



Mathematics Policy Statement

Aims

This policy aims to set out an expectation for the highest quality education and progress in maths for all our students.

Mathematics teaches us how to make sense of the world around us through developing a student's ability to calculate, to reason and to solve problems.

Mathematics Lessons for pupils focus on and build upon fundamentals. There is a great deal of mathematics to be learned before counting can be effectively learned and learning about counting itself involves the co ordination of many skills. Beyond counting, students need broad practical and learning experiences, to develop their appreciation of estimation, calculation, shape space etc.

Mathematics lessons and maths encountered across the curriculum offer pupils with learning and physical difficulties opportunities to:

- Build on their awareness of events and actions and recognise changes in pattern, quantity and space that occur in their lives, both the immediate environment and in the wider world.
- Use their developing awareness to anticipate and predict changes.
- Use their awareness and developing understanding of pattern, space, shape and number, to develop problem-solving skills that contribute to making choices, taking decisions and gaining control over their immediate environment
- Extend mathematical skills, experiences and understanding which enable them to visualise, compare and estimate. For a few students this may be achieved in abstract as well as concrete contexts.
- Begin to think about the strategies they use and explain them to others.
- Develop a powerful set of thinking tools to help them increase their knowledge and understanding of the world and, during the school years, to learn effectively in different subjects across the curriculum.
- Understand the importance of mathematical skills in everyday life.

Curriculum Content

Mathematics at Oak Grove College covers the whole P Level Scale and the National Curriculum levels:

At **Level P1** there is an emphasis on experience and emerging awareness of:

Noise	Touch	Vision	Smell
Vocalisation	Communication	Movement	

At **Level P2** there is a focus on developing students' skills with regard to:

Reacting, responding, engaging and cooperating in a variety of situations using the senses identified at Level P1.

At **Level P3** there is a focus on developing students' skills with regard to:

Communicating intentionally, participating with less support, sustaining concentration, exploring materials, remembering learned responses and responding to options and choices

At **Levels P4-8** there is a focus on developing students' skills in:

The Number System, Calculations, Measures, Shape and Space.

Whilst seeking to Use and Apply those skills in a wide range of contexts.

At **National Curriculum Level 1** students will work on developing further their skills in Number, Shape and Measures with a continuing emphasis on Using and Applying those skills.

At **National Curriculum Level 2 and above** students will work on developing further their skills in Number, Shape, Measures and Handling Data with a continuing emphasis on Using and Applying those skills.

Oak Grove College aims to develop all students abilities to make links between maths and everyday life. We therefore have whole school termly themes. They are as follows:

Term 1 Whole school Functional Maths Skill Focus - Time

Term 2 Whole school Functional Maths Skill Focus - Money

Term 3 Whole school Functional Maths Skill Focus - Measures

Delivery Method

In the classroom we seek to create a supportive learning environment. We make great use of a variety of age related software, websites, games and real-life materials to engage students and help them learn in the way that best suits their needs with an emphasis on the key skills of Problem Solving.

Perception

- recognising opportunities
- recognising and identifying problems

Thinking

- breaking down a problem into elements
- thinking through the relevant features of a problem
- planning ways to solve a problem

Action

- remembering how to solve a problem

Evaluation

- evaluating how a plan worked
- recognising when existing plans and strategies need changes

In all classes there are students of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all students by matching the challenge of the task to the ability of the child. Throughout lessons a range of strategies are used to ensure appropriate levelled learning. These strategies incorporate the variety of learning styles of students and include the use of a range of visual images and concrete resources. Students are asked to undertake independent work but other strategies are also utilised. In some lessons group work is undertaken, and in other lessons, students are organised to work in pairs on open-ended problems or games. We use classroom assistants to support some students and to ensure that work is matched to the needs of individuals.

We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term).

Our Long term plans are adapted from the Primary Strategy (KS3) and Accredited courses (KS4 and 6th form). They ensure an appropriate balance and distribution of work across each term.

Our medium-term mathematics plans are written according to the topics laid out in the Long term plan and gives details of the main teaching objectives for each level in our class and defines what we teach. These plans are kept by both the class teachers and the lead maths teacher.

Short term plans are weekly plans which are written by the class teacher. These weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught. The class teacher keeps these individual plans.

