**Passion Project – Initial Project Proposal (2018-19)**

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| Goal of the Passion Project:  **Investigation on the structure and the principle of an SLR camera and improve or design one.** |
| Mention any 2 subjects/disciplines whose knowledge you will use for researching about your project. How is your project going to be interdisciplinary? Explain briefly. (Eg. - Languages, the Arts, Sciences, Humanities etc..)   * **Art:**   **I will draw an explanatory drawing to show the structure of an SLR camera.**   * **Engineering & physics:**   **I will use engineering and physics knowledge to investigate the principle of how the SLR cameras work.** |
| Research question/title of report:  **Inside an SLR** |
| Explanation of why you have chosen this goal and research question:   * **My eager to improve a camera and have a camera of my own personalized functions and style.** * **My willingness to help other shutterbugs to satisfy their wants of an ideal SLR, i.e. be cheaper, be more personalized, be more nice-looking, have styles that are not restricted to any existing SLR, etc.** * **My own passion about photography, painting, and physics** |
| Ideas of research methodology (i.e. sources of primary and secondary data, experiments and materials needed, etc.):  **Data:**   * **What’s the name and function of each part of an SLR camera?** * **Why are SLR cameras designed like this? What’s the difference between a good camera and a inferior one? What can I do to improve it?** * **How is the first camera like? What’s the difference the camera now and the ones in the past? And why?**   **Materials:**   * **An SLR camera.** * **Withdrawal tool.** |
| How do you propose to include the ‘Design Thinking Process’ while working on your project?  (EMPATHISE, DEFINE, IDEATE, PROTOTYPE, TEST)  **EMPATHISE:**  **Photographers around the world always have many concerns on the quality and good-looking of cameras.**  **DEFINE:**  **Some properties of SLR camera still need to be improved. And the appearance of the traditional cameras may be modified.**  **IDEATE:**  **I need to first investigate the inner structure of an SLR camera since a camera is really complicated and needs a lot of technical methods and materials to make, then I need to learn what kind of camera are most shutterbugs looking for. Based on what I learned, I will design my own camera.**  **PROTOTYPE:**  **To investigate what’s inside an SLR camera, the most direct way is to take the camera apart and draw what it looks like.**  **TEST:**  **Some research may be done on all kinds of different cameras to see how slight differences in those components may cause a big difference.** |
| Questions that you need to ask your supervisor to support you in developing your Passion Project:  **How to disassemble an SLR camera without damaging it?**  **How each single component works?**  **What materials are they made of? What will happen if another material is used?**  **How to use explanatory drawings to clearly represent the inner structure of an SLR?**  **How to improve and what to improve about an SLR?**  **Etc.** |