

Rutherford Schools Physics Partnership MOOC

The Rutherford Schools Physics Partnership is proud to announce the launch of [Isaac Physics](#) – a MOOC (Massive Open On-line Course) focussing on developing students' physics problem solving skills.

Problem solving is key to understanding physical concepts, furthering knowledge, gaining confidence, and developing expertise and intuition. Isaac Physics provides physics and maths problems and supporting materials for the AS/A2 (or equivalent) years of study, for the transition from GCSE to AS, and for extension towards university physics and engineering. In late October, we will add a section to the MOOC for sharpening core physics and maths skills for university applications and for A2 exams.

Currently [Isaac Physics](#) covers a wide range of topics in mechanics, with fields, waves and circuits soon to be released. Each question has associated concept sheets, graded hints and hint videos to assist the student. For the keener student, there are monthly themed sets of questions on challenging topics, such as rainbows or chain dynamics. If students register, then their progress will be followed, levels and problems suggested to them, and we can contact them about local and on-line events. In general, students' experience over these two years of study will be personalised and a portfolio of their achievements assembled. We would be delighted if you could forward the [isaacphysics.org](#) URL to your students.

Soon, registered teachers will be able to follow the progress of those of their students who specified their school on registration, as well as being able to assign problems to their classes and have the marking done by the MOOC (with results returned automatically). Maths teachers, particularly those teaching mechanics, will also find [Isaac Physics](#) most relevant. Problem sets focussed on core AS and A2 material will soon appear as books (available at the cost price of £1). Answers to these problems, if entered on [Isaac Physics](#), will be marked and appropriate feedback given to both teachers and students.

It is equally possible for students to use the MOOC as a self-study tool, and a hard-pressed teacher's time is not required! We have trialled live on-line video tutorials ("Hangouts") and will run these regularly on pre-arranged themes/problems for students to obtain assistance. Recordings of past sessions are available for support on specific themes.

The MOOC also makes teachers aware of courses, events and materials relevant to both them and their students. We thus urge teachers to register, and become involved as part of the partnership. See [isaacphysics.org/events](#) for teacher events.

Professor Mark Warner, FRS, and Dr Lisa Jardine-Wright, Directors RSPP.

The Rutherford School Physics Partnership, a project funded by the DfE and currently run through the Cavendish Lab at the University of Cambridge.