Recording and Assessment

The Government guidelines recognise that special needs students may not climb the ladder of Vertical Progress at the same rate as their peers. Students at Oak Grove College need time and wide experience to consolidate learning and apply it in a variety of circumstances. The Government also recognise that for some students who suffer degenerative conditions, it is the schools role to support the pupil in maintaining skills.

Student's work is recorded in the following ways:

- Individual workbooks
- Annotated photographs of activities
- Progress Ladders

The level of attainment of each pupil is recorded using our Progress Ladders. Key Stage 4 and 6th Form students follow a variety of accredited courses including Edexcel's Foundation GCSE maths, Entry Level Certificate and Functional Skills Certificate as well as ASDAN modules. which results in certification for those working below the National Curriculum Levels.

We assess students' work in mathematics from three aspects (long-term, short-term and medium-term).

We make short-term assessments which we use to help us adjust our daily plans. These short-term assessments are closely matched to the teaching objectives. Learning objectives are reviewed in discussion with the students daily and attainment is recorded on their Progress Ladders.

We make medium-term assessments to measure progress against the key objectives, and to help us plan the next unit of work. This is recorded on Progress Ladders. At the end of a topic, Progress ladders are photographed and put into students' evidence folder along with all their work related to this topic. The photographs of work and progress ladders are stored on Evernote (see attached guidance).

Maths department staff team meet half termly to moderate individual examples of work.

We use termly assessments as a way of recording students' progress in objectives covered across that specific term. This is recorded on Excel programmes.

We make long-term assessments twice a year in 2 assessment periods. We review old targets and set new ones according to student needs. At the end of the academic

year, we write a summary of each students' progress and share it with parents in the End of Year report.

We pass this information on to the next teacher at the end of the year, so that s/he can plan for the new school year.

Contribution of mathematics to teaching in other curriculum areas

English

Mathematics contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. For example, we encourage students to read and interpret problems in order to identify the mathematics involved. The students explain and present their work to others during plenary sessions.

Science

During science lessons, students are able to use and apply their data handling skills when creating tables and graphs of scientific measurements. Whole class discussion of data also highlights the importance of clear recording of information. Students are also given an opportunity to learn to use a wide range of measuring devices in a real-life context. Students are taught to read the scales on Newton metres, measuring cylinders, weighing scales and a variety of other instruments.

Information and communication technology (ICT)

Students use and apply mathematics in a variety of ways when solving problems using ICT. Students use ICT to communicate results with appropriate mathematical symbols. Also students use it to produce graphs and tables when explaining their results or when creating repeating patterns, such as tessellations. All year groups are using the web based programs, MyMaths and Sumdog to further their learning.

Personal, social and health education (PSHE) and citizenship

Mathematics contributes to the teaching of personal, social and health education and citizenship. The work that students do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own learning. The planned activities that students do within the classroom encourage them to work together and respect each other's views. We present students with real-life situations and contexts which enable them to solve problems linked with money and measures.

Spiritual, moral, social and cultural development

The teaching of mathematics supports the social development of our students through the way we expect them to work with each other in lessons. We group

students so that they work together, and we give them the chance to discuss their ideas and results. Students participate in annual World Number Days. During the days, the college raises money for disadvantaged students and people who live in developing countries. This helps develop their cultural understanding in a mathematically enriched situation.

Homework

Students are set regular homework tasks in order to strengthen their learning in mathematics. These tasks should directly link with the current unit of learning and be differentiated for each maths group.

Homework can be in the form of:

- online activities such as Sumdog or Mymaths
- tasks which apply skills taught within the lesson such as making food or drink
- tasks which consolidate learning such as finding examples of maths taught within the lesson

During lunch times, staff will provide support for students who find it difficult to complete homework.

Homework is seen a positive experience and those who complete it will be praised. The use of rewards will encourage students to complete homework.

Other Guidelines

It is important that this policy is read along side other guidelines which have been created for use by staff at Oak Grove College. These include "Progression in methods of Calculation", "The Role of the Teaching Assistant", "How to use Evernote and write Progress Ladders" and the OGC "Teaching and Learning Manual".

Name of Reviewer	Gemma Kelly (Lead Teacher)
Date of Approval of Governing Body	
Signature of Chair of Governors	
Signature of Head teacher	
Due date of Review	September 2013