General Certificate of Secondary Education
Specimen Controlled Assessment

GCSE Additional Applied Science

Unit 2 How Scientists use Practical Techniques

Specimen Controlled Assessment V1.0

Assignment 2, Option 4: Using analytical techniques to help solve a crime

Notes for Candidates

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Notes for Candidates

This task relates to Unit 1 section 3.3.6 – The use of science in analysis and detection.

Area of Investigation

Forensic scientists use a variety of analytical techniques to help solve crimes.

Task

You will need to design, plan and do an investigation to solve a burglary by analysing materials collected from a crime scene.

You will be given the opportunity to:

- use a number of analytical techniques to obtain evidence to help solve the burglary and suggest why a particular suspect may be guilty of the crime
- compare your results with secondary data in order to comment on the reliability of your data and effectiveness of your techniques.

You will be expected to:

- practice the techniques that you will use in your investigation
- write a plan for your investigation
- write a risk assessment for your investigation.

When you write up your plan and risk assessment you must work on your own, without talking to your classmates or teacher.

You will be shown the equipment available for you to do the investigation.

You will have to decide on things such as:

- how to do the investigation
- appropriate readings and measurements to take
- which readings to repeat.

You will then do practical work to analyse the samples collected at the scene of the crime and to compare the samples with material collected from suspects. When doing the practical work you may work in a group with classmates, but you **must** record the data obtained yourself, and you **must** identify the data that you have obtained.

After the practical, you will be given some results obtained by other people to use in your data analysis.

You must write a report on your investigation, which should contain:

- your plan, including information on why you are doing the investigation and the equipment you think you will need
- your risk assessment, in which you should identify the hazards and risks and give the control measures needed to manage the risks
- your results and observations, recorded in an appropriate format
- an analysis of your data, including calculations
- a comparison of your results with other results
- the scientific conclusions you can make from your analysis of the data / evidence
- an evaluation of your investigation
- an explanation of how a forensic scientist might use the results of the investigation in their workplace.