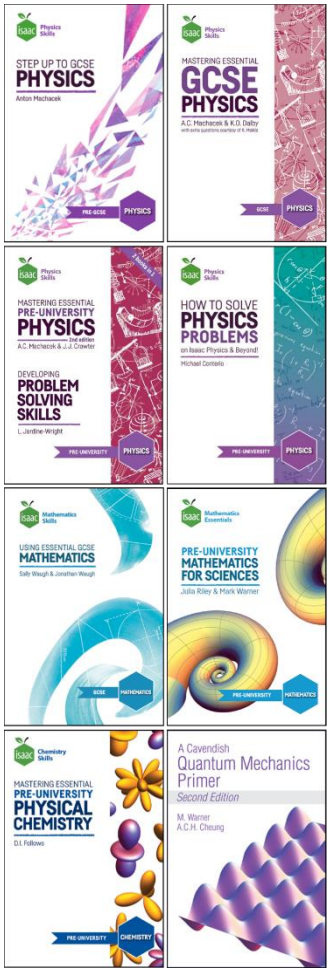
The Isaac Physics project enables all school-age students to develop problem solving skills. The project is based at the Cavendish Laboratory and has been funded by the UK Government's Department for Education with support from The Ogden Trust. The team created an Online Platform for Active Learning (OPAL) which enables students to access a bank of over 6000 questions together with support and teaching materials at http://isaacphysics.org. Over 115 500 000 questions have been answered online in the last eight years, and there are over 500 000 students and 12 000 teachers registered with participation from 92.3% of English state schools. Questions are accompanied by hints, often in the form of videos, and students (and their teachers) are given immediate feedback on their answers. There is no charge to students or schools.

The material was developed to enable students to practise using their mathematical knowledge in practical contexts, and thereby bridge the gap between two disciplines taught separately at school. In addition, it is our conviction that Physics is best learned by doing it, and that this leads to the best understanding of the concepts and how they can be applied.

To enable the material to be used more easily in schools, questions targeted at improving mastery of physics concepts at Year 9, GCSE and A-level are available in workbook form. These books are sold to schools at cost price (£1 each).



An extensive programme of teacher CPD accompanies the resources, suitable for those new to teaching physics through to subject managers. New resources are available, with online support, for teaching Physics at Key Stage 3.

Isaac Physics also runs a mentoring scheme for Year 11-13 students in problem solving, and termly masterclasses in essential concepts from GCSE and A-level specifications.

The ground-breaking STEM SMART programme with weekly tutorials and fortnightly mentoring to support Sixth Form students from January of Year 12 through to their A-level exams has enrolled over 1800 students since it started in January 2022. Places are reserved for those who have faced educational challenge or disadvantage.

The scope of the project ranges from lessons introducing physics ideas to Year 7 students all the way through to A-level and beyond. Resources for GCSE Mathematics and A-level Mathematics, Further Mathematics, Chemistry and Biology have been developed with funding from the University of Cambridge.