Brecknock Primary School
A lighthouse of learning

TORRIANO
PRIMARY SCHOOL

Year 2 parents evening support pack

Mathematicians know and use number facts

Mathematicians use representations

Mathematicians decode problems

Mathematicians select equipment

Mathematicians use a rule to justify

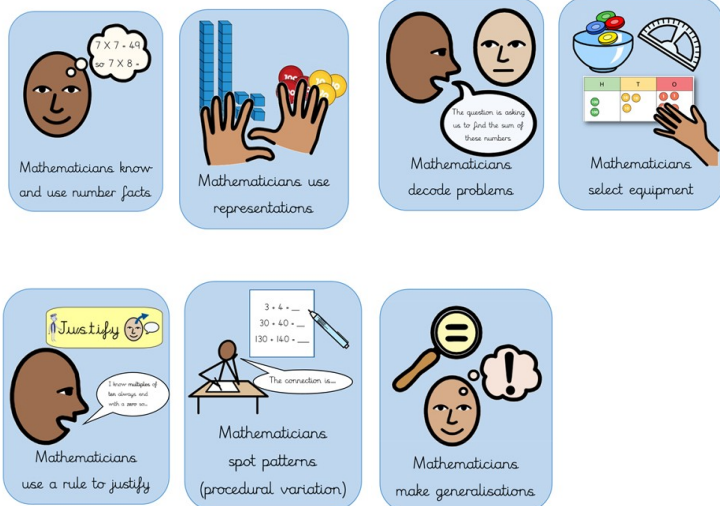Mathematicians spot patterns (procedural variation)

Mathematicians make generalisations

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

- Included in this pack are reasoning prompts, key skills on number fluency and games to practise these skills.

- Playing games strengthens early fluency, conceptual understanding and reasoning and also instils a love of maths.

Hi I am Add'em

Hi I am Esther Mate

Maths skills to focus on:

- Read and write numbers to 100

- Given any six numbers up to 100, put them in order

- Count forwards and backwards in tens from any number

- Recognise odd and even numbers

- Add and subtract numbers under 20 in their heads.

- Find the total value of a handful of coins to £1.

- Measure or weigh using metres, centimetres, kilograms or litres.

- Use a ruler to draw and measure lines to the nearest centimetre.

- Tell the time to the half and quarter hour.

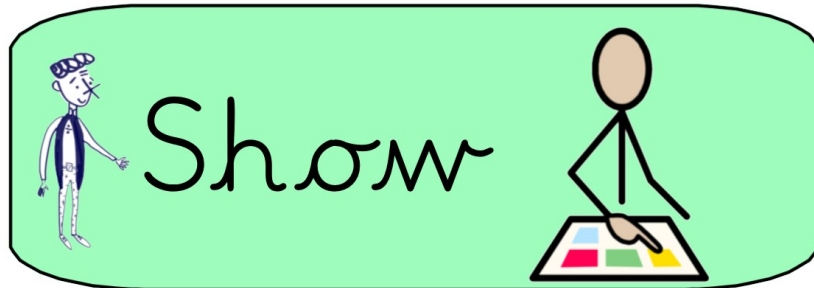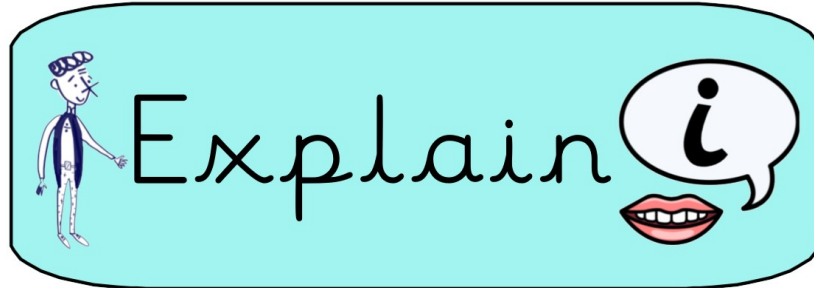- Name and describe common 2-D and 3-D shapes.

- Count in steps of 2, 3, 5 and 10, count in tens from any number e.g. 34, 44, 54, 64, 74...

- Give 10 more or less than a given number to 100.

- Partition into tens and units and recombine e.g. 45 + 34 = (40 + 30) + (5 + 4).

