



The Scottish Baccalaureate in Science

Interdisciplinary Project- Exemplar 2

“Obesity and its Various Causes”

Grade: B

Science: Interdisciplinary Project

Proposal

Candidate name									
SCN									
Centre name									
Assessor name									
Project title	Obesity and its Various Causes								
Project outline (<i>what it is you want to do and how will you go about it</i>)									
<p>I would like to investigate the causes of obesity. Is it the fault of society – either the individual themselves or the countries/governments fault? Including the issue that we live in a capitalist society allowing free trade to reign and therefore fast food to affect the health of many and if the individual themselves is a factor as they choose to eat these foods. Or is it in fact the fault of genetics and therefore not the fault of the person as it is a medical condition? I will be writing a science report and a presentation on this topic. I would like to find out if genetics are at fault and therefore will be looking at genetic research being carried out by Oxford and Edinburgh Universities looking at the latest testing techniques. Many universities are looking at the effects of obesity and are delving into genetics in greater detail. I will gather information from a number of sources from journals and books.</p> <p>I will also be handing out questionnaires and carrying out interviews with MPs in my local area to find out the political parties' views on obesity and whether they believe it is the government's and society's fault. These sources will best be able to tell me the collective thought of their political party and therefore the Scottish parliament as a whole. The questionnaire will allow me to gather data and improve my data and information skills. It will allow me to find out the thoughts of an arrangement of people and to gauge whether people do believe that genetics or society is the main factor in obesity.</p> <p>I will also interview a range of people that suffer from this condition and ask their thoughts on why they might have this condition. They will be able to tell me the effects on their lives and if they believe it runs in their family or if they blame themselves. I will also interview several people that have a degree in sports, health and other related fields that deal first hand with obesity and a variety of ways to combat it.</p> <p>Following my presentation I will also hand out a follow up questionnaire to see if the people that have observed my presentation have gained any more knowledge.</p>									
Reasons for choosing this project (<i>eg personal interest, future plans, links to other subjects you are studying/ have studied</i>)									
I have chosen this project as it has links to a range of subjects that I am studying;									

such as Advanced Higher Modern Studies due to the social aspects of my project. Further Business Management is important as the fast food industry and economics of obesity play a massive role in obesity and therefore in my project. My main subjects in science which I will be using for my project will be Chemistry and Biology as my objective is to find out if genetics is the cause of obesity and this requires both of these subjects. I have also chosen it as I do have an interest in this subject due to the constant media storm surrounding obesity and the link to Scotland as we have one of the highest rates of obesity.

The broad contexts this project will cover are

Citizenship- due to my research I will be going out into the community and trying to understand why these form obesity issues and what support mechanisms are in place to help them. - So if genetics is a factor then what techniques can be used to help the people I will be meeting?

Employability – due to the research I have put in with regard to the research nature of my project I will have the skills that are needed in various social science careers. It will also help me with my chosen career in Law as I would be able to look at a host of data and from this data I would be able to find the appropriate information. It also shows that I can work on my own and be independent which would be a critical requirement of both the degree I wish to take and the career afterwards.

Economic development- through my research more areas can be opened up in the medical field such as more funding and jobs in the research of obesity. Also more areas of genetics can be developed which would again create more jobs for those in the Chemistry, Biology and Pharmacology with the development of drugs to help combat obesity.

Sustainable development – development into the medical field of genetics, further investigation into DNA and genes. Development into medicines for genetic conditions linked with obesity. Also development into slim groups or help groups with and without the NHS.

Learning environments I will access are

I will access many libraries in my local area to try and find out information on my project to gain detailed knowledge.

I have also accessed the university libraries with access to the medical and social science libraries due to this project and my advanced higher.

I will also use the internet to find various data, statistics. I will also use the internet to source the many journals, dissertations, essays and books that will be needed to complete my project.

I will also have my tutors to help me with my project as well in my school .

I will also be going out to GPs in my local area to gain knowledge from many Doctors. Also I will be attending groups in my local hospital to find out more about the effects

that obesity has on peoples' lives.
Another aspect would be speaking to degree obtained sports trainers to ask their opinion on my project.

How I will use my knowledge of science/technology

Biology and Chemistry

I will use my current knowledge to help me understand the extremely complex system of the human body and why some people become obese while others don't.

I will also use my science to learn about all of the various medical conditions that affect a person when they are obese, for example vascular or skin conditions. I will also be using both chemistry and biology to find out about chemicals in the body and the structure of DNA, this is vital to my project as my main topic is genetics so will find out about DNA, gene and chromosome mutations, causes of mutations, mitosis and meiosis, also the chemicals in the body that control genes and globular proteins such as insulin as they play a considerable part in obesity.

Social science

I am also interested in law and in modern studies and hopefully this baccalaureate will expand my knowledge due to the legal and social aspects as well as the science by reading online legal briefs about obesity and politics and law.

I will also use my social science skills as well as I will be looking at the social aspect also such as the two theories posed by social scientists that a) the individual is the most important factor or b) the government is the main factor. So there will be opportunities to use my skills of research to create questionnaires and interview people along with looking up social science research and journals to help me with my project.

Technology

I will be using my technology skills as I will be using computers to write up my project, so will be using Word and a range of other software to complete my project including e-mail, online libraries and internet. I will also be using computers to create a presentation using effects, pictures and text to explain my topic to a group.

The skills I will develop and/or improve in the course of this project are:

(carry out a short analysis of your current strengths and weaknesses in the skills areas below and how you think your project will allow you to develop and/or improve these skills)

My strengths in my project knowledge

I am very interested in social science and currently do Moderns Studies where I have to carry out a similar style of project known as a dissertation where I am required to gather my own information. I also have my Highers in Chemistry and Biology which will greatly help me with my project due to the emphases on the human body and chemicals therein.

Weaknesses

My weaknesses would be that I do not do Advanced Higher Chemistry or Biology and so my scientific knowledge may be a little lacking. I will have to receive help from various professors at Dundee and Abertay University as well as my previous science

teachers in Biology and Chemistry. Also my Maths may be an issue so I might struggle with this side more than the social science areas. My understanding of my science subjects will increase especially my biological knowledge as my topic is all about the human body and the chemistry that makes it up. My Modern Studies will also gain a deeper understanding as again my topic deals with society and social theories and concepts and so will learn more about this subject as well as be able to bring science into a social science.

Research skills – analysis and evaluation.

I already have research skills due to carrying out a number of projects that require independent study including looking up facts. I also do Advanced Higher Modern Studies which deals very heavily in research methods so I have learned all about the various research methods and have even used some in Advanced Higher Modern Studies.

Weaknesses

My weaknesses would be that I could always become better at research and have not carried out enough primary research. My research skills will become more in-depth as I will be carrying out research both primary and secondary research for this project. So I will become better at asking interview questions that are straight to the point and yield valid and reliable information. I will also be able to construct high quality questionnaires and be able to hand them out to segmented members of the market so I receive the most reliable results.

Interpersonal skills – negotiation and collaboration.

My advantages would be that I have already been a part of various meetings involving pupil council and so know how to take part in discussions, take charge and ask questions.

