

## Maths at The Cavendish School

*'Good numeracy is the best protection against unemployment, low wages and poor health.'* **Andreas Schleicher**

*'To me, mathematics, computer science, and the arts are insanely related. They're all creative expressions.'*  
**Sebastian Thrun**

*'Go down deep enough into anything and you will find mathematics.'* **Dean Schlichter**

Mathematics unlocks the world around us; we use maths in every aspect of our lives at work and in practical everyday activities at home and beyond. We use maths when we go shopping or plan a holiday, decide on a mortgage or decorate a room. Good numeracy is essential to us as parents helping our children learn, as patients understanding health information, as citizens making sense of statistics and economic news. Decisions in life are so often based on numerical information; to make the best choices, we need to be numerate.

Maths also helps strengthen reasoning skills and critical thinking. It helps us think analytically about the world and reason logically. The same steps you take to understand a problem, identify the knowns and unknowns and then solve it, can be applied to other areas of your life. We believe everyone can achieve mathematically. The five "Big Ideas" of mastery are coherence, representation and structure, mathematical thinking, fluency and variation, and these are the basis of our curriculum.

### Developing Key Skills and Knowledge through Participation in Mathematics

Maths is all about problem solving. The skills developed whilst in maths support the development of problem-solving abilities in other ways, including:

- ∞ Pattern spotting
- ∞ Working backwards
- ∞ Visualising
- ∞ Working systematically
- ∞ Using logical reasoning

### School priorities and vision

Our school's mission statement is 'Enabling the Self'. As an International Baccalaureate School, our school has a variety of values that we feel are essential to our students' development and journey with us. These are:



Aligned with the school vision of “enabling the self”, and grounded in the attributes of the IB Learner Profile, Mathematics helps pupils become:

- **Knowledgeable** about mathematics and its place in their world.
- **Reflective** on their own learning in mathematics and how they can approach a problem that needs solving
- **Moral** when considering their impact on the world
- Able to **celebrate difference** when discussing how other people might approach the same problem
- **Thinking** hard about complex topics and making connections within mathematics and with other subjects
- **Caring** towards other people and their experiences with mathematics.
- Able to **communicate** their ideas effectively, presenting complex information in an accessible way.
- Able to give a **balanced** view on a debate, taking into account evidence.
- Confident in using mathematical knowledge when carrying out an **inquiry**.
- **Courageous** in attempting something new, knowing that learning involves making mistakes.