



Amethyst representing
creativity, intuition and
wisdom

Mathematics in the Amethyst Pathway



Overview

Mathematics in the Amethyst pathway builds on the foundations of engagement seen in Topaz and moves towards a 'doing and responding curriculum', where children begin to engage in more structured learning while still accessing practical, sensory and play-based experiences.

Children are beginning to:

- Respond to adult direction, modelling and questioning
- Apply skills across contexts
- Develop readiness for more formal learning

Mathematics in Amethyst is driven by:

- Individual EHCP targets (central to all learning)
- Development of early numeracy and problem-solving skills
- Building independence, resilience and confidence
- Preparing children for more structured curriculum learning

Intent: What Maths Should Look Like

Mathematics in Amethyst is:

- Personalised and adapted, centred on EHCP outcomes
- A balance of practical exploration and some structured maths teaching to build readiness for learning
- Embedded within play, routines, and real-life experiences
- Focused on repetition, overlearning and generalisation
- Designed to support children to respond, apply and build understanding

Children develop mathematical understanding through:

- Exploration of number, quantity and pattern
- Use of early mathematical language (e.g. in/out, big/small, more/less)
- Repeated practical experiences across different contexts

- Increasing ability to respond to questions and prompts

Implementation: How Maths is Delivered

1. Maths Across the Day (Continuous Provision)

Mathematics continues to be embedded throughout the day in:

- Heuristic and play-based exploration
- Continuous provision
- Daily routines (snack, transitions, play)
- Sensory and schema-based learning

There is a balance of:

- Incidental learning
- Adult-directed learning

Learning opportunities are:

- Practical and meaningful
- Designed to support application and generalisation

2. Structured Maths Lessons

- Three focused maths lessons per week (KS2) Two focused maths lessons per week (KS1)
- Based on White Rose Maths small steps, matched to the child's level
- Delivered in short, structured sessions to build readiness for learning

Lessons include:

- Clear learning intention
- Visual supports (e.g. now/next, symbols)
- Opportunities for repetition and guided practice

Daily Attention Autism (Bucket sessions) remain in place and can include number and maths-based activities.

3. Individualised Teaching

- EHCP targets are central to all maths teaching
- Targeted 1:1 support is provided where appropriate

Learning is scaffolded to:

- Support understanding
- Encourage independence
- Enable success

Children are supported to:

- Retain skills
- Apply them across different contexts
- Develop increasing independence

4. Teaching Approaches

Mathematics is taught through a balanced approach:

- Practical, hands-on learning
- Adult modelling and questioning
- Short bursts of adult-led teaching
- Continued play-based and sensory experiences

Examples include:

- Sorting and grouping objects
- Filling and emptying (full/empty)
- Matching and comparing
- Counting through song, routine and movement
- Real-life maths (snack, sharing, routines)

Children are:

- Supported to engage
- Guided to respond
- Encouraged to develop understanding

5. Communication in Maths

Mathematics continues to reflect an inclusive communication approach:

- Visual supports (now/next, symbols, choice boards)
- AAC and Makaton
- Consistent adult modelling

Key developments in Amethyst:

- Communication becomes more intentional and consistent
- Introduction of early mathematical vocabulary
- Increased opportunities to respond and communicate choices or understanding

Number songs and actions continue to be used daily to support engagement and understanding.

6. Adult Role in Maths

Adults play a key role in supporting progression and must:

- Follow the child and extend learning
- Use questioning to engage, challenge and develop thinking
- Model mathematical language and concepts
- Provide scaffolding and support
- Balance child-led and adult-directed learning
- Support children to respond, apply and generalise skills

Adults create opportunities for:

- Turn-taking
- Waiting
- Responding to prompts
- Shared learning experiences

Environment: Supporting Mathematical Learning

The environment continues to be:

- Structured but flexible and supportive
- Designed to promote engagement, independence and confidence

Key features include:

- Clear classroom zoning
- Small group teaching areas
- Continuous provision for independent practice
- Visual supports throughout

Mathematics is visible in:

- Play and schema areas (e.g. sorting, filling, connecting)
- Group learning areas (adult-led maths sessions)

- Daily routines and real-life contexts

Children are supported to:

- Engage for longer periods
- Begin to tolerate short adult-led sessions
- Apply learning across different environments

Impact: How Learning is Evidenced

Progress in maths is seen through:

- Increased ability to respond to adult direction and questioning
- Development of early subject-specific skills (numeracy)
- Retention and application of skills over time
- Increased independence and confidence
- Improved communication and understanding

Learning is evidenced through:

- White Rose small steps documentation
- Photographs and observations on Tapestry
- Maths learning journeys
- Recorded incidental learning and adult-led outcomes

Key Principles

- EHCP targets remain central to all learning
- Maths is embedded across the day and taught explicitly
- Repetition and overlearning drive progress
- Learning must be engaging, practical and meaningful
- Focus on application and generalisation of skills
- Children move from engagement towards responding and understanding

What You Should See in an Amethyst Classroom

- A balance of child-led exploration and adult-guided learning
- Children actively engaged and beginning to respond to teaching
- Short, structured maths sessions taking place

- Maths embedded in play, routines and real-life contexts
- Use of visuals, AAC, and mathematical language
- Adults modelling, questioning and extending learning
- Increasing independence, confidence and participation

Mathematics in the Amethyst pathway supports children to move from engagement-based learning towards structured understanding, developing the skills, confidence and knowledge needed for the next stage of their education and for life.