# Applied Science BTEC

## Preparation work: Pre-course Reading, Research and Tasks

Pre-reading and research will help you to become more familiar with the topics you are going to study on your BTEC Applied Science course. If you complete the tasks below they will also help you to become more confident when you start your course.

## Specification :

In the first year you will be studying Unit 1 'Principles and Applications of Science', which is examined and Unit 2 'Practical Scientific Procedures and techniques', which is coursework. You can find out more about what the unit content is in the specification below:
https://qualifications.pearson.com/content/dam/pdf/BTEC-Nationals/Applied-Science/2016/specification-and-sample-assessments/9781446938164_BTECNat_AppSci_ExtCert_Spec.pdf

## Task 1:

You need to recap some topics of science that you have been learning over the last two years. Have a look at the following topics on the GCSE Bitesize website and make 3 separate summary pages for Biology, Chemistry and Physics. (You can revise more topics if you wish, but start with the ones listed below!)

**Biology**
https://www.bbc.co.uk/bitesize/guides/zxm3jty/revision/1
https://www.bbc.co.uk/bitesize/guides/z2jydxs/revision/1

**Chemistry**
https://www.bbc.co.uk/bitesize/guides/zy98msg/revision/1
https://www.bbc.co.uk/bitesize/guides/zxtscj6/revision/1
https://www.bbc.co.uk/bitesize/guides/z2ty97h/revision/1
https://www.bbc.co.uk/bitesize/guides/zpk2srd/revision/1

**Physics**
https://www.bbc.co.uk/bitesize/guides/zs86v9q/revision/1
https://www.bbc.co.uk/bitesize/guides/zc638mn/revision/1

## Case Studies:

How to do a titration https://www.youtube.com/watch?v=-1nJv0k8zQU

## Task 2:

Watch the video above and do your own research on how to carry out a titration. Make a step-by-step page on how you would do it (including diagrams) and, if you can, the equations you would use to work out the concentration of the unknown.

## Websites for Further Research and Reading:

**Infographics on a variety of current science topics** https://www.compoundchem.com
**Serious scientific answers to absurd hypothetical questions** https://what-if.xkcd.com
**BBC Science News** https://www.bbc.co.uk/news/science_and_environment
**The Guardian Science News** https://www.theguardian.com/science
**The Independent Science News** https://www.independent.co.uk/news/science

## Books to Read:

- **The Language of Kindness – A Nurses Story** by Christie Watson
- **The Body – A guide for occupants** by Bill Bryson
- **The Disappearing spoon** by Sam Kean
- **The Immortal Life of Henrietta Lacks** by Rebecca Skloot

## Podcasts:

**13 minutes to the moon (BBC Sounds)** https://www.bbc.co.uk/programmes/w13xttx2
**In our time** https://www.bbc.co.uk/programmes/p01gyd7j/episodes/downloads
**TED Talks Science and Medicine** – TED
**Science Weekly** – The Guardian
**Brains On! Science Podcast** – American Public Media

## Task 3:

Read a book/listen to a podcast and think about what you find most interesting about science and find more out about how it works, making a poster/diagram on it.

## Films to Watch:

- **Planet Earth** (BBC iplayer)
- **Climate Change – The Facts** (BBC iplayer)
- **The Theory of Everything**
- **A Brilliant Mind**
- **Jurassic Park**

## Progression Opportunities

**Why choose Applied Science BTEC**:

- **Forensic science future learn course** (there are more, free science related courses to look into as well!) https://www.futurelearn.com/courses/introduction-to-forensic-science
- **Royal Society of Nursing** https://www.rcn.org.uk
- **Royal College of Midwives** https://www.rcm.org.uk/about-us

There are lots of courses you can apply for with BTEC Applied Science, do check the UCAS website for further details https://digital.ucas.com/search

*We hope you enjoy completing these tasks and look forward to you joining the course.*