

Watermill School Maths Pathway

| STAGE | | | | |
|--|---|--|---|------------------------------------|
| Pre-Intentional/ Pre-Verbal | Learner Characteristics | Resources | Assessment Tools | White Rose Maths Guidance |
| | <ul style="list-style-type: none"> - Not yet using symbolic communication - Responds to sensory stimuli - Early cause-effect awareness | <ul style="list-style-type: none"> - Sensory stories - Number songs - Objects of reference - Intensive Interaction | <ul style="list-style-type: none"> - Engagement Model - Observational tracking on Evidence for Learning | N/A (not yet at this stage) |
| Early Intentional Communication | Learner Characteristics | Resources | Assessment Tools | White Rose Maths Guidance |
| | <ul style="list-style-type: none"> - Reacts to significant changes of amounts - Independently explores space/their environment - Demonstrates awareness of daily routine and predicts familiar situations - Shows an interest in filling/emptying and stacking, sorting, lining up objects - Joins in with action rhymes and songs | <ul style="list-style-type: none"> - Songs and rhymes - Daily maths opportunities and routines - Equals SOW - Birth to 5 Matters | <ul style="list-style-type: none"> - Engagement Model - Observational tracking on Evidence for Learning - Birth to 5 Matters – Range 1-2 | N/A – building readiness for maths |

Watermill School Maths Pathway

| | (including number songs/rhymes) | | | |
|-------------------------------------|---|--|---|----------------------------------|
| Emergent Mathematician | Learner Characteristics | Resources | Assessment Tools | White Rose Maths Guidance |
| | In meaningful contexts : <ul style="list-style-type: none"> - Uses counting words in play, songs and rhymes and engages in counting-like behaviour - Beginning to demonstrate some cardinality to 3 - Explores shapes, spaces and puzzles - Some learners have a strong interest in number and can recognise numerals but may not have strong cardinality | <ul style="list-style-type: none"> - Songs and rhymes - Storybooks - Daily maths opportunities and routines - Equals SOW - Birth to 5 Matters | <ul style="list-style-type: none"> - Birth to 5 Matters – Range 3-4 - WRM Small Steps - Principles of Counting | Nursery |
| Early Counting Mathematician | Learner Characteristics | Resources | Assessment Tools | White Rose Maths Guidance |
| | <ul style="list-style-type: none"> - Counts up to 5 objects and recognises and matches numerals | <ul style="list-style-type: none"> - Equals Mathematics SOW + other Equals SOW - White Rose Maths Scheme of Learning | <ul style="list-style-type: none"> - Birth to 5 Matters – Range 5-6 - WRM Assessment Checkpoints | Reception |

Watermill School Maths Pathway

| | | | | |
|---|---|--|--|---|
| | <ul style="list-style-type: none"> - Explores mark making to represent numbers and quantity - Joins in with simple linear patterns in the environment | <ul style="list-style-type: none"> - Active Maths - Numicon Breaking Barriers - Numicon Firm Foundations - Calculation Policy - Manipulatives - NCETM - Numberblocks | <ul style="list-style-type: none"> - Principles of Counting | |
| Developing Fluency Mathematician | Learner Characteristics | Resources | Assessment Tools | White Rose Maths Guidance |
| | <ul style="list-style-type: none"> - Counts reliably and has deep understanding of number to 10 - Begins to solve simple reasoning and problem solving questions - Vocabulary developing | <ul style="list-style-type: none"> - Equals Mathematics SOW + other Equals SOW - White Rose Maths Scheme of Learning - Active Maths - Numicon Breaking Barriers - Numicon Firm Foundations - Calculation Policy - manipulatives - Sumdog -NCETM | <ul style="list-style-type: none"> - Birth to 5 Matters – Range 6/ELGs - WRM end-of-block assessments - WRM end-of-term assessments | National Curriculum Year 1+ |
| Problem Solver with Access Needs | Learner Characteristics | Resources | Assessment Tools | White Rose Maths Guidance |
| | <ul style="list-style-type: none"> - Older pupils (KS3/KS4) - May use | <ul style="list-style-type: none"> - iPads and Maths apps/websites - Audio support | <ul style="list-style-type: none"> - Observations on Evidence for Learning - EHCP outcomes | Variable → Base starting point on understanding of |

Watermill School Maths Pathway

| | | | | |
|---------------------------------|---|--|--|---|
| | technology to support access | - alternatives to recording | | concepts not access to formal questions/assessments |
| Functional Mathematician | Learner Characteristics | Resources | Assessment Tools | White Rose Maths Guidance |
| | - Applies maths skills and knowledge in real life contexts - May struggle with abstract concepts | - Equals Mathematics SOW + other Equals SOW - Functional maths tasks - Sumdog - Active Maths - Calculation Policy - manipulatives -NCETM | - WRM end-of-block assessments - WRM end-of-term assessments - Reasoning and problem solving tasks | National Curriculum Year 2 + |

The Principles of Counting

The Science Behind Counting

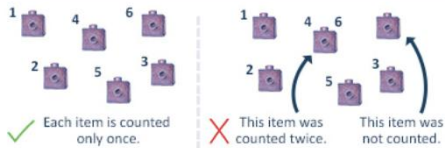
1 Stable Order Principle

When counting, the names of the numbers remain in the same order.



2 One-To-One Principle

Each item in a group is counted once and only once.



3 Cardinal Principle

The final number said when counting represents the total number in a group.



4 Order Irrelevance Principle

The order in which we count items does not matter.



5 The Abstraction Principle

We count the collections of items the same way, regardless of their characteristics.



Non-tangible items like movements or words are counted the same as well.

Subitizing

The ability to accurately determine numerosity without having to consciously count.

