

Physics

Firstly, well done on choosing to study Physics at Beaconsfield High School. To prepare for the course, we would like you to...

1. Print out the [A level specification](#).
2. Print off [the Data booklet](#).
3. Sign up to the [Isaac Physics website](#) (using your Beaconsfield High School email address if you have one).
4. Once you have signed up to Isaac Physics, attempt as many of these practice questions as you can. Make sure you are logged in when you answer the questions so your answers will link to your account.

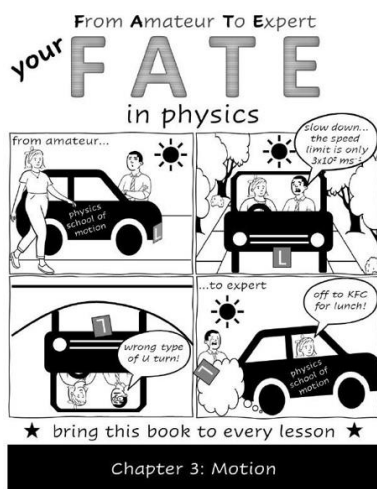
- Key skills https://isaacphysics.org/gameboards#gcse_alevel_transition_skills
- Significant Figures https://isaacphysics.org/gameboards#sig_fig_prac_mastery
- Components of vectors
https://isaacphysics.org/questions/ch_b_p1?board=vector_components&stage=a_level
- Adding vectors https://isaacphysics.org/questions/ch_b_p2?board=adding_vectors&stage=a_level
- Polar bear on ice sheet https://isaacphysics.org/questions/polar_bear?board=adding_vectors&stage=a_level
- Springs https://isaacphysics.org/questions/ch_b_p7?board=springs_hookes_law&stage=a_level
- Current & voltage https://isaacphysics.org/gameboards#phys_book_gcse_ch_3_23
- Resistance
https://isaacphysics.org/questions/gcse_ch3_24_q10?board=phys_book_gcse_ch_3_24&stage=a_level
- Waves / em frequencies
https://isaacphysics.org/questions/electromagnetic_frequencies?board=em_spectrum&stage=a_level
- Waves / light
https://isaacphysics.org/questions/searching_for_the_invisible?board=em_spectrum&stage=a_level
- Waves / sound https://isaacphysics.org/questions/noise_production?board=wave_eqn&stage=a_level

- Buy the [Head start to A-level Physics](#) book (ISBN- 13 978-1782942818, ISBN-10 1782942815). You need to work your way through the book and mark your answers.
- Buy the [CGP Essential math skills for A-Level Physics](#) ISBN- 13: 978-1782944713
- We are using the physics textbook [A Level Physics for OCR A](#) ISBN- 13: 978- 0198352181. You do not need to purchase it as you will have access to it online, but some students like to buy their own paper copy.

The course notes are provided in the A Level Physics SOAP:



We also provide you with a unique set of learning recourses called FATE packs for each topic:

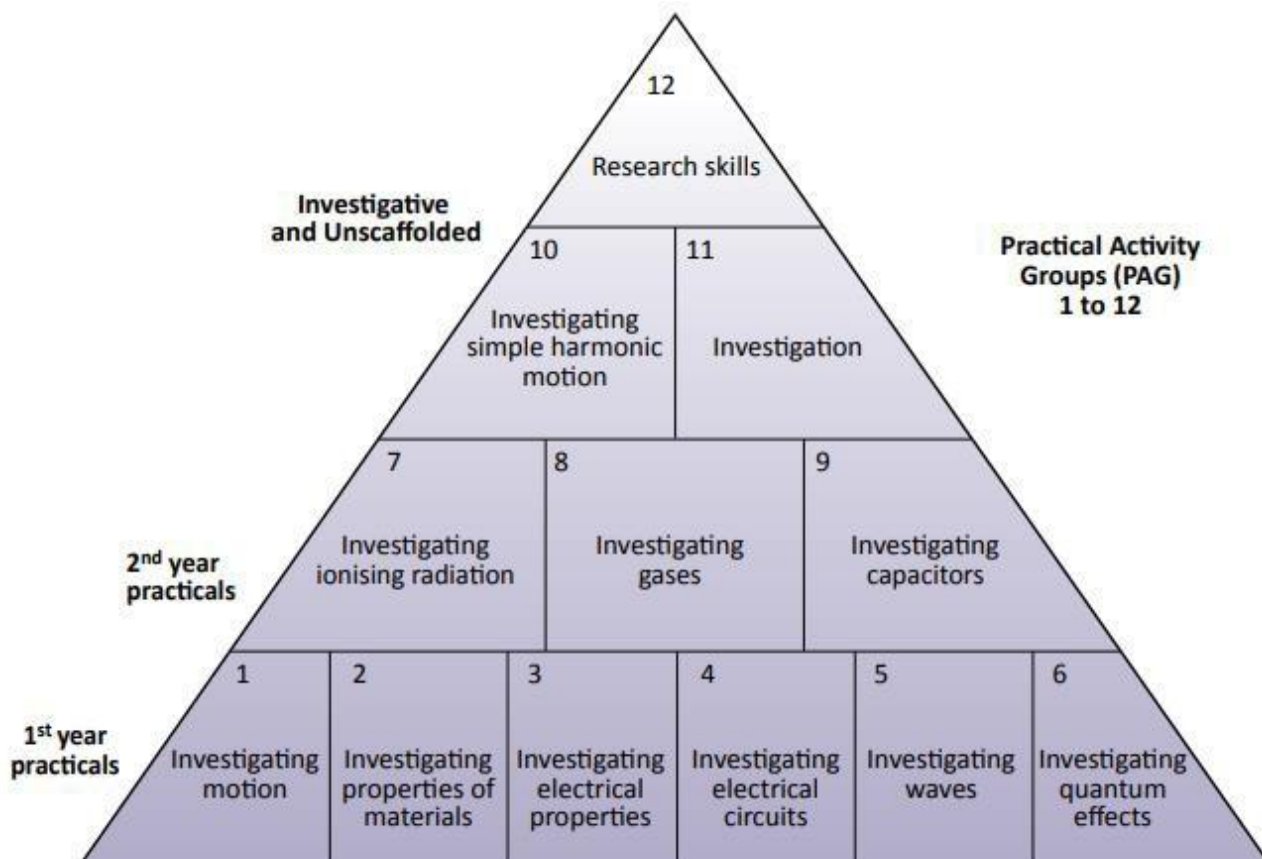


name: _____

The course we teach is OCR Physics A (H556). The course is divided into six modules:

- Module 1: Development of practical skills in physics
- Module 2: Foundations in physics
- Module 3: Forces and motion
- Module 4: Electrons, waves and photons
- Module 5: Newtonian world and astrophysics
- Module 6: Particles and medical physics

Module 1 practical skills are taught across the two years. There are 12 groups of required practicals (PAGs):



In year 12 we teach modules 2, 3 and 4 and in year 13 modules 5 and 6. Here are the details:

Module 2: Foundations in physics

- Physical quantities and units
- Making measurements and analysing data
- Nature of quantities

Module 3: Forces and motion

- Motion
- Forces in action
- Work, energy and power
- Materials
- Newton's laws of motion and momentum

Module 4: Electrons, waves and photons

- Charge and current
- Energy, power and resistance
- Electrical circuits
- Waves
- Quantum physics

Module 5: Newtonian world and astrophysics

- Thermal physics
- Circular motion
- Oscillations
- Gravitational fields
- Astrophysics and cosmology

Module 6: Particles and medical physics

- Capacitors
- Electric fields
- Electromagnetism
- Nuclear and particle physics
- Medical imaging