



Topaz representing
communication,
emotional peace &
positive interactions



Mathematics in the Topaz Pathway

Overview

Mathematics within the Topaz pathway looks very different from a traditional subject-led model. It sits within a 'doing curriculum', where learning is rooted in play, exploration, communication and engagement. Children are typically working within the iASEND Engagement Model ('A' curriculum) and learning is evidenced through engagement, interaction, and repeated experience rather than formal outcomes.

Mathematics in Topaz is driven by:

- Individual EHCP targets
- Developing early mathematical awareness through experience and exploration
- Building engagement, attention, and communication as foundations for mathematical learning
- Preparing children for real-life mathematical understanding and independence

Intent: What Maths Should Look Like

Mathematics in Topaz is:

- Highly personalised and centred on each child's EHCP outcomes
- A practical, sensory-rich experience rather than formal recording
- Embedded within play, routines and everyday activities
- Focused on overlearning, repetition and familiar experiences
- Designed to support regulation, engagement and connection before expectation

Children develop early mathematical understanding through:

- Cause and effect
- Object permanence
- Exploration of quantity, size, space and pattern
- Familiar routines (e.g. snack time, transitions, songs)

Implementation: How Maths is Delivered

1. Daily Mathematical Experiences

Mathematics is not confined to discrete lessons. It should be visible throughout the day in:

- Heuristic play and exploration areas
- Continuous provision
- Daily routines (snack, transitions, play)
- Sensory and engagement activities

Heuristic and maths-based play opportunities must be available daily.

2. Individualised Teaching – can occur as and when appropriate **it is not a requirement.**

- Children can access 1:1 maths learning throughout the day/week– this can look different according to each child's individual needs and intrinsic motivation. This can be delivered at the discretion of the

class teacher in a number of ways both inside and outside of the classroom, on the carpet, at a table etc

- Learning can follow White Rose Maths small steps, adapted to the child's developmental level
- Focus is on:
 - Repetition
 - Consolidation (overlearning)
 - Practical application

3. Teaching Approaches

Mathematical learning is:

- Hands-on and practical
- Supported through concrete apparatus (objects, real items, sensory materials)
- Embedded within play and engagement
- Delivered with no pressure to complete tasks – engagement is the priority

Examples include:

- Filling and emptying containers
- Sorting and matching objects
- Cause-and-effect toys
- Water, sand and sensory play
- Counting through movement or songs

4. Communication and Engagement

Mathematics is taught through an inclusive communication approach:

- Use of objects of reference, visuals, AAC and Makaton
- Number songs and actions used daily
- Adults model language without expectation
- Visuals are consistently used to support understanding

5. Adult Role in Maths

Adults play a critical role and must:

- Follow the child's lead
- Use skilful questioning to engage and extend thinking
- Model mathematical language naturally
- Allow processing time
- Recognise and respond to moments of engagement
- Embed maths within shared experiences and play

Attention Autism (Bucket) sessions take place daily and can be number or maths-focused, supporting shared attention and engagement.

Environment: Supporting Mathematical Learning

The classroom environment should:

- Promote exploration, curiosity and independence
- Include zoned areas such as heuristic play, engagement stations and sensory circuits
- Provide low demand opportunities to explore mathematical concepts

- Reduce overload and support regulation

Mathematical learning is often seen in:

- Heuristic exploration (sorting, comparing, investigating)
- Engagement stations (cause and effect)
- Sensory circuits (counting actions, sequencing)

Impact: How Learning is Evidenced

Progress in maths is seen through:

- Increased engagement and sustained attention
- Repeated exploration and familiarity
- Emerging understanding of cause and effect
- Development of early concepts (e.g. more/less, full/empty)

Learning is evidenced through:

- White Rose small steps documents
- Photographs and observations on Tapestry
- Maths learning journeys
- Recorded moments of incidental learning

Key Principles to Remember

- Maths is everywhere, not just in lessons
- Engagement comes before learning
- Learning must be fun, motivating and meaningful
- Overlearning is essential for progress
- Focus on real-life skills and independence
- Every interaction is an opportunity for mathematical development

What You Should See in a Topaz Classroom

- Children actively exploring, not sitting at desks
- Adults interacting, modelling and supporting
- Maths embedded in play, routines and sensory experiences
- Use of songs, visuals and objects of reference
- Individualised learning happening at each child's level
- Engagement, enjoyment and curiosity at the centre of learning

This approach ensures that mathematics in Topaz builds the foundations for understanding, communication, and lifelong learning, preparing children for the next stage of their education and for real-world experiences.