

## Year 2 Fluency Focus: Number Facts Yearly Overview

10-minute daily fluency session | Autumn, Spring and Summer

### End-of-year expectation

By the end of Year 2, children should have secure and increasingly automatic recall of addition and subtraction facts within 10. They should recall and use addition and subtraction facts to 20 fluently and use known facts to derive related facts up to 100. This includes continued retrieval of the Year 1 fact families (adding/subtracting 0, adding/subtracting 1, doubles and related subtraction, adding/subtracting 2, and bonds to 10 with corresponding subtraction), alongside Year 2 near doubles and their related subtraction facts.

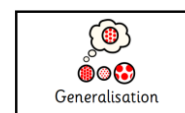
Children should also have automatic recall of multiplication and corresponding division facts for the 2, 5 and 10 times tables. Facts should be taught as connected families so that children see the relationship between multiplication and division, for example  $5 \times 2 = 10$ ,  $2 \times 5 = 10$ ,  $10 \div 5 = 2$  and  $10 \div 2 = 5$ .

### Year 2 facts to be secured

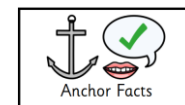
**Additive fluency:** secure automatic recall of addition and subtraction facts within 10; develop fluent recall and use of addition and subtraction facts to 20; and use known facts and place value to derive related facts up to 100. Near doubles are introduced as the Year 2 fact strategy.

**Multiplicative fluency:** secure the 2, 5 and 10 multiplication tables and corresponding division facts. Teach multiplication and division as connected inverse relationships and explicitly connect the 2 times table with recognising odd and even numbers.

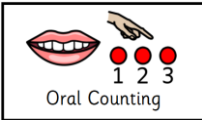
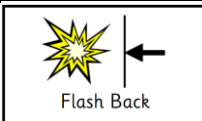
When introducing a new fact family, introduce and explicitly teach the related generalisation.



An anchor fact is a key number fact that we know well and use to help us work out other facts.



### Structure of Fluency Focus!

| Approx. time | Element             |                                                                                     | Purpose                                                                                                                                         |
|--------------|---------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 mins       | Oral Counting       |  | Count forwards/backwards in the current focus. Use chanting, missing numbers, 'what comes next/before?' and pattern spotting.                   |
| 4–5 mins     | Current fact family |  | Explicit oral rehearsal of the current addition facts and corresponding subtraction facts. Encourage children to explain the relationship used. |
| 2–3 mins     | Flash Back          |  | Mix previously taught facts so learning is retained. Include addition, subtraction, missing-number questions and quick-fire recall.             |

### Autumn: weekly teaching sequence

Autumn revisits and secures the Year 1 additive facts, introduces near doubles and establishes automatic recall of the 2 times table and corresponding division facts.

