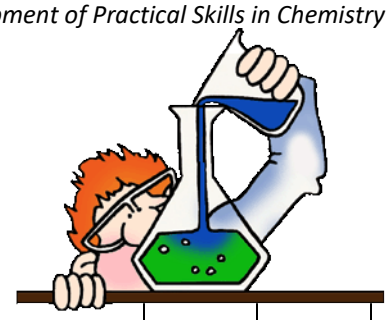
Practical Skills



The key areas of study in this topic are:

- Planning
- Implementing
- Analysis
- Evaluation

By the end of this topic I should be able to:	Start	End
Design experiments, including those to solve problems. Select suitable apparatus, equipment and techniques for the proposed experiment.		
Identify variables that must be controlled, where appropriate		
Evaluate an experimental method to decide if it appropriate to meet the expected outcomes		
Know how to use a wide range of practical apparatus and techniques correctly		
Use appropriate units for measurements		
Present observations and data in an appropriate format.		
Process, analyse and interpret qualitative and quantitative experimental results and reach valid conclusions (where appropriate)		
Use appropriate mathematical skills for analysis of quantitative data		
Use significant figures appropriately		
Plot and interpret suitable graphs from experimental results, including: • selection and labelling of axes with appropriate scales, quantities and units • measurement of gradients		
Know how to evaluate results and draw conclusions		
Identify anomalies in experimental measurements		
Understand the limitations in experimental procedures		
Understand precision and accuracy of measurements and data, including margins of error, percentage errors and uncertainties in apparatus		
Refine experimental design by suggestion of improvements to the procedures and apparatus.		

In all topic areas you should be able to demonstrate and apply your knowledge and understanding.