

# Unit 2: Product Design

Content Area: **CTE**  
Course(s):  
Time Period: **September**  
Length: **1**  
Status: **Published**

## Unit Overview:

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The Product Design Unit is designed to introduce students to designing work that is intended to be mass produced. Students will learn about traditional and contemporary design techniques to further their understanding of how artists create designs intended to be produced. Students will gain an understanding of how Principles of Graphic Design like Harmony, Unity, Pattern, and Emphasis play a role in creating aesthetically pleasing work. Students will be able to create a series of designs intended for production. Students will create work that is aligned with production industry standards.

## Essential Questions:

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- How can reflecting upon your own designs help you improve as a designer?
- How do artists create Bedding Sets?
- How do artists create Holiday Cards?
- How do artists create Shoe Designs?
- How do artists use the Elements of Art and Principles of Design to create successful artwork?
- What constitutes a successful design?

## Enduring Understandings:

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- Analysis of the role and development of the visual arts in past and present cultures throughout the world is essential to appreciate human diversity as it relates to the visual arts and artists.
- Analysis, assessment, and derivation of meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities, is vital in the process of design.
- Artistic processes, skills, ideas, themes, and emotions can be creatively expressed through a variety of media including, but not limited to, web and print media through use of graphic design and editing tools.
- Critical thinking, problem solving, decision-making, and inquiry are all integral parts of the process of Design.
- Design is applied across a wide range of industries and other fields through complex strategies of marketing and brand development.
- Human diversity has been displayed throughout the ages through visual arts and artists.
- Pixel-based and vector-based graphics are the two primary formats used for desktop publishing, and use of programs including Adobe Photoshop (pixels) and Illustrator (vectors) is standard throughout the design industry
- Problem solving, creativity, communication, and management of time and resources are essential to become a lifelong learner and acquire necessary career skills.

- Self-directed learning enables users to empower themselves as lifelong students creating works of art and completing the design process with increasing complexity.
- Visual arts have played an important role in past and present cultures throughout the world.

## **Standards/Indicators/Student Learning Objectives (SLOs):**

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MA.9-12.1.2.12acc.Cr1	Generating and conceptualizing ideas.
MA.9-12.1.2.12acc.Cr1a	Strategically use generative methods to create multiple ideas and refine artistic goals that increase aesthetic depth.
MA.9-12.1.2.12acc.Cr1b	Organize and design artistic ideas for media arts productions.
MA.9-12.1.2.12acc.Cr2c	Apply aesthetic criteria in developing and refining media arts artwork.
MA.9-12.1.2.12acc.Cr3	Refining and completing products.
MA.9-12.1.2.12acc.Cr3a	Apply ideas with deliberate choices in organization, integrating content and stylistic conventions.
MA.9-12.1.2.12acc.Cr3b	Demonstrate an understanding of media art principles through a selection of tools and production processes.
MA.9-12.1.2.12acc.Cr3c	Refine and elaborate aesthetic elements and technical components. Intentionally form impactful expressions in media artworks for specific purposes, intentions, continuity, juxtaposition, audiences and contexts.
MA.9-12.1.2.12acc.Pr	Producing
MA.9-12.1.2.12acc.Pr4	Selecting, analyzing, and interpreting work.
	Practice
MA.9-12.1.2.12acc.Pr5	Developing and refining techniques and models or steps needed to create products.
MA.9-12.1.2.12acc.Pr6	Conveying meaning through art.
MA.9-12.1.2.12acc.Pr6a	Curate and design the presentation and distribution of media artworks through a variety of contexts, such as mass audiences and physical and virtual channels.
MA.9-12.1.2.12acc.Pr6b	Evaluate the benefits and impacts at the personal, local and social level from presenting media artworks, such as benefits to people or to a situation.
MA.9-12.1.2.12acc.Re7	Perceiving and analyzing products.
MA.9-12.1.2.12acc.Re7a	Analyze and synthesize the qualities and relationships of the components in a variety of media artworks and how they impact an audience.
MA.9-12.1.2.12acc.Re7b	Analyze how a broad range of media artworks affect audience experience, as well as create intention and persuasion through multimodal perception when addressing global issues including climate change.
MA.9-12.1.2.12acc.Re8a	Analyze the intent, meanings and influence of a variety of media artworks, based on personal, societal, historical, and cultural contexts.
MA.9-12.1.2.12acc.Re9	Applying criteria to evaluate products.

