



Curriculum Overview

Overview of Subject:

Pupils at Osborne School are taught Maths in line with the National Curriculum. This is always adapted to the needs of the individual. Best practice recommends adopting the CPA approach for concept development. This represents Concrete, Pictorial and Abstract. This has previously been referred to as Maths Mastery and Singapore Maths. It is based on the cognitive development work of psychologists Piaget and Jerome Bruner. The “concrete” stage is the “doing” stage. During this stage pupils experience and handle physical objects, thereby bringing new maths concepts to life. This stage is followed by the “pictorial” stage, where we use visual representations of real objects to model maths concepts. Finally, there is the “abstract” stage where symbols are used to represent maths. Pupils are encouraged to see the connections between each type of representation. It is also helpful to vary the apparatus that pupils use to grasp a maths concept. At all stages we use resources which are age appropriate. Pupils who have not yet reached the “concrete” stage in cognitive development are supported in their learning via sensorimotor activities.

We use an interactive online teaching resource to support pupils at school and at home. This supports at the pictorial and abstract stages. Maths lessons are delivered across the school in 4 x 55minute lessons per week. Cross curricular links are encouraged in all subjects, providing meaningful application of skills, and in a variety of settings. Links to “real life” situations are made at every opportunity to build up life skills.

There is also a focussed Curriculum Day where pupils and staff engage in a variety of themed Maths tasks during each lesson.

KS3

Year 7 pupils are class based for maths with differentiation applied in lessons. Years 8&9 are streamed for maths based on the results of standardised testing at the end of year 7. These groups are monitored throughout the year and pupils occasionally change groups throughout the year if appropriate. Standardised tests results at the end of Year 8 are considered when setting groups for the following year. Standardised test results at the end of Year 9 are considered when setting pupils for the start of Key Stage 4 and selecting an appropriate accreditation path.

KS4 and accreditation.

Accreditation:

Key stage 4 Maths is taught according to the programmes of study of appropriate accreditation depending on the level of attainment by the end of Key Stage 3.

Key stage 4 offers a range of different accreditation options to enable all pupils to leave Osborne with a qualification in Maths at the appropriate level. The accreditation that we offer to accommodate all the pupils are:

- Asdan Transition Challenge
- AQA Entry levels 1, 2, and 3
- AQA GCSE Foundation level

Asdan Transition Challenge

Asdan Transition Challenge is a learner-centred, activity based curriculum for pupils who are working below the level required to obtain the AQA Entry Level Certificate 1,2 and 3. Pupils complete the following modules as part of their overall Transition Challenge curriculum. Maths is linked to each module and evidence is collected in a portfolio. These modules can be undertaken with as much support as necessary. The five modules pupils complete are:

- Knowing How
- Making Choices
- Feeling Good
- Moving Forward
- Taking the Lead

AQA Entry Level.

The AQA Entry Level Certificate 1,2 and 3 Certificates are suitable for pupils currently working below the level required to obtain a GCSE grade 1. The AQA Entry Level Certificate 1,2 and 3 gives pupils the opportunities to develop and apply their mathematical skills in relevant contexts as well as engaging them in problem solving activities at an appropriate level. For this qualification, pupils are required to complete eight units of work, these are;

- Measures
- The four operations
- Calendar and Time
- Ratio

- Properties of Number
- Money
- Geometry
- Statistics

GCSE foundation level.

Pupils working at GCSE foundation level will study different units throughout the two years. This culminates in a revision period where pupils are given the opportunity to consolidate and refine their skills and knowledge in preparation for the exams in the Summer Term. The Maths units covered are:

- Coordinates and Applications of Linear Graphs
- Probability
- Statistical Measures
- Percentage and Ratio
- Basic Algebra, Sequences, Number, Fractions and Decimals
- Perimeter, Area and Volume
- Collecting Data
- Reflections, Rotations, Translations and Enlargements