



Northern York County School District

Curriculum Overview

Course: Packaging Engineering & Design	
Grade Level: 10-12	
Approval Date: March 2023	Length of Time: 180 Days/1 credit
Course Description: Prerequisite: Introduction to Graphic Design The Packaging Engineering & Design course introduces students to the ever-growing packaging design and printing field. Students will learn how to engineer and design various shaped packages. These processes develop the critical-thinking and problem-solving skills necessary for preparation to meet the always every changing industry needs. Students who are looking to investigate their creative skills and / or prepare for potential future employment in this field will benefit greatly from this course.	
Course Objectives: <ul style="list-style-type: none">• Students will incorporate the seven elements of the graphic design process.• Students will know and use non-fiction reading strategies to improve their technical reading ability.• Students will know color palettes.• Students will use tools within Adobe Illustrator.• Students will use tools within Adobe Photoshop.	
Related Standards: <u>Pennsylvania State Standards:</u> <ul style="list-style-type: none">• Explore the use of basic tools, simple materials, and techniques to safely solve problems.• Evaluate the effectiveness of computer software to solve specific problems. <u>Pennsylvania Technology & Engineering Standards</u> <i>Nature of Characteristics of Technology & Engineering</i> <ul style="list-style-type: none">• Relate how technological and engineering developments have been evolutionary, often the result of a series of refinements to basic inventions or technological knowledge.• Use project management tools, strategies, and processes in planning, organizing, and controlling work. <i>Integration of Knowledge, Technologies, and Practices</i> <ul style="list-style-type: none">• Analyze how technology transfer occurs when a user applies an existing innovation developed for one function for a different purpose. <i>Design & Technology</i> <ul style="list-style-type: none">• Apply a broad range of design skills to a design thinking process.• Implement and critique principles, elements, and factors of design.• Implement and critique principles, elements, and factors of design.• Optimize a design by addressing desired qualities within criteria and constraints while considering trade-offs. <u>Standards for Technological and Engineering Literacy:</u> <ul style="list-style-type: none">• Illustrate principles, elements, and factors of design.	

Units:

1. Graphic Design Principles
2. Color Theory
3. Package Design & Prototype Construction
4. Print for Packaging & Manufacturing

Concepts:

- Design principles
- Color theory
- Principles of packaging
- Material testing
- Prototype & package printing
- Adobe Photoshop
- Adobe Illustrator

Competencies:

- Students will learn about the 7 elements of design: Balance/Alignment, Contrast, Emphasis, Movement, Proportions, Repetition, White Space.
- Students will learn basic tools in Illustrator: Selection, Direct Selection, Pen, Type Tools (Type, Type on a path, Vertical Type, Area Type), Shape Tools (Rectangle, Ellipse, Polygon, Star, Line), Rotate, Scale, Reflect, Sheer Tools. Eraser, Gradient, Fill & Stroke.
- Students will learn basic panels in Illustrator: Properties, Layers, Colors, Colors Guide, & Swatches.
- Students will learn basic tools in Photoshop: Move, Marquee Tools (Rectangle & Ellipse), Lasso Tools (Lasso, Polygonal Lasso, Magnetic Lasso), Selection Tools (Object Selection, Quick Selection & Magic Wand,) Crop, Eyedropper, Healing Brush Tools (Spot Healing, Healing, Red Eye), Brush, Stamp Tools (Clone & Pattern) Eraser Tools (Eraser, Magic Eraser, Background Eraser), Paint Bucket, Gradient, Blur, Sharpen, Smudge, Type Tools (Horizontal & Vertical), Shape Tools (Rectangle, Ellipse, Triangle, Polygon, Triangle, Line & Custom Shape), Foreground Color, Background Color, Fill, Stroke & Zoom Tool.
- Students will learn basics panels in Photoshop: Layers, Swatches, Gradients, Properties, Adjustments, History & Layers.
- Students will employ non-fiction reading strategies including: using external text features, identifying key concepts, recognizing text organization, previewing, monitoring comprehension and summarizing.

Learning Activities:

- Individual classwork
- Peer teaching
- Teacher demonstration
- Instructional videos

Performance Tasks:

- Product/package research project
- Non-traditional shaped package design
- Design and create a cell phone box packaging or similar task based on student competency achievement

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| | <ul style="list-style-type: none">• Redesign and create an updated label of existing product |
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Other Assessment Measures:

- Student self-evaluation.
- Student peer evaluation.
- Teacher feedback.

Textbook/Primary Resource:

- Adobe Illustrator
- Adobe Photoshop

Supplemental Resource Materials:

- YouTube
- Adobe Help Website
- Teacher generated materials