



Helping your child with maths in primary 4

This leaflet is to give you some ideas about how you can support your child's learning in maths in small, fun, practical ways at home this year. The main emphasis of this leaflet is multiplication and division. We encourage you to talk about maths with your child. Little and often is a great way to reinforce learning.

Here is an example. All about time.

Can you tell the time?

Whenever possible, ask your child to tell you the time to the nearest 5 minutes. Use a clock with hands as well as a digital watch or clock.

Also ask:

What time will it be one hour from now?

What time was it one hour ago?

Time your child doing various tasks, e.g.

getting ready for school;

tidying a bedroom;

saying the 5 times, 10 times or 2 times table...

Ask your child to guess in advance how long they think it will take them. Can they beat their time when they repeat it?

Make sure that there are both traditional and digital clocks around the house for your child to practise reading the time to the nearest minute. Use TV guides and timetables to encourage them to calculate times (e.g. which programme will last 45 minutes?)

Number games

Give your child a number fact (e.g. $5+3=8$). Ask them what else they can find out from this fact (e.g. $3+5=8$, $8-5=3$, $8-3=5$, $50+30=80$, $500+300=800$, $5+4=9$, $15+3=18$). Add to the list over the next few days. Try starting with a 'x' fact as well.

Give your child an answer. Ask them to write as many addition sentences as they can with this answer (e.g. $10 = \square + \square$) Try with multiplication or subtraction.

Roll two dice. Make two-digit numbers, e.g. if you roll a 6 and 4, this could be 64 or 46. If you haven't got two dice, roll one dice twice. Ask your child to do one or more of the activities below.



- Count on or back from each number in tens.
- Add 19 to each number in their head. (A quick way is to add 20 then take away 1.)
- Subtract 9 from each number. (A quick way is to take away 10 then add back one.)
- Double each number

Secret sums

- Ask your child to say a number, e.g. 43.
- Secretly do something to it (e.g. add 30). Say the answer, e.g. 73.
- The child then says another number to you, e.g. 61.
- Do the same to that number and say the answer.
- The child has to guess what you are doing to the number each time!
- Then they can have a turn at secretly adding or subtracting something to each number that you say to them.

How to help your child with learning the multiplication tables

Learning the times tables takes time, dedication and patience. Introducing them in a fun and interactive way is by far the best way to start. Encourage your child to learn their times tables by being as involved as possible and checking their progress often. Little tips and tricks can make a huge difference in instilling the times tables into their memories and help build their confidence

Mastering multiplication tables is a well-known key milestone in primary maths. When your child achieves this - which is often at ages 8, 9 or 10 - they also get an extra boost in confidence.

Always praise an improvement, including a mistake that a child puts right for him or herself. I don't praise trying, if trying leads to an error, but I don't criticise either – I will usually just repeat the question in a neutral tone, or go back to an earlier point in a table that a child knows, and take it from there. Then praise when the child gets the right answer, and accelerate the praise when they've really had to work to get something right. Sometimes use a "full praise statement", pointing out what they couldn't do last week and can do this week, going on to explain how this will help them to learn the next step. It takes a bit of practice not to show impatience when a child makes a mistake, but it really is worth learning to do this, as it will help you in all areas of learning as well as with tables.

Provide lots of practical materials – real life examples.

You can start when your child is quite young by practising counting in twos and threes, making number patterns and solving simple mathematical problems. Counting objects, making sets of similar objects and using blocks and LEGO can all help to increase your child's confidence with number bonds and multiplication facts

Show children how they can count on their fingers to keep track, for example find how many fives are in 20, saying five, ten, fifteen, and twenty.

Double your numbers

If your child learns how to double numbers this will help them to make connections between different times tables, for example the 2, 4, and 8 times tables.

Practise tables as a time-filler

When you're sitting at traffic lights or waiting in the queue it is the perfect opportunity for a bit of times table practice! It's always better (for both your child and you!) to just spend a few minutes reciting or testing times tables rather than going into overdrive and spending too long practising them.

There are usually one or two multiplication facts in each times table that are more difficult. When you notice that your child is stumbling over the same fact each time, try to give them extra practice. Try to use visuals representations. Pictures of sweets or actual sweets makes a big difference. You could even get your child to write the fact out in a fun way on a piece of card and then stick it somewhere prominent (like on the fridge) so that they have an extra reminder!

The danger with too much rote learning of times tables is that children can fail to see the use of times tables in real life. Try to take opportunities to get your child to use multiplication in problem solving, for example working out quantities for scaling up a recipe, or calculating the price of more than one item of shopping.