Weaknesses

My disadvantage is that I have never carried out my own interview and so this will have to be developed. I will learn and develop the skills to be able to confidently ask people for help and information from a number of independent organisations. I will also be able to arrange times and dates to interview people and go to a range of meetings with people in the school and outwith.

Planning - time, resource and information management.

I have good time management as I have to arrange and sometimes even juggle times due to my extracurricular activities such as getting to the charity shop I work in or getting to pupil council meetings.

Weaknesses

However information management may be at a disadvantage as I have never had to do this before as all the information for my subjects was given to me by teachers. My time keeping will also improve as I will have to schedule meetings with my tutors, with contacts I have made and make time to complete my project around school and extra curriculum activities. I will also have to make sure that I have all my information in one place I will improve on this by developing skills to keep detailed notes and log journals to record any information and also will have to look for new information to the development of my project so any new development in the social responsibility argument that rages about obesity or on the genetic side any development in the search for the elusive “fat gene”.

Independent learning – autonomy and challenge in own learning.

I will develop and improve my independent learning by looking up my own research and information in the university library or searching the web for journals and articles. I will also be putting together my own booklet of information on my project and will do this independently looking up information putting it together and presenting the information. I will also be carrying out a video presentation on my project and will have to do this on my own, putting the presentation together as well as presenting the talk to a group.

Problem solving – critical thinking: logical and creative approaches.

My strengths in this area would be that I am a very logical thinker due to the subjects I enjoy and the activities I partake in, such as debating which requires me to think logically both on my feet and during speech preparations. I could improve being creative as I am not the most creative person. The ways in which I will improve this would be that I will be carrying out a presentation which will require me to think very creatively also coming up with questions from interviews and questionnaires.

Presentation skills-

I have some knowledge of presenting projects and have given talk and presentations to a large group many times. I can design a presentation including effects, sound and video. I am not the best with computers and so may find it hard to carry out my report on Microsoft Word and many other software devices. I will present my findings and present them in an ordered set out and instructive manor.

Self-evaluation – recognition of own skills development and future areas for development.

I have good communication skills that come from extra curriculum activities, I have good listening skills and I can also compile my own information and can work independently due to the subjects I am interested in. I do have to develop my skills including time keeping due to having to balance many things I will have to work on my time as well as my confidence to speak to a large group of people.

Assessor Audit of Proposal

Does the Project Proposal:	Yes/No	Comments
Demonstrate a theme of personal and/or career interest?	Y	Employment - A career Law - due to skills being learned. Personal interest re -constant media attention/links to Scotland.
Allow the candidate to develop and demonstrate the required generic and cognitive skills across the three stages?	Y	The content covers the required cognitive skills. You have specified that you will be developing and using skills to evaluate your findings and build upon your knowledge & understanding of your chosen topic.
Allow a high degree of learner autonomy and independent learning/working?	Y	Use of research papers from various sources. Acquiring the necessary knowledge to carry out IP from peers, staff at school and elsewhere. Mention of previous course in Higher Chemistry & Biology. Using Modern Studies (Health issues covered). Recognised a need to learn new skills.
Allow collaborative working?	Y	Lots of mention of including School staff, MPs, Doctors Surgery, University Staff and personal contacts.
Allow the accessing of less familiar learning environments (other institutions, employers, virtual environments etc.?)	Y	Indication of different learning environments which should allow for scope and for any difficulties you may face in getting the relevant information. Recognises deficit in ICT awareness.
Explore and bring out the relevance of Science in one or more of the five broad contexts?	Y	The content covers the broad contexts of citizenship, employability, economic development and sustainable development.
Make a connection between subject knowledge and the wider world?	Y	Your project is relevant to current health issues and you seem to have developed a reasonable range of methods in order to tackle it.
Indicate practical applications for Sciences?	Y	Within the reasons for choosing project and during discussion you made it clear how your IP links to current medical issues.
Involve the use of knowledge and skills across different disciplines?	Y	This is evident from Skills section and through discussion. You will be able to use your Higher Biology and Chemistry, AH Modern Studies knowledge as well as develop or learn new skills such as statistical analysis of questionnaires and other ICT packages.
Clearly define research methodologies and allow for research from a variety of sources?	Y	This was evident during discussion.

Other Relevant Questions:	Yes/No	Comments
Is the scope of the project viable (neither too wide nor too narrow)?	Y	The project scope is both viable and achievable.
Is it achievable within the required Timescale and does it make allowance for contingency possibilities?	Y	As indicated in the Gantt chart the project is realistic and achievable in the given timescale. Contingencies not all mentioned in script but mentioned during discussion.
Does it set realistic goals?	Y	
Is it realistic in terms of resources and support required?	Y	
If working on a group project, are individual roles and participation across the three stages clearly defined?	N/A	

Assessor feedback to candidate		
<p>Your aims meet project requirements. The objectives of the project are clear and the methods to be used to achieve stated aims are appropriate and achievable. The project proposal clearly links to your personal interests and should aid your intended career path.</p> <p>It is well thought through and a variety of appropriate resources have been identified at this early stage of work. You have stated that you intend to look into the genetic research being carried out by Oxford and Edinburgh Universities be mindful to elaborate on their "latest testing techniques".</p> <p>You have developed a project proposal that clearly sits within the citizenship, employability, economic development and sustainable development contexts. Discussion illustrated that there are opportunities for skills development within the chosen field.</p> <p>There is evidence of cross linking of subject knowledge such as Higher Biology, Chemistry and AH Modern Studies. As discussed since your presentation will be levelled at Higher Modern Studies pupils there is need for it to be supplemented by a 'Presentation Finding Report' conveying the in depth science. You should be careful to ensure that your knowledge and understanding of the science of Obesity and genetics as well as other probable causes are explained.</p> <p>There is evidence of collaborative working involving you working outwith the school environment, medics, politicians and other people of interest.</p> <p>You are clearly aware of the independent approach required for such a project and the need to develop a variety of skill sets. These have been thought out and planned to fit in with a realistic timescale. One recommendation is that you keep on task by continual referral to the aims and objectives of your project and the issues discussed during meetings.</p>		
Proposal approve	Yes	Further work required
Candidate signature		Date
Assessor signature		Date

Science: Interdisciplinary Project

Plan

Candidate name									
SCN									
Centre name									
Assessor name									
Project title	Obesity and its Various Causes								
<p>Is this a group project? yes <input type="checkbox"/> no <input type="checkbox"/></p> <p>If a group project my individual role or responsibilities will be:</p>									
<p>Timescales (<i>this should be a detailed timeline and any separate spreadsheets or charts should be included as evidence</i>)</p> <p>June-July-</p> <ul style="list-style-type: none"> • Baccalaureate information introduction to the baccalaureate. • Meetings with tutor/teachers about finalising topic for my project June to July. <p>June-August-</p> <ul style="list-style-type: none"> • Started work on baccalaureate introduction from July to August. Will research my topic to learn more about it. <p>September-</p> <ul style="list-style-type: none"> • Will start to write up my plan in September along with my proposal. • Will also research my topic more and gain more knowledge about it. <p>October-</p> <ul style="list-style-type: none"> • Will e-mail several people including :- <ol style="list-style-type: none"> 1. GPs in local area, 2. Slimming groups, 3. health organisations, 4. Companies including Coca-Cola, Sainsbury and Asda • I will watch several documentaries on health and obesity. • Use Abertay and Dundee university libraries to take out books on obesity. • I will meet with Amnesty International and hopefully attend a meeting in Perth to discuss my topic. • Start defining what obesity is, I will create a questionnaire on obesity and carry out a pilot study. • I will begin planning interviews with a lawyer, physiotherapist and psychologist. • I will carry out work experience for a law firm and ask them a series of questions about obesity and legal information on health. 									

