Cavendish Church of England Primary School

Times-tables Policy

Signed on behalf of the Governing Body	
Signed: Headteacher	
Date:	Autumn 2023
Date to be Reviewed:	Autumn 2025

Our Vision

In our school our Christian vision shapes all we do.

Challenge, Creativity, Compassion: Create a pure heart in me – Psalm 51:10

Our School Vision Statement reflects this commitment as children and staff are taught to challenge inequality, prejudice, bullying and harm; to respond with compassion and sensitivity to individual need and to respect the rights of all individuals to be safe and nurtured within God's world.

We encourage children to respond creatively to internal and external challenges in life, with compassion for others, including consideration for creation and the planet itself. Thus, we show how to live justly and with a pure heart, reflecting the teachings of Jesus and God's love within our school environment.

Intent

Times tables form the foundation for fluent mental arithmetic. This then helps form the basis of a child's understanding and ability when working with other areas of number. Once children have memorised times tables by heart, they are then able to work far more confidently through a wide range of more advanced calculations. We believe that through a range of engaging, interactive, visual and rote learning techniques, most children can achieve the full times table knowledge by the time they leave Year 4. This then means they have the opportunity to access all areas of the upper key stage two curriculum. Additionally, this also ensures children are prepared for and successful in statutory assessment.

Implementation

By the end of year 4, children are expected to know and have rapid recall of all times-tables up to 12 x 12 including knowledge of associated division facts. This is achieved through structured learning, starting in Reception:

Reception:

Counting in jumps of 2, 5 and 10

Year 1:

Introduction to 2, 5 and 10 times-table – doubling and halving skills.

Year 2:

2, 3, 5 and 10 times-table by heart; calculate 4 x table by doubling 2 x table.

Year 3:

4, 6, 7 and 8 times-table

Year 4:

9, 11 and 12 times-table

Year 5 and 6:

Application of all times-tables in wider curriculum.

Children learn their times-tables through a range of activities and lessons. Some of these include:

- Explicit teaching of number system including multiplication
- Interactive digital games on iPad and laptops including TT Rockstars
- Competitive class games and quizzes
- Rolling Numbers chants
- Chanting when moving around the classroom
- Songs
- Maths meetings
- Early bird work
- Homework tasks
- Arrays
- Maths mental starters

Children are assessed through statutory testing in the summer term of year 4. This is a test completed online which consists of 25 multiplication questions. Children have 6 seconds to answer each question, with a 3 second pause between each question. The percentage of children achieving full-marks is recorded.

In KS1 and LKS2 children have the opportunity to earn a sticker each time they completely learn a times- table. This can then be added to their times-table chart, which visually records children's successes. It also highlights the times-tables to be achieved next. In LKS2 weekly times-tables challenges are given, where children have the opportunity to earn their stickers.

In UKS2 children are initially tested to identify any areas of weakness. Any children arriving within the academic year are also given this task. From this, teachers can identify times-table knowledge which may cause challenges throughout the year when accessing other areas of mathematics. Children are expected to know their targets for times-tables and to work on them independently. All children are given the opportunity to maintain their fluency of times-tables through games and challenges. Times-tables practise is also set as homework frequently. All children in UKS2 use their times-table knowledge to complete daily maths work where the importance of times-tables is emphasised.

Impact

Fluid and secure tables knowledge is a prerequisite to success in mathematics in UKS2. Children who have a secure knowledge are well placed to continue to develop their learning and application in areas such as form long multiplication and division methods, equivalence, fractions, decimals, ratios and proportion, reasoning and algebraic exploration. Children who are not secure at the beginning of Year 5 are offered additional support and a letter sent to families outlining how they can best support their child.

Enrichment

Times-tables are celebrated as personal challenges in school. When children achieve their target of learning all their times-tables, it is celebrated either within the classroom community or with the whole school in collective worship.

Times-tables are also emphasised through displays, in many of the areas used by children from across the school.

Inclusion for SEND and Higher Attaining

It is expected that individual children will be at different stages in their times-table learning. In KS1 it is very important for those identified as lower attaining have extra support in developing an understanding of the concept of 'lots of' before moving on to rote learning of any times tables. If children are secure in the times- tables specific to their year group, they can then begin learning the times-tables from the year group above. If children do not achieve the target tables for their year groups, they must continue to work of the tables for the year until achieved.

Once children are able to securely recall all the times tables facts, they need to be extended through real-life problem solving/problems in context and related number facts.

Progression in Representation of Times-Tables

Concrete: using 'lots of' to reinforce the ideas of groups. i.e. how many socks in 4 pairs?

How many wheels on 3 cars?

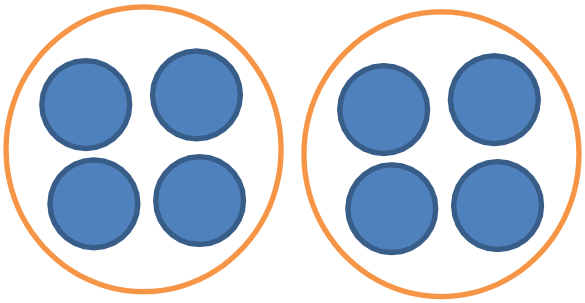
If 4 children each have 2 pencils, how many pencils are there in total?

The idea of multiplication being repeated addition is important.

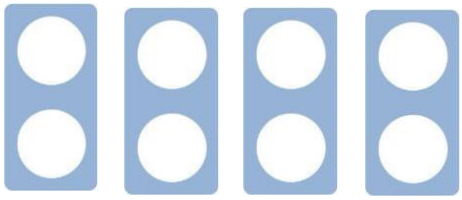
Representing the multiplication in many ways is important. E.g.

- Numicon is a good resource to show the 'groups' or 'lots of'.
- Creating groups of items with hoops, beanbags, or multi-link.

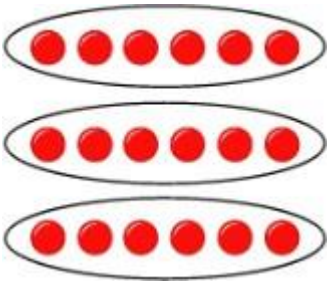
4x2=2+2+2+2=8



2x4 = 4 + 4 = 8



Pictorial: recording diagrams of the concrete groups children have made is the next step to fluently recognising times-tables, without over-relying on manipulatives.

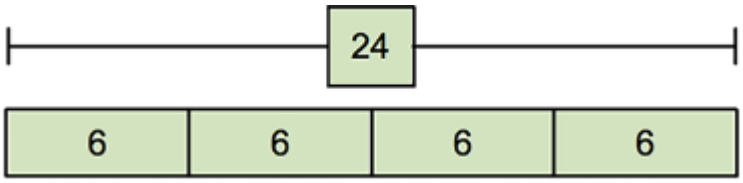


3 x 6 = 18

Moving on from drawing groups to arrays is the next step: it is an excellent way to show the relationship between multiplication and division, and to explain the commutative law (that 5 x 3 = 3 x 5)

Associative law can also be shown (5x3 = 1x3 + 4x3)

Bar models can also be used as a way to draw multiplication questions, as can repeated jumps on a number-line.



Abs tract: once children have gained a clear understanding of times-tables through concrete manipulatives and pictorial representations, they will be able to progress to memorising times tables independently. This will lead to the 'rapid recall' of all multiplication and division facts.