Things you need to do before your return in September

- **Complete the summer task and bring it with you.**
- **Revise from your GCSE notes**
- **Revise from your 'Head start to A level Chemistry' book and produce a revision aid for one of the topic areas.**
- **Prepare for the ability test which will take place in the first week of starting your A level Chemistry course.**

Finally good luck with your GCSE exam results and we look forward to seeing you in September—Have a good summer!!

A Level Chemistry

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A Level Chemistry

SUMMER TASK

Aim

To look at alternative ways of determining enthalpy changes and develop graph drawing skills.

The apparatus below can be used to measure the temperature rise of water when a liquid fuel is burned.

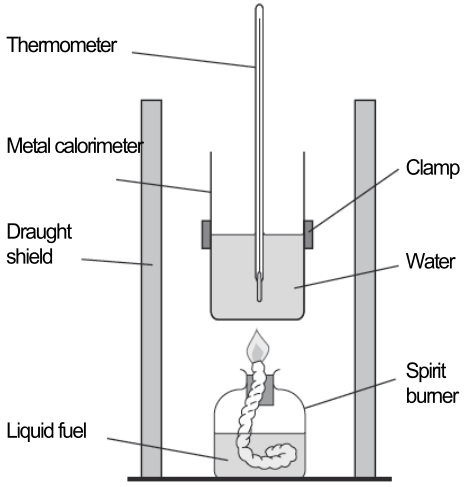

Figure 1 Simple apparatus for measuring the enthalpy change of combustion of a liquid fuel.

The enthalpy change for burning a fuel in this way is much lower than the value given in a chemical data book.

TASK 1

List as many factors as you can that may affect the readings obtained and what could you do to try and improve the method.

The results in the following table were obtained when a different solid to the one used in the previous lesson was added to a dilute acid

Time/ minutes	0	1	2	3	4	5	6	7	8	9	10
Temp./ °C	21.8	21.7	21.7	21.6	Add Solid	13.1	13.3	13.5	13.7	13.9	14.2

Task 2

- Plot a graph of temperature (Y—axis) against time.
- Draw two separate lines of best fit. One using the points before the addition of the solid and one using the readings after the solid had been added.
- Extend both lines to the fourth minute.
- Use your graph to find the temperature change which would have occurred immediately on addition of the solid to the acid.
- What other measurements would you need to be able to work out the enthalpy change for this reaction?

Assessment criteria.

- Marks will be awarded for the following:
- Choose suitable scales and labels for your axes
- The accuracy of plotting your points (+/- one square)
- How well you draw your lines of best fit
- Extending (extrapolating) your lines of best fit.