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# EE/RPPF

For use from May/November 2018

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Candidate personal code

## Extended essay - Reflections on planning and progress form

**Candidate:** 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 three reflections combined must amount to no more than 500 words.

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

### First reflection session

Candidate comments:

Biology is my favorite subject and in that I find plants to be the most interesting. There are many real-world applications to this topic such as agriculture and business. My initial idea was to investigate several homemade fertilizers and after my first meeting, my advisor agreed with this idea. However, I decided that I would grow the plants hydroponically. Growing the plants in a solvent instead of soil makes it much easier to control whereas growing the plants in a soil like I had originally planned, would be much more challenging. Lastly, to keep my experiment controlled, I will grow the plants from seeds and under a plant light to keep everything the same. As for the species, I will grow an edible plant in order to have a real world implication for discussion.

Date:

Supervisor initials:



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**Interim reflection**

Candidate comments:

After researching various plants, I've decided on *Ocimum basilicum* (Basil) as the plant I will be investigating. Instead of fertilizers, I am looking at the effect of various sources of calcium in the form of salts and investigating the effect on growth rate because calcium is often overlooked as a plant nutrient. During my research, I found that calcium is a secondary nutrient it plays a key role in plant structure and homeostasis. My research was conclusive besides not finding much literature about basil growth rate which means I cannot compare my results to direct literature. My independent variable is the anion present in each salt. An issue occurred with one salt however. The anion to cation ratio in three of the salt solutions is 1:2 whereas the ratio in calcium sulphate is 1:1. Therefore, to keep the concentration of the anion constant in every solution, I will double the concentration of this solution which leads to this solution having twice as much calcium, but this can't be avoided and therefore this will skew the data.

Date:

Supervisor initials:

**Final reflection - Viva voce**

Candidate comments:

The overall process of writing my research paper was fruitful and interesting. The process of data collection and the choices I made worked well. The plant species I chose to investigate grew well and exhibited expected results nicely and in due time. My data collection process was perhaps not the most precise way of measuring and investigating growth. In another attempt at this experiment, I would perhaps change in mass as this not only takes into account change in stem length, but also leaf and root growth. This investigation also served to assure me of my passion for biology and assuring me that it is indeed the career I want to pursue. The linear and systematic approach required for such a research paper appealed to me and gave me a taste of what a career in the life sciences would consist of. On a broader level, this exploration allowed me to become more aware of myself as a hands-on and practical learner. It taught me to be more critical and aware of real life applications of what I learn as well as improve my overall work ethic.

Date:

Supervisor initial:

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Supervisor comments:

**Supervisor:** By submitting this candidate work for assessment, you are taking responsibility for its authenticity. No piece of candidate work should be uploaded/submitted to the e-Coursework system if its authenticity is in doubt or if contradictory comments are added to this form. If your text in the box below raises any doubt on the authenticity of the work, this component will not be assessed.

This candidate was extremely receptive to questions and suggestions and very self-reliant after our meetings. Initially they came with lofty ideas that lacked practicality. When I addressed some concerns, they quickly steered themselves into a more reasonable direction. This student worked hard at learning some stoichiometry-type skills in attempts to control nutrient concentrations. Throughout the design, experimental and analysis phase this candidate implemented thoughtful approaches and was flexible and wise enough to enact helpful revisions when necessary. While this could have been a well executed but drab study, this student was very in touch with potential wider applications or implications of this type of research. While recognizing that they were not going to solve world hunger, they did enjoy the process of scientific endeavor as an exercise in learning some tools that might help to solve some world issues in the future. They fell a bit short in bring this back in the discussion section. The student struggled a bit with analysis skills, but I was very pleased in every other way to advise this student and found their balance of inquisitiveness and independence extremely refreshing.



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