Maths Policy 26/27

The school is committed to reviewing this policy regularly to ensure it remains compliant with current legislation, statutory guidance, and best practice.

School Name: The Kassia Academy Fallowfield Grove, Longbarn, Warrington, WA2 0QQ.

Address: Fallowfield Grove, Longbarn, Warrington, WA2 0QQ

Telephone: 01925 452010

This document is classified as a controlled document. Printed copies may not be the most up-to-date version. The latest version is available from the school.

Mathematics curriculum intent

Mathematics is fundamental. From money management to measuring when cooking, driving a car to decorating a room, it can be seen in all aspects of everyday life. The beauty of Mathematics can be seen in art and nature and it is critical to most forms of employment including science, engineering, finance and construction. At Kassia Academy, it is our intent to foster a love of Mathematics whilst creating a foundation for understanding the world, developing critical problem solving and reasoning skills, cultivating enquiring minds and building independence. The aim of the curriculum is to create fluency between mathematical ideas regardless of background and starting points. Throughout the key stage 3 and key stage 4 curriculum, it is important that students are supported and lessons sequenced in such a way that information is reviewed and key concepts, known as Golden Threads, are revisited so that key learning is built upon progressively and any gaps in knowledge are filled. The Golden Threads in Mathematics include: Balancing, Skills for life, analysing data, keeping things in proportion and Defining properties

Our curriculum aims to:

All students in key stage 3 and key stage 4 follow the National Curriculum. These are set out by the National framework and are organised in five main Mathematics strands. The areas covered are: Number, Ratio and Proportion, Algebra, Geometry and Measures and Probability and Statistics.

In key stage 3, we build upon mathematical skills each year, checking that the foundations of each skill are secure before extending; enabling students to recall and retrieve prior knowledge. All students have the same opportunities to access the content delivered and are stretched in every area.

To support the delivery of our curriculum, we use pre and post testing of each unit to ensure that our students are accessing a programme that is tailored to their needs. Termly assessment weeks are in place to ensure key areas are revisited and to support students' recall and retrieval.

In key stage 4, the curriculum allows students to further their progress by using the fundamentals gained in key stage 3 to underpin the new content learnt, checking that the foundations of each skill are secure and enabling the students to recall and retrieve prior knowledge. As with key stage 3, a combination of pre and post testing is in place for each unit. Mock examinations are also in place in November and March of both year 10 and 11 to give the pupils the experience of a formal examinations with the aim to reduce anxieties before the official examinations in May and June. There are three levels of entry: Entry level, GCSE foundation level and GCSE higher level. All pupils complete the Entry level qualification which consists of eight components: properties of number, the four operations, ratio, money, the calendar and time, measures, geometry and statistics. These are completed throughout the school year in line with the topics taught at GCSE level.

Implementation

At Kassia Academy, the mathematics curriculum is implemented through carefully planned, structured, and adaptive teaching approaches that ensure all learners can access learning successfully and make progress from their individual starting points. Teaching is designed to support learners within an SEMH and alternative provision context through high levels of consistency, positive relationships, and carefully sequenced learning experiences.

The mathematics curriculum is delivered in a logical sequence which builds progressively on prior knowledge and National Curriculum expectations. Teachers revisit and consolidate key concepts regularly to strengthen long-term memory, develop fluency, and support learners in applying mathematical knowledge with increasing confidence and independence.

Lessons are planned to:

- Present new learning in small, manageable steps
- Reduce cognitive overload through clear explanations and modelling
- Provide opportunities for guided and independent practice
- Use retrieval practice and repetition to support retention of knowledge
- Develop fluency, reasoning, and problem-solving skills
- Encourage learners to explain their thinking and mathematical reasoning
- Apply mathematics within practical, vocational, and real-life contexts
- Build learner confidence, resilience, and engagement within mathematics

Teaching approaches are adaptive and responsive to learners' individual needs. Staff use scaffolding, differentiation, modelling, questioning, manipulatives, and visual representations to ensure learning is accessible whilst maintaining ambition and challenge for all learners.

Positive relationships and consistent classroom routines are central to implementation at Kassia Academy. Staff create calm, structured, and supportive learning environments where learners feel safe to ask questions, take risks in their learning, and develop resilience when approaching challenge and problem solving.

Assessment is integrated effectively within lessons through questioning, retrieval activities, low-stakes quizzes, teacher assessment, and feedback. Assessment information is used to identify gaps in learning, inform planning, adapt teaching, and implement targeted interventions where required.

At Key Stage 3, learners follow a broad and balanced curriculum aligned to National Curriculum expectations and adapted appropriately for learner need. At Key Stage 4, learners access suitable qualification pathways including GCSE Mathematics, Entry Level Mathematics, and personalised pathways where appropriate.

