

Exemplar 6: Biology

REFLECTIONS ON PLANNING AND PROGRESS

Supervisor name										
Candidate session number	0	0								
Candidate name										
School number					0	0				
School name										
Examination session (May or November)					Year					

Candidate: From May 2018, please refer to the Extended essay student guide when completing this form. This form is to be completed by the candidate during the course and completion of their EE. This document records reflections on your planning and progress, and the nature of your discussions with your supervisor. You must undertake three formal reflection sessions with your supervisor: the first formal reflection session should focus on your initial ideas and how you plan to undertake your research; the interim reflection session is once a significant amount of your research has been completed; and the final session will be in the form of a viva voce once you have completed and handed in your EE. This document acts as a record in supporting the authenticity of your work.

The completion of this form is a mandatory requirement of the EE for first assessment May 2018. It must be submitted together with the completed EE for assessment under criterion E.

Supervisor: You must have at least three reflection sessions with each candidate, one early on in the process, an interim meeting and then the final viva voce. Other sessions are permitted but do not need to be recorded on this sheet. After each session candidates must record their reflections and as the supervisor you must sign and date this form.

Reflections on planning and progress	Candidate comments	Date	Supervisor signature
First reflection session	<p>I knew early on what I wanted the focus of my EE to be. I wanted to choose a personal interest as I knew that would increase my engagement with the subject matter. I brainstormed a few ideas with the PE staff and decided on researching the effectiveness of whey protein supplements for building muscle, within the subject of biology. I am interested in the science behind protein supplements and will investigate the different amino acids that make up the whey protein.</p> <p>My supervisor suggested I look into an appropriate timeline for my research and set out a clear method for investigation.</p>		

<p>Interim reflection</p>	<p>I have had many discussions with professional bodybuilders and also the PE staff at school and after considerable reflection, I have set out a concrete method of investigation that will take place over the course of 8 weeks and includes constant variables such as which areas of the body will be measured and what exercises will be done through the course of the investigation. After advice from bodybuilders I will also factor a two-day rest and recovery period each week so that the amino acids will be able to increase muscle mass and size.</p> <p>My supervisor has asked me to think critically about my sources, so I will seek advice again from the PE staff and professional bodybuilders to ensure I have the most up-to-date information. The scientific content of my research is very important to me and I have considered a variety of sources to ensure credibility of my research.</p>		
<p>Final reflection: viva voce</p>	<p>I thoroughly enjoyed researching this EE. However, I do feel on reflection that I realize that my data is completely invalid as I only had a sample size of one. If I had done this as a pilot study and then continued to increase the number of subjects, then this would have produced much more effective data and improved my research. I actually decided to experiment on myself because I was not sure about the ethical guidelines. In addition to my personal investigation, researching the essential amino acids leucine, lysine, valine, phenylalanine and methionine present in whey amino acid consumption has given me a strong scientific background to my overall understanding of the effectiveness of whey as a muscle-developing supplement. I would advise other students who undertake the EE to be clear on their research question from the start as it focused my investigation and allowed me the space to structure the essay with room for adjustments to my plan.</p>		

Supervisor's comments:

It is my professional opinion that F has worked tirelessly and independently on this EE. He has been a pleasure to work with; he has kept all appointments and has carried himself in a mature and diligent manner throughout the process.

F has enjoyed his EE as it is a topic that he is personally interested in, so much so that he chose to carry out his investigation over the summer. F is directly interested in this topic and used himself as his investigative subject; this kept him engaged in the process, however he is aware of the limitations of his sample set and expressed regret in not gaining more data over the summer by increasing his sample set.

F would advise any future IB EE students to have a clear specified research question from the onset as he found that very helpful in maintaining the focus of research and structure of the EE.

F was reflective on his choice of sources and research, seeking advice from professional bodybuilders and PE staff. He was keen to use the most up-to-date published information, however he also wanted to be sure the scientific content was rigorously upheld.

F is well read around the topic of his EE and speaks confidently, passionately and eloquently about his EE. He was focused from the beginning of this process about where he wanted to bring this EE, and he was innovative and well organized for the investigative stage. He was a pleasure to work with and showed intelligence, independence and initiative throughout the process.

Candidate's declaration

This declaration must be signed by the candidate; otherwise a grade may not be issued.

The extended essay I am submitting is my own work (apart from guidance allowed by the International Baccalaureate).

I have acknowledged each use of the words, graphics or ideas of another person, whether written, oral or visual.

I am aware that the word limit for all extended essays is 4,000 words and that examiners are not required to read beyond this limit.

This is the final version of my extended essay.

Candidate's signature	Date
------------------------------	-------------

Supervisor's declaration

This declaration must be signed by the supervisor; otherwise a grade may not be issued.

I have read the final version of the extended essay that will be submitted to the examiner.

To the best of my knowledge, the extended essay is the authentic work of the candidate.

I spent hours with the candidate discussing the progress of the extended essay.

Supervisor's signature	Date
-------------------------------	-------------