

Name:

Date:

Class:

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.

Name:

Date:

Class:

| 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. |