Practical resources, manipulatives, and structured support are used where appropriate to strengthen conceptual understanding and learner engagement. Opportunities for literacy, numeracy, communication, and oracy development are embedded throughout mathematics lessons to support learners in explaining reasoning, interpreting information, and developing mathematical vocabulary.

The implementation of the mathematics curriculum is regularly monitored through lesson observations, learning walks, work scrutiny, assessment analysis, learner voice, and curriculum reviews to ensure consistency, quality, and continual improvement across the department.

Assessment

Assessment within mathematics is used to monitor learner progress, identify gaps in knowledge and understanding, inform future planning, and support targeted intervention strategies. A range of formative and summative assessment approaches are used to ensure that learners make progress

from their individual starting points and are supported appropriately throughout their learning journey.

Assessment information enables staff to adapt teaching, provide additional support or challenge where required, and ensure learners are working towards appropriate qualification pathways and outcomes. Regular assessment also supports the identification of misconceptions, informs curriculum development, and contributes to effective tracking of learner attainment and progress over time.

Assessment methods include:

- Retrieval activities and low-stakes quizzes
- Teacher assessment and questioning
- End of topic assessments
- Mock examinations at Key Stage 4
- Observation of learner understanding and participation
- Comparative assessment using the Kings Level framework at Key Stage 3

At Key Stage 3, learners are assessed using the Kings Level Assessment Model, where levels broadly align with Year 1–9 expectations and are broken down into Emerging, Developing, and Securing stages.

At Key Stage 4, progress is monitored through teacher assessment, examination preparation, mock examinations, and qualification-based assessment criteria.

Assessment information is used to identify learners who require additional intervention, scaffolding, stretch, or personalised support.

Literacy, Numeracy and Communication

At Kassia Academy, the development of literacy, numeracy, and communication skills is recognised as a fundamental part of learners' educational entitlement and wider personal development. These skills are embedded across the curriculum to ensure learners are able to access learning successfully, communicate effectively, think critically, and apply knowledge within a range of academic, vocational, and real-life contexts.

Staff explicitly teach and reinforce subject-specific vocabulary, reading, writing, speaking, listening, and numeracy skills across all curriculum areas. Opportunities are planned to enable learners to develop confidence in communication, articulate their ideas clearly, and apply mathematical and literacy skills within meaningful contexts.

Teaching and learning across the curriculum support learners to:

- Read accurately and understand a range of texts and information
- Develop and use appropriate subject-specific vocabulary
- Communicate ideas effectively through speaking and writing
- Participate confidently in discussion, questioning, and collaborative learning
- Apply numeracy skills across the curriculum and within everyday contexts
- Interpret information presented through graphs, tables, charts, and data
- Develop reasoning, analytical, and problem-solving skills
- Improve accuracy, presentation, and organisation within their work

Opportunities for oracy and communication are embedded throughout lessons to support learners in explaining their thinking, expressing opinions, and engaging positively with learning. Staff model appropriate language and provide structured opportunities for learners to develop confidence in speaking, listening, and discussion.

Numeracy is reinforced across the curriculum to help learners understand the relevance and application of mathematical skills within science, vocational learning, finance, technology, enterprise, and wider life experiences.

At Kassia Academy, literacy, numeracy, and communication development are supported through adaptive teaching approaches, scaffolding, modelling, repetition, and structured support to ensure that learners with SEND, SEMH needs, disrupted educational experiences, or gaps in prior learning are able to access the curriculum and make progress from their individual starting points.

Inclusion and Adaptive Practice

At Kassia Academy, we are committed to ensuring that all learners can access, engage with, and succeed within mathematics regardless of prior attainment, attendance history, SEND, SEMH needs, or previous educational experiences. We recognise that many learners may arrive with gaps in learning, low confidence, disrupted educational backgrounds, or negative experiences of mathematics, and therefore teaching approaches are carefully adapted to meet individual needs.

Mathematics lessons are designed to be inclusive, supportive, and accessible, enabling learners to make progress from their individual starting points whilst maintaining high expectations and academic ambition.

Teaching approaches include:

- Adaptive teaching strategies tailored to individual learner needs
- Scaffolded and differentiated learning activities
- Flexible pacing to allow learners sufficient time to secure understanding
- High levels of adult support where appropriate
- Small-step teaching approaches to reduce cognitive overload
- Practical, visual, and hands-on learning opportunities
- Use of manipulatives and modelling to support conceptual understanding
- Retrieval practice and repetition to strengthen long-term memory
- Positive behaviour support and trauma-informed practice
- Clear routines and structured learning environments

Staff work proactively to rebuild learner confidence and support pupils in overcoming barriers to mathematical learning. Positive relationships are central to successful engagement within mathematics lessons, with staff creating calm, consistent, and supportive classroom environments where learners feel safe to ask questions, take risks in their learning, and experience success.

At Kassia Academy, we believe that all learners are capable of achieving within mathematics when provided with appropriate support, encouragement, and adaptive teaching approaches that recognise their individual strengths, needs, and starting points.