| Week | Counting / multiplicative focus                                                                        | Current fact teaching                                                                                                                                                              | Generalisation                                                                             | Cumulative retrieval                             |
|------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------|
| 1    | Count forwards/backwards in 1s within 100 from varied starting points.                                 | RETRIEVE Year 1: adding/subtracting 0 and 1.                                                                                                                                       | Adding 0 leaves a number unchanged. Adding 1 gives one more; subtracting 1 gives one less. | Year 1 +0 and +1 facts.                          |
| 2    | Count forwards/backwards in 2s from 0 and other multiples of 2. Include counting in steps of 2 from 0. | RETRIEVE Year 1 doubles and corresponding subtraction facts.                                                                                                                       | When we double a number, we add the same number to itself.                                 | +0, +1 and doubles.                              |
| 3    | Count forwards/backwards in 5s. Introduce counting in steps of 3 from 0.                               | RETRIEVE Year 1 adding/subtracting 2.                                                                                                                                              | Adding 2 gives two more; subtracting 2 gives two less.                                     | Earlier Year 1 facts.                            |
| 4    | Count forwards/backwards in 10s. Count in 10s forwards and backwards from any number, e.g. 34, 44, 54. | RETRIEVE bonds to 10 and corresponding subtraction facts.                                                                                                                          | Addition and subtraction are inverse operations and can undo each other.                   | All Year 1 additive facts.                       |
| 5    | Mix counting in 2s, 5s and 10s.                                                                        | Introduce near doubles within 10, e.g. $3 + 4$ , $4 + 5$ .                                                                                                                         | A near double is one more or one less than a known double.                                 | Doubles and earlier additive facts.              |
| 6    | Count in 2s; connect each count to groups of 2.                                                        | Secure near doubles and related subtraction facts.                                                                                                                                 | A known double can help us derive a near-double fact.                                      | Mixed addition/subtraction within 10.            |
| 7    | Count in 2s forwards/backwards; use missing multiples.                                                 | Introduce $2\times$ table as equal groups and repeated addition. Connect multiples of 2 to recognising even numbers; identify odd numbers as not divisible into equal groups of 2. | Multiplying by 2 is the same as doubling. Multiples of 2 are even numbers.                 | Near doubles + mixed additive retrieval.         |
| 8    | Rehearse $2\times$ table in and out of order.                                                          | Secure $2\times$ multiplication facts.                                                                                                                                             | The order of the factors can change without changing the product.                          | $2\times$ facts plus additive facts.             |
| 9    | Count backwards in 2s from 20.                                                                         | Introduce corresponding $\div 2$ facts through sharing/grouping.                                                                                                                   | Multiplication and division are inverse operations.                                        | $2\times$ multiplication + mixed additive facts. |

| Week | Counting / multiplicative focus                  | Current fact teaching                                       | Generalisation                                                                  | Cumulative retrieval                                                     |
|------|--------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 10   | Mixed $2\times$ and $\div 2$ recall.             | Secure $2\times$ and $\div 2$ fact families.                | If we know a multiplication fact, we can use it to know related division facts. | All taught facts.                                                        |
| 11   | Mix counting in 1s, 2s, 5s and 10s.              | CONSOLIDATE additive facts within 10 and $2\times/\div 2$ . | Use known relationships to recall or derive facts efficiently.                  | Mixed retrieval.<br>Begin retrieval of addition/subtraction facts to 20. |
| 12   | Mixed counting and quick-fire $2\times/\div 2$ . | ASSESS AND RETRIEVE Autumn learning.                        |                                                                                 | All Autumn learning.                                                     |

### Spring: weekly teaching sequence

Spring keeps additive facts in cumulative retrieval while securing the 5 and 10 times tables and their corresponding division facts.

