

Dear Prospective Physics Students,

I hope you are all well.

In this document I want to outline the A Level physics course structure and explain what I would like you do before September.

The A Level course runs over two years and you will have two teachers. At Hardenhuish School we follow the Salters Horners Context Led Approach. You can see from the concept led approach what the main topics covered throughout the course.

Course Outline

The exam structure is as follows:

A level Paper 1 – Advanced Physics I

✓ 90 marks

⚖ 30% weighting

🕒 1 hour 45 minutes

Concept-led approach

- Working as a Physicist
- Mechanics
- Electric Circuits
- Further Mechanics
- Electric and Magnetic Fields
- Nuclear and Particle Physics

Salters Horners context-led approach

- Working as a Physicist
- Higher, Faster, Stronger (HFS)
- Technology in Space (SPC) (except items 70 and 92–95)
- Digging up the Past (DIG) (except items 83–87)
- Transport on Track (TRA)
- The Medium is the Message (MDM)
- Probing the Heart of Matter (POR)

A level Paper 2 – Advanced Physics II

✓ 90 marks

⚖ 30% weighting

🕒 1 hour 45 minutes

Concept-led approach

- Working as a Physicist
- Materials
- Waves and the Particle Nature of Light
- Thermodynamics
- Space
- Nuclear Radiation
- Gravitational Fields
- Oscillations

Salters Horners context-led approach

- Working as a Physicist
- The Sound of Music (MUS)
- Good Enough to Eat (EAT)
- Technology in Space (SPC) (only items 70 and 92–95)
- Digging up the Past (DIG) (only items 83–87)
- Spare-Part Surgery (SUR)
- Build or Bust? (BLD)
- Reach for the Stars (STA)

A level Paper 3 – General and Practical Principles in Physics

✓ 120 marks

⚖ 40% weighting

🕒 2 hours 30 minutes

- All topics across the full A level specification.
- Half of the paper will also focus on testing students' knowledge and understanding of practical skills and techniques.

Year 12 Units:

- Working as a Physicist
- Mechanics
- Electrical Circuits
- Materials
- Waves and Particle Nature of Light

Year 13 Units:

- Further Mechanics
- Electric and Magnetic Fields
- Nuclear and Particle Physics
- Thermodynamics
- Space
- Nuclear Radiation
- Gravitational Fields
- Oscillations

Core Practical's

- At least 12 pieces of assessed practical work over the two years of the A level course
- These practical activities must develop the necessary skills for direct assessment of practical skills in students
- The practical activities enable students to gain hands-on practical experience of the 12 techniques and apparatus
- Students should develop and demonstrate competency in each of the areas described through the CPAC statements.

Induction Work for May- September 2020

I have set up a programme of work to prepare you for starting your AS physics in September.

Please submit all work to me using this email address: cmm@hardenhuish.wilts.sch.uk

Induction Work-Phase 1 18th May-15th June

As part of the first phase of the physics induction work, I would like you spend some time looking at background reading/films/websites and TED talks. The document containing this information can be found in the Physics transition folder titled *Physics Links for transition*.

This can be reviewed over the complete induction period.

The following tasks I would like you to complete before 15th June:

1. Identify an area of physics that interests you/ you would like to know more about and submit a short report (200 words) on this area including:
 - a. Topic area
 - b. Why it interests you
 - c. What you already know/have learnt about this topic
 - d. What is the current research in this area?
 - e. What further information/research you would like to do in this topic?
2. Complete the Phase 1 Booklet

Induction Work-Phase 2 15th June-15th July

As part of the first phase of the physics induction work, I would like you spend some time looking at background reading/films/websites and TED talks.

1. Feedback given on report
2. Self-assess and feedback on Phase 1 booklet
3. Complete phase 2 booklet

Induction Work Phase 3- 15th July-2nd September

1. Complete Summer Task
2. Complete Online Quizzes on GCSE knowledge
3. Self-assess areas of physics which you highlight as requiring extra work