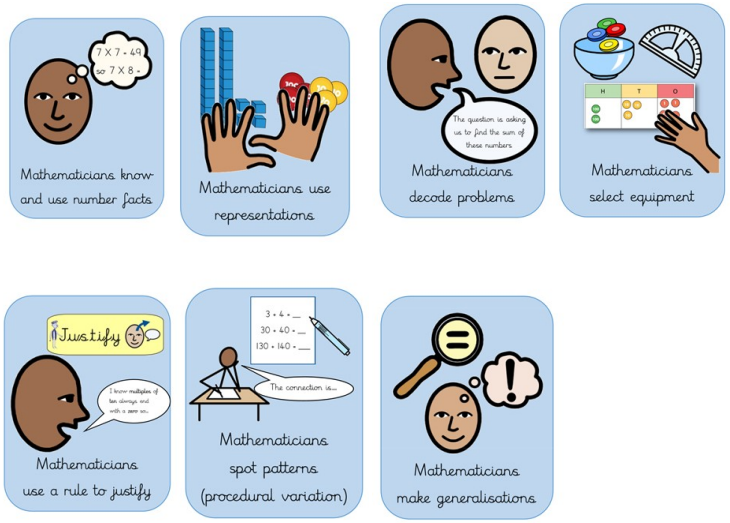
Brecknock Primary School
A lighthouse of learning

TORRIANO PRIMARY SCHOOL

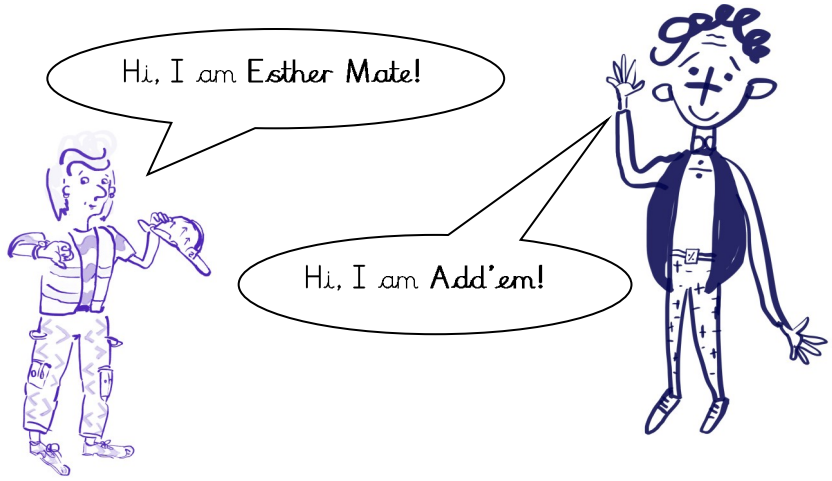
Year 6 Parent Support Pack



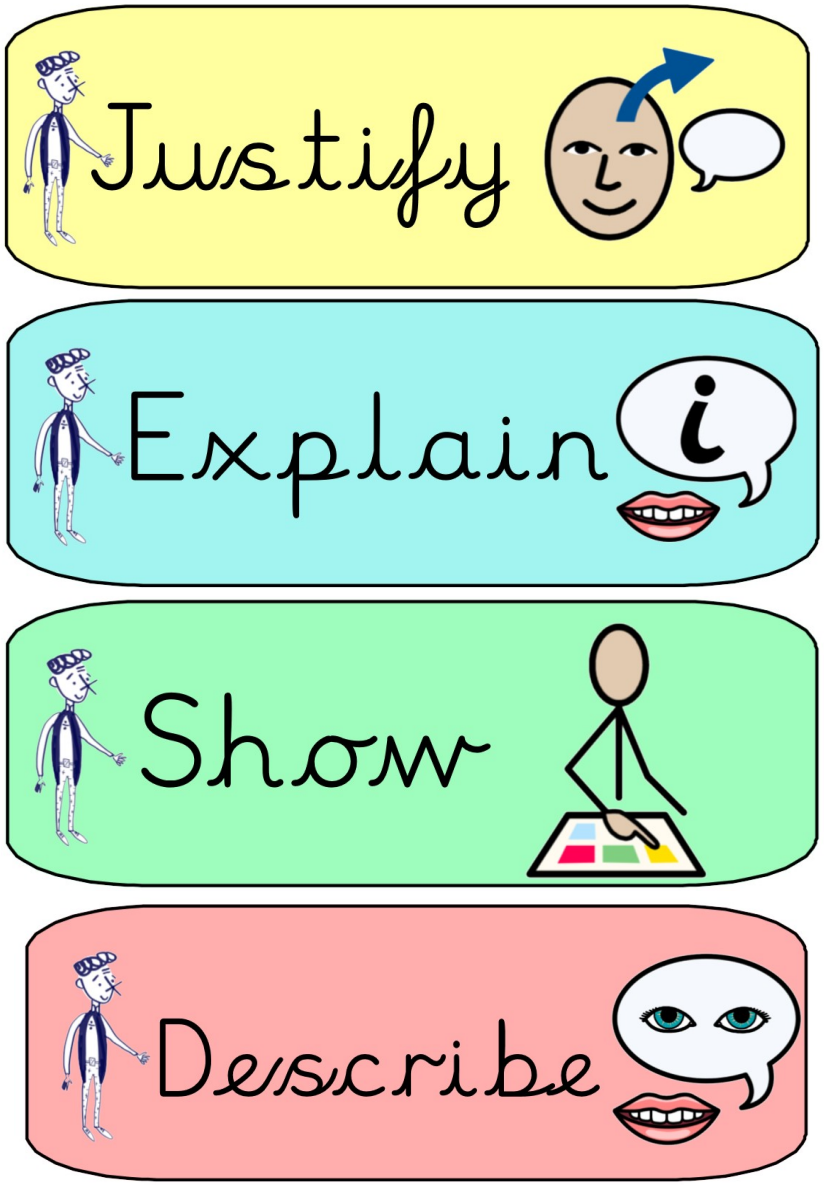
This support pack focuses on skills you can practise at home with your child:

