Curriculum Intent, Implementation and Impact

Subject : GCSE Mathematics – Edexcel

Year group: Year 10

Lessons per fortnight: 8

INTENT:

The intent of the Mathematics curriculum at TBS is to nurture students to become confident mathematicians. They will develop resilience, spatial reasoning and problem solving skills that will allow them to connect different mathematical concepts together. Our students will be curious in their approach to this course, as they will be challenged through the different questions/ concepts that are suitable and appropriate for their individual level. This will be evident not only in our lessons but also in the form of extended learning opportunities where students will be encouraged to think outside of the box through National Maths Challenge questions, and further their learning through nationally acclaimed websites like DrFrostMaths.com. Support for students in need of it will be provided through the use of intervention groups. Ultimately the intent of the mathematics curriculum is to challenge our students to become ambitious individuals who will be successful in their approach to solving complex problems and who will be respectful and empathetic of others. Moreover, they will develop an understanding of the fact that maths goes beyond numerical problems and text books and will start to see and appreciate its beauty in artwork, music, nature, sport, science and the wider world in general.

At the start of this course students will be divided into the Higher and Foundation Tier. The intent is that all of our students sit the tier of paper that is most appropriate to their abilities. As such, final decisions on Tier entry will not be made until the Spring of year 11, hence enabling maximum flexibility over two very important years. By the end of this year students will have secured over half of the content of the GCSE syllabus and will be in a good position to embark on the second half of their journey towards gaining their GCSE in Mathematics.

IMPLEMENTATION:

Higher Tier

Term	**Topics studied** Add dates and any assessments included	**Extended learning opportunities** (homework, controlled assessments, field work, trips etc.)	**How parents could support students**

Term 1 Term 2	▪ **Number**: problems; HCF/LCM; indices; standard form; surds ▪ **Algebra**: indices; expand and factorise; equations; formulae ▪ **Statistics** ● **Fractions, decimals and percentages**	Google classroom - With extended learning opportunities such as Dr.Frost. Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Summative assessment once a term covering all previous topics taught to ensure good recall and practice. Google classroom - With extended learning opportunities such as Dr.Frost.	Engage with Dr.Frost with their child Ensure that all homework is cross referenced and completed on google classroom Encourage and help their child to remember key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks Engage with Dr.Frost with their child

	● **Angles and** **trigonometry ● Graphs**	Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Year 10 Mocks - two full GCSE papers. (one calculator and one non calculator paper)	Ensure that all homework is cross referenced and completed on google classroom Encourage and help their child to remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks
Term 3	▪ **Area and Volume** ▪ **Transformations and constructions** ▪ **Equations and inequalities**	Google classroom - With extended learning opportunities such as Dr.Frost. Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Summative assessment once a term covering all previous topics taught to ensure good recall and practice.	Engage with Dr.Frost with their child Ensure that all homework is cross referenced and completed on google classroom Encourage and help their child to remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks

Term 4	▪ **Probability** ▪ **Multiplicative reasoning** ▪ **Similarity and Congruence**	Google classroom - With extended learning opportunities such as Dr.Frost. Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Summative assessment once a term covering all previous topics taught to ensure good recall and practice.	Engage with Dr.Frost with their child Ensure that all homework is cross referenced and completed on google classroom Encourage and help their child to remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks
Term 5	- **Further Statistics** - **Equations & graphs**	Google classroom - With extended learning opportunities such as Dr.Frost. Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Summative assessment once a term covering all previous topics taught to ensure good recall and practice.	Engage with Dr.Frost with their child Ensure that all homework is cross referenced and completed on google classroom Encourage and help their child to remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks
Term 6	▪ **Preparation for mock exams** ▪ **Circle theorems**	Google classroom - With extended learning opportunities such as Dr.Frost. Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Year 10 Mocks - Full GCSE papers (one non calculator and two calculator papers)	Engage with Dr.Frost with their child Ensure that all homework is cross referenced and completed on google classroom Encourage and help their child to remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks

Foundation Tier

Term	**Topics studied** Add dates and any assessments included	**Extended learning opportunities** (homework, controlled assessments, field	**How parents could support students**

		work, trips etc.)	
Term 1 Term 2	▪ **Number:** calculations; factors, multiples, primes; index notation ▪ **Algebra:** simplifying expressions; expanding and factorising; substitution ▪ **Graphs, tables and charts** ▪ **Fractions, decimals and percentages** ▪ **Equations, inequalities and sequences**	Google classroom - With extended learning opportunities such as Dr.Frost. Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Summative assessment once a term covering all previous topics taught to ensure good recall and practice. Google classroom - With extended learning opportunities such as Dr.Frost. Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Year 10 Mocks - two full GCSE papers. (one calculator and one non calculator paper)	Engage in Dr.Frost with their child Ensure that all homework is cross referenced and completed on google classroom Encourage and help with your child in remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks Engage in Dr.Frost with their child Ensure that all homework is cross referenced and completed on google classroom Encourage and help with your child in remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks
Term 3	▪ **Angles** ▪ **Averages and range**	Google classroom - With extended learning opportunities such as Dr.Frost.	Engage in Dr.Frost with their child Ensure that all homework is cross referenced and

	▪ **Perimeter, area and volume** ▪ **Graphs (start)**	Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Summative assessment once a term covering all previous topics taught to ensure good recall and practice.	completed on google classroom Encourage and help their child to remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks
Term 4 Term 5	▪ **Graphs (continued)** ▪ **Transformations** ▪ **Ratio and proportion** ▪ **Right angled triangles: Pythagoras and trigonometry** ▪ **Probability**	Google classroom - With extended learning opportunities such as Dr.Frost. Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Summative assessment once a term covering all previous topics taught to ensure good recall and practice. Google classroom - With extended learning opportunities such as Dr.Frost. Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Summative assessment once a term covering all previous topics taught to ensure good recall and practice.	Engage in Dr.Frost with their child Ensure that all homework is cross referenced and completed on google classroom Encourage and help with your child in remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks Engage in Dr.Frost with their child Ensure that all homework is cross referenced and completed on google classroom Encourage and help with your child in remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks

Term 6	- **Preparation for exams** - **Multiplicative reasoning**	Google classroom - With extended learning opportunities such as Dr.Frost. Formative assessments to take place at the end of each unit test with opportunities to respond to feedback. Summative assessment once a term covering all previous topics taught to ensure good recall and practice.	Engage in Dr.Frost with their child Ensure that all homework is cross referenced and completed on google classroom Encourage and help with your child in remember the key terms Ensure that their child is working through the Edexcel Revision guides/ Workbooks

IMPACT:

The impact of the course is measured primarily through our ongoing formative and summative assessments. Regular formative assessments allow teachers to address students misconceptions and areas of weakness. These assessments are opportunities for students to demonstrate their mathematical knowledge. Results will be reported on in the form of National Curriculum equivalent levels. The content being reported on will cover 5 different categories: Number, Algebra, Ratio/ Proportion/ Rates of Change, Geometry and Measures, Statistics and Probability. This year 10 course will prepare our students well for the course that they will follow in year 11. It will also reinforce some of our initial decisions on tiering to be made, although the final decisions on this will actually be made in the Spring of year 11. Ultimately, at the end of their time with us, students will be able to think independently and process their thoughts in a logical and sequential way, hence enhancing any future decision making and judgements.