



Mathematics Curriculum Intent

Subject Vision

We believe mathematical intelligence is expandable and that every child can learn mathematics given the appropriate learning experiences within and beyond the classroom. We aim to develop a love of mathematics and are committed to broadening students' understanding of the core mathematical facts and powerful methods that are sequenced together to reflect the reciprocal learning relationship between them. We aim to equip students with numeracy skills in order to solve problems and reason mathematically and then use these skills in a wider context. In doing the above we should create successful learners who are confident mathematicians that enjoy the subject.

We deliver our curriculum intent on a subject level by:

Stimulating an interest and enjoyment of mathematics. Encouraging a culture of questioning and feeding the natural inquisitiveness of students. We aspire to provide the opportunity for all students to develop an awareness of the relevance of maths to real life that will enable students to contribute positively to society. Further rationale behind our curriculum design includes trying to embed learning into students' longer term memory by having a spiral curriculum. As such each time students revisit an area they are exposed to more complex content, building on what they have already learnt. We believe that knowledge underpins and enables the application of skills. As a department we help define the powerful knowledge our students need and help them recall it by use of knowledge organisers and regular fact checks.

At KS3 our curriculum map is sequenced with fewer topics each week, term or year, putting depth before breadth. Research identifies that spending longer on each topic enables students to really think and talk about the mathematics they are learning and gain a greater level of understanding. This enables them to make greater progress in the longer term. We sequence concepts and methods so that previously learnt ideas can be connected to new learning, supporting students in understanding the coherent and connected nature of the subject, and ensuring they consolidate learning by continually using and applying it in a variety of contexts.

Our KS4 curriculum is designed to build upon the knowledge and skills learnt at KS3. At this stage in the curriculum, students will now be following a foundation or higher tier scheme of work. The main aims are

to deepen students understanding through regularly revisiting content in different contexts. This is supported by the use of regular low-stakes testing across this key stage.

In KS5 the theme continues, however greater importance is now placed on the links to application outside of the classroom, reasoning and problem solving. This is possible due to how quickly the Advanced Level students can absorb the declarative knowledge (facts and formulae) and therefore their working memory is not being overloaded when engaging with the conditional knowledge.

At Helsby we enrich our mathematics curriculum by offering further opportunities for students to study mathematics, whether this is during lunchtime enrichment clubs, competing in national challenges or trips to inspiration events. We also look to use external resources to enhance our mathematics provision at Helsby via websites or University visits.

In Mathematics, students '**Achieve success**' by:

Encouraging high aspiration and a love of learning	<ul style="list-style-type: none"> • Students in all key stages are challenged to exceed their own Target Grades and reflect on how to improve their work. • Students engage with a variety of stimulating independent learning resources which enhance their learning. • Our mathematics curriculum helps students to gain enjoyment through a growing self-confidence in their ability.
Maximising progress and potential	<ul style="list-style-type: none"> • Key skills and knowledge are constantly revisited. • Students' progress is constantly monitored and reviewed to ensure we are meeting their needs.
Providing rewarding learning experiences	<ul style="list-style-type: none"> • By having a carefully planned curriculum that enables students to develop new skills through a variety of interesting contexts to foster enjoyment.
Offering diverse opportunities	<ul style="list-style-type: none"> • Students across all key stages are offered enrichment opportunities at

	<p>lunchtime or after school, in addition to the national challenges, trips or visits by external institutions.</p>
<p>Recognising and celebrating all achievement</p>	<ul style="list-style-type: none"> • A positive attitude towards mathematics is the outcome of success in the subject, especially if students are aware of their success. We ensure students get continual verbal feedback, regular praise during lessons, and written feedback on regular low-stakes testing and more formal summative assessments.

In Mathematics, students '**Value Others**' by:

<p>Contributing to a safe school environment</p>	<ul style="list-style-type: none"> • All students are reminded and encouraged of the school values and rules whilst in mathematics. • Students regularly display kind and considerate behaviour ensuring that others feel safe in lessons.
<p>Showing tolerance, respect and fairness</p>	<ul style="list-style-type: none"> • By understanding that others acquire knowledge at different times and pace, students are respectful and kind when others ask for assistance or a further explanation.
<p>Listening to and respecting others' views</p>	<ul style="list-style-type: none"> • Students regularly show compassion and understanding through listening to others' ideas and questions during discussions in mathematics.
<p>Appreciating and embracing diversity</p>	<ul style="list-style-type: none"> • Students appreciate that not all students have the same ability or opinions. Students are exposed to this regularly when offering different methods or solutions to the same problem, and everyone feels their contribution is valued.

<p>Being an active member of our school and local community</p>	<ul style="list-style-type: none">• Students in KS3 assist with primary school Big Maths Roadshow. KS4 and KS5 students support younger students with their mathematical understanding at lunch, after school or sometimes even during lessons.
<p>Co-operating with others</p>	<ul style="list-style-type: none">• Many of the tasks carried out in mathematics can involve group work. Some puzzles and problem solving games help students foster an understanding and collaborative nature which ensures cooperation and enables them to succeed with tasks.