Grand Blanc High School Robotics Team

Advanced Level Deliverables
SMART Goal Deliverable – Steps 1 and 2

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Mentor(s) to ask if you have questions about, and may sign off on this Challenge: Clinton Bolinger, Brandi Bolinger or Cathy Fillwock

Gather the following Materials:

1. Camera or phone with camera for documentation
2. Computer or other device with internet access (suggested sites noted in entry instructions)

Background Information – IMPORTANT, PLEASE READ:

1. Sustainability of the FRC Team is one of our main goals, and it cannot be achieved without the help of each person. New ideas are the cornerstone of CHANGE and CONTINUOUS IMPROVEMENT.
2. This challenge has three parts – Identification, Proposal and Request for Action/Withdraw
3. Steps can be completed together in a series or separately, but must be completed in order.
4. Each Student will be expected to come up with his/her own unique problem and implementation for all aspects of this Deliverable.
5. Students must work independently on this Deliverable, but may request assistance with spelling, grammar, and readability for each submission during the process.
6. This deliverable is opinion-based, so you will be judged on the quality of your work, and level of seriousness and dedication to the Team's wellbeing when approaching the problem.
7. Students may not represent the Team, or contact any organization or business on behalf of the Team during the course of this deliverable without the expressed written permission of the Team's Head Mentors. Infractions will be dealt with very seriously.
8. Students may not attempt to implement any type of solution without the expressed written permission of the Team's Head Mentors.
9. Students may not make or initiate any purchases on behalf of the Team, and will not be reimbursed for any purchases that are made in conjunction with this Deliverable, unless they have received written permission of the Team's Head Mentors.
10. Students may not gain access to Premier Tooling Systems outside of the designated Team Meeting schedule without permission from the Team's Head Mentors.

General Advice and Guidelines:

Your responses do not need to be lengthy, but you need to write legibly and use complete sentences:

a. You should be able to complete each part of this two-part challenge in one or two short paragraphs, but you can write more if you choose. The more you do, the more impact you'll have!
b. Feel free to include pictures, charts, drawings, etc.
c. You must complete BOTH your Identification and Proposed Solution before you can ask to have your notebook signed.
d. You may take as long as you need to complete this deliverable, and work on it over multiple entries throughout the off-season (just indicate which pages include progress on this challenge in your table of contents).
e. You may ask for advice from your Teammates, Mentors, family and friends, but you must come up with the identification, proposed solution, and research on your own.

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Part One – Identification

1. Identify a specific need in ONE AREA of the Team that is currently not being met, that you believe would be beneficial for the financial, operational, or membership sustainability of the EngiNERDs were it met.
2. The need must meet the following criteria:
    a. Ensure that this need is not temporary, and will not be solved with "time".
    b. Ensure that this need affects more than one person (past, current, future Team Members).
    c. Ensure that this need does not "blame" a person or group of persons for their actions (i.e. it's a DELTA).
    d. Ensure that this need could be solved using the SMART Goal Method (quick overview: http://topachievement.com/smart.html, although more research is HIGHLY recommended)
3. In your Engineering Notebook, write *about* one or two paragraphs (or more if you want) that describes the need that you think needs to change.

Things to think about and/or write in your Identification entry in your Engineering Notebook (note: you do not need to answer these questions *exactly.* These are things you need to take into consideration when you're thinking about the subject matter of your Identification and Proposed Solution):

1. Identify the Status Quo:
    a. What aspects of the Status Quo are having a positive affect on the Team?
    b. What aspects of the Status Quo are having a negative affect on the Team?
    c. Determine what aspects of the Status Quo are missing that may create a positive change for the Team?
2. Why this issue is important to you:
    a. How does it affect you personally?
    b. Why does it affect you personally?
    c. Why do you want to make change in this specific area?
3. Why do you believe this need is significant and impactful to past, current and future Team Members aside from yourself?

