

MATHS YEAR 7: ARITHMETIC, ALGEBRA, SEQUENCES AND GRAPHS

Curriculum core purpose. Intent

How does this curriculum fit into the OBHS Curriculum Specification?

In year 7 Maths is focused on number and algebra. As number and algebra are interrelated concepts they are naturally linked to sequences and graphs which are taught at the same time. Numeracy is assessed at the beginning and end of year 7 and areas of weakness are addressed throughout the year. Students in set 5 follow a simplified curriculum where the focus is basic numeracy and algebra.

How is this linked to prior learning? How do units/ topics/ chunks fit together to form the curriculum narrative and prepare students for the next phase of their learning?

The year 7 scheme of work is intended to build on prior knowledge at Key Stage 2. Whilst the Autumn term content overlaps with that at KS2 a mixture of consolidation, extension and mastery is employed.

Year 7 set 5 follow an adapted version of the 'white rose' scheme of work used at local Primary schools. They complete the baseline test from Numicon 'big ideas' pack which informs us of the areas to focus on.

How does this curriculum respond to local and national agendas (e.g. SMSC and BV)?

Topics are not taught in isolation they are linked wherever possible to real life context and across other areas of the curriculum.

Content-Knowledge and Skills.

The year 7 curriculum can be summarised as follows:

Support and Core:

As a brief outline the scheme can be summarised as follows;

Arithmetic (all four operations), proportion and ratio, measure, percentages / decimals /fractions and their equivalence, order of operations, fraction and decimals arithmetic.

Basic algebra – symbolic representation, algebraic manipulation, patterns and generalising, graphical representation, substitution and solving equations.

Depending on the ability of the maths set would depend on which level of scheme of learning is mainly followed.

Through differentiation when understanding is secure, teachers are encouraged to extend the challenge of each topic to minimise a gap forming between sets.

Subject specific pedagogy

Mastery of each topic and extension is given to achieve greater depth. Open discussion of how problems can be tackled are encouraged.

Resources and support

Basic scaffolding of worked examples, notes and questions is given from various sources and formats to support all students in their understanding.
A Concrete, Pictorial, Abstract approach is taken. Manipulatives such as multilink cubes, playing cards, number lines are encouraged to enable students to visualise new concepts. Online resources include MyMaths, PiXL, mathsbox and white rose SoL and resources.

Feedback, assessment and progress.	Habits
<p>Students are formally assessed at the end of each term based on the scheme of learning. Each assessment is cumulative so that the complexity increases throughout the year. Student's exercise books are marked on a two / three week cycle and feedback is given in a number of ways: students are encouraged to self and peer assess by green pen marking of their own work for instant feedback. Whilst marking, teachers will periodically model solutions where a consistent mistake is made and complete a green sheet at the end of the student's work indicating 'next steps', which are then reviewed in the next two marking cycle as per policy. Topics are then re-taught by the teacher following the exercise books being returned as appropriate and students complete personalised DIRT work according to the feedback. DIRT work can be consolidation, application or extension depending on the level of understanding of the student. This may be of the form of consolidation but those secure in their understanding may be extension.</p> <p>Assessment, feedback from student voice and from teachers leads to changes in the scheme of learning and this is reviewed on a yearly basis. Assessments are moderated initially within department to gauge their effectiveness and at SET department meetings.</p>	<p>In year 7 subject knowledge will be developing and with the struggles sessions their focus is on collaboration. The skills that we are looking for students to develop are;</p> <ul style="list-style-type: none">● Students to learn from their mistakes whilst sharing subject knowledge with their peers. <p>These skills will be highlighted in lessons, taught and practiced.</p>