## **Lesson Titles:**

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- Bedding Set Design Project
- Holiday Card Project
- Shoe Design Project

## Career Readiness, Life Literacies, & Key Skills:

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WRK.9.2.12.CAP.5	Assess and modify a personal plan to support current interests and post-secondary plans.
WRK.9.2.12.CAP.6	Identify transferable skills in career choices and design alternative career plans based on those skills.
TECH.9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
TECH.9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
TECH.9.4.2.CT.1	Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem (e.g., K-2-ETS1-1, 6.3.2.GeoGI.2).
TECH.9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
TECH.9.4.2.DC.2	Explain the importance of respecting digital content of others.
TECH.9.4.2.DC.3	Explain how to be safe online and follow safe practices when using the internet (e.g., 8.1.2.NI.3, 8.1.2.NI.4).
TECH.9.4.2.IML.2	Represent data in a visual format to tell a story about the data (e.g., 2.MD.D.10). Digital tools have a purpose. Digital tools can be used to display data in various ways.

## Inter-Disciplinary Connections:

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SOC.6.1.12.HistoryCC.3.a	Evaluate the role of religion, music, literature, and media in shaping contemporary American culture over different time periods.
MA.G-MG.A.1	Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).
LA.SL.11-12.5	Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
SCI.K-2-ETS1-2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
SOC.6.1.12.D.8	History, Culture, and Perspectives
SOC.6.1.12.CS16	Contemporary United States: Interconnected Global Society: Scientific and technological changes have dramatically affected the economy, the nature of work, education, and social interactions.
TECH.8.1.12.B	Creativity and Innovation: Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.
TECH.8.1.12.B.CS2	Create original works as a means of personal or group expression.
TECH.8.1.12.C	Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

## Equity Considerations

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## **LGBTQ and Disabilities Mandate**

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**Topic:** Teaching LGBTQ+ History through Works of Art

**Materials Used:**

[Queer Lives and Art](#)

[Pride timeline: a history of contemporary queer culture and art](#)

[Queer Art History](#)

**Addresses the Following Component of the Mandate:**

The instruction shall enable pupils to identify and analyze applicable theories concerning human nature and behavior: to understand the consequences of prejudice and discrimination: and to understand that issues of moral dilemma and conscience have a profound impact on life.

**Topic:** Disability and Art

**Materials Used:**

[Disability and Art](#)

[National Disability Arts Collections and Archive](#)

**Addresses the Following Component of the Mandate:**

The instruction shall enable pupils to identify and analyze applicable theories concerning human nature and behavior: to understand the consequences of prejudice and discrimination: and to understand that issues of moral dilemma and conscience have a profound impact on life.

- Economic
- Political
- Social

## **Holocaust Mandate**

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**Topic:** Teaching the Holocaust through Works of Art

**Materials Used:** Artwork and artifacts that highlight unique objects from the Jewish Museum's extensive collection.

[Holocaust\\_CurriculumGuide.pdf](#)

[Teaching the Holocaust through Works of Art](#)

**Addresses the Following Component of the Mandate:**

The instruction shall enable pupils to identify and analyze applicable theories concerning human nature and behavior: to understand that genocide is a consequence of prejudice and discrimination: and to understand that issues of moral

dilemma and conscience have a profound impact on life. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

- Bias
- Bigotry
- Bullying
- Holocaust Studies
- Prejudice

## **Climate Change**

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**Topic:** Teaching Climate Change through Works of Art and Everyday Art Practices

Climate change affects humans and natural environments today and particularly in the future. Visual arts provide tools to spur social change and process and overcome emotions that come with climate change. Instead of a passive approach, arts encourage us to engage and take action. Therefore, visual arts play a key role in understanding climate change in-depth and creating a climate-friendly world. The following artifacts and activities promote students to learn about climate change through research and hands on exercises.

**Materials Used:**

[Art Works for Change](#)

[Climate Change and Visual Arts](#)

[Climate Change Exchange](#)

**Addresses the Following Component of the Mandate:** Analyze how a broad range of media artworks affect audience experience, as well as create intention and persuasion through multimodal perception when addressing global issues including climate change.

- Economic
- Political
- Social

## **Asian American Pacific Islander Mandate**

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**Topic:** Teaching Asian American Pacific Islander Appreciation through Historical and Contemporary Works of Art

**Materials Used:**

[Asian American and Pacific Islander Artists](#)

[Artists that Explore the Pride and Joys of Being Asian American and Pacific Islander](#)

[Asian Art Museum Resources](#)

**Addresses the Following Component of the Mandate:**

Artists have many layered identities and art educators need to present them as such.

