Intent: Maths at New Horizons Academy

At New Horizons Academy, we are committed to fostering a robust, ambitious and enriching Mathematics curriculum. Whilst aligning with the National Curriculum, we also recognise the unique needs and circumstances of our learners and so aim to meet these through an adaptive yet challenging and progressive curriculum. In addition, we aim to efficiently identify and address the needs of our learners when joining us and through regular assessment and targeted intervention, enable our learners to engage successfully with their learning and make positive progress.

Our intent is to:

- **Engage and Empower:** Create a learning environment where all students feel valued and excited about Mathematics, encouraging a positive attitude towards the subject and bolstering their confidence.
- **Provide Personalised Learning:** Tailor our Maths curriculum to meet the diverse needs of our learners, including those with varying abilities and backgrounds, ensuring that every student has equal access to a high-quality education.
- **Offer Opportunities for Real-World Application:** Equip students with practical skills and knowledge that can be applied in real-life situations, fostering an understanding of the relevance of Mathematics in everyday life and future employment opportunities.
- **Promote Growth Mindset:** Promote a culture of resilience and a growth mindset, encouraging students to embrace challenges, learn from mistakes, and develop a love for problem-solving.

Ultimately, we aim to prepare our pupils with the appropriate skills and understanding to better support their next stage in education whilst engaging our learners and improving their confidence and resilience.

Implementation: Maths at New Horizons Academy

We deliver a Maths curriculum using the White Rose Maths scheme, which is then adapted to be highly responsive to the fluid nature of our student population.

We utilise the Concrete-Pictorial-Abstract (CPA) approach to ensure deep understanding. Many of our learners arrive with gaps in conceptual understanding; we use physical manipulatives (concrete) and visual models (pictorial) to help build pupils' foundational knowledge and understanding to enable them to successfully access formal calculations (abstract). Through this structure, we ensure that mathematical foundations are secure. Our adapted curriculum focuses on our pupils' ability to: learn number facts, count and calculate, describe time, size and shape using correct mathematical vocabulary.

The maths curriculum map below provides a general overview of the topics delivered with adaptations made to the White Rose scheme of work where necessary to ensure our pupils are challenged and learning is pitched correctly.

Review lessons at the beginning of each term as well as consolidation and assessment sessions at the end of terms are planned into our curriculum overview to allow for learners to revisit their learning and provide time for them to 'showcase' their learning in order to support our continuous AFL cycle, allowing staff to better pinpoint the needs of pupils. Certain maths topics are taught and revisited throughout the year to support a spiral curriculum approach where pupils are able to again revisit prior learning' this also enables pupils joining us partway through the year to access key knowledge and develop key skills in areas they may have previously not been able to access.

Identifying and Bridging Gaps

- Baseline on Entry: Recognising that students join us at various points in the school year, we conduct baseline assessments to identify learning levels and needs as well as utilising ongoing formative and summative assessment to support continuous progression.
- Targeted Intervention: We use the White Rose Maths Intervention Programme to provide bespoke support. This involves small-group or 1:1 sessions designed to "bridge the gap" in prerequisite knowledge, allowing students to re-join their peers in age-related learning as quickly as possible.

- Retrieval Practice: Every lesson begins with retrieval practice to consolidate previous learning and ensure knowledge is transferred to long-term memory.

Adaptive Delivery

- Small Steps: We break down learning into the WRM "small steps" to prevent cognitive overload and provide frequent opportunities for success, which is vital for building the confidence of learners who have previously struggled.
- Real-World Context: We wrap mathematical concepts in functional, real-life scenarios—such as budgeting, cooking, or sports statistics—to answer the "Why are we doing this?" question and increase engagement.

Mathematical Talk and Oracy

We encourage students to "reason" aloud. By using sentence stems and mathematical vocabulary prompts, we help pupils move beyond just "finding the answer" to explaining their thinking, which fosters deeper critical thinking skills.

Impact: Maths at New Horizons Academy

The impact of our curriculum is measured by the growth in our students' mathematical competence and, crucially, their confidence and resilience to engage with challenges.

Accelerated Progress from Individual Starting Points

Due to our robust intervention and small-step approach, students make significant progress from their respective starting points. We measure success by the "narrowing of the gap" between their chronological age and their mathematical attainment.

Reduction in "Maths Anxiety"

The most immediate impact is a visible shift in attitude. Learners who arrive with a "can't do" mindset develop a 'Growth Mindset'.

They become willing to make mistakes, use manipulatives to solve problems independently, and show increased resilience when faced with unfamiliar questions.

Functional Fluency

Our students leave us with the practical mathematical skills required for the next stage of their life. Whether transitioning back to a mainstream setting, moving to specialist settings or transitioning to secondary education, they can apply their knowledge of number, measure, and data to real-world situations with confidence.

Success in Reasoning and Problem Solving

Impact is evidenced by students moving beyond simple fluency. They develop the ability to approach multi-step problems logically. This development in computational thinking has a "knock-on" effect, improving their problem-solving skills in other subjects and in their social interactions.

Data-Informed Success

We see and assess impact through:

- Formative Assessment: Daily success in small steps
- Summative Assessment: Progress in termly WRM standardized tests.
- Student Voice: Pupils expressing a sense of pride in their mathematical achievements and a newfound "love for the subject."

New Horizons Academy

NHA Maths Vision Whole School Overview