

# Appendix 1: Instructions for candidates

This assessment applies to the Assignment for National 5 Chemistry.

This Assignment is worth 20 marks out of the total of 100 marks. This is 20% of the overall marks for the Course assessment. The Course will be graded A–D.

It assesses the following skills, knowledge and understanding:

- applying knowledge of chemistry to new situations and interpreting information
- selecting and presenting information appropriately in a variety of forms
- processing the information/data collected (using calculations and units, where appropriate)
- drawing valid conclusions and giving explanations supported by evidence/justification
- communicating findings/information

In this assessment, you will have to:

Investigate a relevant topic in chemistry and communicate your research findings in a report. The topic must have an application with an impact on the environment/society. This must relate to a key area of the National 5 Chemistry Course. The Assignment has two stages:

- ◆ a **research** stage
- ◆ a **communication** stage

Your assessor will let you know how the Assignment will be carried out and any required conditions for doing it. Your report must be completed independently.

## Research stage

You need to choose a relevant topic in chemistry to investigate. The topic must have an application which has an impact on the environment/society. Your assessor will help you to choose a suitable topic.

Once you have chosen your relevant topic, you need to decide the specific aspect which you want to research. This will become the aim of your Assignment. The aim may change during the research stage of your Assignment depending on what kinds of information you find.

Most of the work in this stage is to gather data/information. This could come from the internet, books, published articles or extracts, journals, experiment/practical activity or any other appropriate source.

Your information/data could include for example, statistical, graphical, numerical or experimental data/information; notes taken from a visit or talk; notes taken from a written or audio visual source; or extracts from publications.

Downloads directly from the internet or copying directly from books may suggest to the assessor that you have not understood the chemistry involved. This may be considered as plagiarism unless you acknowledge the sources carefully. It is always best to put things in your own words to make sure you really understand them.

### **You must**

- ◆ use at least two sources of information/data and be able to explain why you chose them. You could think about:
  - relevance – how useful they are for your topic
  - reliability of sources – who wrote them? who published them? etc.
  - similar/different perspectives – do they agree or disagree with each other?
  
- ◆ select relevant data/information from your sources. This could include raw data from an experiment/ practical activity, extracted tables, graphs, diagrams and text.
  
- ◆ record the sources you have used with enough detail to allow someone else to find them again. If one of the sources is an experiment/practical activity, then you need to record the title, the aim and the raw data.

If you use an experiment/practical activity as one of the sources of information/data, your assessor will give you instructions for this. The experiment/practical activity will not be assessed and you may carry out the experiment/practical activity as part of a group.

If you are working in a group to gather data/information, you must take an active part in this and choose your own sources of data/information.

**Checkpoint:** Inform your teacher that you have finished the Research stage

### **Communication stage**

In this stage of your Assignment you need to select, process and present information/data from the sources you have gathered, and produce your report.

This stage will be conducted under a high degree of supervision. This means that:

- ◆ you will be in direct sight of the assessor during the period of the assessment
- ◆ you must not discuss your work with other candidates.

In this stage of your Assignment you can only use information/data that you have collected from your research. This may include, for example, statistical, graphical, numerical or experimental data; data/information from internet; published articles or extracts; notes taken from a visit or talk; or notes taken from a written or audio visual source. It cannot include a prepared draft report.

A chemistry data book can be used

As a guide, your report should be 500-800 words, excluding tables and diagrams. There is no penalty for being outwith this range.

The table below shows how many marks are available for each aspect of your report.

| <b>Skills, knowledge and understanding</b>        | <b>Marks Allocation</b> |
|---|-------------------------|
| The aim of the investigation                      | 1                       |
| Application/impact on the environment/society     | 2                       |
| Selection of sources of data/information          | 2                       |
| Selection of relevant Information from sources    | 2                       |
| Processing and presentation of data/information   | 6                       |
| Drawing a valid conclusion                        | 1                       |
| Applying knowledge and understanding of chemistry | 3                       |
| Report Structure                                  | 3                       |

### **Guidance on Producing Your Report**

Your report should

- ◆ have an appropriate structure with an informative title and headings where necessary
- ◆ be clear and concise

Your report should include the following

- ◆ Aim
- ◆ Application
- ◆ Research
  - Choice of Sources
  - Data/information
- ◆ Conclusion
- ◆ Underlying Chemistry
- ◆ References

#### **Aim**

The aim **must** describe clearly what is to be investigated

#### **Application**

Here you **must** describe the application of bChemistry and explain its impact on the environment/society.

Your explanation must make clear how the application affects the environment/society. This could be a positive or negative impact or both.

#### **Research**

##### *Choice of Sources*

Here you **must** give reasons for your choice of sources of raw data/information

You must explain your choice of sources in terms of at least two of the following:

- relevance – how useful they are for your topic?
- reliability of sources – who wrote them? who published them? etc.

- similar/different perspectives – do they agree or disagree with each other?

### *Data/information*

Here you **must** include the data/information from your sources that is relevant to your investigation. This must include data/information that you have processed from at least two of your sources. This can include, for example, performing calculations, plotting graphs from tables, populating table from other sources, summarising referenced texts etc.

It must be clear where the raw or extracted data/information that you processed came from. For example you could

- include raw data from an experiment/ practical activity,
- include tables, graphs, diagrams, text taken from your sources.
- explain clearly where the data/information came from (reference your sources)

You **must** present your processed data/information in at least two different formats from summary, graph, table, chart or diagram (one must be graph, table, chart or diagram).

Think carefully about the format you choose because it must be suitable for the information you are presenting.

Check that you have included, as appropriate

- suitable scales
- units
- headings
- labels

You should also compare the data/information from at least two sources. For example how they agree/disagree or describe other similarities/differences.

### **Conclusion**

You **must** clearly state the conclusion(s) of your investigation. Your conclusion(s) must relate to your aim and be supported by what you have found out.

### **Underlying Chemistry**

Here you should explain how the underlying chemistry relates to your topic.

You should include a statement of the chemical principles involved. This may include one or more of formulae, chemical equations, calculations, a description of properties related to bonding.

### **References**

At the end of your report you must record the sources you have used with enough detail to allow someone else to find them. If one of the sources is an experiment/practical activity, then you need to include the title and the aim.

Before submitting your report check that you have included everything you need.