Part Two – Proposed Solution

1. Now that you have identified a DELTA within the STATUS QUO, it's time for you to come up with a solution that you believe could turn this DELTA into a PLUS. *You'll be creating a PROPOSED SOLUTION using the SMART Goal Method.*
2. Do research into industry standards, the habits of other Teams in the FIRST and VEX communities, and other ways people solve problem(s) similar to the one(s) that you have identified.
    a. Places to look:
        i. Other Teams' Websites
        ii. Chief Delphi
        iii. Corporate Websites
        iv. Home Depot, Lowes, etc.
    b. Document your research using (but not limited to):
        i. Charts
        ii. Graphs
        iii. Photos
        iv. Printed materials from the internet

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3. A SMART GOAL will help you achieve turning this DELTA into a PLUS:
    a. Base your SMART Goal Solution off of your PROBLEM STATEMENT (created in Part 1) and research.
    b. You do not need to answer each question individually, but be sure that you have taken all of the information into consideration while developing your Solution:
        i. **S – Specific**
            1. WHO is affected?
            2. WHAT do you want to accomplish?
            3. WHEN did this need come about?
            4. WHICH materials will need to be purchased or repurposed?
            5. WHY it's necessary?
        ii. **M – Measurable**
            1. Can you measure the growth, improvement, or change in the solution you've created? STATUS QUO measurements for the DELTA?
            2. Determine how often you will measure results going forward. Create a table or listing that will allow you to document future measurements.
        iii. **A – Assignable**
            1. WHO on the Team will be completing tasks to implement the solution?
            2. WHO outside of the Team will be assisting?
            3. WHO will be responsible for maintaining your solution once it has been implemented?
            4. WHO will continue to ensure the success of your SOLUTION after you've graduated?
            5. HOW will people know what to do? What training or information will they need?
        iv. **R – Realistic**
            1. Is this SOLUTION within our Teams' realistic budget?
            2. How will you find funding for items that you will need to purchase?
            3. Is your solution a physical task that is attainable?
        v. **T – Time-Related or Timely**
            1. What is the timeline for your SOLUTION?
            2. Will you implement it all at once, or introduce it in stages?
            3. What is your goal for completion?
4. Write *about* one or two paragraphs (or more if you'd like), or use complete sentences and bullets to:
    a. Explain (in general terms) how your SOLUTION meets the SMART Goal criteria.
    b. Construct a set of directions for implementing your solution (a numbered list is fine) that describes the details of your solution, and a step-by-step list for implementation. (Note: the next step of this deliverable will offer you the opportunity to implement your solution *in a request for action*, or describe why your solution isn't a realistic option for our Team, and *withdraw your proposal*. For now, just focus on the steps you'd use to put your solution into action)
    c. If your solution requires purchasing goods/services, please include the following information:
        i. Name/description of good/service(s)
        ii. Location or place of business for sourcing good/service (based on research)
        iii. Estimated pricing (based on research)
        iv. Intended purpose for good/service
        v. Why you think the good/service is a <u>necessity</u> for this DELTA

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d. If your solution requires materials that we already own and can be repurposed or reallocated:
    i. Name/description of Materials
    ii. Current purpose or use for materials
    iii. Quantity of materials that will be required
    iv. Why you think the materials are a necessity for this DELTA
    v. New purpose or use for materials

To Complete Your Challenge:

1. Ensure that your Engineering Notebook entry is complete for BOTH Steps 1 and 2.
2. Find one of the Mentors listed on this deliverable and present him/her with your Engineering Notebook to inspect your completed work.
3. Ask one of the Mentors listed on this deliverable to approve your Engineering Notebook entry and have your deliverables checklist validated.
4. If your Identification and Proposed Solution are approved, you may begin work on Step 3 (Request for Action or Removal from Consideration) for this challenge. *Do not begin work on Step 3 until you have completed Steps 1 and 2.*
5. Clean your workspace AND the floor around you:
    1. Wipe off tables
    2. Push in Chairs
    3. Sweep the floor