

Whole School Approaches to Teaching and Learning Times Tables

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Research and
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Context

Theme-level research question:

How to improve the teaching and learning of Multiplication Bonds (Times Tables)

Local-level research question

How to apply research findings from previous cohorts to improve the teaching and learning within local schools (5 previous cohorts -200+ schools)

What we did

8 Whole School Steps (with pre-requisites)

A. Practice Time for automaticity – 10 mins 3 days per week

B. Dedicated Maths Lessons to explore and understand each new TT, 3 lessons per half term

1. **Bank of High-Quality Activities (10 mins)**: develop fluency and verbal patterning
2. **The Order** to teach tables, which tables to include and half term focus on each, (+ revision of those previously met)
3. **Consistent presentation** across school – with shared and clear **focus language**
4. Build each new times table **around facts already known** using a consistent format
5. Introduce a new TT by making clear conceptual links to the real world – a **display (what comes in ...)** to support conceptual understanding and word problems
6. Introduce a new TT using **CPA approach** with **Array as CORE representation**
7. Explore the **patterns** of each new times table – focus on relationships and structure
8. Develop an Overarching Mastery Approach to Teaching and Learning Times Tables



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What I want other teachers to know

Participation in this RIWG: Key Themes from data (collected over 6 years)

For Participants:

Deeper Subject Knowledge and Mastery, Conceptual Understanding, Empowerment, Confidence to lead CPD and work with staff, Consistency across School, Progression, Clear Manageable Structure with 8 Steps and Pre-requisites, Actually 'teaching' times tables; Manageability, Engagement and Enjoyment, 'Bank of High-Quality Activities' & Resources, Practical with Theoretical Underpinning; Ability to develop School Guidelines and take ownership

For Children: Increased Subject Knowledge, Confidence and Motivation

For Staff: Subject Knowledge: Consistency; Progression; Structured Whole School Approach; Manageability; Confidence and Engagement

For Senior Management:

Recognising importance; Increased priority; More informed; Increase understanding; Dedicated time needed.

Limitations: Time to Work with Staff, Lack of Senior Management Support, Gaining Staff Support, Staff Subject Knowledge; Time to Embed

Expectations: Session 1: 95% exceeded 5% met; **Session 2,3 and 4:** 100% exceeded

Sample of quotes from participants:

I have a much deeper understanding of times tables

I feel more confident in teaching and leading others.

I feel far more prepared to lead on restructuring the teaching of times tables at school.

I am well prepared to create whole school guidelines for implementation of times tables.

I have increased knowledge of teaching for mastery and conceptual understanding.

Thank you



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