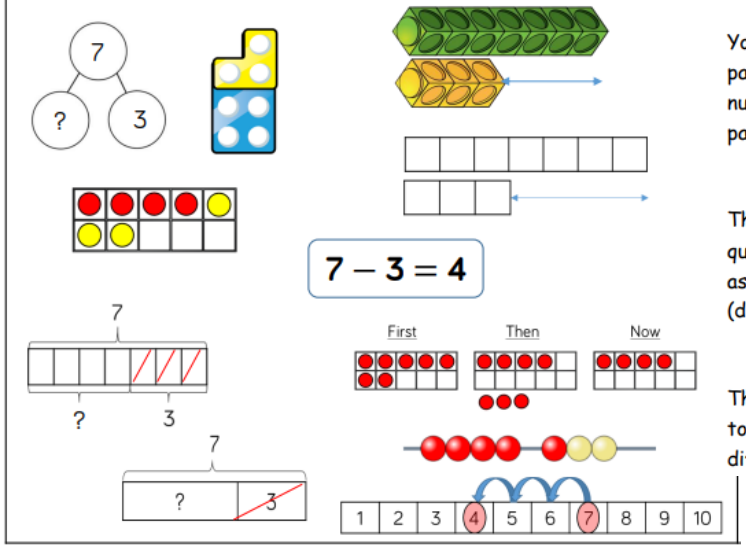


New Learning

Your child will be introduced to using part-whole models, ten frames and number shapes (Numicon) to support partitioning of numbers. They will also use bar models to represent calculations.

Your child will explore the combining of two sets (aggregation) and increasing a quantity by another (augmentation).

Skill: Subtract 1-digit numbers within 10



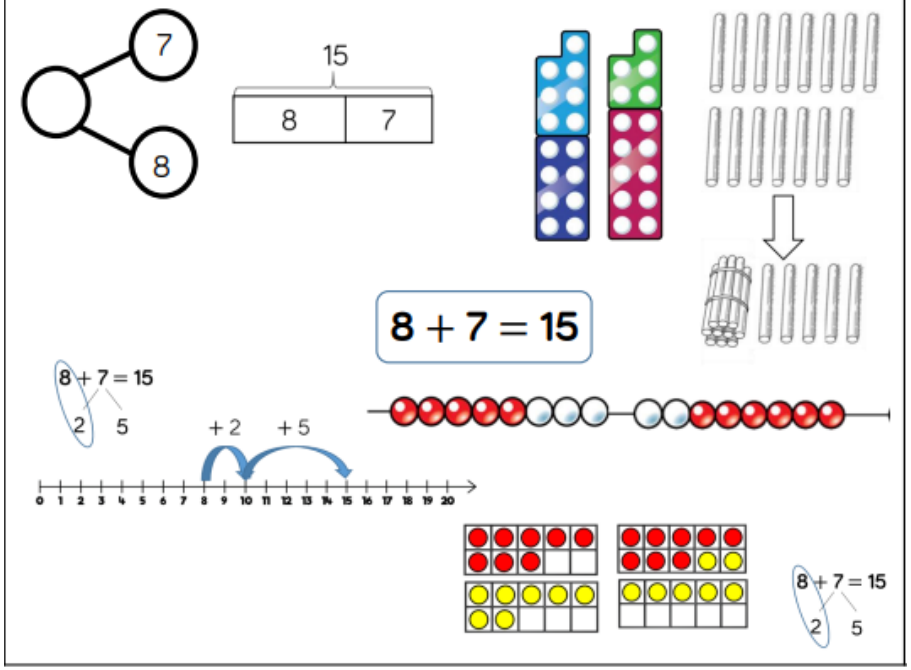
New Learning

Your child will be introduced to using part-whole models, ten frames and number shapes (Numicon) to support partitioning of numbers.