November-

- Will contact a range of people including:-
 1. Tayside Contracts
 2. Jamie Oliver
 3. Nick Nairn
 4. Dundee College
 5. Dundee Science Centre (sensations)
 6. Nurse enquiries
 7. Food Standard Agency
 8. local MSP
 9. Home Economics teacher
- I will research the science of my topic more, about healthy eating and genetics from various sources.
- I will continue to write up some of my research and findings.
- I will continue with my questionnaire which will hopefully be handed out in December.

December-

- Questionnaire should be handed out.
- Interviews should be carried out-
 1. MSPs
 2. Sports teachers
 3. Others
- I will look at government statistics and more research on obesity.

January –

- Interviews, questionnaire and talk and meetings should be completed. Finishing off report and also working and hopefully presenting my presentation.

February-

- I will be carrying out my evaluation hopefully on my topic and the baccalaureate.

See Gantt Chart

Planning (*how you are going to meet the agreed objectives of your project*)

- Plan to speak and go to various meetings in the coming months so that I can compile data before my report. For example visit Amnesty International.
- Keep a diary so that I ensure I stay within the time scale so that everything is done and completed before the date it is required for.
- Hopefully continually carry out secondary research to compile my report including
 1. Using medical journals from various sources, such as the British Medical Journal
 2. Looking at various interviews and articles by popular science publications such as Scientific American and New Scientist.
 3. I will also be looking at various case studies on family law and cases of obesity and prosecution in our courts.
 4. Also the research and debate on whether genetics could be a factor in this obesity topic.

5. Using research given to me by various doctors at both Abertay and Dundee University about the genetics of obesity, about brain chemistry, metabolism, and digestive systems. They will be sources as they are experts in these fields and the research is their research and various articles and documents that they use themselves.

- I will be working on my report continually to make sure that it is completion time including periods set down to complete all baccalaureate work. Two periods a week have been scheduled.
- Carry out primary research into my project including:
 1. A questionnaire with a pilot study (to improve my questionnaire)
 2. Interviews with health professionals
 3. Meetings with various groups. This would include amnesty international, slimming groups, GP and obesity clinics.

E-mailing several individuals including professors of medicine at Dundee University and members of the biology and psychology departments at Abertay.

Resources (*eg people, materials, places*)

The resources I am going to be use:

- Local libraries
- Dundee and Abertay University Libraries
- Online resources
- GPs
- Health groups
- Slimming groups
- General public
- Books and Publications e.g.
 1. "Obesity Prevention and Public Health"
 2. New Scientist
 3. Broadsheet newspapers

Experts and students that are studying sport science and genetics

Research methods (*eg contacting companies, surveys, focus groups, experimentation*)

Primary research-

1. Survey/questionnaires given to the 5th and 6th year pupils at my school and teachers.
2. Interviews with a psychologist, on the brain chemistry and how eating affects the brain.
3. Interview with a PE teacher in my school on healthy eating and obesity.
4. Interview and questionnaires given to Amnesty International on the rights of obese people.
5. Visiting the local courts and speaking to several lawyers civil and criminal.
6. I will also e-mail a great range of people including famous chefs, professors and doctors along with several healthcare professionals, slimming groups, MSPs MEPs.
7. By using research compiled by several doctors at both Abertay and Dundee University. On the science behind my project including, metabolism, brain

chemistry, genetics and hormones.

Secondary research-

1. Looking at several statistics by government bodies and organisations.
2. Looking at publication/journal articles for science and politics, such as Politics Today, Scientific American and Science Now.
3. Reading books on obesity and its causes.
4. Reading newspapers such as tabloid newspaper The Sun also broadsheet newspapers such as The Guardian.
5. Watching documentaries on obesity, genetics and the social affects of society and the person themselves on obesity.

Presentation

- **Who do I think will benefit from listening/reading/looking at my presentation of my project findings/product?**
 - Modern Studies students will benefit as one of the topics in Higher is “Health and Society” and deals with obesity including the two theories that I will be studying. This could help them understand the topic and allow them to write better essays for their exams.
 - Those who are affected by obesity may be look at my project as it could explain why they have this problem and if it is genetics they may be able to look into areas where there might be treatment as I believe that obesity is genetic.
 - Also those in government as there is huge debate in politics about the cost of the care provided for those suffering obesity - if it is self-inflicted why should the state pay but if it is found that it is genetic than it must be paid for just as any medical condition.
 - Children could benefit from my research as health eating and obesity is taught in schools, if they are taught about the science behind obesity and that genetics may play a part in obesity and over eating than this could help them in school, in SE, HE and PE while also helping them outside of school in their own lives.
- **What methods are appropriate to my audience(s)** (*eg demonstration, presentation software, websites, oral, report, piece of theatre, dvd, wiki/blog or any combination*)
 - The methods that are appropriate would be a presentation, dealing with obesity and its causes. This would be given out to a Higher Modern Studies class, as one of the topics deals with health and so this would help them with their studies.

- Also I believe my report would help those suffering from obesity as it explains the causes of obesity in a more detailed and scientific manner.

Dependencies (*what is required for your project to go ahead ie reliance on other people or resources, steps in plan that must be completed before starting the next step*)

1. Tutors to help me manage my time as to when everything must be complete. Also they help as they assess what I plan to do and check that it's okay to move on to the next step after I have completed, for example a plan.
2. Rely on a small group in a Higher class to conduct a pilot study before I send my questionnaires out.
3. My many contacts, including
 - Amnesty International
 - Dundee Science Centre (Sensation)
 - Health professionals
 - Teachers in my school
 - Lawyers
 - Professors at Abertay and Dundee University.
4. Local libraries to supply me with the many journals and books. I will need to back up my project with science and statistics.
5. Government statistics will also help me back up any theories I may have or disprove any theories that I may have.

If I cannot contact these people I will continue to e-mail and speak to a range of others who will hopefully give me similar research and answers.

Contingencies

Any anticipated problems

- **Contacts**
 1. Not hearing back from any GPs through e-mail so have to go through other channels.
 2. Problem with E-mail: sometimes I cannot open my personal e-mail in school which makes it hard to contact several people.
 3. It is also hard to get contacts for groups to go along to as the ones I have are a distance from Dundee. So finding these contacts can be hard and they may be busy.

My plans for overcoming the anticipated problems.

- **Contacts**

Going into the GPs offices and asking them to talk to me.

I will have to travel further out go to the focus groups I contacted and just find a way to get there.

