Name: _____

Electrical Squad Assignment

Project Due Date: _____

Your platoon's captain asks you and your comrade, Keon, to look at a building to rewire. Your minimum requirement for this task is to provide enough lighting within the building to make it feasible for work after dark. He would like you to provide a simple model presentation before he orders the supplies for the electrical renovation. He also indicated that he would prefer the presentation include an additional electrical component that would make the living conditions more comfortable for the future occupants. Finally, he asked that you keep your costs at a minimum.

After talking with your captain, you hear rumors that other squads in other closely stationed platoons are also tasked with this assignment. Additionally, the best model will receive a bonus on their next paycheck and a week furlong in the city of Jordan.

Of course, it would be difficult to construct your model without further guidance. Therefore, your captain provided further details about the requirements for this task. Again, he stated the importance of presenting a **good** working model with adequate detail to ensure the designed plan will work.

Requirements:

- The building has two rooms.
    - One room has an exterior door and one window right next to it.
    - The second room has zero windows and has access to a dugout basement with room enough for two soldiers to fit into if they need to hide.
    - The second room has a place for plumbing and a hanging curtain for privacy.
- A single door connects the rooms.
- An rough scale for the small building is 4" x 6." (Although, these measurements are only a suggestion.)
    - The rooms are currently undivided. Since you are supplying the electricity for lighting, you will provide the contractors with the appropriate dimensions so that they may construct the dividing wall. However, this dividing wall must already be in your model.
- You should include a series circuit room: two lights in series.
- You should also include a parallel circuit room: three lights in parallel with a switch in one room.
- Your building model should also have a two-dimension (separately completed) circuit diagram.
- You may include furniture as you deem appropriate to market the placement and usefulness of your lighting plan.
- You may also include artwork for the walls (appropriate for the army) or leave the walls clean. (The lack of artwork will not hurt your grade.)

Construction (tips):

- Recommended building materials may include cardboard, foamboard, shoeboxes, dough, paper mache, etc.
- Switches can be made from brads and paper clips (or similar structure materials).
- You may use supplies from the classroom with permission. Keep in mind that you want to keep your budget at a minimum. (Please return all unused materials.)
- Your project may be powered by a 9V (or smaller battery). You may use basic leads to attach to the battery (of your choice) or borrow a battery pack from the classroom.
- Each circuit must work independently, and both circuits on simultaneously **without moving the**

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battery.

- You will need to use scissors, wire cutters (optional), wire strippers (optional), and other building materials and tools. If you need help obtaining any material or getting access to a particular tool, please come to me for these items.
    - *Please allow time for me to acquire the needed equipment and tools and time enough for you to complete your model.*
- You may **NOT** use premade items in your model (including furnishings). You should make everything within your model (outside the electrical requirements).

Your project is due by the time your class begins on the due date, whether or not you are at school. For each day the project is late, I will reduce your grade from the rubric total by 10 points.

This project is solely yours. You may discuss aspects of your project with others in the class and troubleshoot any problems you may be experiencing. You may also use YouTube and other various online resources. However, be unique and creative. (This is 15 points of this project.) **Any duplicated efforts will receive an automatic zero for that rubric aspect.**

Finally, you are supposed to go above and beyond what you learned in class. Providing references provides evidence of your effort in completing this project. (Electrical engineers, electricians, and other electrical professionals are adequate resources. Family and friends are not--unless they are experts in one of the fields mentioned above.) You may also receive bonus points if you provide proof that you talked with an expert about this project. **If you provide no references, this will be an automatic zero.**

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Project Rubric

Category	5-4 Points	2-3 Points	0-1 Points	Points Scored
Project submitted on time.			Five points (all or nothing)	_____
References provided			Five points (all or nothing)	_____
Followed requirements	All requirements are followed.	Missing one or two requirements.	Missing three or more requirements.	_____
Switches work	Both switches work & wiring is easy to follow (5 points); else 4 or less points.	One switch works & both are wired correctly, 3 points; else 2 or fewer points.	Neither switch works & wired correctly, 1 point; else 0 points	_____
Series circuits with two lights wired correctly.			Five points (all or nothing)	_____
Parallel circuit with three lights wired correctly.			Five points (all or nothing)	_____
Series and parallel circuits work independently without moving the battery.			Five points (all or nothing)	_____
Creativity and Neatness	Second document providing wiring information/blueprint (5 points); else 4 or less points.	Wiring blueprint not provided, but model functionally furnished, 3 points; else 2 or fewer points.	Furnished, not necessarily functional/project not neatly done, 1 point; else 0 points.	_____
Effort	Project goes above and beyond rubric description, 5 points; else 4 or less points.	The project follows the rubric to exact specifications, 3 points; else 2 or fewer points.	The project does not meet rubric requirements will be assigned a 0.	_____
EC: *Working* extra electrical component(s) while maintaining a low budget.			**Five points (all or nothing)**	_____

Comments:

Rubric Total: ____/50 points

Late Work: _____

Final Grade: _____%

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Presentation Rubric

Category	5	3	1	Points Scored
Planning	Storyboard/Well rehearsed Language/and-or slideshow presented.	A general outline is provided within a storyboard/in the language/and-or slideshow. Speaking was not well rehearsed.	No storyboard/unrehearsed and unplanned speech/and-or no slideshow. Or these items are incomplete.	_____
Organization	Logical sequence with title and closing slide included.	Logical sequence possibly missing the title and/or closing slide.	Not logically ordered and missing title and/or closing slide.	_____
Content	All aspects are briefly discussed in-depth.	Some aspects of the presentation are shallowly described.	The presenter briefly addressed their model with no depth of knowledge.	_____
Fluidity	Fewer than nine (but greater than five) significant pauses, clearing of throat, "ummss"…., and other non-significant babble.	Fewer than 15 (but greater than 10) significant pauses, clearing of throat, "ummss"…., and other non-significant babble.	Greater than 15 significant pauses, clearing of throat, "ummss"…., and other non-significant babble.	_____
Knowledge of Project Model	Presented their project using correct vocabulary in their descriptions.	Presented their project using correct vocabulary occasionally.	Did not use appropriate vocabulary.	_____
Language	Spoken and written language was appropriate and correct.	Spoken language was appropriate with minor (non-confusing) grammar errors.	Spoken and written language used through presentation was confusing at time or throughout.	_____
Appearance	The presentation is attractive.	The presentation is "colorful" but a bit	No presentation or is incomplete.	_____

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		distracting.		
Questions	Allowed the individual time to ask the question and answered well.	Did not allow the individual the full amount of time to ask a question but did answer the question well.	Was unprepared to receive or answer questions.	_____
***Clarifying Questions (if appropriate)**			If done well, receives all five points; else 0.	_____
Audience Interaction			If done well, receives all five points; else 0.	_____
			Rubric Total:	___/50 points
			Late Work:	_____
			Final Grade:	_____%

*If relevant questions were not asked, this category should remain unscored. I will find the presentation final grade by scoring the rubric out of 45 points.

Provide additional comments:

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