| Week | Counting / multiplicative focus                                                                            | Current fact teaching                                                                                                                                                     | Generalisation                                                                                                                                 | Cumulative retrieval                                                                 |
|------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1    | Revisit mixed counting in 2s, 5s and 10s. Include counting in steps of 3 from 0.                           | Secure mixed addition/subtraction facts within 10. Extend retrieval to fluent addition/subtraction facts to 20.                                                           | Known facts can help us derive less familiar facts.                                                                                            | Retrieve $2\times/\div 2$ . Include facts to 20 alongside automatic facts within 10. |
| 2    | Count forwards/backwards in 5s; connect to groups of 5.                                                    | Introduce $5\times$ table as equal groups and repeated addition.                                                                                                          | Multiples of 5 end in 0 or 5.                                                                                                                  | Additive facts + $2\times$ .                                                         |
| 3    | Rehearse $5\times$ facts in order and with missing facts.                                                  | Secure $5\times$ multiplication facts.                                                                                                                                    | Each next multiple of 5 is 5 more.                                                                                                             | $2\times/\div 2$ and additive facts.                                                 |
| 4    | Count backwards in 5s from 50.                                                                             | Introduce corresponding $\div 5$ facts through sharing/grouping.                                                                                                          | Multiplication and division are inverse operations.                                                                                            | $5\times$ multiplication + earlier facts.                                            |
| 5    | Mixed $5\times$ and $\div 5$ recall.                                                                       | Secure $5\times$ and $\div 5$ fact families.                                                                                                                              | A multiplication fact gives us related division facts.                                                                                         | $2\times/\div 2$ + additive facts.                                                   |
| 6    | Compare counting in 2s and 5s. Include counting in 3s from 0.                                              | CONSOLIDATE $2\times/\div 2$ and $5\times/\div 5$ . Use known facts within 10 to derive related facts with multiples of 10, e.g. $4 + 6 = 10 \rightarrow 40 + 60 = 100$ . | Facts can be connected and retrieved in different orders. If I know a fact within 10, place value can help me derive a related fact up to 100. | Mixed additive retrieval.                                                            |
| 7    | Count forwards/backwards in 10s; connect to groups of 10. Count in 10s forwards/backwards from any number. | Introduce $10\times$ table.                                                                                                                                               | Multiplying by 10 makes groups of ten.                                                                                                         | 2s, 5s + additive facts.                                                             |
| 8    | Rehearse $10\times$ facts in and out of order.                                                             | Secure $10\times$ multiplication facts.                                                                                                                                   | Multiples of 10 end in 0.                                                                                                                      | Earlier multiplicative facts.                                                        |
| 9    | Count backwards in 10s from 100.                                                                           | Introduce corresponding $\div 10$ facts.                                                                                                                                  | Multiplication and division are inverse operations.                                                                                            | $10\times$ multiplication + additive facts.                                          |
| 10   | Mixed $10\times$ and $\div 10$ recall.                                                                     | Secure $10\times$ and $\div 10$ fact families.                                                                                                                            | If we know a multiplication fact, we can use it to know related division facts.                                                                | $2\times$ , $5\times$ and additive facts.                                            |
| 11   | Mix counting in 2s, 5s and 10s from varied starting points.                                                | Mix $2\times$ , $5\times$ and $10\times$ multiplication/division facts.                                                                                                   | Use patterns and known relationships to recall facts efficiently.                                                                              | All additive facts. Include addition/subtraction                                     |

| <b>Week</b> | <b>Counting /<br/>multiplicative focus</b>         | <b>Current fact teaching</b>         | <b>Generalisation</b> | <b>Cumulative retrieval</b>              |
|-------------|----------------------------------------------------|--------------------------------------|-----------------------|------------------------------------------|
|             | Mix counting in 2s, 3s, 5s and 10s.                |                                      |                       | facts to 20 and related facts up to 100. |
| 12          | Mixed counting and multiplication/division recall. | ASSESS AND RETRIEVE Spring learning. |                       | All Spring learning.                     |

### Summer: weekly teaching sequence

Summer moves increasingly towards interleaved, mixed retrieval so that children develop automatic recall of additive facts and multiplication/division facts for the 2, 5 and 10 times tables.

