

## Subject: Applied Science

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The Royal Society of Chemistry produces posters and leaflets to go in school laboratories that give key information to learners and technicians about different ideas in science. This information is used by school technicians to produce the various solutions needed in a school laboratory.

**In Btec Applied Science you will need to produce a portfolio of scientific information to be passed to the graphic designer for preparation of a web-based programme to help the teaching and understanding of the use of titrations.**

### Task 1

You need to research the periodic table in detail and then design a **digital poster** to outline the key features of the periodic table and of atomic structure. Your poster should cover all of these key points.

- *The periodic table*: organisation of elements; periodicity; groups (physical and chemical properties); relative atomic mass; atomic number
- *Electronic structure of atoms*: Bohr's theory
- *Bonding of elements*: ionic bonding; covalent bonding; tetrahedral basis of organic chemistry

We will work on improving this research and work completed during the start of the course in september. It is best for you to work in a digital format so work can be edited. This could be Word, Powerpoint etc. An A3 page layout will ensure that you have enough space to go into detail.

### Task 2

Produce a **leaflet** to be used as a reference by other lab technicians that outlines the key features of a simple acid base titration. Your step by step guide should include diagrams and explanations to ensure that anybody would be able to complete a titration. You should aim to research and include all of the key words given below.

- *Quantities in chemical reactions*: formulae; balanced equations; relative molecular mass; moles; molar
- masses; molarities; standard solutions and titrations

Please use your own research skills and keep a word file of all the references you have used so that you can refer to them later. These are the starting steps and all work should be saved so that we can improve work.

Work should be brought to the first lesson of applied science in September 2016.