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Project Activity Log

Learner Name	**Ashwin Ahuja**	**Learner number**	**5501**
Centre Name	**St Paul's School**	**Centre Number**	**14627**
Unit Name	**Artefact Extended Project**	**Unit number**	
Teacher Assessor			
Proposed project title			

This form should be used to record the process of your project and be submitted as evidence with the final piece of work.
You may want to discuss:

- what you have done (eg, from one week to the next)
- if you are working in a group, what discussions you have had
- any changes that you have or will need to make to your plans
- what resources you have found or hope to find
- what problems you are encountering and how you are solving them
- what you are going to do next

Date	Comments
14th September 2015	**Activities Undertaken:** I have completed a number of SolidWorks tutorials in order to better my CAD abilities. I learnt about new tools such as Equations and am beginning to learn about Simulation. The tutorials completed were: Lofts, Surfaces, Advanced Design and Equations I have also been researching a number of possible ideas, understanding how they might fit inside the purview of solving a problem and understanding whether the ideas were feasible to accomplish inside a term and a half. Additionally, in order to help visualise one of my ideas, and to test my SolidWorks abilities, I attempted to design a basic idea for a smart water bottle. My research also included whether other such products existed, and how they worked. **Problems Encountered:** I realised that a couple of my ideas would be far too time-consuming and thus not a realistic goal for my project. **Steps Taken to Overcome:** As well as discarding one idea, I began to consider the possibility of finding a smaller part of the other idea, thus making a more focussed project which could still be feasible. **Plan for Following Week:** I hope to continue the research into my ideas and begin to choose one of them. I also hope to continue my learning on SolidWorks – especially learning to use the simulation features of the application.
21st September 2015	**Activities Undertaken:** Using the new tools offered by SolidProfessor, I began to explore the world of SolidWorks Simulation, by watching the first few videos. In addition, as part

	of homework, I continued to research what existed regarding my ideas, and how they worked, preparing a talk regarding them, learning from Dr Gardam's presentation about what an effective idea would be. In addition, I attempted to continue to research the possible solutions to my problems, thinking about how I could in fact simplify my ideas, focusing on a specific part of the product, and researching and modelling that part in depth. I also completed a few more tutorials on SolidWorks, such as the animation tutorial, which would easily allow the user to see inside a complex product easily. Finally, I am also beginning to conduct some research on how to use EagleCAD, a ubiquitous software for Electronics Design (and Simulation), since my product would likely contain an element of electronics. **Problems Encountered:** I faced a number of computer related issues, including a reinstallation of SolidWorks originally failing, before finally succeeding after a period of pain. Additionally, I struggled to find a good source of information for EagleCAD, which was both upto date and was comprehensive enough for me to gain a good understanding of a tool. **Steps taken to overcome:** By following steps online, I was able to remedy the problem that I faced during installation. Additionally, after a period of research I found a Sparkfun tutorial online for EagleCAD which at least appeared to cover the basics effectively. **Plan for following week:** Building off opinions of others in my class, and using research for the homework, I hope to reduce the number of possible ideas, finding which is the most feasible, whilst still being interesting for me, and challenging. Additionally, I hope to continue the tutorials for EagleCAD and SolidWorks.
28th September 2015	**Activities Undertaken**: In the theoretical taught lesson, we received a continuation to the introduction to Fluid Dynamics, and also an introduction to Mechanical Analysis, especially into the elasticity of materials – using Young's Modulus, and how to find the statistics of different materials – using MathWeb.com. Additionally, I continued to research the existence of my problem, asking a few friends if they encountered similar ideas. I also received an introductory lesson on SolidWorks Simulation, using the SolidWorks Express package, and am currently completing a homework – which would begin to use the skills acquired. Finally, I completed the tutorial on EagleCAD and am currently experimenting, using the skills for CanSat as a preparation for the EP. **Problems Encountered:** I was unable to access the SolidWorks Simulation tools on the student edition. **Steps taken to overcome:** I was able to use the SolidWorks that exists on the computers in school to do my simulation homework, and experimenting with the tools. **Plan for the following week:** I hope to continue the tutorials for Simulation in SolidWorks.
