King Edward VI School, Lichfield – Physics bridging work Y11 – 12 2026

1) Complete the 'Maths for Physics' project.

Maths for Physics course

Although 'A' level Maths is not a requirement for 'A' level Physics it is critical for your success at 'A' level Physics that you are very confident at the Mathematical techniques in this booklet.

In the first few weeks of year 12 at King Edward VI you will be given a 'Maths for Physics' test. This will include **rearranging equations**, trigonometry, Pythagoras' theorem, indices, standard form, significant figures, substituting numbers into formula, prefixes (eg. What do Mega and nano mean) and graphs. This booklet has been prepared in order to help you with the test.

Task 1

1. Read through **ALL** of the booklet
2. Read through the booklet again, completing the following student tasks as you get to them.
    - Student task 1.1
    - Student task 1.2
    - Student task 1.3
    - Student task 1.4
    - Student task 2.4
    - Student task 2.7
    - Student task 4.3
    - Student task 4.4 & 4.5
3. If there is anything that you don't understand you need to research the problem.
4. Revise, using the booklet, for the test in the first few weeks back.
5. Hand in your completed exercises to your Physics teacher in your **FIRST** lesson back.
6. Past experience has shown us that student's that don't do well on the 'Maths for Physics' test find the Physics 'A' level very difficult. Please work hard at mastering the techniques in this booklet!

TASK 2

Y11 INTO Y12 ISAAC PHYSICS 'MATHS FOR PHYSICS' work

Sign up to Isaac Physics by going to the website below unless you already have an account:

https://isaacphysics.org/login

If you then click on sign up (not login).

Students joining the group will be shown my name and account email and be asked to confirm sharing data - you need to do this so that I can see your results after setting you assignments.

You need to enter the following code into the teacher connections tab on your 'My account page':

X9QUVQ

Or use the following link:

https://isaacscience.org/account?authToken=X9QUVQ

Complete the following Isaac Physics tasks that have been set for 1st September:

1.1 Algebraic Manipulation EDIT
1.2 Quadratic equations EDIT
1.3 Simultaneous equations EDIT
1.4 Trigonometry

TASK 3

Read through the 'Kerboodle transition guide' for 1st September. There is no need to answer the questions unless you wanted to.

Please see below for other useful tasks/resources:

3) You can keep your Physics problem solving skills sharp by using Isaac Physics and attempting some level 1 and possibly level 2 questions:

https://isaacphysics.org/

4) It is recommended that you have a look at the 'New Head Start to A level Physics (CGP A level Physics) Kindle Edition. If you select the Kindle option it is free – see link below:

https://www.amazon.co.uk/Head-Start-level-Physics-Level/dp/1782942815

5) For the course specification see the link below:

https://filestore.aqa.org.uk/resources/physics/specifications/AQA-7407-7408-SP-2015.PDF

6) Take a look at the AQA Physics transition guide:

AS and A-level Physics Physics Transition guide (devizes.wilts.sch.uk)

7) The following book would be very useful in aiding your study over the 2 year Physics A level:

New A-Level Physics for AQA: Year 1 & 2 Student Book with Online Edition (CGP A-Level Physics) Paperback – 8 Jun. 2018

This unbeatable CGP Student Book covers all of the core content for both years of AQA A-Level Physics - plus the optional topics 9-12. It's brimming with in-depth, accessible notes, clear diagrams, photographs, tips and worked examples. Throughout the book there are lots of practice questions and end of section summaries with exam-style questions (answers at the back). There's detailed guidance on Maths Skills and Practical Skills, as well as indispensable advice for success in the final exams. We've even thrown in a free Online Edition of the whole book - just use the code printed inside the book to access it on your PC, Mac or tablet. If you'd prefer Year 1 (9781782943235) & Year 2 (9781782943280) in separate books, CGP has them too! And for more detailed coverage of the mathematical elements of A-Level Physics, try our Essential Maths Skills book (9781782944713)!

See Amazon link below:

https://www.amazon.co.uk/New-Level-Physics-AQA-Student/dp/1789080487