



Iffley Academy Mathematics Policy

Written	September 2016
Date of review	September 2018
SLT Lead	Debbie Grayson
Signed: Head Teacher	_____
Chair of Trustees	_____



POLICY STATEMENT FOR Mathematics

Definition

Mathematics at the Iffley Academy is more than numbers in books and more than abstract concepts that are hard to understand. It is a cross-curricular and creative experience in which our students are equipped with a uniquely powerful tool set that supports them in becoming independent and successful in understanding and interacting with the world around them.

We believe that for students to be successful they need to have a fluent understanding of the fundamentals of mathematics, they need to be able to reason mathematically and to be able to solve problems and they need to be able to do this by forming rich connections across mathematical ideas and concepts.

We also believe in the central importance of spoken language in students' development across the whole curriculum and thus believe that mathematics should promote a dialogue that enables students to be able to apply their cognitive understanding through social, spoken, practical and written opportunities.

Aims

Each student should be able to think and solve problems mathematically by using the relevant skills, concepts and knowledge appropriate to their ability.

Each student should be able to apply mathematical reasoning and be able to solve problems applying a rich understanding of a range of concepts and ideas.

Each student should be equipped with the relevant skills so that they can access independence and a range of employment opportunities in later life, including the development of spoken language.

Each student should be provided with rich and enjoyable experiences that foster and encourage a love of learning.

Objectives

To enable students to:

- Feel positive and confident in their approach to Mathematics.
- Be able to work both co-operatively and independently developing perseverance and determination.
- Experience a sense of achievement regardless of ability or individual need.
- Have access to the full National Curriculum and relevant qualifications differentiated to meet their individual needs.

- Be able to apply their mathematical understanding to new, cross-curricular and real life experiences showing an awareness of Mathematics outside of the classroom.
- Feel confident to explore and communicate ideas, experiences and questions, using the appropriate mathematical spoken language, to both adults and peers.
- Be able to use ICT to enhance and develop their understanding of mathematical ideas and process.
- Have equality of opportunity regardless of race, gender, or ability.

Organisation of the teaching and learning

In the Tate and Louvre galleries students are taught in small groups with a high level of adult support. There are four dedicated mathematics lessons each week with lesson objectives meeting the relevant requirements for the National Curriculum. Students also have access to interactive activities and programs that encourage independence in learning and develop an enjoyment for success and understanding. It is expected that students will work in small ability based groups within their classes and come together to explore a range of learning from independent, paired, small group to whole class teaching experiences.

In the Guggenheim gallery students are again taught in small groups with a high level of adult support. There are three dedicated mathematics lessons each week. The students work towards objectives that enable them to have the understanding they need to be successful with relevant qualification pathways. Currently on offer is the Edexcel Functional skills qualification in Mathematics.

Students in Guggenheim also have access to Mathematics across the curriculum: lessons that build upon key independent and life skills link to topics such as money, time and measurement.

The aim for mathematics within the MCA gallery (6th form) is to build upon and consolidate skills that have already been gained within the main school. The focus is on developing functional skills which are ideal for giving learners the ability to use mathematics confidently, effectively and independently in work and everyday life. Student progress is assessed through using B Squared Adult Levels and the functional skills exam criteria.

Students who are not yet ready to complete functional skills exams, complete mathematic work aimed at increasing their competencies according to the National Curriculum stages used in the main school.

Most students have termly outcome targets tailored to their mathematical need, which is set, monitored and reviewed termly by class teachers.



The recommended structure of a mathematics lesson:

- 'Warming up our brains' (starters) begin the mathematics lesson. This is done through the **Mental and Oral starter** (5mins) a short and fast paced activity involving whole-class or small group work rehearsing, sharpening and developing mental and oral abilities in a range of Mathematical based topics and themes. Class teachers and support staff can lead on these activities with a focus on speaking and listening skills.
- We then **introduce** our learning thinking about today's learning objectives and explaining the ideas, questions, and activities we will be exploring. This is a chance to review previous learning and identify any gaps in understanding and a chance for support staff to work with individuals or small groups in a differentiated manner. (10-15mins)
- The **main** teaching activity (25 - 30mins) follows the introduction and includes both teaching input and pupil activities with a balance between whole class, grouped, paired and individual work using a range of different activities, resources, practical and interactive approaches. Plenty of opportunity to review learning is encouraged as well as self and peer assessment. Support staff are expected to take a full and active role in the main section of a mathematics lesson whether this is through leading a small group activity or supporting the main class teaching through working on differentiated elements of the main lesson.
- The lesson ends with a **plenary** (10-15mins) where the teacher and support staff will either work with the whole class, individuals or groups to explore today's learning objectives or address any misconceptions. This is also where the students will peer and self assess progress and understanding and a chance for the class to celebrate achievements and success through the use of our learning passports and assessment.

