

## Mathematics

At the Ashley School Academy Trust we believe all our students should have the opportunity to be able to achieve, feel confident and make progress in mathematics.

We try to teach in a way that provides context for our pupils and will help them cope with every day mathematics in real life when they leave us. Teaching maths here is based on the idea that our students work with practical objects to begin with when they are first learning something, they may then move on to work with pictures and once they are secure with their skills and understanding then they can move on to work in the abstract. We believe that solid consolidation is essential before we accelerate our pupils. Although it is a challenge for most of our students we try to place an emphasis on developing fluency, mathematical reasoning and problem solving.

Both Key Stage 2 and Key Stage 3 follow our own personalised curriculum, built on the foundations of the new national curriculum. This means we cover topics such as number and place value, addition and subtraction, multiplication and division, properties of shape including position and direction, measure and statistics.

### Key Stage 2

The Key stage 2 curriculum focuses on using and applying mathematics, counting and using number, calculating, understanding shape, measuring and statistics.

Many students working in Key Stage 2 are working within 'P' Levels. Pupils follow a multi-sensory approach to maths. We regularly provide them with opportunities to explore mathematical topics such as time, shape, number and measure through books, toys, props, scents, sounds and musical cues. In every maths lesson there are opportunities for pupils to use a range of maths manipulatives (Dienes, Unifix etc.) best suited to individual needs.

Pupils are assessed against the national curriculum using our recently developed learning Stages and the P-Level descriptors.

### Key Stage 3

At KS3 maths lessons cover the separate strands of mathematics curriculum. These comprise: applying mathematics, numbers and the number system, calculating, algebra, shape, space and measure and handling data.

Pupils work individually and in small groups on suitably differentiated activities using a variety of resources. Activities practice numeracy skills, problem solving investigations and functional maths in the real world. Pupils work with and without the use of calculators.

A variety of maths manipulatives (Dienes, Unifix etc.) are available to support pupils understanding and working out. Lesson starters encourage the sharing of knowledge and help develop mathematical vocabulary and skills. Pupils are assessed through teacher observation, peer and self-assessment, pupil presentations, tests and mathematical tasks in their exercise books or through the use of ICT (including iPads). Pupils are assessed against the national curriculum using our recently developed Learning Stages. Where appropriate, some pupils begin their 'Entry Level Maths Qualification' in year 9.

#### Key Stage 4

In Key Stage 4 we currently offer a range of accredited programmes of study. Pupils work towards either Entry Level Certificate or GCSE Mathematics. We continually review the qualifications we offer to ensure that the most appropriate outcomes are achieved for our students, to correctly equip them for their next steps in education.

We subscribe to 'sumdog.com' (<http://www.sumdog.com/>) where students in Key stage 3 and Key Stage 4 all have their own personal log-ins. This enables targeted revision on areas of maths students are finding more challenging. Please find details of these log-ins in pupil planners.

Maths lessons cover the separate strands of mathematics curriculum; Using and Applying Mathematics, Numbers and the Number System, Calculating, Algebra, Shape, Space and Measure and Handling Data.

Pupils are encouraged to work independently for a part of each lesson and develop investigation skills. Pupils work individually and in small groups on suitably differentiated activities using a variety of resources. Lesson starters encourage the sharing of knowledge and help develop mathematical vocabulary and skills. Pupils are assessed through teacher observation, peer and self-assessment, presentations, tests and mathematical tasks in their exercise books or through the use of ICT.

Some pupils have already achieved an entry level qualification at 'Entry Level 1', 'Entry Level 2' or 'Entry Level 3'.

Links

Sumdog

<http://www.sumdog.com/>

OCR Entry Level

<http://www.ocr.org.uk/qualifications/by-type/entry-level/>

AQA GCSE (old)

<http://www.aqa.org.uk/subjects/mathematics/gcse/mathematics-linear-b-4365>

AQA GCSE (new)

<http://www.aqa.org.uk/subjects/mathematics/gcse/mathematics-8300>