Reasoning Prompts:

- Prove your answer is correct

- Have you seen a question like this before?

- I agree/disagree because...

- How did you get that answer?

- Why is that the answer?

- Can you explain to me how you got that answer?

The Add'em Scale:

Justify

Explain

Show

Describe

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 is the mathematical rule that tells you that 92 cannot be a multiple of 5.

Explain: How do you know that 56 + 25 cannot equal 80?

Show: Can you show me your working using a tens frame?

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

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.

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
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

Months of the Year!

January

February

March

April

May

June

July

August

September

October

November

December

Days of the Week

Monday

Tuesday

Wednesday

Thursday

Friday

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Times Tables

Year 2 should begin to become familiar with a multiplication table. They need to focus on learning the 2, 5, and 10 times tables.

The 10 times table are generally the easiest to start with as children can spot a pattern to support their memory of the multiplication facts.

We will introduce Times Table Rockstars in year 2 as we teach the times tables at school. The school will provide logins.

https://ttrockstars..com/

Hit the button is another great website for practising their Times tables.

https://www.topmarks.co.uk/maths-games/hit-the-button

We use these rules to teach the times tables:

- 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.**

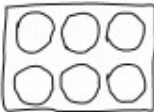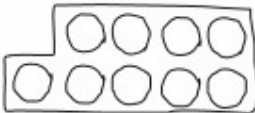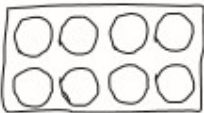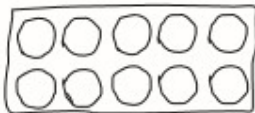| X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

I love maths

- Game for 2 players
- One person is odd, one person is even
- Like rock paper scissors shake your hand with fist closed saying I-Love-Maths.
- Open your hand on 'Maths' and reveal 0-5 fingers
- Add up the total of fingers
- A point to the odd person or even person depending on the total!
- First person to 10 wins

You can teach the marching rhyme to learn odd and even numbers:

'Odd numbers it's time to shine (children repeat), we end in 1, 3, 5, 7, 9.

Even numbers don't be late (children repeat) we end in 0, 2, 4, 6, 8'
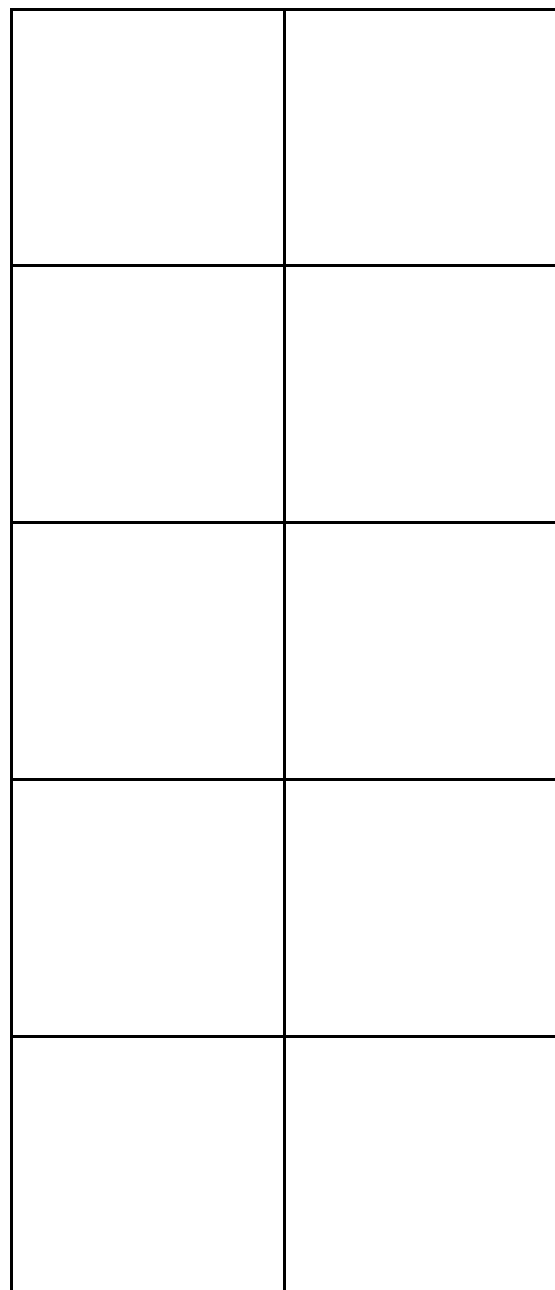
Guess What? (5 – 7 years) 2 players

Materials: Blank ten-frames, counters, a large board to act as a screen/barrier between pairs of players.

