



Our Lady's Catholic College

MATHEMATICS

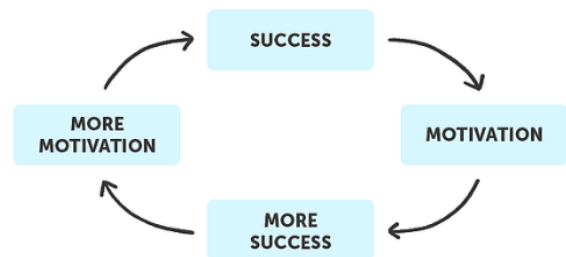
Our Lady's Catholic College, Morecambe road, Lancaster, La12rx

Department Vision and Values

We firmly believe that everybody can be a mathematician and that all students have the right to experience mathematics in a safe but academically challenging environment.

It is our belief that every student in mainstream education has the potential to successfully engage with the GCSE course. There is no evidence that compels us to believe that there is anything innate in our students that means they cannot be successful in our classrooms. We are aware that students may have had experiences in mathematics that has led them to believe that this isn't the subject for them.

In these cases, we need to get students into a success/motivation cycle. We do not believe that engagement in maths needs to come from elsewhere; from gratuitous examples of its use in "real-life" or from activities where the maths takes a back seat. We believe that the ability to overcome a problem, to explore a fascinating pattern and grapple with complex ideas are possible to be endorphin-rich, enjoyable experiences which all students are entitled to. If they are lacking motivation, it is our job to ensure they are having success. If, in the short term, it means making them feel successful through whatever means necessary, then we know that this can pay off in the long run and is worth the initial investment in time. Where possible this feeling of success will come from appropriately pitching the content from the curriculum but if it means going "off-script" for a short period of time with a greater good in mind then so be it.



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Implementation

We aim to turn our vision into reality by focussing on three key areas:

1. Evidence-based Teaching and Learning
2. Ambitious Curriculum for All
3. Assessment to improve

3. Assessment for All

- Assessments provides essential feedback to pupils and improve attainments together. At OLCC we use the idea of MIGs (Multiple Inadequate glances) to inform us about current understanding. These MIGs falls mainly into two categories:
- **Formative Assessments** (done very frequently and indicated as Fs in the curriculum overview) – This is a range of short low stakes assessments/quizzes that generates instant feedback for the teachers so they can adapt their teaching and/or the flow of the lesson and help pupils to improve and progress. You will typically see a combination of the following in our lessons:
 - Retrieval starters - These are designed to enhance the retention of knowledge by asking pupils to retrieve knowledge from last week, last month or last unit
 - Prior Learning Checks - Designed to check ensure pupils have sufficient prior knowledge to access new material
 - Multiple Choice Questions - Designed to root out misconceptions
 - Show Me Board Questions – checking for understanding and provides instant feedback to teacher to allow adaptive teaching
 - Pupils are encouraged to self-reflect about their own learning and how they can improve using the Learning Checklist frequently.
- **Summative/Synoptic Assessments** (more formal and done infrequently and indicated as Ss in the curriculum overview)
 - Sparx Maths Homework – Homework is set once a week. The system learns and adapt its questions so it is delivered at the desired difficulty for the individual.
 - End of Unit tests – Pupils take a topic test when they have received tuition on a unit of work. **All tests are single tiered to give all pupils access to questions appropriate to their level as well more challenging ones.** Individual Feedback is given in an individualised Question Level Analysis with guidance to improve.
 - Pupils are encouraged to self-reflect about their own learning and how they can improve using the Learning Checklist frequently.

SEND support

We aim to remove barriers for students with SEN and/or disabilities. All our lessons utilise a number of different approaches, techniques and resources to ensure SEND needs are catered for to encourage success for all.

Pedagogical approaches, techniques and considerations (not used exclusively just for SEND pupils)

- Extra steps– expected prior knowledge are covered at the beginning of each topic to ensure the starting point for SEND pupil are appropriate to increase the chances of success
- Extra scaffolding – the Small Steps in our curriculum (see below) are further broken down to provide additional support
- Visual learning – staff are encouraged to use physical representation to turn the abstract into concrete
- Visual support – all our presentations are encouraged to be sparse to reduce cognitive load and background of slides are changed to ensure legibility.
- Minimum copying – photocopies should be provided when necessary
- Consistent Classroom routines – creates a predictable and safe environment
- Visual feedback – emoticons for feedback and self-reflection
- Explicitly teaching maths vocab
- Use of ICT to allow self-paced learning

Other SEND Resources

- Additional curriculum support material – There is a set of supporting material for every unit in our KS3 and KS4 curriculum that staff are encourage to dip into (but never teach from) when the needs occur.
- Teaching assistants – all staff and Tas has been MITA trained and we are planning to train up some of our TAs in how to specifically support in maths by increasing their mathematical knowledge and our teaching pedagogy.