| Week | Counting / multiplicative focus                                                                           | Current fact teaching                                                                                                                               | Generalisation                                                                                                                      | Cumulative retrieval                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 1    | Mixed counting in 2s, 5s and 10s.<br>Include counting in 3s from 0.                                       | Retrieve all addition/subtraction facts within 10.<br>Retrieve addition/subtraction facts to 20 as well as automatic facts within 10.               | Fluent recall means knowing facts efficiently without relying on counting.                                                          | 2x, 5x, 10x facts.                                                                                      |
| 2    | Mixed $2\times/\div 2$ quick-fire recall.                                                                 | Mixed additive facts: Year 1 families + near doubles.                                                                                               | Known facts and relationships can be used to derive related facts.                                                                  | 5x and 10x retrieval.<br>Include related facts up to 100, e.g. $3 + 7 = 10 \rightarrow 30 + 70 = 100$ . |
| 3    | Mixed $5\times/\div 5$ quick-fire recall.                                                                 | Mixed multiplication/division fact families.                                                                                                        | Multiplication and division are inverse operations.                                                                                 | Additive facts + $2\times/\div 2$ .                                                                     |
| 4    | Mixed $10\times/\div 10$ quick-fire recall.                                                               | Mixed multiplication/division fact families.                                                                                                        | One multiplication fact can give us related division facts.                                                                         | Additive facts + $5\times/\div 5$ .                                                                     |
| 5    | Switch rapidly between counting in 2s, 5s and 10s.<br>Include rapid switching between 2s, 3s, 5s and 10s. | CONSOLIDATE all 2x, 5x and 10x facts and divisions.                                                                                                 | Look for patterns and relationships rather than counting from the beginning.                                                        | Mixed additive facts.                                                                                   |
| 6    | Count from unfamiliar multiples; include missing numbers.                                                 | Mixed addition/subtraction within 10.<br>Apply known facts to mental calculations: two-digit number $\pm$ ones and $\pm$ tens.                      | Automatic facts can be recalled without working them out.<br>Known number facts can be applied to larger numbers using place value. | Multiplicative retrieval.                                                                               |
| 7    | Missing-number sequences in 2s, 5s and 10s.<br>Include missing-number sequences in 3s.                    | Mixed multiplication/division facts including missing numbers.                                                                                      | Use the inverse to find a missing factor or quotient.                                                                               | Additive retrieval.                                                                                     |
| 8    | Mixed oral counting challenge.                                                                            | Interleave additive and multiplicative facts.<br>Include fluent facts to 20, related facts up to 100, and mental addition/subtraction applications. | Choose an efficient known relationship to help recall a fact.                                                                       | All Year 2 fluency facts.                                                                               |
| 9    | Quick-fire 2x, 5x, 10x and related division.                                                              | Interleave all Year 2 facts.                                                                                                                        | Fluent mathematicians recognise relationships between facts.                                                                        | All Year 2 fluency facts.                                                                               |

| Week | Counting / multiplicative focus                                                                                           | Current fact teaching                                     | Generalisation                                     | Cumulative retrieval      |
|------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|---------------------------|
| 10   | Mixed counting from varied starting points.                                                                               | CONSOLIDATE all Year 2 additive and multiplicative facts. |                                                    | Mixed retrieval.          |
| 11   | Final mixed counting and times-table review.<br>Review counting in steps of 2, 3 and 5 from 0 and in 10s from any number. | ASSESS AND SECURE end-of-year fluency.                    |                                                    | All Year 2 fluency facts. |
| 12   | Targeted retrieval based on assessment.                                                                                   | RETEACH AND SECURE identified gaps.                       | Use the most efficient known fact or relationship. | Individual next steps.    |

## Assessment language

Use the same A / D / C language as the Year 1 assessment so that fluency is tracked consistently across school.

| Code          | Meaning                                                          | What this might look like                                                                                                  |
|---------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| A – Automatic | The child recalls the fact automatically.                        | The answer is given quickly and accurately without needing to work it out.                                                 |
| D – Derived   | The child derives the answer using a known fact or relationship. | For example, uses $4 + 4 = 8$ to know $4 + 5 = 9$ , or uses $5 \times 2 = 10$ to derive $10 \div 2 = 5$ .                  |
| C – Counting  | The child relies on a counting strategy.                         | For example, counts on/back for an additive fact or skip-counts from the beginning to find a multiplication/division fact. |

## Year 2 curriculum fluency coverage

- Additive facts: automatic recall of addition and subtraction facts within 10, fluent recall and use of facts to 20, and derivation of related facts up to 100.
- Multiplicative facts: automatic recall and use of multiplication and division facts for the 2, 5 and 10 times tables, including inverse relationships and commutativity.
- Odd and even: recognise odd and even numbers through the structure of the 2 times table.
- Counting: count in steps of 2, 3 and 5 from 0, and in 10s from any number, forwards and backwards.
- Mental calculation: apply secure facts to a two-digit number  $\pm$  ones, a two-digit number  $\pm$  tens, two two-digit numbers, and three one-digit numbers through cumulative retrieval/Flash Back.