<ul style="list-style-type: none"> • Topic The research carried out into my topic is very specialised and quite hard to understand. So finding and understanding and even analysing the research may be hard. • Computing skills I do not have the best computing skills and therefore I may struggle with my presentation and also with my research and e-mails. 	<p>I will have to try and find books and journals that are not as specialised to try and understand the jargon and language used for my presentation and booklet.</p>
<p>Method for recording my skills development and future areas for improvement</p> <p>I will be using a diary book to record everything that I do including skill developments and areas of improvement as I will always try to improve my skills while carrying them out within my project.</p>	
<p>Assessor feedback to candidate</p> <p>You have during discussions and also detailed in your plan outlined a reasonable strategy to achieve the project aims and objectives; progressing on from your proposal.</p> <p>Your plan shows evidence of the project evolving along the planned route. Your Gantt chart identifies dependencies and milestones. These can be discussed at your interim review.</p> <p>There is evidence of the linking of aims to methodologies and the relevant timescales for the different components.</p> <p>You have produced a plan pulling together all strands; you have clearly thought about the timing and order of various activities. It became evident during discussion that thought has been made for the format of your presentation with your preferred option being a PowerPoint presentation to Higher Modern Studies class; as discussed a 'Presentation Findings Report' will provide the necessary scientific background to your findings.</p> <p>You have considered potential problems and outlined contingencies however these are merely statements that you have to overcome the problem. Contingencies should be alternatives for overcoming the anticipated problems. During discussions, however, it was obvious that consideration had been given to appropriate contingencies.</p> <p>Be mindful of your statement that you think "obesity is genetic" as this clearly pre-judges your research. Are you not trying to find out if the problem is genetics,</p>	

otherwise or both?			
There scope for significant skills development.			
Plan approved		Further work required	
Candidate signature			Date
Assessor signature			Date

Assessor Audit of Plan

Does the plan:	Yes/No	Comments
Is the plan relevant to the proposal?	Y	Links to proposal. Clear progression is shown.
Are the aims and objectives of the project clearly described in the plan?	Y	Aims and Objectives are discussed throughout the plan. These can be found within the Gantt chart and the 'Planning Phase' of the Plan. These were also elaborated on during interim review and various discussions.
Are there sufficient strands within the aims and objectives to make the project broad enough for this level of study?	Y	There are sufficient strands. Including questionnaires and interviews.
Are the timescales realistic, and are achievable milestones identified at appropriate points?	Y	Gantt Chart
Have resources and research methods been clearly identified.	Y	These are clearly identified.
Is there justification for the research/investigation techniques being used?	Y	Access will be needed to attend clinics and meet with relevant staff. Also mentioned internet research - scientific and research materials. Access to publications.
Is there sufficient scope for skills development?	Y	Statistical software analysis packages; PowerPoint; Using University online libraries; Interviewing skills. Reference made to cross-curricular links within school and to appropriate staff.
Have dependencies and contingencies been considered?	Y	Valid dependencies and associated contingencies. However more statement than resolutions.

Science: Interdisciplinary Project

Presentation of Project Findings/Product

Candidate name	
SCN	
Centre name	
Assessor name	
Project title	Obesity and its Various Causes

How I presented my project findings *(describe in detail how you presented your project findings and explain the choices you have made with regard to your presentation method(s) and audience(s))*

Power point presentation-

- I choose to do a PowerPoint as I believe that this would be the best method to present my findings to wide range of people as I could go into great detail about my project. I would be able to provide sound, pictures and videos to give further thought to my project. I would also be able to explain my points in great detail to my audience and so fully explain what I have done and what my hypothesis would be. I also believed that it would be good for me as I would learn valuable skills by presenting a PowerPoint presentation as I would gain communication skills through speaking to large groups of people. I would gain more confidence as well as I would be standing speaking for some time on my topic and the work was all my own and so also gained responsibility for my work.
- I presented my project through PowerPoint presentation to a Higher Modern Studies class.
- I choose this method after careful consideration with my tutors and my peers in the Baccalaureate
- I presented a PowerPoint with detailed information regarding my topic of obesity and its causes using various videos to explain the points I was making, I also used sound, statistical evidence and text to describe my project to this class.

Audience-

- I choose this audience as they are my targeted audience as this class do the topic of "Obesity and its Causes", the individualist and collectivist theories and so were the best people to present my findings.
- They would be able to use my research and my results in their essays and so it would benefit them in their exams.

- I also chose this group as I believe that just as the individual or collectivist theories do stand as causes of obesity so does the theory that genetics is to blame and so would therefore be beneficial to this class to perhaps include in their own essays and course.

Presentation –

The various things I included in my PowerPoint presentation would include ;

- Five videos to explain my points including two to explain the genetic conditions, the social impact and the individual cause of obesity. I choose to include media as it would engage the class and would allow them to see what society, scientists and individuals thought about obesity so better inform them of the causes.
- I used text to explain the history of obesity to explain my point that obesity could be seen for thousands of years. What obesity was and what society perceives it to be and then went on to explain my three causes, individualist, collectivist and genetic causes. Text helped me to explain my findings as the pupils in the class could take notes or write down the statistical evidence to use.

Problems with my presentation

- However there were some technical issues regarding my presentation as the PowerPoint crashed twice during my presentation and I had to reboot the computer twice, which wasted time and resulted in the class and myself losing focus as I lost my place.
- Technology is one of my weaknesses so the PowerPoint was a struggle for me as I could not fix the problems which presented themselves on the day. Also getting the videos onto the presentation resulted in some problems for me.

Assessor Feedback to candidate

Presentation <i>(Clear presentation of main findings/outcomes at Grade C minimum)</i>	Excellent	Satisfactory	Unsatisfactory
Title and presenter properly identified		✓	
Easy to understand how presentation was to be organised		✓	
Presentation adequately summarised (e.g. future work? technical hurdles?)		✓	
Amount of information appropriate to delivery time		✓	
Clarity (volume, pronunciation and appropriate pace)		✓	
Presenter avoided reading verbatim from notes	✓		
Presenter kept good eye contact		✓	
Presenter fairly confident and fluent		✓	

Presenter showed enthusiasm for their project	✓		
Any visual aids significantly helped me understand the project	✓		
Any visual aids legible (lettering size, no crowding)	✓		
Key features drawn to audience attention		✓	
Enough time given to take in essential information		✓	
Presentation made the subject reasonably understandable		✓	
All technical terms properly explained	✓		
Methods & Resources			
Presenter explained the practical methods used during project (<i>Grade C</i>)		✓	
Evidence of time management) (<i>Grade C</i>)		✓	
Evidence of management of project (e.g. problem solving; collaboration; feedback) (<i>Grade C</i>)		✓	
Evidence of research planning and prioritisation of interlinked stages of projects (<i>Grade C</i>)		✓	
Rationale for use of methods is well reasoned and argued (<i>Grade C/A</i>)		✓	
Extent of use of resources (physical, human and information) in project are clearly defined (<i>Grade C/A</i>)		✓	
Knowledge and Understanding			
Presenter reacted well to questioning and answers were clear and concise (<i>Grade C</i>)		✓	
Subject knowledge and understanding evidenced (<i>Grade C</i>)	✓		
Easy to follow how different stages of project were prioritised and interlinked (<i>Grade C</i>)		✓	
Evidence student is aware of the wider context of project results and the interdisciplinary nature of the work (<i>Grade C</i>)		✓	
Evidence of specialist knowledge of specific field (<i>Grade C/A</i>)		✓	
Conclusions are convincing, supported and well-defended (<i>Grade A</i>)		✓	
Evidence of analysis and reflection of the findings and skills developed (<i>Grade A</i>)		✓	

