

## G627: Investigating the Scientist's Work – Sample Assignment B

<b>Unit Name:</b> Investigating the Scientist's Work	<b>Unit Number:</b> G627
<b>Assignment Title:</b> Investigating Insulating Materials	<b>Assignment:</b> G627 Sample Assignment B
<b>Date Set:</b>	<b>Due Date:</b>
<b>Assessment Objective(s):</b> AO1, AO2 & AO3	

### Vocational Brief:

Effective use of insulation materials helps consumers save money and conserve energy. Companies invest in research into insulating materials to try to produce high quality, value for money products. You are required to plan and carry out an investigation on the effectiveness of a number of insulation materials.

The investigation will involve:

- research to obtain knowledge about the topic
- practical work to obtain data to confirm or disprove your original ideas
- the production of a scientific report.

The practical work must be carried out safely by you in the laboratories that you usually work in. If possible, several practical techniques should be used in the investigation.

### Task:

#### Planning - AO1(a) & (b)

- Produce a plan for your investigation into the insulation properties of a number of different materials. You need to include your aims and objectives, full details of experimental work and the guidelines you have to work to. [5 marks]
- Record evidence of any research you carry out with details of sources used. Give details showing checks for the validity of the information chosen. [5 marks]

### **Investigation completion - AO3(a) & (b)**

#### **Presentation and processing of data - AO2 and AO3(c) & (d)**

- Carry out safely all the experimental work detailed in your plan. [6 marks]
- Complete a record to show your plan has been completed with evidence of any changes or modifications recorded and carried out. [4 marks]
- Record the data from your practical work in a suitable form. [4 marks]
- Process your data so it can be easily understood. [5 marks]
- Carry out and record any calculations needed to help interpret your data. [5 marks]
- Write a scientific report on your investigation to include what you have found out. Show how this links to the results you have made and interpret the outcome of your investigation. [7 marks]  
[5 marks]
- Evaluate the work you have completed. [4 marks]

Check that your report is clear, logical and accurate. Ensure that you have used scientific terminology correctly and that your spelling, punctuation and grammar are correct.

Check also that you have shown an understanding of the scientific knowledge used in your investigation.

**[ Max marks possible for this task: 50 ]**