Behaviour and Learning Environment

At Kassia Academy, mathematics classrooms promote calm, structured, inclusive, and purposeful learning environments where learners feel safe, respected, supported, and able to engage positively with learning. We recognise that positive relationships and consistent routines are essential in supporting learners within an SEMH and alternative provision context to build confidence, resilience, and successful learning behaviours.

Staff maintain high expectations of behaviour, engagement, presentation, and effort whilst using supportive, relational, and trauma-informed approaches to encourage positive attitudes towards mathematics and learning more widely.

Staff consistently promote:

- High expectations of behaviour, participation, and engagement
- Clear routines, boundaries, and predictable classroom structures
- Positive reinforcement, praise, and recognition of success
- Consistent approaches aligned with the school Behaviour Policy
- Trauma-informed and relational practice
- Respectful communication and positive interactions
- Safe opportunities for learners to take risks within their learning
- Independence, resilience, and perseverance when solving problems

Mathematics lessons are designed to encourage learners to ask questions, explain their thinking, and approach challenge positively without fear of failure. Staff support learners to develop confidence in problem solving and reasoning through scaffolded learning, encouragement, and carefully sequenced activities.

At Kassia Academy, we aim to create mathematics classrooms where learners feel motivated, supported, and able to experience success, helping to rebuild positive attitudes towards education and learning.

Monitoring and Quality Assurance

The quality of mathematics teaching, learning, assessment, and curriculum implementation at Kassia Academy is monitored regularly to ensure consistency, high expectations, and continual improvement across the department. Monitoring activities are designed to support staff development, strengthen curriculum delivery, improve learner engagement, and raise outcomes for all learners.

A range of quality assurance activities are used to evaluate the effectiveness of the mathematics curriculum and identify strengths, areas for development, and appropriate support strategies.

Monitoring activities include:

- Lesson observations and learning walks
- Book looks and work scrutiny
- Curriculum reviews and departmental health checks
- Assessment analysis, progress tracking, and data reviews
- Learner voice and engagement discussions
- Monitoring of behaviour for learning and classroom climate

- Review of curriculum sequencing, planning, and coverage
- Staff coaching, instructional coaching, and CPD opportunities
- Moderation and review of assessment practices where appropriate

Monitoring activities are carried out by senior leaders, subject leads, and relevant staff in line with the Kings Academy Trust monitoring calendar. Findings from quality assurance processes are used to inform departmental action planning, curriculum refinement, intervention strategies, and professional development priorities.

Assessment information and monitoring outcomes are used to identify gaps in learning, support targeted interventions, and ensure that learners are progressing appropriately towards their individual targets and qualification pathways.

At Kassia Academy, monitoring and quality assurance processes are intended to promote reflective practice, support continual improvement, and ensure that all learners receive high-quality mathematics teaching that meets their individual needs and supports positive educational outcomes.

Outcomes

Through the mathematics curriculum at Kassia Academy, learners will develop confidence, resilience, and independence within mathematics whilst securing the core knowledge, fluency, reasoning, and problem-solving skills needed for success both within and beyond the classroom. Learners will be supported to apply mathematical understanding within real-life and vocational contexts, helping them recognise the relevance and importance of mathematics within everyday life, further education, employment, and wider society.

The curriculum aims to ensure that all learners achieve appropriate qualifications and accreditation pathways which reflect their individual starting points, needs, and aspirations. Through carefully sequenced teaching, adaptive practice, and supportive relationships, learners are encouraged to re-engage positively with mathematics and experience success within their learning.

At Kassia Academy, our ambition is for all learners to leave with the mathematical understanding, confidence, resilience, and transferable skills required to progress successfully into further education, training, employment, and adult life, enabling them to participate positively and independently within modern society.

Summary of SEND Impact in Mathematics

Learners with SEND at Kassia Academy are supported through adaptive teaching approaches, personalised learning strategies, and carefully scaffolded mathematics provision designed to meet a wide range of additional needs and starting points. The mathematics curriculum is structured to reduce barriers to learning whilst maintaining high expectations and promoting progress, confidence, and engagement for all learners.

Many learners with SEND present with gaps in prior learning, difficulties with retention, processing, attention, literacy, numeracy fluency, or emotional regulation. As a result, mathematics lessons are carefully adapted through small-step teaching, repetition, retrieval practice, visual supports, practical resources, modelling, and structured routines to support understanding and reduce cognitive overload.

Positive relationships and consistent classroom approaches play a significant role in supporting SEND learners to engage successfully within mathematics lessons. Staff use trauma-informed and relational practice to help learners feel safe, supported, and confident to take risks within their learning.

Targeted interventions, additional adult support, differentiated tasks, and flexible pacing enable learners to access the curriculum at an appropriate level whilst continuing to develop mathematical fluency, reasoning, and problem-solving skills. Assessment information is used regularly to identify gaps in knowledge and inform personalised support strategies.