<p>Presenter appreciates implications of his/her findings and has shown they have deepened their understanding of the chosen context. <i>(Grade A)</i></p>		✓	
<p>Comments</p>			
<p>You gave a professional presentation which was delivered very well and kept the audience engaged throughout.</p> <p>The presentation as a whole and your subsequent question/answer session showed that you had considered a variety of wider aspects associated with the project. These aspects were sourced from a variety of resource materials indicating breadth and depth of study and interlinking of topics.</p> <p>The very well researched “Presentation Findings Report” ensured that your knowledge and understanding of the science of obesity was thoroughly explained and you displayed your understanding of the physiological and psychological affects linked to obesity.</p>			
<p>Candidate signature</p>	<p>Date</p>		
<p>Assessor signature</p>	<p>Date</p>		

Science: Interdisciplinary Project

Evaluation of project

Candidate name									
SCN									
Centre name									
Assessor name									
Project title	Obesity and its Various Causes								
<p>How successful has my project been overall? (<i>consider the strengths, weaknesses and learning points of your planning, implementation and findings/outcomes giving examples to support your comments</i>)</p> <p>I believe my project was somewhat successful. I achieved what I wished to achieve in the form of my presentation, I wanted to look into the various causes of obesity, looking closely at both the social science behind obesity as well as the new cutting edge research that was coming about as a result of genetic inquiry into this condition.</p> <p>I had various strengths in this project:</p> <ol style="list-style-type: none">1. My deep interest in the social science aspect of my project which allowed me to look not only into the condition itself but its effect on people in today's society.2. I also have an interest for the topic itself and I do believe that social perception and the government guide lines should be changed to include genetics into the causes of obesity.3. My second strength would be my research methods including my pilot study and my questionnaire, due to my studies in Advanced Higher Modern Studies I have increased my knowledge about research methods and so have improved my research skills through Baccalaureate and Modern Studies. I effectively carried out a questionnaire given to fifth and sixth years in my school and carried out a pilot study to gather information on my research aims.4. My strength would also be the people I contracted as I sent out a large volume of e-mails and interviewed several people and gained public opinion through my questionnaires giving ideas, opinions and statistics. <p>My weaknesses would include</p> <ol style="list-style-type: none">1. My technological abilities were weaknesses as I struggled greatly to complete my PowerPoint as it crashed twice and I could not fix it. Also I struggled to finish my PowerPoint as I could not get the videos to upload from YouTube to the PowerPoint.2. My second weakness would be my lack of knowledge of science, as I am doing Advanced Higher Modern Studies and not an Advanced Higher in a science. I was lacking in several areas scientifically and so had to go to									

various sources to gain the knowledge.

3. Another weakness would be time management as I have various other subjects and awards I am doing this year and so balancing time between all of them has been difficult. This has affected my time spent on the Baccalaureate and various deadlines.
4. Another weakness would be my lack of knowledge in what the project would entail. I did not realise the volume of work that would need to be completed. I could do the project again I would look more closely at my Gantt chart and try to follow dates and times more closely.

Learning points -

1. I have developed my skills with technology by sending various e-mails to several people and so have learned how to use Glow effectively and send e-mails to multiple people. I have also learned how to send attachments including video, sound and text to people.
2. I have learned more about my topic including having a detailed knowledge about genetic conditions affecting obesity and fat accumulations.
3. I have developed good communication skills, as I had to present my findings, interview various people and explain my research and my progress to my tutors. I have also gained independent learning as I completed the project on my own, with my own research and collated my own data and presented it.

Outcome-

1. I have found out that genetics is a cause of obesity through various conditions. For example, Genes are also involved in obesity as one gene controls the hormone Leptin which is released and contributes towards regulating food intake. Or another example being Scientists have found that Cushing's disease can be a cause.
2. I have discovered public opinion regarding obesity and its causes through my interviews and questionnaire and have found that many people blame the person, that they believe it is their own fault but I do not agree with this I do believe many have this condition due to genetics.

How effective were my communication methods throughout the project?

I think they were fairly effective, in the sense that I did various things to support this such as:

1. I attended meetings with my tutors on a weekly basis and went to them outside of this time to talk about my project and my progress. And so I communicated to them on my findings and my research and gained feedback from them so communicated over a period of time with my tutors.
2. I also communicated my findings to a Higher Modern Studies class and spoke to them for about an hour and so this highlights my communication as I had to stand and speak to them about what my project was the findings of my project. With this came some weaknesses as I was very nervous and had never stood for this long to give a presentation on my own to a class and so overcame my nerves to communicate with this class.

3. I also communicated to various groups during my research including

- Amnesty International- I went along to a meeting and had to give a small talk to the members about my project to explain myself and asked them various questions on my project. Therefore, I communicated with a group who I did not know for about half an hour and communicated quite effectively what I was trying to do. However a disadvantage was that again I was nervous and could have perhaps presented myself in a better manner. As I did not have a presentation or evidence I only spoke to the members.
- I interviewed two PE teachers in my school along with a lawyer and a Professor of Psychology at Abertay University. I communicated with them by asking them questions which I had devised, explaining the questions -asking them more detailed questions once their answers had been given and had to present myself to these professionals to ask their permission to interview them and so I communicated very effectively during my interviews.
- I also sent e-mails to various groups including GPs, Professors of various Sciences at Dundee and Abertay University. I had to communicate with them through technology and so e-mailed them: asking their permission to ask questions, I devised and formulated various things to ask. I believe I communicated effectively as I got several replies back. However a weakness would be that many people I did try to communicate with never got back to me, so my communication skills may need some work as I did not get all of my questions back.
- Questionnaire - I had to communicate my project to various people in my school to get permission to hand out my questionnaire as I needed to print out over 200 copies and had to ask guidance staff in their meeting if I would be able to hand out questionnaires in their classes and this required me to communicate with them about what I was doing and why I needed their help.

Is there any aspect of my project that could be taken further? What might my next steps be?

Yes I think there is; especially the genetic research into obesity could be taken much further.

1. An investigation into chromosomal abnormalities could be in order to try and see if there are any mutations with DNA themselves which cause excess fat and so might be a cause of obesity from a hereditary and mutation point of view.
2. Also case studies into families to see if obesity is passed down and if so what psychological, physiological or chromosomal traits are being passed down.
3. A further step would be looking into the causes which I have identified and look into perhaps drug treatment and chemical engineering to come up with cures for obesity which I believe is a condition much like cancer and strokes and so needs medical research preformed to help with this condition.
4. A further step, this time socially, would be to turn social stigma away from

people being blamed for their condition which society seems to hold. To make people realise and become aware nationally that obesity is not something a person brings upon themselves it can be a medical condition changing society's presumption of obesity.

5. Another possible step would be an investigation into the human body and look more closely at psychological changes that occur in person life to try and stop obesity before it presents itself in a person.

