

**Subject: Chemistry****Exam Board: OCR A**

Welcome to A-level Chemistry. We are delighted that you are considering this A-level as an option in Year 12 and 13. To demonstrate your commitment to the course and to prepare you for September, you must complete the following tasks to the best of your ability. These tasks are compulsory and must be completed prior to your first Chemistry lesson in Year 12.

We expect you spend at least 3-4 hours completing the tasks outlined in this pack. The activities have been designed to help you begin to develop some of the key skills you will need for A-level.

**Learning Objectives: Understand how to use experimental data to calculate enthalpy change of a range of reactions.**

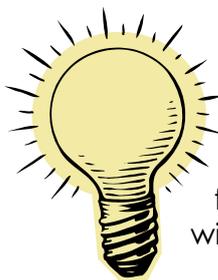
**Contacts for Support:**Mrs Simpson – [Simpson@tahs.net](mailto:Simpson@tahs.net) or via Teams

## What is Chemistry?



A Level Chemistry will give you an exciting insight into the contemporary world of chemistry. It covers the key concepts of chemistry and practical skills are integrated throughout the course. This combination of academic challenge and practical focus makes the prospect of studying A Level Chemistry highly appealing. You will learn about chemistry in a range of different contexts and the impact it has on industry and many aspects of everyday life.

## Careers you can consider with Chemistry:



For many career choices a Chemistry A level is essential requirement. Course such as medicine, veterinary medicine, pharmacology and chemical engineering specify A level Chemistry. However there are many other career paths for which Chemistry is looked upon as a highly favourable subject of study. Due to the high demands of the course and the wide range of skills gained Chemistry is a valued subject for further study in Law, Accountancy and Business Studies. A Chemistry A level also has a wide range of applications in industry, particularly in manufacturing and agriculture.

## Skills you will have learnt upon completion of Chemistry:

You will learn to investigate and solve problems in a range of contexts. In addition to a much more in depth understanding of chemistry, you will gain transferable skills including investigating, problem solving, research, decision making, mathematical skills and analytical skills.

## ***Overview of lessons:***

Lesson 1: Enthalpy of combustion – an introduction to calculating the enthalpy change when a reactant combusts by measuring the temperature change experimentally.

Lesson 2: Introducing enthalpy definitions for different reactions and finding the enthalpy of neutralisation experimentally.

Lesson 3: Applying the first law of thermodynamics to chemical reactions to derive Hess' Law. Use Hess' law to calculate enthalpy change experimentally.

Lesson 4: Consolidation and practice of enthalpy calculations from lessons 1-3 and short assessment.

## ***Homework Tasks to be completed:***

Task 1: Use the data gathered experimentally during the lesson to calculate the enthalpy of combustion of a range of alcohols. Calculation template and support sheet available.

Task 2: Evaluation of calorimetry method (RSc starter for 10 – thermodynamics 6.4)

Task 3: Hess' Law Questions (RSc starter for 10 – thermodynamic 6.3)

Task 4: Bridging work pack – PixL self assessed work pack (to be handed in already self-assessed with green pen), Maths for Chemistry Handbook (read and sign form), Chemistry Practical Skills Handbook (read and sign form)