Maths: Progression in Supporting the Recall of Number Facts

Numbots

	Age-related objectives	Challenge Mode Progression
R	ELG: • Have a deep understanding of number to 10, including the composition of each number; • Subitise up to 5; • Automatically recall number bonds to 5 (including subtraction facts) and some number bonds to 10, including double facts.	Challenge 1: Adding and subtracting 1 or 2 within 10. Challenge 2: Number bonds to 5. Challenge 3: Doubles within 10. Challenge 5: Number bonds to 10.
1	• Given a number, identify one more and one less. • Represent and use number bonds and related subtraction facts within 20. • Add and subtract one-digit and two-digit numbers to 20, including zero.	Challenge 4: Adding and subtracting 1 and 2 within 20. Challenge 6: Adding and subtracting 10 within 20. Challenge 7: Doubles within 20. Challenge 8: Adding two 1-digit numbers. Challenge 9: Number Bonds to 20. Challenge 10: Subtracting 1-digit numbers within 20.
2	• Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100. • Add and subtract numbers mentally including: ○ A two-digit number and ones; ○ A two-digit number and tens; ○ Two two-digit numbers; ○ Adding three one-digit numbers.	Challenge 11: Adding and subtracting 1, 2 and 10 within 100 Challenge 12: Adding and subtracting 2-digit numbers to/from multiples of 10 Challenge 13: Addition by bridging a multiple of 10 Challenge 14: Subtraction by bridging a multiple of 10 Challenge 15: Number bonds to 100 Challenge 16: Using compensation to add and subtract within 100 Challenge 17: Adding by partitioning two 2-digit numbers Challenge 18: Subtracting by partitioning two 2-digit numbers Challenge 19: Adding any two 2-digit numbers Challenge 20: Subtracting any two 2-digit numbers

Suggested Session Structure

Story and Challenge modes both have their place. It is recommended that pupils are encouraged to "help Rusty to shine" (play in Story mode) for the most part and then to "beat your own high score" (play in Challenge mode) at the end of each session or week.

NumBots time may be found during:

- ✓ Soft/fluid registration, i.e. on arrival at school before things get started
- ✓ During "continuous provision"
- ✓ Maths or Computing lessons
- ✓ Intervention sessions
- ✓ Breakfast, lunch and after-school clubs

The guiding principle should be "little and often", e.g. five to ten minutes three or four times a week. However, teachers should plan to use Numbots as appropriate to the needs of the children in their class.

It is expected that children continue their progress through story mode, as well as attempting to beat their own high score in challenge mode, at home as part of their weekly homework as well as in the classroom.

Tracking Progress

Teachers will monitor the progress made by the pupils by using the 'Stats' page in the teacher log in page. This allows teachers to see how accurate pupils are, their progress through the story mode and a pupil's effort when working in school and at home.

The subject leader will generate a termly report, tracking pupils' accuracy and their progress made since their initial score.

Times Table Rockstars

Times Tables Rockstars is used across years 2 to 6 to support children's rapid recall of multiplication facts and their associated division facts, up to 12x12. Our aim is to use a range of approaches to enable children to commit this vital knowledge to long-term memory, including explicit teaching of the times tables, over-learning, regular practice and homework.

Times Tables Rockstars will be used to guide the school's delivery of the national curriculum as outlined below.

Year group	**Children receive explicit teaching and are supported to learn:**
2	2x, 5x, 10x,
3	3x, 4x, 8x
4	All multiplication and division facts up to 12x12
5/6	Children who have not 'passed' the Year 4 Multiplication Check continue to use TTRS to lower their recall speed as part of targeted teacher intervention.

In school, children are supported to learn their times tables through the use of paper quizzes and the TTRS app.

Paper Quizzes allow pupils to follow a carefully sequenced schedule of multiplication and division practice over the course of several weeks, or months.

The TTRS App provides six main game types which differ according to whether or not the pupils have been set tables to learn.

Teachers should use their professional judgements to decide upon the frequency with which paper quizzes and/or the TTRS App are used so that pupils can commit their age-related facts to long-term memory.

At the start of each academic year, a Baseline check will be conducted with pupil scores being logged in the 'Data' section for each pupil. This check is then repeated every term to measure the progress pupils have made.

At home, children are expected to learn the appropriate multiplication and division facts using the TTRS app and other strategies, outlined on the federation's website.

Tracking Progress

It is vital that the progress of pupil's recall of multiplication and division facts is tracked throughout years 2, 3 and 4. Therefore, it is expected that teachers adhere to the following guidelines:

- ✓ Pupils' scores and times from the 'Baseline' are recorded at the start of the academic year.
- ✓ A subsequent 'Check' at the end of each term, with pupils' scores and times are being recorded.
- ✓ If using the last weekly practice quiz, the score and time for each pupil is recorded.

The subject leader will generate a termly report, tracking the progress pupils are making.

Celebrating Success

With both Numbots and TTRS, we aim to celebrate the success children make to encourage children to keep working hard to progress further and recognise their hard work so far. Certificates will be awarded to pupils who progress through Story Mode (Numbots) until they pass Diamond mode. Whereas in TTRS pupils will receive certificates as they progress from 'Wannabes' to 'Rock Heroes' and for any success in 'battles/ tournaments/ sessions' the class teacher may feel appropriate.

What about those children in Years 5 and 6 who have 'passed' the Year 4 Multiplication Check?

Children who have passed the Year 4 MTC have demonstrated they can recall these number facts with the accuracy and speed required to access the year 5 and 6 curriculum. Therefore, we now aim to deepen children's understanding of these facts by applying them to wider areas of the curriculum.