Candidate signature	Date	
Assessor signature	Date	

Science: Interdisciplinary Project

Self evaluation of generic and cognitive skills development

Candidate name									
SCN									
Centre name									
Assessor name									
Project title	Obesity and its Various Causes								

In evaluating your skills consider the skills analysis which you carried out at the Proposal stage and how you said you would develop and improve these skills. Now refer to your reflective diary/log/blog and feedback you have received and evaluate how you have developed and/or improved these skills through the work on your Interdisciplinary Project.

Application of subject knowledge and understanding

(Think about practical uses for the science you have learned. How did you use your knowledge of science/technology effectively to help you carry out various aspects of your project and how it related to your chosen broad context(s)?)

Science

- I have explored deeper depths of biology by looking more closely at the metabolism of the body and the chemical balances of the brain. I have looked more closely at respiration and the various stages such as glycolysis so expanding my higher understanding of biology. I have also looked more into DNA and chromosomal abnormalities and mutations found within the building blocks of life and so again have expanded my knowledge.
- I also used my knowledge of chemistry and of carbon based chemicals and compounds that form the basis of life on earth and therefore us. I used my knowledge of carbon and its various chemical reactions. I also used my knowledge of enthalpy and energy that I gained due to Higher Chemistry. I used my knowledge of carbons and their functional groups to identify various molecular structures of fatty acids and lipids. I also used chemistry to identify the various chemicals in certain food that would affect obesity and its rates.

Social Science

- My knowledge of social science has helped me as my Higher in Modern Studies first introduced me to the causes of obesity and the individualist and collectivist theory's that are present in my project.

Technology

- My knowledge of the internet has helped me as I was able to search the internet to find the secondary data that was required to finish my project. I was also able to use Microsoft Word to type up my various findings and reports for my project.
- I was also able to use power point software to present my findings to my target audience.
- I was also able to use e-mails to communicate with various people, including primary sources of information in the form of e-mails and phone conversations that I had.

I was also able to effectively keep in touch with my tutors through the use of e-mail and send them various links and updates via attachments.

Research skills – analysis and evaluation

(Think about the research process. How did you plan, carry out, analyse and evaluate your research? You should evaluate your research methodologies, tools, resources and contacts, data recording and referencing, reliability and usefulness of data.)

Plan –

- I planned my research as wanting to get as much primary research as possible and so began to think of ways to complete this such as interviews and questionnaires.
- To complete my secondary research I began to look at various books and online website to see what information was available and so planned what information I would need and began to source some secondary data.

Carry out-

- My interviews- I planned to complete several interviews in with my school and out with my school. I formulated who I would contact such as the PE teachers in my school, The HE teachers and then also began to think of MP's and Lawyers to also help my research become more reliable and valid.
- I began to formulate a questionnaire which after showing my tutors I then carried out a pilot study using ten people to find out the various weaknesses of questionnaire and act on the strengths presented to make a more reliable and valid questionnaire which I then intended to hand out to fifth and sixth years in my school.
- I went along to various meetings including Amnesty International in which I spoke to the group about my topic and asked them various questions.

Interpersonal skills – negotiate and collaborate

(Think about how you considered other peoples' views/feedback, discussed issues of concern, reached a solution where needed, adjusted your approach in response to a situation/environment, showed positive self belief and had the confidence to offer and ask for support.)

Support: I asked for support in various ways

- I asked my tutors to help me in several ways,
 1. Help in choosing my idea for the Baccalaureate after I presented them with various options and discussed my options with them.
 2. Help with technology as this seems to be a weakness I have and so helped me with my Gantt chart and Microsoft applications on the computer and with attaching various documents to e-mails. They also taught me how to send more than one e-mail to various people.
 3. My tutors helped me in the form of my reports and evaluations as I have spelling and grammar difficulties and so they helped me to tweak my plan and proposal due to my issue regarding spelling and grammar.
- Pilot study for questionnaire
 1. I asked ten pupils to fill out my questionnaire and give feedback. They reported the strengths and weaknesses of my questionnaires which I noted down and compared the ten pupils comments. I then fixed my questionnaires based on the pilot study evaluation.
 2. I asked my tutors to help me with my questionnaires as they looked over the first and final drafts and made suggestions and comments which I took on board and which I changed.

I also went to the guidance staff in my school to ask if they would be willing to hand out the questionnaire and explain what they were for, which they thankfully did and then once completed handed the questionnaires to my tutors.

Planning – time, resource and information management

(Think about your time management. How did you set targets, monitor/record progress, consider any probable barriers to achievement and take steps to minimise them?)

Targets

- I set targets by looking to my Gantt chart to try and follow along with the targets I had set out for myself.
- I also set targets through my tutors who would ask to see me once a week so a target was to have work completed for when I was to see them.
- I wanted various things such as my project completed before I came off for study leave as my target audience was pupils in my own year and so needed to complete before we came off.

Monitor and record progress

- Recorded through the use of a diary journal.
- I also recorded my progress through my meetings with my tutors as I would tell them the various things I had done or yet to be done which

they recorded.

- Through looking at my Gantt chart as I would monitor what had to be completed by looking at this and my plan and proposal to see if I was still on track.

Barriers

- There were several barriers such as my inability to get into contact with several people including GPs and nurses who did not reply to my e-mails and phone calls and so I had to move on to different sources which took time and planning.
- My weakness with technology was a barrier as I struggled to complete my Gantt chart as I could not use the software that was used to create it and I could not send e-mails to several people and so spent quite a lot of time sending individual e-mails.

How I overcame this

- Through asking for help from an Advanced Higher Computing pupil in my school who helped me with my technological issues.
- Asking for help from my tutors again regarding my technology weakness as they helped me with my Gantt chart and e-mails.
- By interviewing and researching different means of communication as I could not get in touch with my main contacts and so had to e-mail other people to hopefully get similar information.

Independent learning – autonomy and challenge in own learning

(Think about how you used your skills to make things happen, took the initiative to establish links with other learning environments/opportunities and looked for challenges rather than taking the easy option.)

Due to the fact that my first choice of contacts, Doctors, nurses and people suffering from obesity were hard to gain access to I had to come up with ways to find out similar information I would have gained from the experts in health and well-being. I therefore had to speak to experts of Biology at Dundee and Abertay university and had to use clips and video footage from the internet to gain the insight of how people suffering from this condition are affected and their opinions on this topic.

I needed to gain contacts in Science Departments as I struggled with my science and so went out to try and arrange interviews and establish e-mail correspondence with Professors at the University. I looked these people up on the university websites and introduced myself, they were very helpful with their knowledge and their own research and so through approaching these people I gained the knowledge I was lacking.

The project idea and the completion of the project was my own work. I came up with the idea and throughout gained my own research by making my own questionnaire, distributing it myself, completing the evaluations and plan and proposal.

The Science of the project was not easy. I do not study a science in my sixth year completing my scientific studies last year. This has made it especially hard to

complete the project as I do not have the advanced knowledge as some others may have. But I wished to try and complete the project to see if I could, to use my skills to help improve my weaknesses which I think I have done.

Problem solving – creative approaches; critical thinking; logical approaches

(Think about your problem solving skills. How did you generate and explore ideas, use logical and creative approaches, analyse source materials in order to support findings, reflect on problems and possible contributory factors and think critically about possible actions/changes?)