In this pack, you will find:

- **Key Skills and facts**—What will your child learn this year? What facts should they be confident in?
- **Reasoning prompts**—What questions can you ask whilst your child does their Maths Homework?
- **Fluency Games**—Fun maths for everyday!



The Add'em Scale:



At school we use the Add'em Scale to extend the reasoning and problem solving skills.

This is introduced to children in EYFS and used throughout the school.

Children begin with **describe** and **show** at the bottom of the scale and build to **explaining** and **justifying**.

Examples of questioning:

Justify: What rule can be used to justify that 168 is divisible by 4?

Explain: How do you know which number is the greatest and which is the smallest?

Show: Can you show me your working? What pictorial representation could we use to solve this?

Describe: How did you get that answer? Could you explain it to a friend who didn't understand?

Maths skills to focus on:

- Multiply and divide by 10, 100, 1000 and 10,000.
- Recognise the place value of each digit in numbers up to 10 million
- Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts
- Use a given number fact to derive or complete a related calculation.
- Solve problems involving ratio.
- Solve problems multi-step problems systematically.
- Recognise when fractions can be simplified, and use common factors to simplify fractions.
- Express fractions in a common form and use this to compare fractions that are similar in value.
- Compare fractions with different denominators, including fractions greater than 1.

Reasoning Prompts and sentence stems:

We use sentence stems in many of our maths lessons to help with our reasoning.

- Why did you choose this method?

  "I chose this method because..."

  (It is easier for me/the question needs me to use this method/there are lots of steps/the numbers are larger)

- Prove your answer is correct.

  "I know that ..... therefore I know that..."

- How did you get this answer?
- How did you know which operation to use to solve the problem?

"The word _____ appears in the question. This tells me that I need to..."

- Convince me that...

  "I will use this rule to convince you..."

- Spot the pattern, explain the pattern.
- If the answer is ..... what was the question?

Number fluency facts:

- These are number fluency facts that the children should know (be able to say the answer verbally in under 3 seconds).

+	0	1	2	3	4	5	6	7	8	9	10
0	0 + 0	0 + 1	0 + 2	0 + 3	0 + 4	0 + 5	0 + 6	0 + 7	0 + 8	0 + 9	0 + 10
1	1 + 0	1 + 1	1 + 2	1 + 3	1 + 4	1 + 5	1 + 6	1 + 7	1 + 8	1 + 9	1 + 10
2	2 + 0	2 + 1	2 + 2	2 + 3	2 + 4	2 + 5	2 + 6	2 + 7	2 + 8	2 + 9	2 + 10
3	3 + 0	3 + 1	3 + 2	3 + 3	3 + 4	3 + 5	3 + 6	3 + 7	3 + 8	3 + 9	3 + 10
4	4 + 0	4 + 1	4 + 2	4 + 3	4 + 4	4 + 5	4 + 6	4 + 7	4 + 8	4 + 9	4 + 10
5	5 + 0	5 + 1	5 + 2	5 + 3	5 + 4	5 + 5	5 + 6	5 + 7	5 + 8	5 + 9	5 + 10
6	6 + 0	6 + 1	6 + 2	6 + 3	6 + 4	6 + 5	6 + 6	6 + 7	6 + 8	6 + 9	6 + 10
7	7 + 0	7 + 1	7 + 2	7 + 3	7 + 4	7 + 5	7 + 6	7 + 7	7 + 8	7 + 9	7 + 10
8	8 + 0	8 + 1	8 + 2	8 + 3	8 + 4	8 + 5	8 + 6	8 + 7	8 + 8	8 + 9	8 + 10
9	9 + 0	9 + 1	9 + 2	9 + 3	9 + 4	9 + 5	9 + 6	9 + 7	9 + 8	9 + 9	9 + 10
10	10 + 0	10 + 1	10 + 2	10 + 3	10 + 4	10 + 5	10 + 6	10 + 7	10 + 8	10 + 9	10 + 10