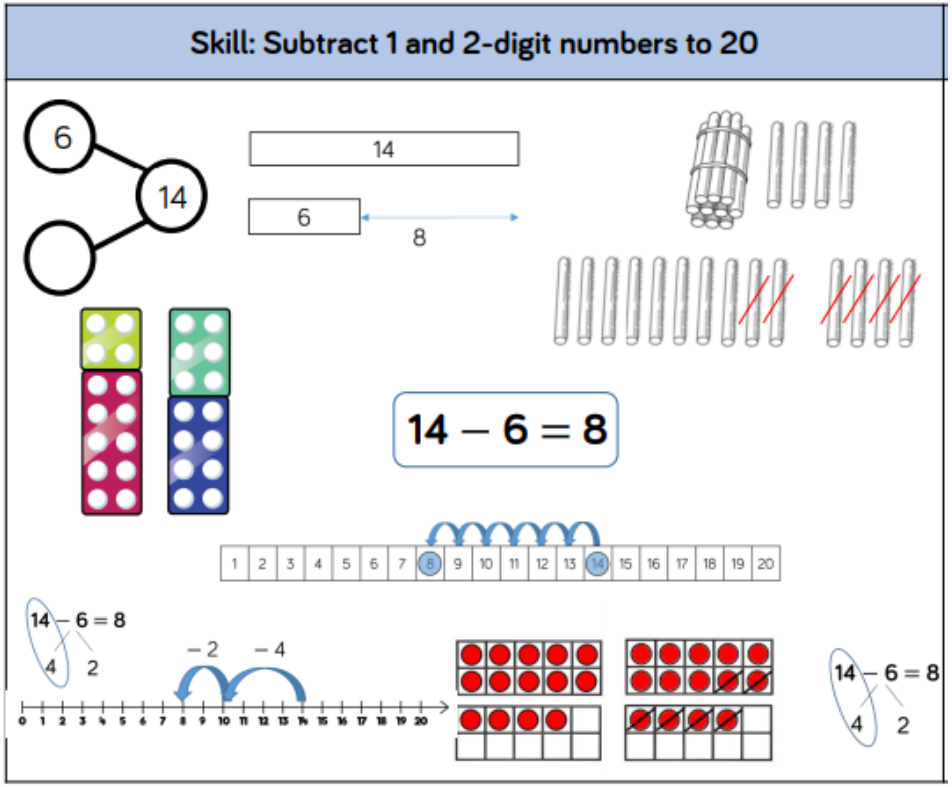
They will explore the concept of a quantity getting smaller (reduction) as well as comparative problems (difference).

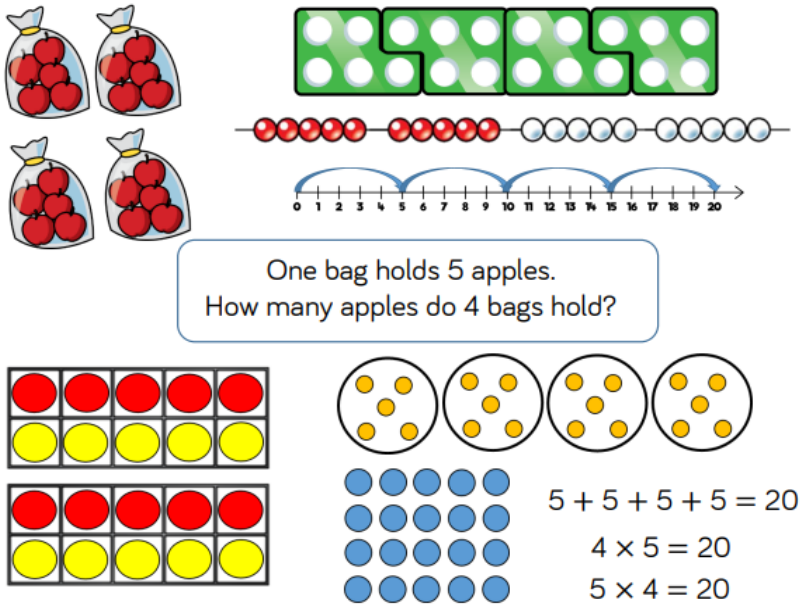
The bar model is the most useful tool to support your child to understand difference problems.

