**Project Portfolio Rubric**

**Overview:**

You have designed, tested, and refined vehicle prototypes and production lines. Now, you'll create a digital portfolio to showcase your journey and synthesize what you learned about engineering design, production efficiency, and balancing real-world constraints.

Portfolio Requirements:

Your digital portfolio should include the following clearly labeled sections:

1. Introduction
   * Explain your team's initial goals for your vehicle and production system.
   * State the problem and how production constraints impacted your design.
2. Initial Design and Planning
   * Share initial sketches or digital diagrams of your first vehicles and production line design.
   * Include rationale for choices made.
3. Testing and Data Collection
   * Describe your testing process.
   * Include detailed data collected during testing (time, cost, quality).
4. Analysis and Reflection
   * Analyze your data, explaining successes and challenges encountered.
   * Identify areas of inefficiency and opportunities for improvement.
5. Revisions and Optimization
   * Clearly document the revised production line design, including labeled diagrams or photographs.
   * Explain improvements made based on data analysis and reflection.
6. Final Reflection
   * Reflect on the overall learning experience.
   * Did you develop any professional skills, such as collaboration, communication, and problem-solving skills?
   * Discuss what your team learned about balancing trade-offs among factors including cost, quality, and speed.
   * Reflect on the real-world implications of your production line choices.

Submission Format:

* Google Slides, PowerPoint, Google Sites, Canva, or other approved digital platforms.
* Include visuals such as photos, videos, graphs, and diagrams clearly labeled and explained.

|  |
| --- |
| **Rubric** |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Criteria** | **Excellent (4)** | **Proficient (3)** | **Developing (2)** | **Emerging (1)** | | Introduction & Problem Definition | Clearly defined goals and constraints; highly focused and detailed. | Clearly defined goals and constraints; adequately focused. | Partially defined goals and constraints; lacks clarity in focus. | Goals and constraints are unclear or missing. | | Initial Design & Planning | Thorough and clear rationale for design choices, with detailed visual aids. | Clear rationale for design choices; adequate visuals provided. | Limited rationale for choices; visuals provided but unclear or incomplete. | Minimal or no rationale; visuals missing or unclear. | | Testing & Data Collection | Comprehensive documentation of testing and accurate data collection, clearly organized. | Clear documentation of testing; data collected is accurate, but organization or clarity could improve. | Documentation incomplete; some minor inaccuracies or omissions in data collection. | Minimal testing documentation; significant inaccuracies or omissions in data. | | Analysis & Reflection | Deep and insightful analysis identifying clear areas for improvement, supported by data. | Adequate analysis with clear areas identified for improvement; data somewhat supports reflection. | Superficial analysis; few specific areas for improvement identified; limited data support. | Little to no analysis; areas for improvement vague or missing; no data support. | | Revisions & Optimization | Revisions clearly address identified problems with robust rationale and strong visual evidence. | Revisions address most identified problems with clear rationale and adequate visual evidence. | Revisions partially address problems; rationale somewhat unclear; visuals insufficient or unclear. | Minimal revision; unclear rationale; inadequate visual evidence. | | Final Reflection | Insightful, thoughtful reflection clearly articulating learning and real-world connections. | Adequate reflection articulating some learning and real-world connections. | Basic reflection; general statements about learning and limited real-world connections. | Reflection minimal or superficial; lacks learning or real-world connections. | | Professionalism & Organization | Report is highly organized, professional, and visually appealing, with no errors. | Report is organized and visually appealing, with minor errors. | Report is somewhat disorganized; basic visual appeal; several noticeable errors. | Report is disorganized; minimal effort; many errors, detracting from readability. | |