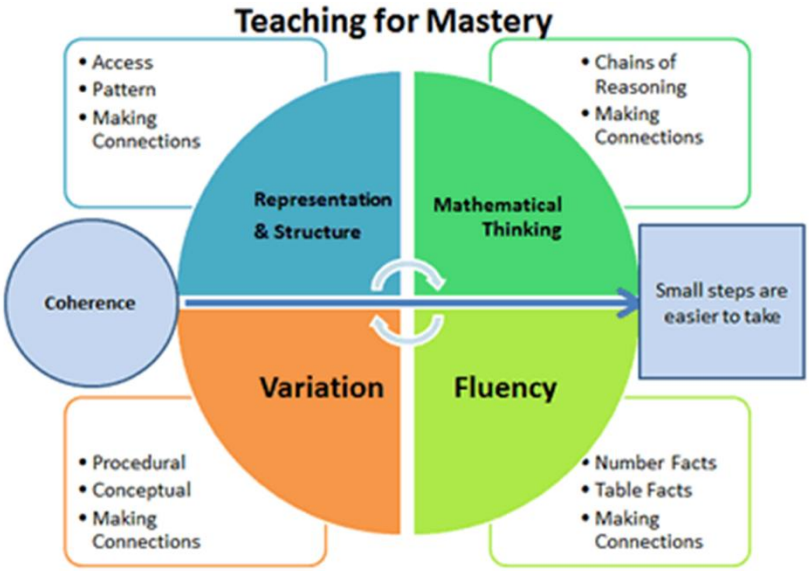
Fluency Policy

At Cecil Road Primary School, our aim is for our learners to become fluent in their number facts (addition/ subtraction / multiplication / division). Being 'fluent' means that children are able to rapidly recall their times tables. If children can recall their tables at speed, it eases cognitive load for pupils and allows them to assess other areas of the Mathematics curriculum more readily.

Fluency involves:
• Quick recall of facts and procedures
• The flexibility and fluidity to move between different contexts and representations of mathematics.
• The ability to recognise relationships and make connections in mathematics



Fluency is one of the 'Five Big Ideas'. These are principles drawn from research evidence that underpin a 'Teaching for Mastery' approach. Fluency goes hand-in hand with the other ideas that lie at the heart of maths mastery pedagogy. A child who is fluent in key maths facts has the ability to quickly and efficiently recall facts and procedures and has the flexibility to move between different contexts and representations of mathematics. At Abbey Village primary School there is an emphasis on the importance of developing fluency with mathematical facts. Mathematics lessons begin with a fluency activity. Children are also given regular opportunities within and outside of maths lessons to practise basic facts and develop flexibility with these facts.

In years 1 and 2, we acknowledge that children need to be fluent in the following addition facts:

+	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 majority of these facts will be learnt in Year 1 and Year 2. In Reception, children become fluent in working with totals to 5 (though not recording as equations), e.g. “Show me 5 on your hands. Now show me 5 in a different way.” Year 3 will need to focus on securing fluency in subtraction facts which bridge 10. Although this is a Year 2 objective, aiming for real fluency in subtraction facts such as 14 – 9 and 13 – 5 (where fluency is an answer in 3 seconds) requires securing in Year 3.

In Years Reception, 1 and 2, they follow the Mastering Number @ KS1 programme to support the teaching and learning of key basic number facts. This project aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number. Attention will be given to key knowledge and understanding needed in Reception classes, and progression through KS1 to support success in the future.

Numbots

NumBots is all about every child achieving the understanding, recall and fluency in mental addition and subtraction, so that they move from counting to calculating. NumBots’ intelligent practice methodology focuses on automatic recall of number facts as well as developing conceptual understanding.

Supporting Number Facts at Home
For most effective practice we suggest playing for at least 3 minutes a day, 4 or 5 times a week at home, whenever it is possible for families.

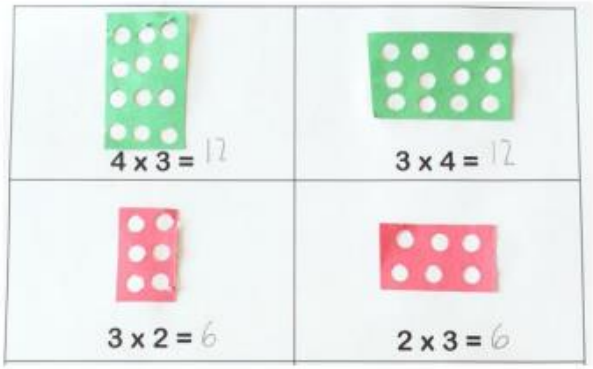
National Curriculum Expectations for Time Tables

The National Curriculum provides statutory guidance for schools which has guided us in developing our times tables system and policy. The aim of the National Curriculum is for pupils to recall all their times tables by the end of year 4. This is broken down as follows:

Year 2 Expectations	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables.
Year 3 Expectations	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.
Year 4 Expectations	Recall multiplication and division facts for multiplication tables up to 12 × 12

Our Times Tables system is rigorous and helps to support children in moving through their times tables at the pace set out by the National Curriculum.

