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# Foundations of Technology Technology Design Folio [TYPE TITLE HERE]

[TYPE NAME HERE]

# Definition of the Problem

What need or want must be met by the solution?

### **Criteria and Constraints**

#### **Materials List**

# **Ideas for Solution**

After investigating and researching the problem, the designer generates a number of ideas for a solution. List and briefly describe at least three ideas for possible solutions to the problem

# **Sketches of Solutions**

Create a simple sketch for each ides using simple electronic tools. Add additional slides as necessary

- $\Box$  Drawing tools
- Scanned image of a hand drawn sketches
- Labeled clip art

# **Test Results of Designs**

You will create models of your designs to test their functionality using the materials list. If necessary, you can drop one solution that you feel is not going to work and choose another for your final design. If no design proves to meet the criteria and constraints, you may need to repeat the first three steps of the process until you find a functional design. When you select a final design, you may still need to make addition changes when you construct the final prototype.

Use the space below to create a table to record the results of your tests or record the results in some written form that clearly shows how your designs performed during testing.

# **Selected Solution**

Considering the original criteria, constraints, and ideas one or more designs are chosen as the most promising. Draw and label a detailed sketch of your selected solution. Include a brief explanation of why you selected the design.

Use simple electronic tools to create your detailed sketch.

- Drawing tools
- Scanned image of a hand drawn sketches
- Labeled clip art

# **Completed Solution**

Put a digital picture of your constructed design here.

# **Evaluation of Solution**

There is no such thing as "the" correct answer. Evaluate the design you chose. Describe how well your constructed item met the criteria and constraints and how well it met the need or want defined in the problem. You should offer any further changes (if any) you might make to what you created.

#### Technology Design Folio Rubric

Scale	1	2	3	4	Self Score	Teacher Score
Criteria	Beginning to Attain Standard	Nearly Attained Standard	Achieved Standard	Exceeded Standard		
Defining the Problem	Sees the problem on the surface, but does not look for the real problem.	Examines the situation and sees the apparent problem.	Looks deeply into the situation, seeing beyond the obvious real problem.	Constantly looking for ways to improve the problem.		
Generating Ideas	Accepts the problem statement and has some difficulty looking into it.	Accepts the problem statement as it is and examines it for the obvious.	Critically examines the problem statement for correctness and looks creatively for possibilities.	Continues to brainstorms ideas and creative ways to accurately solve the problem.		
Testing the Solution(s)	Inadequately analyzes the pluses and minuses of a variety of possible solutions.	Satisfactorily analyzes the pluses and minuses of possible solutions.	Thoroughly analyzes the pluses and minuses of a variety of possible solutions.	Numerous solutions were provided that thoroughly analyzed the pluses and minuses.		
Selecting a Solution	Selection of solution is not based on criteria and constraints.	Selects a promising solution based on criteria and constraints.	Selects a promising solution based on thorough analysis of criteria and constraints.	It is clearly obvious the solution will work prior to testing.		
Making the Solution	Solution or (product) was not completed or fails to meet specifications	Finished solution (product) almost meets specification	Finished solution (product) meets specifications	Finished solution (product) exceeds specifications		
Evaluating the Solution	Finished solution (product) exceeds specifications	Refinements based on testing and evaluation results	Significant improvement in the design is made based upon modifying results	Models continuous improvement strategies in every part of the solution		
				Overall Score		