

# Title of Software Project ( Official Name, Optionally Team Name )

Students' names ( First Name, Last Name as Registered)

Teacher name

School Name

**This is a template that may need to be altered to fit the needs of your school or project needs and specifics. I recommend the teacher use this as part of the group's class grade to help show the progress as the team makes updates and iterations.**

# Define the Problem you are trying to solve

- This should be your first step that is completed as soon as you have chosen a project. Most of this will be in the HUNCH project description but there may be other research you need to do to understand the environment of the Space Station, the Moon or other locations.
- **Just a thought you may consider Agile Training or AI/ML Learning**
  - **UDEMY**
  - **Coursera**

# Research

- This should be started the first week of your project and will be continually updated as you work on your project.
- Are there existing commercial products that can satisfy the needs of the product? Are there good ideas that may need alteration?
- List where you found valuable information related to the problem and how you might solve it.
- Describe the main ideas that are important from the research
- Show pictures of what you are thinking about.

# Brainstorm and Generate Ideas

- This should be started the first week of your project and will be completed by the second week.
- Attach photos of the sketches and list ideas each of the students suggested for solving the problem. This may take more than one page.

# Identify criteria and specify constraints

- This should be started the first week of your project and may be updated as you work on your project and as you learn more while working.
- Criteria---this is what we need
- Constraints---these are problems we have to avoid

**Remember to look at Other Things to Think About**

# Develop and Propose Designs and Choose among Alternative solutions ( Should have 3 )

- This should be completed by the 3<sup>rd</sup> week of your project.
- Analyze the strongest ideas by listing out their pros and cons on this page. Choose one for your final solution.

# Story Board ( 3<sup>rd</sup> Week )

- Build a series of drawings that describe in 4 to 8 panels your solution that tell the story of how your solution will solve the problem, or better describe your solutions in picture form.
    - Could be cartoon
    - Sketch
    - Animation
- Can also be used in Other Parts  
You are Welcome to use Software Generation

**This should be updated as your project evolves.**

# Implementing the proposed solution

- This should be started in the 4th week. Depending on the complexity of your project you should be finished within the next week or two.
- Draw up your design in Block Diagrams or in sketches and apply all the specifications.
- Make Sure you label Block Diagrams with labels of the relevant parts so other people will understand what is important.



# Make a model or prototype

- This should be started the 4<sup>th</sup> or 5<sup>th</sup> week. Your first prototype should be completed by the 6<sup>th</sup> or 7<sup>th</sup> week.
- Write pseudocode or program with Stubs in language best suited to your application
- Attach code and block diagrams
- Assign areas to each team members
- Define team input, output , files, screens etc.

# Test and Evaluate the solution and its consequences

- This should be completed once your prototype is completed and you have spent a day evaluating and trying out your prototype.
- Check all the requirements and limitations to see if you have met them all.
- List any that you did not meet.
- List any other problems you have found that could be fixed.
- What attributes did you like best.
- Include a picture of your screens and reports, data base design if it helps you describe the improvements you want to make

# Refine the design

- This should be completed within the week after completing your prototype.
- Update your system, identify improvements
- You may find that you repeat this page several times depending on the complexity of your project. Testing your project to make it operate well will mean that you find problems that need to be fixed so it works the way you want. The little details are what makes your product stand out so that people want your design over another.

# Build the final Design

- Prepare you Laptop to display programs and or setup
- Attach 3 photos or more of your final design from different angles showing and labeling all the important aspects. Use multiple pages if needed.

# Communicate the Process and Results

- This page should be started in the 5<sup>th</sup>+ week as you draw up your project. Your development of the object may be influenced by how you use it. This will be updated as you make improvement on your project.
- Summarize the processes and provide complete and accurate drawings of your final design. Label all the parts in your drawing so it is easy for someone else not familiar with the project will understand your discussion on the project.
- Provide instructions on its operation or its use. Although it is obvious to you, not everyone will know how to use it.

# List of Items to be Delivered during the Project

## PDR

Science Board (Tri-Fold) - WEB Site – Student Registration

- School Information including WEB site URL and teacher
- Project WEB Site ( URL – First 5 Letters of School, Program ( Software, BIO, D&P etc., + team name )
  - School information
  - Project Name
  - Project Team Members
- Handout - Brochure 8 ½ x 11 back and front ( See next chart )
- Picture of the Team (Professional Dress)
- Picture of the Project/Science Board (Trifold)
- 3 Pictures of the Prototype (3 Perspectives) or
- System Diagrams – Hardware
- Software Architecture
- Slides of the Project ( For Online Meetings )
- Current State (PDR, CDR, FDR online meeting, other)
- Code Listing
- GITHUB Listings and Links
- Program Files
- CAD Drawings if applicable – Embedded Systems
- CAD Electrical Drawings if applicable

## CDR – FDR – Additional Info

### PDR INFO plus below

Science Board (Tri-Fold) - WEB Site

- Video Presentation of the Board 3 Minutes
- Video Presentation of the Prototype 3 Mins
- Current State ( CDR, FDR online meeting, other)
- Testing Plan
- Testing Results
- Video of Testing
- Execs
- VR Files

## USB Info – FDR Only

**Purpose, to save and potentially demonstrate student project in the following years.**

Please copy PDR, CDR and FDR Info  
Add Execs or SETUP file to easily set  
Up your project.

Include Page to explain how to  
Set up system, files etc.

# BROCHURE – HANDOUT 8 ½ - 11 Critical for BIO Medical Software projects at PDR all Projects by CDR

## PDR – CDR - FDR – Innovation Day

Science Board (Tri-Fold) - WEB Site – Student Registration

- School Information including WEB site URL and teacher
- TOP OF FIRST PAGE Project WEB Site ( URL – First 5 Letters of School, Program ( Software, BIO, D&P etc., + team name )
  - School information
  - Project Name
  - Teacher
  - Project Team Members
- Picture of the Team (Professional Dress)
- Picture of the Project Board (Trifold)
- 3 Pictures of the Prototype (3 Perspectives) or
- System Diagrams – Hardware
- Software Architecture
- Indicate (PDR, CDR, FDR online meeting, other)
- CAD Drawings if applicable – Embedded Systems
- CAD Electrical Drawings if applicable
- Link to WEB Site
- Link to 3 Minute Video about Board
- Link to 3 minute Video about Prototype ( You should just see Prototype )