



KS1 Mathematics: Pedagogy on a Page

Grounding mathematical thinking in play — every session, every child, every day

OUR VISION

Curious, confident mathematical thinkers who explore, talk, and reason through play

OUR PRINCIPLE

Concrete experience before pictorial representation before abstract recording

OUR COMMITMENT

Every child — including SEND and disadvantaged pupils — accesses maths through meaningful play

Make and create — concrete mathematical thinking

- Sorting, counting, and grouping real objects
- Making patterns with loose parts and natural materials
- Constructing with 2D and 3D shapes — naming and comparing
- Measuring ingredients, materials, and quantities with purpose
- Adult models mathematical language naturally during making

Build — spatial and structural reasoning

- Comparing height, length, weight, and capacity through building
- Estimating and checking: “how many bricks will it take?”
- Number bonds and addition/subtraction through combining structures
- Symmetry, balance, and positional language embedded naturally
- Adult asks: “How do you know? What would happen if...?”

Draw — pictorial mathematical representation

- Children record mathematical thinking in their own way first
- Drawing to represent quantity, change, and comparison
- Maps, diagrams, and tallies as meaningful child-led recording
- Adult introduces conventional symbols alongside child’s marks
- Transition from pictorial to abstract is child-led, not timed

Message — symbolic and abstract mathematics

- Number sentences emerge from play contexts, not worksheets
- Children write calculations to record what they have already done
- Mathematical vocabulary displayed and used purposefully in provision
- Story problems written by children from their own play experiences
- Recording is the end point of understanding, not the starting point

What a session looks like

- Short whole-class launch (5–10 mins) — hook, concept introduction, key vocabulary
- Extended play in provision (30–40 mins) — adult-guided and child-initiated
- Brief gather and share (5–10 mins) — children explain their mathematical thinking
- Explicit teaching inputs used when concepts need direct instruction

The adult's role during play

- Observe before intervening — notice the mathematics already happening
- Use precise mathematical language naturally in conversation
- Ask: “Can you show me another way?” and “How do you know?”
- Extend thinking — do not simply correct and move on
- Plan provocations in provision linked to current concept focus
- Target interactions with SEND and PP pupils purposefully

When and how recording takes place

- Recording follows understanding — never precedes it
- Photographs, annotations, and adult observations are valid evidence
- Formal written recording introduced gradually through Year 2
- Books capture the journey of thinking, not only correct answers
- No worksheets used as primary learning activity in KS1

Continuous provision enhancements: Each week, provision areas are enhanced with resources and provocations linked to the current mathematical concept focus. Enhancements are planned collaboratively at medium-term planning stage and reviewed through learning walks and pupil voice.

Monitoring and review: Termly learning walks focus on the quality of mathematical talk and child-initiated maths in provision. Pupil voice captures confidence and enjoyment. Staff questionnaires review consistency of approach. Teacher assessment data is reviewed annually against national benchmarks.