No-one ever said that learning times tables was easy. It's a matter of going over and over them until your child feels confident that they have learnt them.

By starting with the 1's you are introducing your child to the times tables in a very easy way. 1×1 is 1.

The best order for learning the times tables, in my opinion, are as follows:

The 10's The 5's. The 2's. The 4's.

And then: The 3's. The 9s. The 6's. The 8's. The 7's.

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Number lines can help

Help your child to use the number lines to multiply by adding on or counting in steps. They can use a counter, pencil or finger to hop from one number to the next and mark their place.

- Draw your own number lines. Use the tips below to help you.

Tips:

- Always include 0 on your number line. (Forgetting about 0 can get children into a real muddle!)
- Start by drawing them pretty big, with a nice gap between each number.
- Point out the pattern made by the jumps, e.g. 'land on one, miss one, land on one, miss one'

Division

We get both a **multiplication fact** and a **division fact** from the same picture:

Three **groups of 4** makes 12.

$$3 \times 4 = 12$$



12 divided into **groups of 4** is three groups.

$$12 \div 4 = 3$$

Multiplication and division are very closely related. They are opposite operations. You could say division is "backwards" multiplication.

There are two models of division and children need experience of both. Calculations such as $10 \div 2$ can be interpreted as:

Sharing, for example ten stickers are shared between two children; how many will they have each?

Grouping, for example if we have ten children, how many pairs can we make? (how many 2s are there in 10?)

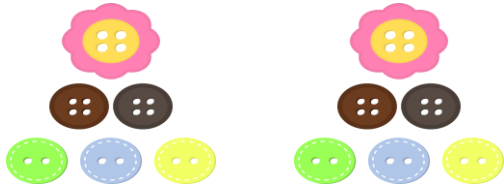
Children often have more everyday experience of sharing and so the concept of grouping usually requires the greatest emphasis when exploring division.

Provide frequent opportunities for children to gain practical experience of grouping using a wide variety of practical opportunities, equipment and models and images, for example:

Count along a counting stick in 5s. Stop when you get to 20 and then ask: How many 5s in 20?
Show 14 identical socks. How many pairs do you think we'll be able to make?

Fractions – linked to division

Repeat with other numbers.



Use 12 buttons, or paper clips or dried beans or...

Ask your child to find **half** of the 12 things.

Now find one **quarter** of the same group.

Find one **third** of the whole group.

In a similar way, learning multiplication tables becomes easier when you make the connection to division. Each times table fact is actually closely connected to three other facts - two division facts and one multiplication.

So, for instance, learning that 56, 7 and 8 are connected actually means you've just learned:

$$8 \times 7 = 56 \quad 7 \times 8 = 56 \quad 56 \div 7 = 8 \quad 56 \div 8 = 7$$

$$4 \times 6 = 24 \quad 6 \times 4 = 24 \quad 24 \div 4 = 6 \quad 24 \div 6 = 4$$

Websites. – These websites might be useful. There are many more.

<http://www.multiplication.com/games/all-games>

<https://www.timestables.co.uk/>

<https://www.topmarks.co.uk/maths-games/7-11-years/multiplication-and-division>

Curriculum for Excellence First level outcomes.

By the end of primary 4 we are expecting our pupils to be able to do many of the following:

Number

- count on and back in tens from a given whole number
- identify the number before and after any given number in the range 0-1000
- solve a variety of addition and subtraction tasks using 3 digit numbers
- use a range mental strategies to solve problems
- recall facts from the 2,3,4,5, 6, and 10 times tables

Fractions

- understand that a fraction is an equal part of a whole
- read and write fractions using fraction notation
- find the fraction of an amount using division

Money

- demonstrate the most efficient way to give change

Time

- tell and record the time starting to use both 12 and 24 hour notation from analogue and digital clocks
- show time on an analogue clock, demonstrating the relative position of the hour and minute hand
- use the vocabulary associated with calendars. Use a calendar to plan events.
- know how many seconds there are in a minute, minutes in an hour and hours in a day
- know how many days there are in each month

Graph work

- design and use my own data collection methods
- draw simple diagrams, table and charts to display data collected using a graphing software package or simple spreadsheet
- make predictions and collect information to test them using my own criteria

Measures

- Cooking is a great way for your child to practise weighing and measuring in grams and kilograms. It's a terrific way to learn to accurately read scales and measure out capacities in litres and millilitres.