Rules: One player secretly arranges some counters on a ten-frame. The other player asks questions that can be answered yes or no, trying to gain enough clues to work out the arrangement of counters. For example: Is the top row full? Are there 8 counters? Is there an empty box in the bottom row?
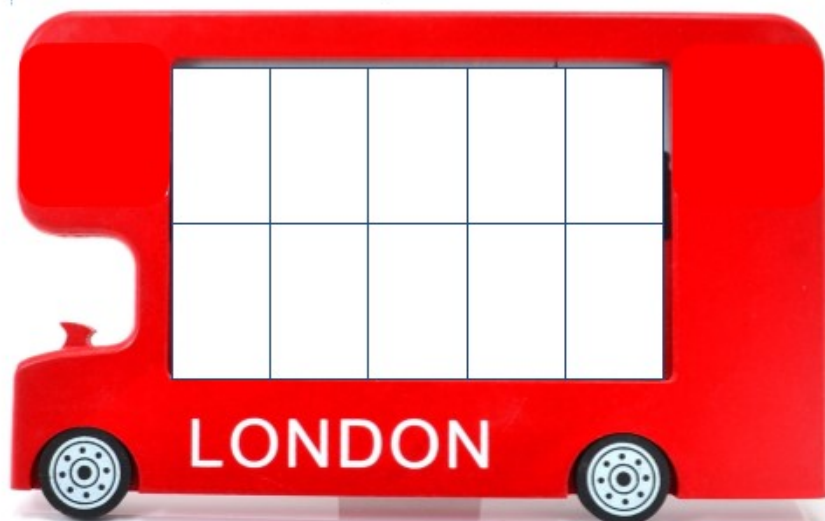
Variations/Extensions

As players become more skilled the number of questions can be counted. The player who asks fewer questions wins.

Extend to using two tens-frames and numbers 0-20.

Children on the bus:

(print or draw a bus with 10 squares)

There are 5 kids on the bus so there are _____ empty chairs.

There are 4 kids on the bus so there are _____ empty chairs.

There are 3 kids on the bus so there are _____ empty chairs.
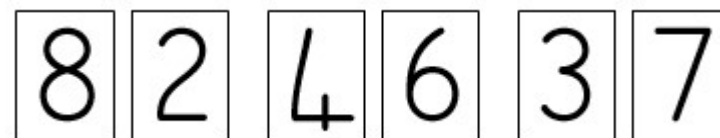
There are 2 kids on the bus so there are _____ empty chairs.

There is 1 kid on the bus so there are _____ empty chairs.

Speedy number bond pairs to 10

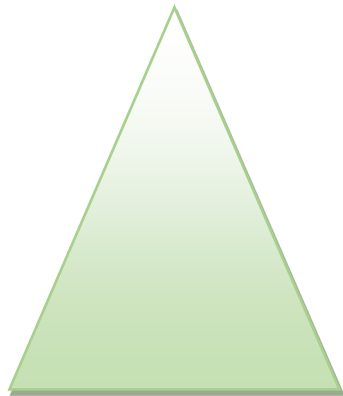Make a set of 12 cards showing the numbers 0 to 10, but with two 5s.

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 10.

- Repeat later in the week. See if your child can beat his / her time.