How are Times Tables learned?
Learning times tables begins in the classroom, where children learn about the fundamentals of multiplication and division in Maths lessons. It is vital that children have a secure conceptual understanding of the meaning of a multiplicative calculation, as opposed to just learning by rote. In these lessons, children will explore the times tables relevant to their year group. Children learn about the communitive law (that 3 x 4 is equal to 4 x 3) and also key relationships such as 8 x 5 being double that of 4 x 8, or that 7 x 9 is seven less than 7 x 10. We have a strong emphasis on visual representations to support the children's conceptual understanding.



In years 4 and 5, they follow the Mastering Number @KS2, Multiplicative Reasoning programme. This programme provides the opportunity to develop the knowledge of multiplication and division and its applications forms the single most important aspect of the KS2 curriculum, and is the gateway to success at secondary school. This project enables pupils in Years 4 and 5 to develop fluency in multiplication and division facts, and a confidence and flexibility with number that exemplifies good number sense. In years 5 and

6, they will continue to use their number sense of times tables and develop further confidence to multiply and divide numbers mentally drawing upon known facts. They will also demonstrate confidence to multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.

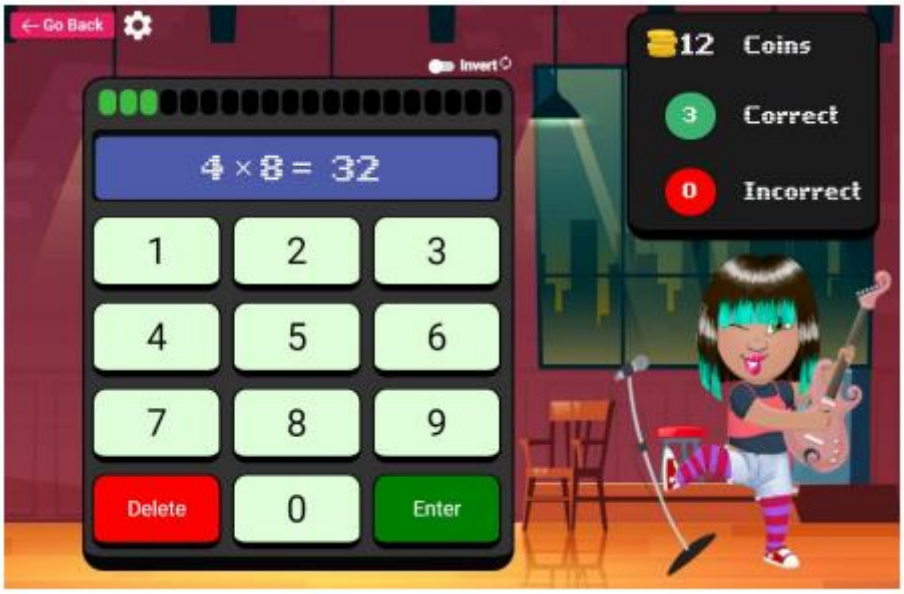
DfE Year 4 Multiplication Check

This year, the Department for Education have introduced a statutory multiplication check for all Year 4 pupils in June 2022. The purpose of the check is to determine whether children can fluently recall their times tables up to 12, which is essential for future success in mathematics. It will also help our school to identify who may need additional support. This test will be in school time, and will consist of 25 mixed questions. Pupils will have 6 seconds to answer each question. We will receive a copy of the children's results by the end of the academic year and will report upon this in the Summer term.

Times Tables RockStars

TT RockStars is an educational learning platform which is specifically designed to support children in learning and becoming more fluent in their times tables.

There are many different games and modes within this platform for children to practice in different ways. There are also competitive elements where children can play against fellow pupils, the computer or other players from all around the World (within a safe avatar name).



This is a useful tool for teachers as we are able to review children's effort and performance, whilst also analysing data to identify any times tables which children are finding difficult.

Supporting Times Tables at Home

Whilst we do have a heavy emphasis on learning times tables at school, this is best supported when children also have opportunities to practise at home too. Times tables is part of our weekly homework regime and we would encourage pupils to dedicate around 20 minutes a week practising as a rough guide. This practice can be verbal, using home resources, or of course using platforms like TTRockStars or Hit the Button.