



SIXTH FORM INDUCTION TASKS





Dear student,

Congratulations on your enrolment for the Sixth Form at The Heathland School.

The leap from GCSE to Post 16 study is significant and it is essential that you make a strong and committed start to your courses in September.

In order to help you do this, we have asked departments to prepare some preliminary work for you to start before your first lessons begin. There are tasks to complete for each A Level or BTEC subject you are going to study in Year 12. Teachers will refer to these tasks during the first two weeks of study.

I would also ask you to view the specification for each subject by viewing the curriculum section on the school website.

The best of luck with your Sixth Form studies – we look forward to seeing you make good progress during Year 12 and beyond.

Personalised Checklists (PLCS)

A PLC is a Personalised Learning Checklist. It is an organised list of topics that you will study in your chosen subjects taken from the syllabus. It also provides an opportunity for you to reflect on your progress in your subjects.

MyPLC (<https://www.my-plc.co.uk/register/>) has a large bank of subject and exam board specific information. Sign up as a student and join the Sixth Form Students class by entering the code **ab4870**.

You will then have access to all the available PLC's for your subject and exam board. This will:

1. Show you all the topics you will be studying for your subjects
2. Allow you to rate your level of understanding for each topic as you study them
3. Help you direct your revision to make it specific, focused and individual to you; ensuring your revision is an effective use of time and energy

Previous students have said:

“PLC's help me see in advance what we will be learning so I can do some additional reading before the lesson”

“Using the PLC has helped me to focus my revision on areas I need to improve”

“It has been really helpful when Topic tests come up. I know specifically what to revise”



PHYSICS

Research activity A: Cornell notes

To get the best grades in A Level Physics you will have to become proficient at completing independent research and making your own notes on challenging topics. Below are links to 5 websites that cover some interesting topics in physics.

Using the Cornell notes system: <http://coe.jmu.edu/learningtoolbox/cornellnotes.html> for **2** of the sites below make 1 page of notes covering a topic of your choice for each.

a) <https://home.cern/about>

CERN encompasses the Large Hadron Collider (LHC) and is the largest collaborative science experiment ever undertaken. Find out about it here and make a page of suitable notes on some aspect of the accelerator.

b) http://joshworth.com/dev/pixelspace/pixelspace_solarsystem.html

It is difficult to comprehend the size of the solar system. Have a look at this award winning website and make a page of notes on a topic of your choice.

c) <https://phet.colorado.edu/en/simulations/category/html>

PhET create online Physics simulations where you can perform some simple experiments online. Open up the resistance of a wire html5 simulation (or another physics simulation of your choice). Conduct a simple experiment and make a one page summary of the experiment and your findings.

d) <http://climate.nasa.gov/>

NASA's Jet Propulsion Laboratory has a great deal of information on Climate Change and Engineering Solutions to solve it. Have a look and make notes on an article of your choice.

e) <http://www.livescience.com/46558-laws-of-motion.html>

Newton's Laws of Motion are fundamental for understanding the motion of all the objects in the universe. Use this website and the suggested further reading links on the webpage to make your own page of notes on one of the topics.

Research activity B: Method

Research a method for measuring the acceleration due to gravity 'g' using **light gates**.

Make sure you include:

- a step by step method
- what variables will need to be measured
- what equipment is required for your method
- what are the uncertainties in the experiment
- what calculations will be performed