



MULTIPLICATION TABLES CHECK

Practice & Progression Strategy | Year 2–Year 4

A practical, consistent approach to developing fluent multiplication fact recall

Pensans Primary School

Rationale

At Pensans Primary School, we hold the uncompromising belief that all pupils, especially those experiencing disadvantage, are entitled to secure mathematical fluency, high expectations and teaching that enables success. Multiplication facts are foundational knowledge that frees working memory, unlocks reasoning and problem-solving and sustains confidence across the maths curriculum. This strategy sits within our declarative knowledge approach.

Why we plan from Year 2 to Year 4

Fluency is a curriculum journey, not a last-minute event. Across three years, pupils move deliberately from conceptual understanding, to secure recall, to automaticity. Year 2 establishes the foundations through equal groups and the 2, 5 and 10 times tables; Year 3 expands coverage and strengthens derived-fact strategies; and Year 4 focuses on precision, pace and confidence ahead of the MTC.

- Year 2 lays the conceptual foundations and normalises short, predictable practice.
- Year 3 expands coverage while pupils learn to use known facts to unlock less familiar facts.
- Year 4 focuses on precision, automatic recall and increasing familiarity with MTC-style questions.

Why short, regular retrieval matters

Regular retrieval helps move multiplication facts from short-term performance towards long-term memory. Short, low-stakes sessions reduce cognitive load, create frequent success experiences and provide structured practice for pupils who may have fewer opportunities to practise at home. The approach is deliberately sustainable: approximately three focused sessions each week, rather than lengthy daily worksheets.

Why quality-first teaching comes before intervention

No intervention can compensate for inconsistent everyday instruction. Core teaching should prioritise clear explanation, expert modelling, guided practice and responsive feedback. When pupils encounter difficulty, staff should act swiftly with precise, brief keep-up support, ensuring gaps are addressed early.

Why and how we assess

Assessment earns its place because it informs teaching. Baselines identify starting points, while regular checks and question-level analysis pinpoint facts and patterns that need reteaching. Unofficial MTC-style checks build familiarity and help pupils approach the assessment with confidence.



Core Principles

Principle	What this means in practice
One table at a time	Pupils have a clear period of focus on one multiplication table before moving to another.
Short and regular	Approximately three focused sessions each week, typically 5-10 minutes, rather than lengthy worksheets.
Recall, not just chanting	Move from sequencing and counting towards retrieving individual facts in a random order.
Teach relationships	Explicitly develop commutativity/reverse facts, e.g. $5 \times 3 = 15$ and $3 \times 5 = 15$.
Use known facts	Use doubling, near multiples and partitioning until difficult facts become automatic.
Deliberate repetition	Revisit difficult facts over several sessions and weeks rather than many times in one sitting.
Assessment drives practice	Use test results to identify specific facts pupils need to practise and reteach.
Keep it varied and positive	Use mini-whiteboards, partner games, flashcards, matching, movement, TTRS and short retrieval.

Whole-School Progression at a Glance

Year	Main tables	Practice	Assessment	Main emphasis	Key feature
Year 2	2x, 5x and 10x	3 short sessions	Every 2 weeks	Understanding + recall	Reverse/commutative facts explicitly taught.
Year 3	Progress towards 2-12	5 short sessions	Weekly	Fluency + accuracy	One table at a time with regular retrieval of prior tables.
Year 4	2-12	5 short sessions	Weekly	Automaticity + speed	Target gaps and increasingly rehearse MTC-style questions.

Year 2 – Building Foundations

Year 2 focuses specifically on the 2, 5 and 10 times tables. Pupils should also understand the commutative/reverse relationship between facts. For example: $5 \times 3 = 15$ and $3 \times 5 = 15$.

Assessment: one short mini-test every two weeks. Practice: approximately three short sessions per week.

Example two-week cycle: 5x table

Session	Purpose	Example activity
1	Learn and understand	Count in 5s; build equal groups; use arrays and number lines; establish $5 \times 4 = 20$ and $4 \times 5 = 20$; ask 'How do you know?'
2	Retrieve and practise	Quick-fire questions, mini-whiteboards, partner questioning, matching cards or bingo. Include both 5×6 and 6×5 .
3	Apply and strengthen	Use missing-number questions: $5 \times ? = 30$ and $? \times 5 = 30$. Connect multiplication to related division facts where appropriate.
4	Retrieval after a gap	Return to the 5x table. Identify facts still requiring counting and target those facts.
5	Random recall	Mix the order: 5×7 , 3×5 , 5×4 , 9×5 , 5×6 . Avoid simply reciting the table in sequence.
6	Mini-test	Complete a short MTC-style check. Review individual errors and use results to inform the next focus.

