

## Statistics at The Cavendish School

*'Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write.'* **H. G. Wells**

*'Data is a precious thing and will last longer than the systems themselves.'* **Tim Berners-Lee**

Statistics is the language we use to understand uncertainty, interpret the world around us and make informed decisions. In an age where vast amounts of information are generated every second, the ability to question data, recognise bias, and draw valid conclusions is essential. From reading the news to evaluating scientific claims, from understanding risk to interpreting trends in health, sport or business, statistics empowers young people to navigate modern life with confidence and clarity.

GCSE Statistics builds upon the foundations of mathematics, teaching students to ask meaningful questions, design reliable investigations, collect and analyse data, and communicate findings effectively. Students learn to think critically about evidence by spotting misleading graphs, recognising poor sampling, and challenging assumptions. These skills are fundamental not only for academic success but for responsible citizenship in a world shaped increasingly by data.

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

The study of statistics strengthens a range of transferable skills including:

- ∞ Evaluating the reliability and validity of information
- ∞ Identifying patterns and relationships in real-world data
- ∞ Understanding and interpreting risk and probability
- ∞ Designing systematic methods of inquiry
- ∞ Drawing reasoned, evidence-based conclusions
- ∞ Communicating complex ideas clearly and accurately
- ∞ Applying logical reasoning to uncertain situations

These skills support learning across subjects such as science, geography, psychology, business, and computing, and they prepare pupils for future study and employment in a wide variety of fields.

### 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, GCSE Statistics helps pupils become:

- **Knowledgeable** about how data shapes society and how statistical methods can clarify complex problems.
- **Reflective** in evaluating their own approaches to analysis and how conclusions are drawn.
- **Moral**, recognising the ethical responsibilities involved in using, presenting, and interpreting data.
- **Celebrate difference**, appreciating how different questions or methods can lead to different interpretations.
- **Thinker**, willing to tackle complex datasets and make meaningful connections across subjects.
- **Caring**, acknowledging that data represents real people and real experiences.
- **Communicators**, able to present findings clearly, accurately and responsibly.
- **Balanced** understanding how evidence should be weighed before forming judgments.
- **Inquirers**, confident in designing investigations and pursuing answers through data.
- **Courageous** trying unfamiliar tools, methods and technologies, and recognising that the best learning often comes from mistakes.