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| **NAME:** | **CLASS PERIOD:** | **DATE:** |

**Foundations of Technology**

**Unit 1. Technological Inventions and Innovations**

**Learning Cycle 4. Advertising and Marketing Effects on Technology**

**File 1.4.3 Product Advertisement Design Brief**

**Background**: Many factors—including advertising, the strength of the economy, goals of the company, and fads determined by society—have an impact on the demand and design of technology. Technological inventions and innovations are affected by advertising.

**Problem:** Based on the product you developed in Unit 1 Lesson 3, develop an advertisement. The advertisement should identify your target audience, be creative/capture your audience’s attention, and demonstrate the essential functions of your product.

**Procedure:**

* Complete the background questions for your advertisement
* Brainstorm ways to advertise your product
  + Develop a series of sketches to showcase your product
  + Develop a series of storyboards to showcase your product
* Evaluate your ideas and choose the best one
* Develop your advertisement using a technology that is available and meets your needs. Submit the link/video to your teacher electronically

**Background Questions for Developing an Advertisement:** In your engineering journal record your answers to the questions below. Use complete sentences.

1. What target audience does your product serve?
2. What need or service does your product provide?
3. What impacts will your product have on the environment, the economy, society, and politics?
4. Through what market do you plan to advertise your product (online, print, video, social network)?
5. Within that market, describe the characteristics of a successful advertisement.
6. How will your advertisement incorporate those characteristics?

**Brainstorming an Advertisement:** In the space provided or in your engineering journal, sketch two or more ideas for your advertisement. Include information about your product and the essential functions. The advertisement should be appealing and capture your audience’s attention. Remember to be creative!

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| **Idea 1:** | **Idea 2:** | **Idea 3:** |
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**Developing a Sequence:** In the space provided below or in your engineering journal develop two or more storyboards that reflect your advertisement ideas. A storyboard is used to graphically organize a sequence of events. Title each scene, sketch a representation of what will occur, describe the scene, and add notes as appropriate. Include information about your product and the essential functions. The advertisement should be appealing and capture your audience’s attention. Remember to be creative!

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| Scene Title:  Scene Description:  Notes: | Scene Title:  Scene Description:  Notes: | Scene Title:  Scene Description:  Notes: |
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**Evaluating Your Ideas:** Use the matrix below to evaluate the advertisements you brainstormed. Using a responsibility matrix is an easy way to demonstrate whether your idea has or has not met the requirements of the project. Once you have completed the responsibility matrix, answer the questions below in your engineering journal.

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| **Responsibility Matrix Criteria and**  **Evaluation Scale:** | **Poor** | **Meets Target** | **Exceeds Target** |
| To what degree is the advertisement designed for your target audience? |  |  |  |
| Is the advertisement visually appealing? |  |  |  |
| Rate the advertisement’s uniqueness. |  |  |  |
| Does it grab the audience’s attention? |  |  |  |

**Questions:** In your engineering journal, respond to the questions below. Use complete sentences.

1. Based on the responsibility matrix, which advertisement(s) meet(s) all criteria?
2. Did you encounter any trade-offs in finalizing your design? Cite examples.

**Developing Your Advertisement:** Using a technology of your choosing, develop an advertisement that showcases your product. The advertisement should be creative and capture your audience’s attention. Further, the advertisement will need to clearly convey meaning and inspire your audience to act upon your invention/innovation. Refer to the rubric below for all components of the advertisement.

