



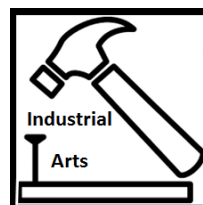
ASSESSMENT NOTIFICATION

Model Farms High School

"Achieving Personal Excellence Through Quality Teaching"

The rules of assessment tasks can be found in the assessment booklet

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Subject	STEM	Task Weighting	20%
Year	9	Date Task Set	28/2/2025
Task Number	1	Date Task Due	21/3/2025

TASK	Paper Bridge & Folio Submission
Description	Working in groups of 3 or 4 students, design and construct a Paper Bridge that will meet your criteria for success. You will be provided with an A4 size paper, books to support your bridge and 300mm masking tape. Then prepare and submit an individual portfolio addressing all assessment criteria, as evidence of your research, teamwork during production and testing of your practical component, and project evaluation.
Requirements	Submit completed Practical Task. Submit completed folio onto google classroom
Time allowed	3 weeks

OUTCOMES BEING ASSESSED

5.1.1 Develops ideas and explores solutions to STEM based problems

5.3.1 Applies a knowledge and understanding of STEM principles and processes

5.4.2 Develops skills in using mathematical, scientific and graphical methods

5.5.1 Applies a range of communication techniques in the presentation of research and design solutions

5.6.1 Selects and uses appropriate problem solving and decision making techniques in a range of STEM contexts

Criteria for assessing learning

You will be assessed on:

- Your ability to observe and follow safe and cooperative work practices.
- The quality of workmanship evident in the completed practical component
- Folio documentation consisting of:
 - Statement of Intent (format your response using the PEEL technique)
 - Criteria for Success
 - Research (Bridge designs, strength, materials, load Vs deflection)
 - Idea Generation and Development
 - Final Design
 - Production
 - Statistical Data (Graphing of your data obtained when testing)
 - Ongoing and Final Evaluation

Late Submission:

If a student hands in an assessment task late:

- 15% is deducted for each day the work is late (including weekends)
- After 7 days (including weekends), a zero will be recorded. The task will still be marked for student feedback.

Model Farms High School - Marking Criteria Boomerang Project

Name:						
Portfolio - Statement of Intent	5 Marks	5.1.1	5.3.1	5.4.2	5.5.1	5.6.1
Comprehensive Statement of Intent clearly describing what the project will be, and why this product was chosen using the PEEL format. Comprehensively provides a Criteria for Success and the Constraints of their chosen product.						5
Detailed Statement of Intent including a mostly clear description of what the project will be, and why this product was chosen using the PEEL format. Provides a detailed Criteria for Success and the Constraints of their chosen product.						4
Satisfactory Statement of Intent describing what the project will be, and why this product was chosen using the PEEL format. Provides a Criteria for Success and the Constraints of their chosen product.						3
Basic Statement of Intent describing in minimal detail what the project will be, and why this product was chosen. Provides some Criteria for Success and the Constraints of their chosen product.						2
Poor Statement of Intent describing in poor detail what the project will be, and why this product was chosen.						1

Portfolio - Research	15 Marks	5.1.1	5.3.1	5.4.2	5.5.1	5.6.1
Extensive research of three existing designs with a comprehensive and clear PMI for each. Excellent summary of Design Principles applied to a bridge. Extensive explanation of the selection of materials for a bridge.			5			
Thorough research of three existing designs with a detailed and clear PMI for each. Excellent summary of Design Principles applied to a bridge. Thorough explanation of the selection of materials for a bridge.			4			
Sound research of three existing designs with a satisfactory and clear PMI for each. Excellent summary of Design Principles applied to a bridge. Sound explanation of the selection of materials for a bridge			3			
Limited research of three existing designs with a basic PMI for each. Basic summary of Design Principles applied to a bridge. Limited explanation of the selection of materials for a bridge.			2			

Poor research of a design with an inadequate PMI of the design. Poor summary of Design Principles applied to a bridge.. Poor or no explanation of the cultural aspects, materials and Throwing Techniques of a boomerang.		1			
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Portfolio - Idea Development	15 Marks	5.1.1	5.3.1	5.4.2	5.5.1	5.6.1
Two creative and detailed hand drawn sketches that are supported by an extensive annotation of their designs. Extensive CAD presented.	5					
Two detailed hand drawn sketches that are supported by a detailed annotation of the designs. Thorough CAD presented.	4					
Two complete hand drawn sketches that are supported by a basic annotation of the designs. Sound CAD presented.	3					
Limited sketches that are supported by a minimal annotation. Elementary CAD presented.	2					
Poorly presented sketch with no explanation of the design. No CAD attempted	1					

Portfolio - Procedure	15 Marks	5.1.1	5.3.1	5.4.2	5.5.1	5.6.1
Extensive step by step procedure that is detailed, accurate and includes all the steps in the correct sequence . Independently selects and uses a range of media to illustrate the steps of construction of your Bridge.					5	
Thorough step by step procedure that is mostly detailed, accurate and includes most of the steps in the correct sequence. Selects and uses digital media to illustrate the steps of construction of your Bridge.					4	
Sound step by step procedure that is sometimes detailed, accurate and includes some of the steps in the correct sequence. Selects and uses a satisfactory media to illustrate the steps of construction of your Bridge..					3	
Limited step by step procedure that has limited detail, accuracy and includes limited steps in the correct sequence. Selects and uses a limited media to illustrate the steps of construction of your Bridge.					2	
Poorly written step by step procedure that includes hardly any detail and the steps are in the wrong sequence. Selects and uses a no media to illustrate the steps of construction of your Bridge.					1	

Portfolio - Statistical Data (Load Vs Deflection) Marks	10	5.1.1	5.3.1	5.4.2	5.5.1	5.6.1
Extensive use of data to determine mean and range from data collected.				5		
Thorough use of data to determine mean and range from data collected.				4		
Sound use of data to determine mean and range from data collected.				3		
Limited use of data to determine mean and range from data collected.				2		
Elementary use of data to determine mean and range from data collected.				1		

Portfolio Progress Mark - Evaluation / Ongoing Evaluation	10 Marks	5.1.1	5.3.1	5.4.2	5.5.1	5.6.1
Comprehensive evaluation analysing your final product compared with your Statement of Intent, success criteria, research and planning.						5
Thorough evaluation analysing your final product compared with your Statement of Intent, research and planning.						4
Sound evaluation analysing your final product compared with your Statement of Intent, research and planning.						3
Basic evaluation analysing your final product compared with your Statement of Intent, research and planning.						2
Limited evaluation analysing your final product compared with your Statement of Intent, research and planning.						1
Portfolio Total Marks 30		5	5	5	5	10

Practical Project - Functionality	10 Marks	5.1.1	5.3.1	5.4.2	5.5.1	5.6.1
Bridge has excellent strength and holds a very high load before failure.	9-10					
Bridge has high strength and holds a high load before failure.	7-8					
Bridge has satisfactory strength and holds a moderate load before failure.	5-6					
Bridge has poor strength and holds a little load before failure.	3-4					
Bridge will not hold any load..	0-2					

Practical Project - Quality of finished project	10 Marks	5.1.1	5.3.1	5.4.2	5.5.1	5.6.1
Excellent attention to detail with exceptional accuracy and high quality bridge construction .		9-10				
Good attention to detail with accurate and high quality bridge construction ..		7-8				
Satisfactory attention to detail with a quality bridge construction .		5-6				
Limited attention to detail with average quality bridge construction .		3-4				
Minimal attention to detail with a poor quality bridge construction .		0-2				
Practical Project Total Marks 20	10	10				