

“The Evolution of Automobile Engines to Become More Environmentally Friendly”

(C Grade)

Introduction

The evidence submitted for this Interdisciplinary Project consisted of the five stages of the project and SQA templates were used. The assessor’s report was included along with supporting comments on the proposal, plan and presentation.

Proposal

At this initial stage the candidate makes reference to the fact that he intends to research various aspects of his topic using the Internet as well as contacting car manufacturers. While the Internet is a useful resource, it should not be considered as the main research method in an Interdisciplinary Project.

The candidate explains his personal interest in the topic and its relevance to his future plans. He also identifies links to Advanced Higher and Higher subjects and how he will use this subject knowledge. In addition, he has produced evidence to show that he has an idea about who the final audience would be. The broad contexts of this Interdisciplinary Project have been identified but, although not mandatory, could have been expanded with some explanation.

In the skills section, the candidate does not discuss any skills that he will need to develop in relation to communication with external agencies but does make good reference to the final product focussing on independent research and his presentation skills. It is recommended that candidates address each of the bullet points in the template at this stage as these correspond to the headings they should refer to in the Self-evaluation.

Although they are adequate, the assessor’s comments could have been further expanded using evidence from the assessor/candidate meetings. As part of constructive feedback to the candidate, it may also have been appropriate to highlight the fact that the interaction with external organisations, the car manufacturers, would be crucial in providing the candidate with the opportunities for skills development. However, this should not detract from the fact that the candidate should be encouraged from the early stages to take the ‘lead’ in the Interdisciplinary Project. The candidate has satisfied all of the C grade criteria.

Plan

The candidate produced a Gantt chart to show the objectives and timescales used for the Interdisciplinary Project. A detailed Gantt chart can provide evidence of timescales, milestones and dependencies and can become part of a working document which helps the candidate in the evaluation section of the Interdisciplinary Project. The candidate's Gantt chart does not identify other commitments outside the Interdisciplinary Project that require candidate time (such as prelims, holidays and other commitments such as the 'Cansat' project mentioned in the Planning section). In addition, given that the candidate planned to present his findings to the Standard Grade Physics class as part of the transport topic which they cover, some consideration should have been given to the appropriate timing of this within the Plan, if not within Timescales or the Planning sections, then in the Presentation or Dependencies sections.

In the Resources and Research methods sections, the candidate refers to contacting various car manufacturers and also comments that a lot of desk research will be carried out. In order to extend beyond meeting the minimum C Grade criteria wider research would have to be carried out. The candidate has already indicated that the theme links to his future university study aims so there would have been an obvious opportunity to contact the Engineering Department of one or more universities to find out more about the research currently underway in this area.

The candidate identifies two different audiences for the Interdisciplinary Project, S3 pupils and a wider audience via a You Tube video. More justification as to why a presentation is the best way to present the findings to the S3 pupils would have been helpful.

The dependencies and contingencies sections of this Interdisciplinary Project are weak and rely on the candidate's use of the Internet and telephone thus restricting the way in which the candidate can take this project beyond meeting the C grade criteria. The candidate should be able to identify several different potential problems and possible solutions to overcome these but this is only possible if the initial plan allows him the scope to do so.

The candidate has indicated that he will reflect on how his skills have developed throughout the Interdisciplinary Project and that he will keep an electronic diary. For the candidate to reach beyond C criteria he should be explaining how he intends to use this. It is expected that, rather than just keeping a log, candidates reflect on the good and not so good aspects of the project as it progresses, that they think about weaknesses as well as strengths and what they might have done differently. Keeping these records emphasises the learning points and greatly helps candidates when it comes to the evaluation sections of the Interdisciplinary Project, where they are

asked to consider skills development, how the project was developed and where the project could go next.

The assessor's comments suggest that the candidate has considered various options and possible problems in addition to those recorded. These should have been included by the candidate. Similarly in the assessor's report the assessor justifies some of the gaps in the Gantt chart, and the assessor notes numerous setbacks that have taken place but these are not considered by the candidate in his submission. It should be remembered that the External Verifier can only support the grade awarded by the centre on the evidence provided by the candidate.

