

SMSC in Mathematics @ Desborough

Spiritual: Studying mathematics enables students to use their numeracy and problem-solving skills to make sense of the fast paced and ever-changing world in which we live. Our department is always encouraging students to make connections between core skills and everyday life, by continuous use of real-world problems and demonstrations of applications. This methodology and deep understanding of topics (mastery) ensures the spiritual growth of our students.

Moral: The moral development of students is a key focus of our syllabus. Students are provided with many opportunities to solve problems and calculate numerical answers but then go beyond and question the impact that it will have in a real-life context. For example, when looking at designing and/or analysing graphs, we take time to discuss with students the impact of having misleading axis and/or data. Another example, when calculating the rate at which an infectious disease is spreading, students are asked to think about what decisions governments might need to take if it goes above or below a certain level (with links to the Covid pandemic). This ensures students understand the important role that mathematicians and statisticians play in our daily lives, as vital analysis and data is reported back to governments and big multi-national companies. Consequences must always be considered from a moral standpoint. We also emphasise the importance of reasoning and deep understanding, getting the answer right or wrong is not always the main focus. Instead, it is the method that we promote above all, helping them to understand how to find the answer.

Social: Student's social development is greatly helped in mathematics through our focus on solving real-world problems and use of team activities. There are constant opportunities for students to think creatively, discuss and explain complex ideas, present work in a formal way that is easy to understand and take ownership of their own learning. These ensure that each student's confidence is boosted greatly by the time they leave us, and they become exceptional independent and resilient learners.

Cultural: Mathematics is a universal language that has been sculpted by many cultures throughout the world since the beginning of civilisation. We take time during lessons (and particularly during Numeracy Week) to explore where our current mathematical system comes from and where it is going. Students get the opportunity to see that there are different systems used throughout the world and that there are many great mathematicians, such as Pythagoras and Pascal, that come from a variety of backgrounds. Other activities include a research project on different mathematicians, investigations with Arabic numbers, Roman numerals, and different methods to do multiplication attached to different countries and cultures. We also point out the linguistic aspect of maths (origin of words, Latin, French, etc), explaining and insisting on the correct terminology. Our department truly believes that this diversity and the cross-cultural links should be celebrated.