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# GREENINGLUCAS

## FINAL PROJECT - DESIGN PROJECT GUIDELINES

A.B. Lucas Secondary School  
Grade 9 - 12 • June 2010

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# GREENINGLUCAS



## COMMON COMPONENTS

Element	Due Date	Potential Score Grade 12	Potential Score Grade 9-11	Achieved Score
1. GROUP CONTRACT		10%	10%	
2. TEAM FOLDER/MEMOS/LOGS		15%	15%	
3. DESIGN BRIEF		25%	25%	
4. RESEARCH CHECK		20%	20%	
5. FINAL COMPETITION		TROPHY		
6. FINAL PRESENTATION		0%	30%	
7. FINAL PRODUCT REPORT (binder)		30%	0%	
TOTAL		100%	100%	

## PROJECT DELIVERABLES

### 1. GROUP CONTRACT: Draft DUE: Day 1 – Final Copy: Day 3

You will be assigned to a Product Design Team (PD Team) by your facilitator. Each PD Team will reach a consensus on the details of working together. Your contract should remind and encourage all to be responsible team members who co-operate, support and learn from each other. Your contract should also have clear consequences for those who do not complete their responsibilities. Each person must take on a role.

### 2. TEAM FOLDER, PROGRESS MEMO and PERSONAL LOG: DUE: Daily - Mon thru Fri

The first 10 minutes of each class period are dedicated to team meetings. Team members are required to discuss their progress. The facilitator will attend team meetings as required to deal with any issues that should be

handled from their side. The team discusses various design issues and organizes a plan of action for the work. Detailed descriptions of how the product accomplishes the goals; meeting parameters or dealing with constraints during the phases of design, production, and testing are written.

Each team member must update their personal TO DO list regarding:

- What I have learned.
- What I need to know.
- What task(s) I have been assigned.
- When I will complete my tasks.

Each team member must keep an up to date Personal Log.

Team leaders summarize assigned tasks and activities in a group log. Leaders are also responsible for maintaining the team folders/ binders (see attached details for maintaining team files).

### **3. DESIGN BRIEF (summary of work in week #1) – DUE: Day 5**

Before investing time and money in a solution, developers should be confident that the solution has the opportunity to be successful. To date, your team has had the opportunity to brainstorm, create a Why-Why diagram, complete a Duncker diagram and complete some preliminary research.

The purpose of this design brief is to present your problem statement, list and evaluate possible solutions, assign group responsibilities and complete a plan for the second week of the project. By the end of the design brief, your group should have a better idea of what work is involved to complete this project.

Teams may want to focus future efforts on the details the potential design, impressive features about the design, cost, considerations, risks, benefits, etc. If a mentor or expert is needed to work through your idea, you may want to contact them and arrange for an interview now.

Your design brief should include (in individual sections – assign one per person):

- team name and logo to distinguish your team
- names of the team members
- a statement of the problem you will address
- background research in the alternative approaches to solving the problem (incl Why-Why)
- the choices you have made regarding a solution (eg KT analysis)
- Plan for week #2
- an overview of the information/data you will need for week #2
- cost estimates
- rubric

### **4. RESEARCH CHECK: DUE June 15**

Annotated bibliography required for all students all grades.

## 5. FINAL COMPETITION: DUE June 18

Your final product will be assessed based on how well it meets the performance criteria while keeping within the constraints imposed by the clients/ judges.

## 6. FINAL PRESENTATION: DUE June 18

On the day the reports are due, each group will give a physical display or representation of their project to the judges and peers. The main purpose of the final presentation will be to show that you have achieved your design objectives and have learned to apply design concepts to develop, analyze, design and complete a project. This final presentation format will be similar to the format for the final product development report.

Choice of:

Gr. 9/10/11 Options: summary pamphlet, 3-D model, or poster board, team binder or portfolio, computer simulation or video

Gr. 12 - design report with oral presentation using the Gr 9/10/11 contributions as props.

## 7. FINAL PRODUCT DEVELOPMENT REPORT (Binder): DUE June 18

The following items should be included in a final report package, in this order:

- I. Letter of Proposal (outlining original specification and possible solution ideas to the "client")
- II. Cover sheet (with descriptive title)
- III. Abstract or overview
- IV. Table of Contents
- V. Introduction (revised Design Brief)
- VI. Body of the Report (Description of the selected solution, component by component)
  - A. What will this design look like? – pieces of the puzzle
  - B. How will it be produced? – putting the pieces together
  - C. What is the expected performance based on manufacturers' specifications? – What tests will need to be done to confirm performance?
- VII. Figures and diagrams that support the written parts of section #6
- VIII. Conclusion section (How will this make Lucas Greener? advantages, next steps, etc.)
- IX. Budget/ costing
- X. Appendix (resources used, etc.)
  - A. Performance data
  - B. References
  - C. Suppliers
  - D. Acknowledgements