Presentation of Project Findings/Product

The candidate presented his findings to an S3 Physics class and a brief description of this is provided. As with the Plan there was no justification provided for presenting his project in this way but his description does describe an interactive presentation where the candidate asked questions of the pupils and also answered their questions.

No mention was made by either the candidate or the assessor of the initial plan to produce a You Tube video based on candidate findings to be shown on the school plasma screen system.

The assessor feedback concentrated on the 'PowerPoint' presentation and how the candidate engaged with the audience. The assessor's report covers the candidate's imaginative use of presentation software using animation and video.

At this stage it has to be remembered that the External Verifier does not see the final presentation so a full explanation should be provided by candidate and assessor to provide sufficient evidence of each criteria being met. Although the candidate used the question session to gauge whether the pupils had been engaged and had learned anything, he did not attempt to obtain further feedback from the group. This could have been done through a short evaluation form or by means of a quiz/question paper to be completed by all members of the group. This would have supported the Evaluation stage of the project. The candidate has satisfied all of the C grade criteria.

Evaluation of Project

Overall the evaluation of the project is weak and just meets the C criteria. The candidate does not fully cover strengths, weaknesses and learning points that could be taken from the Interdisciplinary Project itself.

In the "How successful has my project been overall?" section the candidate has provided evidence of self evaluation; however this should be included in the Self-

evaluation stage. The purpose of this section is to explain how the project met its aims.

One of the aims stated in the Plan, to put the findings on You Tube, has again been omitted. Even if this has not been possible, it is not necessarily to the detriment of the project, if the candidate is able to reflect on this in the evaluation stages but no reference has been made to it.

The candidate reports that communication was successful but had problems obtaining information. In the contingencies section of the proposal the candidate had stated that a large number of manufactures would be contacted. The main success was from one company, the candidate did mention the total lack of information from another, and several companies sent information. There was a lack of face to face or even telephone contact so it is clear that the candidate stayed well within his comfort zone and made limited attempt move outside of school and broaden his learning experience.

As the product of the project was a presentation, communication skills were developed here. The candidate has not commented on how effective his communication skills were in other aspects of the project, such as communication with the mentor/assessor, how effective his communication skills were in written reports to acquire the knowledge needed for the Interdisciplinary Project. It is also unknown whether the candidate had to make further enquiries following information gained. There is no information on the level of oral communication which took place.

The assessor report provided brief comments on how the candidate had obtained all the grade C criteria. The assessor concentrated on the time constraints for the candidate. This could have been alleviated by starting the project earlier in the year; the Gantt chart shows that the project was compressed into a relatively short space of time, from December to March. The Assessor has ticked the A grade criteria 'careful choice and skilful use of communication methods'. This is probably based on the presentation rather than looking at communication throughout the project and for the reasons given above is generous. This of course does not affect the final grade awarded.

Self-evaluation

The self evaluation is a critical evaluation by the candidate of his own skills development against the list of generic and cognitive skills.

The candidate has written up clearly each area and used supporting evidence from the project (some of this evidence was not seen in the other stages so the self-evaluation further supported the other four stages of the candidate's submission).

There is no evidence of feedback from others; this should be sought by the candidate to support the self evaluation.

The candidate has concentrated on the positive aspects of the project with little or no reflection on aspects which could have been improved or done differently. It is an important part of personal development to understand that through reflecting on things which do not work out as well as expected deep learning takes place.

The assessor justified the development of the candidate's skills throughout the project. Although the comments were brief the assessor did refer to some of the grade C criteria.

Overview:

From this IP it is clear that the candidate worked independently and developed self study skills that will be vital in the chosen university courses. The candidate has also provided evidence of having to communicate with outside organisations to obtain the information required for the Interdisciplinary Project.

The assessor has written feedback to support the candidate in each of the stages as well as the overall assessor's report. The comments in the assessor's report could have further helped the External Verifier in supporting the assessor's grade by making reference to why specific criteria were or were not met. It is clear that the C grade criteria have been met in all five stages of the project but the candidate has not done enough to satisfy any of the A grade criteria.