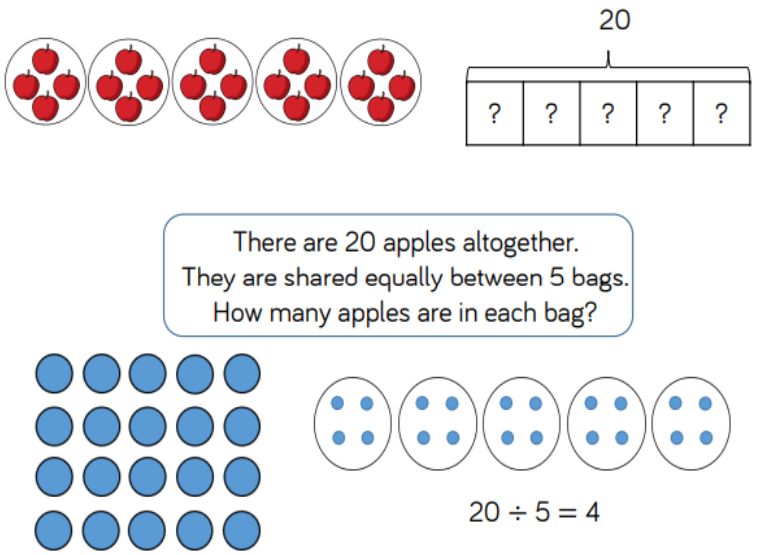
Skill: Add 1 and 2-digit numbers to 20

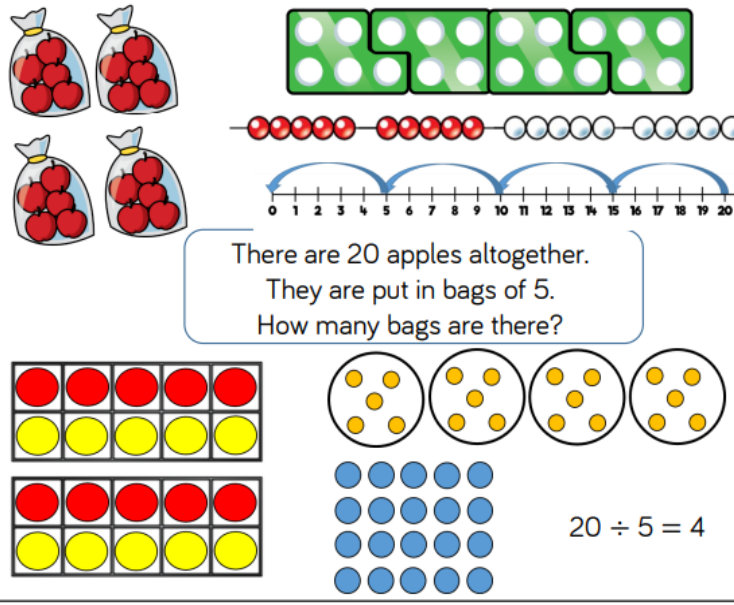


Skill: Subtract 1 and 2-digit numbers to 20



Skill: Solve 1-step problems using multiplication	Year: 1/2
	Children represent multiplication as repeated addition in many different ways. In Year 1, children use concrete and pictorial representations to solve problems. They are not expected to record multiplication formally. In Year 2, children are introduced to the multiplication symbol.

Skill: Solve 1-step problems using multiplication (sharing)	Year: 1/2
	Children solve problems by sharing amounts into equal groups. In Year 1, children use concrete and pictorial representations to solve problems. They are not expected to record division formally. In Year 2, children are introduced to the division symbol.

Skill: Solve 1-step problems using division (grouping)	Year: 1/2
	Children solve problems by grouping and counting the number of groups. Grouping encourages children to count in multiples and links to repeated subtraction on a number line. They can use concrete representations in fixed groups such as number shapes which helps to show the link between multiplication and division.

It is important that children see maths in real life contexts as much as possible. Use everyday objects around the house or out shopping to reinforce the learning that takes place in school. Make it fun and show them how maths is all around us. Counting and being confident with numbers is very important.