- The facts outside the staircase should be focused on in year 1 and the other facts including inside the staircase are to be focused on in year 2 and 3.

This is the sequence for learning their number facts:

- Adding 1 (blue)
- Doubles (orange)
- Adding 2 (pale yellow)
- Story of 10 (bright yellow)
- Adding zero (green)
- Near doubles (grey)
- Adding 10 (purple)
- Additional facts (pink)

+	0	1	2	3	4	5	6	7	8	9	10
0	0 + 0	0 + 1	0 + 2	0 + 3	0 + 4	0 + 5	0 + 6	0 + 7	0 + 8	0 + 9	0 + 10
1	1 + 0	1 + 1	1 + 2	1 + 3	1 + 4	1 + 5	1 + 6	1 + 7	1 + 8	1 + 9	1 + 10
2	2 + 0	2 + 1	2 + 2	2 + 3	2 + 4	2 + 5	2 + 6	2 + 7	2 + 8	2 + 9	2 + 10
3	3 + 0	3 + 1	3 + 2	3 + 3	3 + 4	3 + 5	3 + 6	3 + 7	3 + 8	3 + 9	3 + 10
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6	6 + 0	6 + 1	6 + 2	6 + 3	6 + 4	6 + 5	6 + 6	6 + 7	6 + 8	6 + 9	6 + 10
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10	10 + 0	10 + 1	10 + 2	10 + 3	10 + 4	10 + 5	10 + 6	10 + 7	10 + 8	10 + 9	10 + 10

Multiplication facts:

In Year 6, children should be confident reciting all their times tables.

Throughout the year, they will continue to use their times table knowledge in a context.

x	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

We use rules to teach times tables to each year group. By Year 6, children should already be familiar with the following rules:

- The 10x table is **double** the 5x table.
- The 5x table ends with a 5 **or** a 0.
- The 10 x table **ends with a** 0.
- The 2x table ends with an even number.
- The 4x table is **double** the 2x table.
- The 8x table is **double** the 4x table.
- The 4x and 8x tables end with even numbers.
- The 6x table is **double** the 3x table.
- The 9x table is **triple** the 3x table.
- The 12 x table is **double** the 6x
- table.
- The 12x table is **quadruple** the

X	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

Money and percentages:

Favourite food

Ask your child the cost of a favourite item of food.

Ask them to work out what 7 of them would cost, or 8, or 9.

How much change would there be from £50?

Repeat with his / her least favourite food.

What is the difference in cost between the two?

Sale of the century

When you go shopping, or see a shop with a sale on, ask

your child to work out what some items would cost with:

50% off

25% off

10% off

5% off

Ask your child to explain how they worked it out.

Estimation:

Line it up

You need a ruler marked in centimetres and millimetres.

- Use the ruler to draw 10 different straight lines on a piece of paper.
- Ask your child to estimate the length of each line and write the estimate on the line.
- Now give them the ruler and ask them to measure each line to the nearest millimetre.
- Ask them to write the measurement next to the estimate, and work out the difference.

A difference of 5 millimetres or less scores 10 points.

A difference of 1 centimetre or less scores 5 points.

- How close to 100 points can they get?

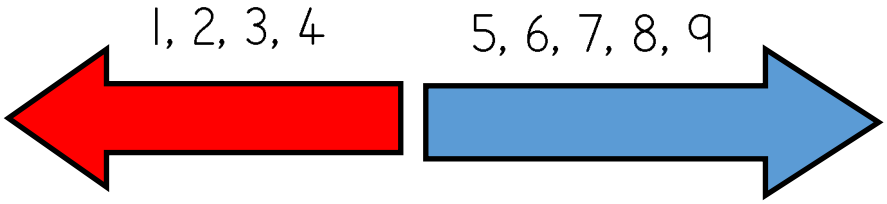
Rounding

Use three dice.