| **Category** | **Below Target** | **At Target** | **Above Target** |
| --- | --- | --- | --- |
| **Define Problem** | Rephrases the problem with limited clarity. | Develops a problem statement that includes the who, what, when, and how the problem will be addressed. Recorded in the Engineering Folio or EDJ. | Develops a problem statement that is clearly and precisely stated. The problem statement includes the who, what, when, and how the problem will be addressed. Recorded in the Engineering Folio or EDJ. |
| **Brainstorm Possible Solutions** | Contributes few or implausible ideas. | Contributes a series of plausible ideas, which are recorded in the Engineering Folio or EDJ. | Contributes multiple plausible ideas, which are expanded upon to show understanding of the concept. All notes are recorded in the Engineering Folio or EDJ. |
| **Research Ideas/ Explore Possibilities** | Contributes ideas but without documented research. Produces incomplete sketches. | Contributes several additional plausible ideas and includes documented research. Produces accurate conceptual models to show the design concepts. All notes are recorded in the Engineering Folio or EDJ. | Contributes many additional plausible ideas and with clearly documented research. Produces accurate conceptual models to show the design concepts with annotated sketches. All notes are recorded in the Engineering Folio or EDJ. |
| **Specify Constraints and Identify Criteria** | Does not identify the criteria and/or fails to specify constraints. | Clearly identifies the criteria and specifies the constraints listed in the design specifications. All notes are recorded in the Engineering Folio or EDJ. | Clearly identifies the criteria and specifies the constraints that are listed in the design specifications and some that are not but pertain to their suggested design. All notes are recorded in the Engineering Folio or EDJ. |
| **Consider Alternative Solutions** | Inadequate analysis of a variety of possible solutions. | Satisfactorily analyzes a variety of possible solutions based on research and the relationship of those designs to the criteria and constraints. All notes are recorded in the Engineering Folio or EDJ. | Did not enter the research phase with a preconceived idea of the final design. Satisfactorily analyzes a variety of possible solutions based on research and the relationship of those designs to the criteria and constraints. All notes are recorded in the Engineering Folio or EDJ. |
| **Select an Approach** | Selection of solution is not justified based on consideration of criteria and constraints. | Selects and justifies a promising solution based on the problem statement as well as the criteria and constraints. Uses some type of evaluation method to determine the final design. All notes are recorded in the Engineering Folio or EDJ. | Selects and thoroughly justifies a promising solution based on the problem statement, criteria, and constraints as well as evidence collected through research. Uses some type of evaluation method to determine the final design. All notes are recorded in the Engineering Folio or EDJ. |
| **Develop a Written Design Proposal** | Design proposal is inadequate and lacking pertinent information. | Design proposal contains the who, what, when, where, and how the solution will be developed as well as how the solution will be evaluated and what tests will be conducted to determine success. Includes annotated sketches, notes, and technical drawings. Recorded in the Engineering Folio or EDJ. | Design proposal is written technically and precisely and contains the who, what, when, where, and how the solution will be developed as well as how the solution will be evaluated and what tests will be conducted to determine success. Includes annotated sketches, notes, and technical drawings. Recorded in the Engineering Folio or EDJ. |
| **Make a Model or Prototype** | The model or prototype meets the task criteria to a limited extent. | The model or prototype is neatly developed to meet the problem statement and the given criteria and constraints. A record of the construction process can be found in the Engineering Folio or EDJ. | The model or prototype is neatly and precisely developed to meet the problem statement and the given criteria and constraints. A record of the construction process can be found in the Engineering Folio or EDJ. |
| **Test and Evaluate** | Testing and evaluation processes are inadequate. | Testing and evaluation processes are defined in the Design Proposal and align to the problem statement. The data collected during evaluation can be used to improve the design. All notes are recorded in the Engineering Folio or EDJ. | Testing and evaluation processes are clearly defined in the Design Proposal and align to the problem statement. The data collected during evaluation is clearly documented and can be used to improve the design. All notes are recorded in the Engineering Folio or EDJ. |
| **Refine/ Improve** | Refinement based on testing and evaluation is not evident. | Refinements were made from data collected during testing and evaluation. Data-driven decision making is clearly evident, and the solution has improved based on testing. All notes are recorded in the Engineering Folio or EDJ. | Refinements were made from data collected during testing and evaluation. Data-driven decision making is clearly evident and documented. Refinements to the solution are clearly documented, and the solution has improved based on testing. All notes are recorded in the Engineering Folio or EDJ. |
| **Create/ Make Product** | Finished solution (product) fails to meet specifications. | Finished solution (product) aligns to the design proposal and reflects the Engineering Design Process and includes evidence of refinement based on testing and evaluation of the design. The process(es) used to create the product are recorded in the Engineering Folio or EDJ. | Finished solution (product) aligns to the design proposal and reflects the Engineering Design Process and includes evidence of refinement based on testing and evaluation of the design. The solution (product) is well constructed and easily meets the problem statement. The process(es) used to create the product are recorded in the Engineering Folio or EDJ. |
| **Communicate Results** | Solution presented with limited accuracy. Limited supporting evidence on how the solution meets the task criteria. | Solution is presented accurately and precisely using the Engineering Folio or the EDJ. The Engineering Design Process is well documented, with supporting evidence. All information aligns to how the solution meets the problem statement as well as the criteria and constraints. | Solution is presented accurately and precisely using the Engineering Folio or the EDJ. The Engineering Design Process is well documented, with supporting evidence. All information aligns to how the solution meets the problem statement as well as the criteria and constraints. A more formal presentation/showcase was developed to support the solution. |