

Knowledge

Using the White Rose Maths Scheme from KS1 through to KS4 enables the department to build a culture of deep understanding, confidence and competence in maths – a culture that produces strong, secure learning and real progress for all pupils.

A mastery approach is achieved through the constant reinforcement of learning using different representations to aid understanding: concrete, pictorial and abstract.

In order to embed prior knowledge into pupils' long-term memory, the department consistently uses the following techniques:

- “Flashback 4” at the beginning of lessons;
- Knowledge organisers to help students learning and as a quick overview of the topic for revision purposes,
- Links to real-life situations, previous experiences and cross-curricular connections.

Diversity

Teachers ensure that resources reference a wide range of different scenarios, reflecting the diverse nature of society. As a result, pupils can “see themselves” in the curriculum and feel more connected to the subject matter.

A departmental display feature mathematical role models of different genders and ethnic backgrounds.

Career presentations are provided every half term, linking to topics taught and pupils' own aspirations/ ambitions.

Cultural Capital

Through the curriculum and additional opportunities, Mathematics provides the accumulation of knowledge, behaviours, and skills that a student can draw upon through life:

- Real life application of abstract mathematical concepts
- The opportunity to enter the UK maths challenges and the University of Leeds challenge.
- Number day. An annual event that challenges pupils' thinking across the through school.

Vocabulary

The way students speak and write about mathematics has been shown to have an impact on their success in mathematics (Morgan, 1995; Gergen, 1995).

A carefully sequenced, structured approach to introducing and reinforcing mathematical vocabulary throughout maths lessons is taken, so all pupils, from the earliest point in their learning, can work with word problems.

Every Maths lesson provides opportunities for students to develop mathematical language.

As they progress through the school, pupils revisit mathematical language from previous years, clarify their understanding and explore concepts in greater depth.

Every Maths classroom has a curriculum wall showing key vocabulary being used.

Teacher discussion and use of modelling and questioning support pupils to explore meanings of new vocabulary in addition to mathematical content.

Pupils read aloud when appropriate.

Knowledge organisers help pupils to remember key vocabulary and the context in which it has been taught.

Flashback 4 starter activities in the senior phase always include a vocabulary check.