The mathematics lessons provide opportunities for students to practise and consolidate their skills and knowledge, to develop and extend their techniques and strategies, and to prepare for their future learning. These may be extended through out-of-class activities, other curriculum areas or home learning at the discretion of the teacher. There are also a range of mathematical interventions available upon request.

Assessment and recording

The Iffley Academy uses assessment without levels to note the progress of learners (see assessment policy). Formative assessments and assessment for learning are ongoing and used to inform teaching in a continuous cycle of planning, teaching and assessment.

We encourage self and peer assessment in which students assess their understanding and progress against the set learning objectives.



Within the main school every student has their own learning passport which is completed at the end of all lessons allowing a dialogue between staff and students' thinking, not just about progress towards learning objectives and academic targets, but also about appropriate and effective behaviours for learning.

Within the main school we also encourage peer support as and when appropriate which fosters an analytical environment where students accept praise and support from not just adults but also their peers.

Where appropriate we have formal baseline assessments during September and at key points throughout the year the school staff work together to monitor work and assessments in formal moderation meetings. We also use B Squared as a continuous assessment tool and students are assessed against their termly outcome targets at key points in the academic year.

Once a student has reached level 1 in the sixth form a bespoke tracking system is used to demonstrate pupil progress. Students work towards Entry Level and Functional Skills qualification in Mathematics.

Resources

Each classroom has access to mathematics resources which include basic and daily mathematical equipment such as number lines, number grids and multilink cubes.

Larger and topic based equipment such as measuring scales, shapes and money can be found centrally the Mathematics Resource Base and is shared by all staff. The Learning Manager for Mathematics will identify any gaps in resources and will purchase new items upon request. We also have a number of shared mathematics board games and thinking activities that are distributed across The Tate and Louvre galleries.

We also have a selection of P level-designed equipment such as STERN Mathematics that is provided to teachers upon request and need of students. This includes Charlotte Clocks for classroom display.

We also have available a number of online and interactive resource centres to support teaching, planning and learning, setting personalised learning opportunities. These include:

- The Active Learn planning platform, which has a student platform attached.
- My Mathematics – an online lesson planner and student platform used for introduction of lessons and development of ideas.
- Mathletics – an alternative student platform and teacher resource base aimed at our Guggenheim and MCE learners.
- TT Rock Star used in MCA to reinforce basic mathematical skills.



As well as these physical resources we also have a number of book resources. We also use Active Learn books to support the planning software mentioned above. We have a range of Entry Level and Level 1 and 2 books designed specifically for the Functional Skills qualification. STERN Mathematics textbooks are also available to support P level learners.

Planning

In the Tate and Louvre galleries planning is supported through the Active Learn Platform.

The learning manager for mathematics is responsible for the long term and medium term plans. The class teachers are responsible for their own class short term plans and are encouraged to use the Active Learn Platform as a template for topics and themes but to adapt and differentiate these for the individual SEN needs of their cohort. Planning is monitored and moderated by the Learning Manager at key points throughout the year.

In Guggenheim planning builds upon the skills learnt in the lower galleries and works towards equipping students with the skills they need to reach success in their qualifications and exams. The Learning Manager produces skeleton plans, which is developed by class teachers in order to meet the needs of their individual class. This is monitored and moderated by the Learning Manager with feedback through planning meetings held at key points throughout the year.

In MCA students work in differentiated groups. The lessons are delivered in two ways: short focused sessions with a key topic, with a longer session once a fortnight. Mathematics across the curriculum is embedded and delivered through Enterprise, Business and Independence lessons.

Where appropriate termly outcome targets are planned for and encapsulate key mathematical life skills or areas for development termly.

Equal Opportunities

All children are entitled to the Mathematics curriculum, which caters for their individual needs, offers equal access and opportunity and enables them to participate fully in all areas of the curriculum. Further reference should be made to the academy's Equal Opportunity Policy.



Monitoring and evaluation

The purpose of monitoring and evaluation activities is to raise the overall standard and quality of teaching and learning and to enhance the level of pupil attainment. The Mathematics Learning Manager will monitor the quality of teaching and learning as part of the academy's self-evaluation policy and report back to the Senior Leadership Team.

Monitoring will include:

- Moderation of Planning
- Official lesson observations
- Peer Support through paired teaching / planning activities
- Learning Walks
- Evaluation of targets set and attainment reached
- Internal verification of exam papers
- Scrutiny of class teacher, key stages and school data sets
- Evaluation of interventions
- Scrutiny of assessment data and progress
- Pupil progress meetings
- Moderation of whole school pupil books
- External moderation of exam papers

There is a link Governor with responsibility for mathematics who monitors this area of the curriculum in collaboration with the mathematics Learning Manager.