Ideas

- I generated the idea for my project by looking at various scientific magazines such as Scientific American. I read an article on obesity and the science behind it and wished to look further into this field, but I was also interested in genetics and the progress that was being made about genetics and the fat gene and so I combined the two to form my project.
- Another idea would be the approach I would take to present my findings, I thought long about what methods to take. I finally decided to do a PowerPoint presentation.

Logic

- It seemed logical to use a Gantt chart to organise my ideas and my progress thought out my project as it had an easy layout which I would be able to refer to easily to identify what I needed to do next. It also clearly highlights the things I have done and what my next steps should be during this progress.

Problems

I could not get into contact with several people and organisations including GPs, nurses and slimming groups. This posed a massive problem as I could not gain the information I needed that was critical to my project, this resulted in me having to change my research and go into different directions by then using secondary research and clips from YouTube in lieu of the primary research I wanted.

Presentation skills

(Think about how you presented your findings. Evaluate your presentation method(s), choice of audience(s), layout, structure, degree of formality and choice of content. Did your presentation include information/ideas/reflections with supporting detail in a logical order and reach a reasoned conclusion?)

I decided after consideration that I wanted to do a PowerPoint presentation as I have used them before in several other areas of school life and they seemed to work well as they were more interactive with an audience than say a leaflet or a poster. I also wanted to play videos to my target audience as they were teenagers and so would enjoy the videos, in my second questionnaire handed out to the class to receive feedback on my presentation I seemed to find that they had enjoyed the videos and wished that I had put more in.

Presentation

- I used a presentation as I could use various means of communication to get

my various points across to my target audience. I could use text, sound, and video imagery to show them my project. I could also explain any points that would need to be explained.

- I didn't want to make the presentation too long or too complicated as it was being presented to a Higher Modern Studies class and the theories of genetics being a cause of obesity were very hard to understand and filled with jargon which was above the knowledge of a sixth year.
- I used a prop in the form of potato crisp fat to highlight that junk food is a cause of obesity and that fat accumulation does come about because of the food we intake. This prop was handed around the class to gauge their interest and to become more active with my target audience, I also asked them questions to find out their opinions and so tried to get them thinking about the topic itself.

I choose to present to fifth and sixth years as this level seemed appropriate for the amount of knowledge given. Also the Higher Modern Studies class do a topic on obesity and health and therefore I felt it was appropriate to tell them about the causes of obesity, the ones they know but also the idea that genetics can also be a cause.

Self evaluation – recognition of own skills development and future areas for development

(Think about how you have developed throughout your project. How did you deal with feedback, praise, setbacks and criticism and their impact on your own development of knowledge, skills and understanding? To what extent did you ask for feedback, learn from experiences and how will you use these to inform future progress?)

Feedback – I took all feedback that I was given and analysed the information. An example would be my pilot study that I conducted where I was given feedback about the various weaknesses and strengths of my questions, I then fixed the questions and improved the quality of the questions.

Praise- I took on board all praise and felt proud and pleased that the work I had done was being noticed. However there is always room for improvement and so while praise was good I always wanted to improve my work. This led me to carry out more research and think back over my presentation and evaluate what I would do differently for example have more props, include more data and videos.

Setbacks- There was several setbacks including my subjects in school as well as extra curriculum activities that set back my time. Also my lack of knowledge in both science and technology affected my project as I had to find sources and find contacts to explain and give the knowledge needed. Another setback would be the issue of contacts not getting back in touch or waiting for people to reply which wasted time and energy. Also as people would not get back to me in any way it affected my project negatively and I had to find other contacts and sources.

Future progress- I will use all the skills I have gained throughout my project in life especially when I am at university as the skills of independent learning, research, leadership and communication skills as well as the deep knowledge I now have on my topic will help me in university and hopefully later on in life in my professional career.

This section is not mandatory. It has been included to allow you the opportunity to undertake an overall reflection of your project.

Reflection on my experiences throughout this project (*eg things you feel you have achieved, things you have done that you feel particularly proud of, anything you would do differently were you to do something similar in future*)

The various things I have achieved because of this project are:

- Good communication skills as a result of presentation, interviews, contacts and meetings with my tutors. I can now effectively communicate an idea or proposal and present it to a large group of people.
- Independent learning skills - In school we are often left along to work on our own for a period of time, this project and course has allowed me to develop this skill which will be essential later on in my life. I can now think independently, take charge of a situation or event and can make plans and carry these plans and tasks out to the best of my ability unaided by others.
- Confidence – this has given me a large amount of confidence, I am now sure that I can go out and do a job unaided to the best of my ability, that I can present a presentation to a large group of people, speaking for a long time. The project has given me confidence in myself and my abilities.
- Technology – my technology skills have improved greatly, before this project I was lacking in several areas but because of this project and opportunity I can now effectively send e-mails to numbers of people, I can add attachments put up videos, use several applications on the computer that I was never able to before and surf the web with confidence and can source material much easier than before.
- Science – I have gained a lot of knowledge and technique because of this project my knowledge of the human body, its functions, chemistry, genetics has improved. I now know several leading theories behind obesity and have looked at the cutting edge of science when it comes to genetic research on the human body.

Things I would do differently-

- I would keep closer to my Gantt chart as while I have followed it I have not followed it as closely as I would have liked. I believe my project and my deadlines would have went a lot smoother if I had planned better and looked far more closely at my planning over a large period of time.
- I would have liked to use a wider targeted segment of society for my questionnaire as I only targeted fifth and sixth years in my school I wish I could have sent it out to the public and so would do this is I did something like this again.
- Improve my time management, due to various other commitments my time management has not been the best and so I would therefore try and improve this.

Skills that I have used in this project that I would like to develop further (*eg using skills in even more challenging situations, more working on your own, more team working*)

I would like to develop skills such as my research skills. I would like to make up more questionnaires and try to improve the quality and reliability of the research. Hopefully I will have the opportunity to work independently and try to carry out a project on my own on a larger scale, hopefully I will get to do this in university as I enjoyed coming up with my own ideas, and pushing myself to complete the work, as I achieved a sense of accomplishment when things worked out and knowing the work and effort was my own.

Science: Interdisciplinary Project

Assessor Report

Candidate name _____

Candidate number _____

Centre _____

Project proposal	Tick as appropriate
Grade C criteria	
The title and aims of the project.	✓
Clear aims and reasoned arguments to support the relevance and practicability of the project.	✓
Identification of opportunities for:	
• own skills development	✓
• collaborative working	✓
• accessing less familiar learning environments	✓
• application of science subject knowledge in a broad context	✓
• use of knowledge and skills across different disciplines	✓
• making connections between subject knowledge and the wider world	✓
Evidence of the ability to communicate clearly and concisely in advocating the proposal.	✓
Grade A criteria, includes all of above plus	
Well conceived proposal which sets creative and challenging goals which are at the same time realistic, achievable and practicable.	✓
Robust and carefully argued justification of the proposal.	✓
Substantial links and understanding of possible connections across disciplines contributing to the project.	✓
Comments	
<p>The aims meet project requirements. The objectives of the project are clear and the methods to be used to achieve stated aims are appropriate and achievable.</p> <p>The project proposal clearly links to the student's personal interests and should aid intended career path.</p> <p>It is well thought through and a variety of appropriate resources have been identified at this early stage of work.</p> <p>The student has developed a project proposal that clearly sits within the citizenship, employability, economic development and sustainable development contexts.</p> <p>Discussion illustrated that there are opportunities for skills development within the chosen field.</p> <p>There is evidence of cross linking of subject knowledge such as Higher Biology, Chemistry and AH Modern Studies. As discussed at the time the presentation was to be levelled at Higher Modern Studies pupils there was therefore a need for it to be supplemented by a 'Presentation Finding Report' conveying the in depth science.</p>	

There is evidence of collaborative working involving working outwith the school environment, medics, politicians and other people of interest. They are clearly aware of the independent approach required for such a project and the need to develop a variety of skill sets. These have been thought out and planned to fit in with a realistic timescale.

