

**ADVANCED SUBSIDIARY GCE UNIT
GENERAL STUDIES**

2963/AS

The Scientific Domain (Coursework)

JUNE 2007

OPEN ON RECEIPT

Additional materials: Instructions for Teachers 2963/IT
Resource Booklet 2963/RB



INFORMATION FOR CANDIDATES

- Assignment Theme: 'Science as a problem solver'.
- The total number of available marks for this assignment is 90.

This document consists of **4** printed pages.

Guidance for candidates

The assignment for Unit 2963 comprises 30% of the AS award and 15% of the A Level. Your assignment should reflect the scientific content of the unit:

- characteristics of the sciences (physical, life and earth)
- understanding of scientific methods, principles, criteria and their applications
- mathematical reasoning and its application.

Assignment Brief – Science as a problem solver

Investigate an issue associated with one of the following areas and submit a report of your findings.

Wherever possible the investigation should incorporate both primary and secondary data and should include an example with which you are familiar. If possible consider an area where science has provided a solution to one problem, but has created further problems as a result.

Your report should **not exceed** 2000 words. There is no need to include a large amount of material downloaded from the Internet, although you should of course provide references for any source material you use.

These topics below are provided mainly as a guide. Other topics within the theme ‘Science as a problem solver’ are perfectly acceptable, and if you have a particular interest in a subject, which comes under the broad heading of the physical, life and earth sciences, you are encouraged to utilise that interest. It is possible that some assignments may include more than one of the suggested topics. This is also perfectly acceptable.

1. Science as the problem solver in environmental issues

Suggested topics under this heading include:

- desalination programmes
- nuclear energy
- CFCs
- the use of nitrates as fertilisers
- dams and/or hydroelectric schemes.

2. Science as the problem solver in plant/animal life

Suggested topics under this heading include:

- the use of biotechnology
- genetic engineering
- the development of DNA technology
- DDT
- the use of antibiotics in animals.

3. Science as the problem solver in human issues

Suggested topics under this heading include:

- X-rays
- insulin
- radar
- computers
- scanners
- mobile phones.

You should discuss with your teacher whether your proposed investigation would enable you to meet the assessment criteria for the coursework assignment.

If you adopt a problem solving approach by generating a question or a hypothesis for investigation, you are more likely to be successful than if you simply produce a descriptive account. You may well use ideas gained from your other studies, but remember this is an assignment for General Studies and you will need to discuss the wider issues and implications of your investigation.

Specification of Responses

Project reports should normally include:

- a title
- a review of the evidence and the development of a focus, question issue or hypothesis
- a plan of the way in which the investigation proceeded
- clearly defined technological concepts or models
- coherent use of appropriate technological terms
- clear tabulation of any data collected
- analysis of any issues raised
- appropriate illustrative material such as graphs, charts, statistics and photographs
- clarification of the dilemmas raised and tests of significance applied
- critical analysis of the scientific methods used and the recognition of facts and opinions
- relevant conclusions and the reliability of results
- a list of the source materials used (which may include the Internet and CD roms).

The report has a maximum limit of 2000 words which includes a short synopsis (about 50 words) and appendices.

Submission of your assignment

Make sure your name and centre number are on each page of your assignment.

Put your work in order and number all pages. Prepare a contents page and a short synopsis.

If you wish to use your assignment as key skills evidence, you should keep an electronic or hard copy.

Hand in your completed assignment to your teacher.

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