Year 2 classroom approaches

- Use equal groups, arrays, practical equipment and counting in steps to establish conceptual understanding.
- Use chanting and table flipcharts as rehearsal, but deliberately move pupils towards random recall.
- Teach commutativity explicitly: if $5 \times 3 = 15$, then $3 \times 5 = 15$.
- Use praise routines and celebrate progress to build confidence.
- Where appropriate, use TTRS as an enrichment tool rather than a substitute for quality-first teaching.



Year 3 – Securing Fluency

Year 3 builds towards secure recall of multiplication facts across 2-12. The main teaching focus remains one table at a time, while previously learned tables continue to appear in retrieval. Pupils increasingly use derived-fact strategies to support facts that are not yet automatic.

Assessment: a short MTC-style check every week. Practice: approximately three short sessions per week.

Example two-week cycle: 7× table

Session	Purpose	Example activity
1	Teach/revisit	Explore 7× using known facts, e.g. $5 \times 6 = 30$ and $2 \times 6 = 12$, so $7 \times 6 = 42$. Establish $6 \times 7 = 42$.
2	Retrieval	Quick-fire 7× questions in random order. Use mini-whiteboards, partner games or a short jotter routine.
3	Fluency	Missing numbers, commutative facts, fact-family activities and short retrieval.
4	Weekly check	Short MTC-style test. Record specific facts causing difficulty, not just the overall score.
5	Targeted practice	Revisit difficult facts, e.g. $7 \times 8 = 56$. Use $5 \times + 2 \times$ to derive it, then practise recalling it directly.
6	Apply	Connect $7 \times 8 = 56$, $8 \times 7 = 56$, $56 \div 7 = 8$ and $56 \div 8 = 7$. Finish with rapid recall.
7	Weekly check	Complete another check and compare accuracy with the previous week.
8	Next focus	If the table is secure, move to the next table. Continue retrieving 7× facts in mixed practice.

Suggested Year 3 table sequence

Period	Suggested focus
Autumn 1	2×, 3×, 5×
Autumn 2	4×, 8×, 10×
Spring 1	6×, 9×
Spring 2	11×
Summer 1	12×
Summer 2	All tables: consolidation, precision and gaps

Year 4 – Automatic Recall and MTC Readiness

By Year 4, pupils should be working towards automatic recall of all multiplication facts from 2×2 through to 12×12 . The emphasis shifts from knowing how to work out a fact to recalling it quickly and accurately.

Assessment: weekly MTC-style check. Practice: approximately three short sessions per week, with additional targeted support where assessment identifies a need.

Example two-week cycle: 8× table

Session	Purpose	Example activity
1	Targeted teaching	Revisit 8× using known facts and strategies such as doubling. Identify facts that need to become automatic.
2	Rapid retrieval	Random 8× facts, including reverse facts such as 7×8 and 8×7 .
3	MTC-style practice	Use short, randomised questions in a format increasingly familiar to the MTC.
4	Weekly MTC check	Complete the weekly test. Analyse accuracy, speed and recurring errors.
5	Target the gaps	Focus on specific errors, e.g. $8 \times 7 = 56$. Build, explain, retrieve and then recall.
6	Mixed retrieval	Keep 8× as the teaching focus but include previously secured facts from across 2-12.
7	Weekly MTC check	Complete another check and review progress.
8	Next focus / intervention	Move on if secure, or revisit identified gaps. Continue mixed retrieval of older facts.