Project plan	Tick as appropriate
Grade C criteria	
Development of clear project objectives in line with the project proposal.	✓
Relevant and detailed planning strands to enable the project to be implemented, monitored, presented and evaluated.	✓
Realistic timescales and achievable milestones for each stage of the project.	✓
Clear identification of resources needed, research methodologies to be used, opportunities for support and feedback.	✓
Grade A criteria, includes all of above plus	
Careful selection and effective use of research/investigation techniques.	✓
Anticipation of probable and possible factors which may impact on the project.	✓
Clear identification of dependencies or reliance on the success of other strands of work and of necessary adjustments to the plan.	✓
Outline the process for achieving own identified development needs.	
Comments	
<p>The student has during discussions and also detailed in their plan outlined a reasonable strategy to achieve the project aims and objectives; progressing on from their proposal.</p> <p>The plan shows evidence of the project evolving along the planned route. The Gantt chart identifies dependencies and milestones.</p> <p>There is evidence of the linking of aims to methodologies and the relevant timescales for the different components.</p> <p>They have produced a plan pulling together all strands and have clearly thought about the timing and order of various activities. It became evident during discussion that thought has been made for the format of the presentation with the preferred option being a PowerPoint presentation to Higher Modern Studies class; as discussed a 'Presentation Findings Report' will provide the necessary scientific background to their findings.</p> <p>They have considered potential problems and outlined contingencies however these are merely statements that could overcome the problem. During discussions, however, it was obvious that consideration had been given to appropriate contingencies.</p> <p>There scope for significant skills development.</p>	

Presentation of project findings/product	Tick as appropriate
Grade C criteria	
Evidence of effective and critical use of — resources, research methodologies, information and time management, prioritisation, problem solving approach to reach objectives, feedback, collaborative approaches, self monitoring.	✓
Application of specialist and interdisciplinary subject knowledge to establish meaningful connections within the broad context.	✓
Clear presentation of main findings/outcomes.	✓
Grade A criteria, includes all of above plus	
Critical thinking, analysis and reflection used at key stages in the project to construct rigorous arguments, draw convincing, well supported conclusions, identify and resolve issues.	
Skilful and creative use of resources, including people, information and learning context to progress the project.	✓
Accurate and deepening of understanding through application of subject knowledge in the chosen context, with meaningful connections well established.	✓
Comments	
<p>A professional presentation which was delivered very well and kept the audience engaged throughout.</p> <p>The presentation as a whole and the subsequent question/answer session showed that the student had considered a variety of wider aspects associated with the project. These aspects were sourced from a variety of resource materials indicating breadth and depth of study and interlinking of topics.</p> <p>The very well researched “Presentation Findings Report” ensured that their knowledge and understanding of the science of obesity was thoroughly explained and displayed understanding of the physiological and psychological affects linked to obesity.</p>	

Evaluation of project	Tick as appropriate
Grade C criteria	
A critical and justified evaluation of all stages of the project process — planning, implementation and findings/outcomes in terms of strengths, weaknesses and learning points.	✓
Effective use of chosen communication method(s).	✓
Grade A criteria, includes all of above plus	
Incisive, well balanced evaluation of the project outcome against project aims, supported convincingly by well selected evidence.	
Careful choice and skilful use of communication and presentation methods(s).	
Comments	
<p>A detailed Gantt chart was produced. Project presentation through a PowerPoint, which was very professionally presented, and a very well researched “Presentation Findings Report”.</p> <p>The report provided more significant evidence of the cross linking of the project across disciplines. It also displayed a level of critical thinking and analysis. The application of scientific knowledge and understanding shown is at Advanced Higher.</p> <p>In discussion they were able give an in depth and frank overview at any point in their project; covering not only their successes but also areas they found challenging. They showed flexibility in developing solutions to issues while never losing sight of their overall aims. The student used all proformas very effectively, kept to deadlines and monitored their own progress.</p> <p>This gave their evaluation a wide scope. They also realised that at the end of the project there was further work which could have been completed and discussed this well.</p>	

Self evaluation of generic/cognitive skills development	Tick as appropriate
Grade C criteria	
A critical evaluation of own skills development against the list of specified generic/cognitive skills.	✓
A reasoned evaluation of own strengths and key goals for development in the specified list of generic/cognitive skills, which takes account of feedback sought and evidenced from others throughout the project.	✓
Grade A criteria, includes all of above plus	
Insightful, balanced and well structured self evaluation of own development.	✓
Assertive and justified use of feedback from others in evaluation and identification of development areas.	✓
Comments	
<p>A very detailed and extensive evaluation with good positive points and enthusiasm for the work carried out.</p> <p>Clear evidence of skills development across a variety of different skills during the project. The student has presented a very honest appraisal of how they believe they have developed across a wide range of skills.</p> <p>Their communication skills with a range of different people involved in the project has clearly improved and their oral presentation showed a good degree of confidence.</p> <p>The student's planning and project management skills have been very good and their research skills and independent work has evolved.</p> <p>The student has been forced to develop computer program skills. They showed great autonomy throughout and have had a very successful experience. This has allowed their confidence to grow and develop well. There is good demonstration of coping with change and with new situations and different learning environments. They relished discussion of their project and used feedback, often after they had sought further clarification and sometimes justification, to great effect. Project log and records of discussion provide supporting evidence.</p> <p>Well done, you have coped admirably throughout your IP project and have not allowed your dyslexia to hinder you progress in any way.</p>	

The overall grade will be:

- A indicative of a highly competent performance which meets the additional Grade A criteria and consistently demonstrated a high degree of autonomy, initiative and effective information management across the five pieces
- B indicative of a competent Grade C performance across the five pieces, but with some aspects of work meeting the criteria for highly competent performance (as outlined by the Grade A criteria)
- C indicative of a competent performance across the five pieces, with all aspects of the work meeting the criteria identified for Grade C performance

Overall Grade Awarded	B
Additional Comments/Overview The student was an independent worker who was extremely well focused to achieve their aims and objectives. The data collected was good and the analysis, management and evaluation of it was done to a high standard. A mature approach throughout this project was evident. The student's monitoring of their progress was effective and they were able to keep to timescale. The data gathered was used to produce a clear and concise report that displayed a level of critical thinking. The approach the student has used to undertake this work has enabled them to use and develop their skills effectively. The student has shown a high degree of autonomy throughout this.	

Assessor signature _____ **Date** _____

Internal verifier signature _____ **Date** _____