OCR
RECOGNISING ACHIEVEMENT

GATEWAY SCIENCE SUITE

CANDIDATE GUIDELINES FOR CONTROLLED ASSESSMENT

VERSION 1 FEBRUARY 2012

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CANDIDATE GUIDELINES FOR CONTROLLED ASSESSMENT

These guidelines are for use by candidates during completion of the task.

THE CONTROLLED ASSESSMENT TASK

The task titles for this subject are set by OCR and changed every year.

Each task is about a particular idea and is divided into three parts:

Part 1 Research
Part 2 Planning and carrying out an investigation to collect results
Part 3 Analysing and evaluating your research and experimental results

PART 1 RESEARCH

The Part 1 sheet tells you the information you need to find out. You can do the research and collect data/information either in school or as homework.

Your teacher will tell you how much time you will have and will give you advice on where you are likely to find resources (for example the library or the internet).

In class, you use your research to make notes. These notes will be used later in Part 2 and Part 3 of the task.

Things to think about:

- how you will approach the task (you can discuss this with your teacher)
- make sure that you have time to cover all the points needed
- only collect the information asked for on the sheet.

What you need to write down:

- write a list of all the sources you have used. You need to include references and a bibliography when you write up your notes. This includes the full URL of all websites you use
- write up notes to answer all the questions on the sheet.

Remember, it is important that your notes contain all the information you need because this is all you will have access to during Part 3 of the task.

During research/data collection, you can talk to your teacher about the task and ask them for advice. You can also work with other candidates and share ideas about doing the research with them.

You must write up your own notes.

PART 2 PLANNING

Your teacher will give you the Part 2 sheet. You will also be able to use the notes you made on your research.

You will work on your own or with one or two other students.

For Science: the sheet will have an explanation of some observations (a hypothesis). You will plan an investigation to find out if this explanation is right.

For Additional Science, Biology, Chemistry and Physics: the sheet will have some observations. You will come up with an explanation of these observations (a hypothesis).

You will then plan an investigation to find out if your explanation is right.

Things to think about:

- what are you trying to prove or disprove? Discuss this with your group.
- how can you make sure the investigation is a fair test?
- what is the independent variable that you are going to change?
- what is the dependent variable that you are going to measure?
- what different values of the independent variable are needed?
- what other variables must be kept the same?
- what equipment is the best to use? Are you able to use it? Do you need to try it out?
- can you use this equipment to detect small enough changes?
- how do you make sure your results will be accurate?
- how many times should you repeat the experiment?
- do you need to try out any parts of the experiment to help with your plan?
- what are the risks in carrying out this experiment? How can you make the experiment safe?
- how many columns and what headings are needed for the results table?

During Planning you can talk to your teacher about the task. You can also work with other candidates and share ideas about the task with them.

However, **you must write up your plan and results table on your own.**

You will be marked on the quality of written communication in your plan.

PART 2 CARRYING OUT THE INVESTIGATION TO COLLECT RESULTS

You will work on your own or with one or two other students.

You will use your plan to do the experiment. You might need to make changes as you go along. Make sure you write them down.

Things to think about:

- were changes to the plan made? Why did you make changes?
- did you work safely?
- how did you reduce any risks?
- how many repeats did you do? Should you have done any more?
- how careful were you in reading the measurements on the equipment?

You must record your results in your own table.

PART 3 ANALYSING AND EVALUATING YOUR RESEARCH AND EXPERIMENTAL RESULTS

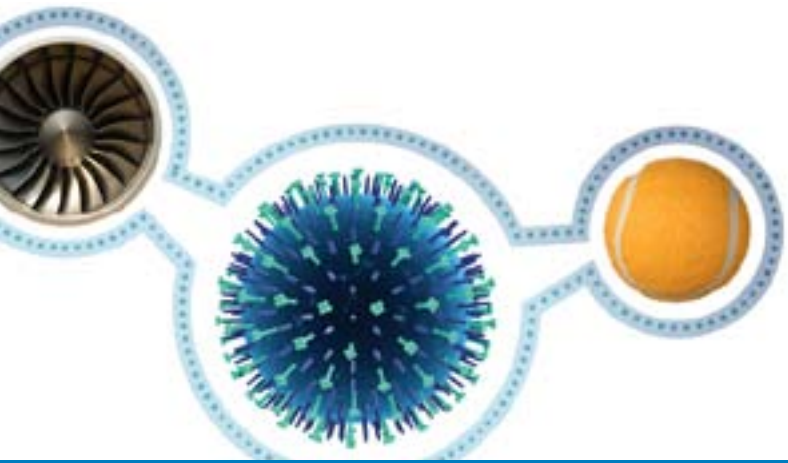
This part of the task has to be completed within school time and supervised by your teacher or another invigilator.

You must do this part of the task by yourself.

You will be given your notes from Part 1 and your results from Part 2.

Your work for this part is written in the Part 3 answer booklet, which will guide you with questions. If you need more space for your answers then you can continue on writing paper.

You will process and analyse your results from the investigation.



Things to think about:

- you will usually need to calculate the mean of your results
- record the mean in your results table
- display the results in an appropriate graph. Don't forget to add a title, label the axes and include the correct units.
- plot the points correctly. You might like to include range bars.
- you will usually need to draw a line of best fit
- describe patterns and trends in your results and make comments on any results you didn't expect
- look at similarities and differences between your results and the data you collected in your research (or the data given to you).

This part of the task also requires you to evaluate your method and your results.

Things to think about:

- the parts of the method that worked well
- any errors in reading the measurements
- the quality of the data
- whether the repeat readings were close together
- whether your results were close to the theoretical result
- any possible risks and hazards you noticed
- how well you managed the risks
- how the method could be improved the next time you or someone else does it.

You will be marked on the quality of written communication in your evaluation.

Part 3 ends with you writing about whether or not your investigation supports the explanation stated in Part 2 (the hypothesis). You will also write a conclusion in answer to a question. It is important that you use scientific explanations and all the information you have collected to explain your answers to both of these questions.

Remember that Part 3 must be your own work.

You should collect all your work together. Make sure you have:

Your notes from Part 1 and the bibliography

Your plan (and hypothesis) from Part 2

Your results table(s) from Part 2

Your graph(s) from Part 3

Your answer booklet from Part 3.

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