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Suggested Year 4 progression

Period	Suggested focus	Assessment / monitoring
Autumn 1	Baseline, core tables and identified gaps	Baseline + weekly test + tracker analysis
Autumn 2	Core tables / remaining gaps	Weekly test + precision practice
Spring 1	6x, 9x, 11x and identified gaps	Unofficial MTC + weekly tests
Spring 2	Speed and precision	Weekly tests + additional targeted/TTRS practice
Summer 1	Revision and MTC readiness	Unofficial MTC + weekly tests
Summer 2	MTC completion and post-MTC consolidation	MTC outcomes analysed; celebrate success

Agreed Classroom Strategies

Strategy	Classroom example
Commutativity / reverse facts	Explicitly teach that $3 \times 5 = 5 \times 3$. This is particularly important in Year 2 and should become increasingly automatic.
Build from known facts	For 7×8 , use $5 \times 8 = 40$ and $2 \times 8 = 16$, giving 56. The long-term aim is direct recall.
Doubling	Useful for connecting 2x, 4x and 8x facts. For example, double $4 \times 6 = 24$ to get $8 \times 6 = 48$.
Near multiples	For 9×7 , use $10 \times 7 = 70$, then subtract 7 to give 63.
Fact families	For $6 \times 7 = 42$, establish $7 \times 6 = 42$, $42 \div 6 = 7$ and $42 \div 7 = 6$.
Arrays and equal groups	Use concrete and visual representations when introducing or repairing conceptual understanding.
Missing-number questions	Vary the position of the unknown: $5 \times ? = 30$, $? \times 5 = 30$ and $30 \div 5 = ?$.
Random retrieval	Mix facts within the focus table so pupils cannot rely on reciting the sequence.
Explain then recall	Ask 'How do you know?' while learning a fact, then gradually remove the strategy so the fact becomes automatic.
Deliberate repetition	Revisit difficult facts across several sessions and weeks rather than repeating them many times in one sitting.

Assessment, Tracking and Keep-Up

Assessment should be used as a teaching tool. Teachers should look beyond the total score and identify the individual multiplication facts pupils are unable to recall accurately or quickly.

- Year 2: short mini-test every two weeks.
- Year 3: weekly MTC-style check.
- Year 4: weekly MTC-style check, with increasing familiarity with the MTC format.
- Record recurring difficult facts and use them to shape subsequent practice.
- Distinguish between a fact that is not known and a fact that is known but recalled slowly.
- Use same-day or next-day keep-up support when a pupil has a specific gap.
- Give disadvantaged pupils priority access to keep-up and targeted practice so structured practice is not dependent on home circumstances.
- Maintain live fluency profiles/trackers so support remains precise.
- Use pupil progress meetings to review patterns and evaluate impact.

Assessment should lead to action

Assessment finding	Response
Pupil does not know a fact	Re-teach using an appropriate representation or derived-fact strategy, then retrieve it regularly.
Pupil knows the fact but is slow	Increase short, random retrieval and practise the fact in varied contexts.
Pupil makes a repeated error	Identify the misconception/pattern, model the correct relationship and revisit shortly afterwards.
Pupil is secure	Continue mixed retrieval while moving the main teaching focus to the next table.



Home, Enrichment and Celebration

Families are partners in building persistence and confidence. Home practice should reinforce the school's message that small, regular practice matters without creating unnecessary pressure.

- Provide simple, aligned guidance so families know which table is currently being taught.
- Use TTRS/home logins as a structured practice opportunity where appropriate.
- Share certificates or other recognition of progress.
- Use heatmaps or other simple progress information to make improvement visible.
- Use competitions carefully to motivate without creating a sense that speed is the only measure of success.
- Celebrate individual improvement as well as high scores.

Implementation and Staff Expectations

- Teachers identify the current focus table and make it clear to pupils.
- Approximately three short practice sessions take place each week.
- The focus remains on one table at a time, while previously learned facts are revisited through retrieval.
- Year 2 completes a mini-test every two weeks; Years 3 and 4 complete a weekly check.
- Test results are reviewed at question level and inform subsequent practice.
- Specific pupils receive precise keep-up support rather than simply being given more worksheets.
- TTRS and other enrichment activities support, but do not replace, quality-first classroom teaching.
- Progress is discussed through pupil progress meetings and agreed tracker/data systems.

Key Message for Staff

**ONE TABLE AT A TIME · SHORT SESSIONS · REGULAR RETRIEVAL · PRECISE
RESPONSE TO GAPS**

The goal is not to create more work for teachers or pupils. The goal is to make multiplication fact practice predictable, purposeful and consistent, so that by the end of Year 4 pupils can recall their multiplication facts with confidence, accuracy and increasing speed.