If you have only one dice, roll it 8 times.

- Make an 8-digit number.

- Ask your child to round the three-digit number to the nearest multiple of 1 million. Check whether it is correct.



Speedy number bond pairs to 1000

Make a set of 12 cards showing the multiples of 100 from 0 to 1000, but with two 500s.

If you wish, you could use playing cards.

- Shuffle the cards and give them to your child.
- Time how long it takes to find all the pairs to 1000.
- Repeat later in the week. See if your child can beat his / her time.

0	100	200	300	400	500
500	600	700	800	900	1000

You could change the cards to be multiples of 1000 or 10,000 and find combinations for other powers of 10.

Fractions at Home:

Fractions of objects: Find objects that have been divided in to equal parts in your home (e.g. window frames, pair of sunglasses, sliced apples)

Ask the questions: What is the whole?

How many equal parts are there?

Fractions of Amounts: 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.

Repeat with other numbers.

"There are 6 buttons. One third of the buttons is 2."

What would 1 third be if I had 120 buttons?

Measurement at home:

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.

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...

Cupboard maths: Ask your child to look at the weights printed on jars, tins and packets in the food cupboard, e.g. tinned tuna 185g, tinned tomatoes 400g

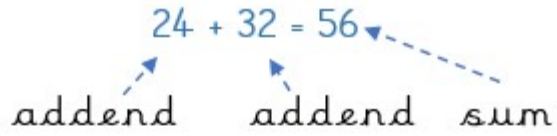
Choose six items. Ask your child to put them in order. Is the largest item the heaviest?

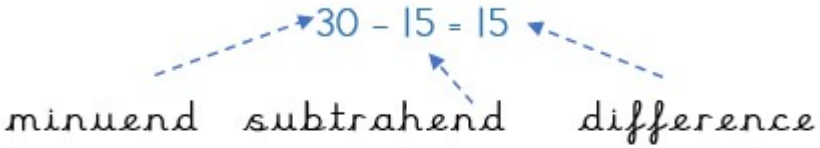
Length/Height/Width:		Volume/Capacity:		Mass:	
1m	100cm	1L	1000ml	1kg	1000g
1cm	10mm			1g	10mg

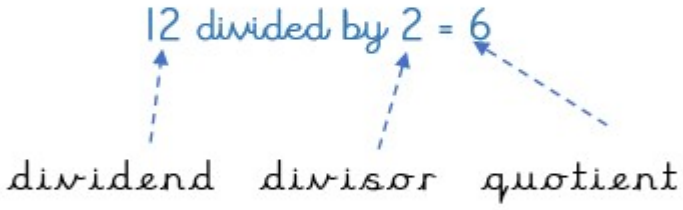
Time:	
1hour	60 minutes
1 minute	60 seconds

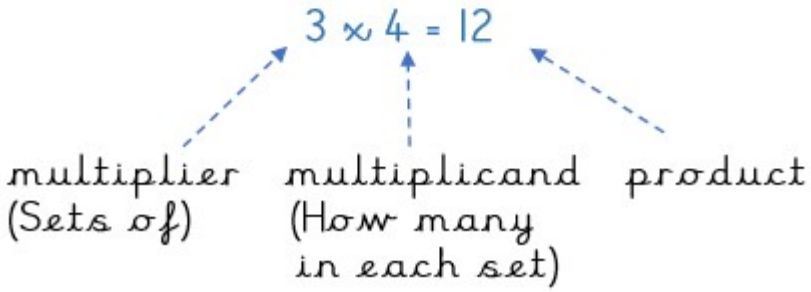
It is always useful to have conversions on display at home.

Key vocabulary in Year 6:









How much?

While shopping, point out an item costing less than £1.

- Ask your child to work out in their head the cost of 3 items.
- Ask them to guess first.

See how close they come.

If you see any items labelled, for example, '2 for £3.50', ask them to work out the cost of 1 item for you, and to explain how they got the answer.

Finding areas and perimeters:

Perimeter = distance around the edge of a shape

Area of a rectangle = length x breadth (width)

Collect 5 or 6 used envelopes of different sizes.

Ask your child to estimate the perimeter and area of each one to the nearest centimetre. Write the estimate on the back.

Now measure. Write the estimate next to the measurement.

How close did your child get?

Your child has a Times Table Rockstar Login

When it comes to times tables, speed AND accuracy are important – the more facts your child remembers, the easier it is for them to do harder calculations. Times Table Rock Stars is a fun and challenging programme designed to help students master the times tables! To be a Times Table Rock Star you need to answer any multiplication fact up to 12×12 in less than 3 seconds!