Fluency and Rapid Recall of Number Facts

In order for children to become confident mathematicians and to be able to solve problems confidently, it is essential that they can re-call all addition and subtraction facts within 20 and that they are able to rapidly recall their multiplication and related division facts. Below is the progression of these facts within the curriculum. As you can see, children should be able to recall all the addition and related subtraction facts by the time they reach the end of year 1.

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Mathematics Progression Map: Key Number Facts

	Autumn Term	Spring Term	Summer Term
Reception	• Manipulating Numbers in preparation for Spring onwards • 1+1 • 2+1 • 2+2 • 3+1	• Number bonds to 5 • 2+2 • 3+1 • 2+3 • 4+1 • 3+3 • 4+2 • 5+1 • 5+2 • 4+3 • 6+1 • 4+4 • 5+5	• Number bonds to 5 • Number bonds to 10 • 4+2 • 5 + 2 • 6 + 2 • 7 + 2 • 4 + 3 • 5 + 3 • 6 + 3
Year 1	• 3+8 • 3+9 • 4+7 • 4+8 • 4+9 • 6 + 6 • 7 + 7 • 8 + 8 • 9 + 9 • 8 + 7 • 8 + 9	• 5 + 9 • 6 + 9 • 7 + 9 • 5 + 7 • 5 + 8 • 6 + 8 • 5 + 4 • 5 + 6 • 6 + 7 • 8 + 7 • 8 + 9 • 4 + 9	• X10 tables Consolidation of all previously taught facts

The importance of practical learning

Practical learning, especially in their earlier years, is so important I the development of your child's understanding of mathematical concepts. ANYTHING can be made practical and you don't need our maths resources to achieve this. This is really visual and crucial before your child moves onto pictorial and abstract learning. Here are some examples of how to make maths fun and practical for children at home.

Imaginative play

- Set the table for your toys. How many spoons will you need?
- Build a tower. Whose tower is tallest? How many bricks did you use?
- Sell food in a shop – this is great for counting, money and recognising shapes in food.

Cooking/Baking

- Weigh out the ingredients when baking. Talk about how long it will take to cook.
- Decorate cakes with patterns.
- Cut food into different shapes.
- Count out how much you will need of an ingredient.

Routine

- Talk about today, tomorrow, yesterday
- Count to 20 when washing hands
- Count when tidying or picking things up. How many lego bricks did you pick up? How many of those were blue?
- Counting things on a walk.
- Looking for shapes and numbers in the world around us.

Stories, songs and rhymes

- Count people/tings/objects on a page
- Look for shapes in a picture
- Sing songs and rhymes (Youtube is great for this)

Playdough

- Make numbers, 2D and 3D shapes
- Make a pattern with shapes and colour
- Build playdough models using time words such as now, next, etc…

Maths – End of Year 1 Expectations	
New National Curriculum Objectives	
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
	use the language of: equal to, more than, less than (fewer), most, least
	identify and represent numbers using objects and pictorial representations including the number line
	read and write numbers from 1 to 20 in numerals and words.
Addition and Subtraction	represent and use number bonds and related subtraction facts within 20
	add and subtract one digit and two-digit numbers to 20, including zero
	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods)
	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)
	solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ - 9
Multiplication and Division	count in multiples of twos, fives and tens
	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
Fractions	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
Algebra	*solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and **missing number problems** such as 7 = □ - 9* (copied from Addition and Subtraction)
	represent and use number bonds and related subtraction facts within 20 (copied from Addition and Subtraction)
	sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening (copied from Measurement)
Measurement	compare, describe and solve practical problems for: * lengths and heights * mass/weight [e.g. heavy/light, heavier than, lighter than] * capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] time [e.g. quicker, slower, earlier, later]
	sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday]
	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**
	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 use language relating to dates, including days of the week, weeks, months and years
Geometry Shape and Position	recognise and name common 2-D, including: rectangles, squares, circles and triangles
	Recognise and name: 3-D shapes: cuboids, cubes, pyramids and spheres.
	describe position, direction and movement, including half, quarter and three-quarter turns.