8 2 4 6 3 7

Guess my shape

- Think of a 2-D shape (triangle, circle, rectangle, square, pentagon or hexagon). Ask your child to ask questions to try and guess what it is.
- You can only answer Yes or No. For example, your child could
- ask: Does it have 3 sides? or: Are its sides straight?
- See if your child can guess your shape using fewer than five questions.
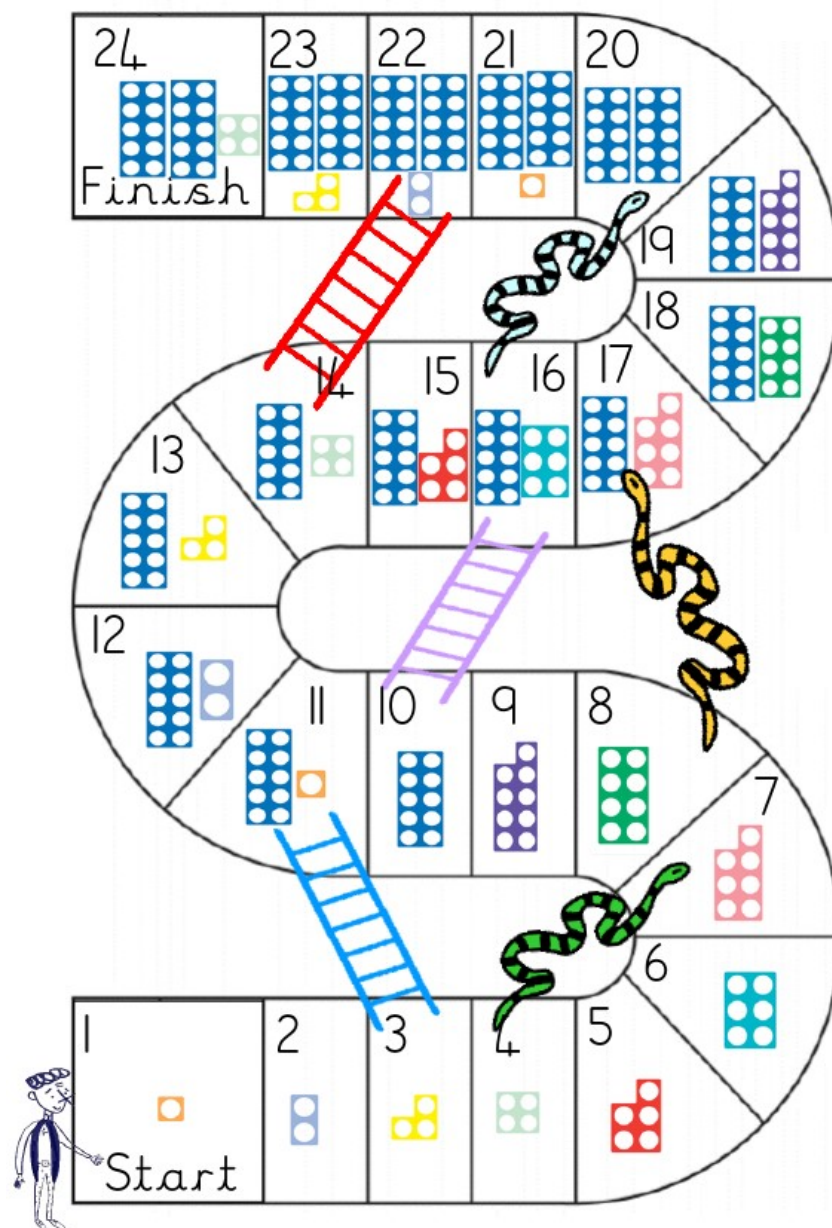- Now ask them to choose a shape so you can ask questions.

Bean subtraction

- For this game you need a dice and some dried beans or pasta.
- Start with a pile of beans in the middle. Count them.
- Throw a dice. Say how many beans will be left if you subtract that number.
- Then take the beans away and check if you were right!
- Keep playing.
- The person to take the last bean wins!

Board games

Playing any board games involving dice and counting is fantastic fluency practise. See if your child look at a dice and know what the number is (subitise) without needing to count the dots?

- Use a normal snakes and ladders board or make one on paper.

- Roll a dice twice. Add the two numbers.

- Move along that number of spaces.

- Before you move, you must work out what number you will land on.

- If you are wrong, you don't move!

- The first to the end of the board wins.

- For a change, you could roll the dice and move backwards. Or you could roll the dice once, then move the number that goes with your dice

Your child has a Numbots login

NumBots adopts the best teaching practises to take children from counting on their fingers, to adding and subtracting two digit numbers.

The programme compliments what your child is learning in school and focuses on securing any gaps in their knowledge, before moving them onto the next challenge. This self paced journey improves children's confidence and means they are fully prepared to tackle each new topic.

Mathematicians know and use number facts

NUMBOTS

Addition & Subtraction. Solved.