- Economic
- Political
- Social

## **Summative Assessment:**

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- Alternate Assessment
- Benchmark
- Digital Arts Project
- Marking Period Assessment

## **Alternative Assessment**

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Performance tasks

Project-based assignments

Problem-based assignments

Presentations

Reflective pieces

Concept maps

Case-based scenarios

Portfolios

## **Benchmark Assessment**

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Skills-based assessment

Reading response

Writing prompt

Lab practical

## **Formative Assessment:**

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- Anticipatory Set
- Closure
- Warm-Up

## **Resources & Materials:**

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- Chromebooks
- Digital Art Online Archives
- EdPuzzle
- Google Classroom
- Lighting Equipment
- Project Specific Step by Step Instructions (Digital)
- Screencastify
- Youtube

## **Instructional Strategies, Learning Activities, and Levels of Blooms/DOK:**

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- Bedding Set Template Demonstration
- Creating a Bedding Set Presentation
- Creating a Holiday Card Presentation
- Creating a Shoe Design Presentation
- Group Critique
- Holiday Card Template Demonstration
- Holiday Photoshoot
- Individual Critique
- Shoe Design Template Demonstration

## **Modifications**

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### **ELL Modifications:**

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- Choice of test format (multiple-choice, essay, true-false)
- Continue practicing vocabulary

- Provide study guides prior to tests
- Read directions to the student
- Read test passages aloud (for comprehension assessment)
- Vary test formats

## **IEP & 504 Modifications:**

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\*All teachers of students with special needs must review each student's IEP. Teachers must then select the appropriate modifications and/or accommodations necessary to enable the student to appropriately progress in the general curriculum.

Possible Modifications/Accommodations: (See listed items below):

- Allow for redos/retakes
- Assign fewer problems at one time (e.g., assign only odds or evens)
- Differentiated center-based small group instruction
- Extra time on assessments
- Highlight key directions
- If a manipulative is used during instruction, allow its use on a test
- Opportunities for cooperative partner work
- Provide reteach pages if necessary
- Provide several ways to solve a problem if possible
- Provide visual aids and anchor charts
- Test in alternative site
- Tiered lessons and assignments
- Use of a graphic organizer
- Use of concrete materials and objects (manipulatives)
- Use of word processor

## **G&T Modifications:**

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- Alternate assignments/enrichment assignments
- Enrichment projects
- Extension activities
- Higher-level cooperative learning activities
- Pairing direct instruction with coaching to promote self-directed learning
- Provide higher-order questioning and discussion opportunities
- Provide texts at a higher reading level
- Tiered assignments
- Tiered centers



## **At Risk Modifications**

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The possible list of modifications/accommodations identified for Special Education students can be utilized for At-Risk students. Teachers should utilize ongoing methods to provide instruction, assess student needs, and utilize modifications specific to the needs of individual students. In addition, the following may be considered:

- Additional time for assignments
- Adjusted assignment timelines
- Agenda book and checklists
- Answers to be dictated
- Assistance in maintaining uncluttered space
- Books on tape
- Concrete examples
- Extra visual and verbal cues and prompts
- Follow a routine/schedule
- Graphic organizers
- Have students restate information
- No penalty for spelling errors or sloppy handwriting
- Peer or scribe note-taking
- Personalized examples
- Preferential seating
- Provision of notes or outlines
- Reduction of distractions
- Review of directions
- Review sessions
- Space for movement or breaks
- Support auditory presentations with visuals
- Teach time management skills
- Use of a study carrel
- Use of mnemonics
- Varied reinforcement procedures
- Work in progress check

## **Technology Materials and Standards**

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- Adobe Creative Suite
- Demonstration Came
- Digital Camera
- Drawing Tablet

- Lighting Equipment
- Promethean Board
- Scanner
- SD Card

TECH.8.1.12	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.12.B.CS1	Apply existing knowledge to generate new ideas, products, or processes.
TECH.8.1.12.C.CS2	Communicate information and ideas to multiple audiences using a variety of media and formats.
TECH.8.1.12.C.CS4	Contribute to project teams to produce original works or solve problems.
TECH.8.1.12.D.1	Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
TECH.8.1.12.D.CS3	Exhibit leadership for digital citizenship.
TECH.8.1.12.E.CS3	Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.
TECH.8.1.12.F	Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
TECH.8.1.12.F.CS2	Plan and manage activities to develop a solution or complete a project.
TECH.8.2.12.C.CS1	The attributes of design.
TECH.8.2.12.D.CS1	Apply the design process.

## Computer Science and Design Thinking Standards

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CS.9-12.8.2.12.NT.1	Explain how different groups can contribute to the overall design of a product.
CS.9-12.8.2.12.NT.2	Redesign an existing product to improve form or function.
CS.9-12.8.2.12.ETW.1	Evaluate ethical considerations regarding the sustainability of environmental resources that are used for the design, creation, and maintenance of a chosen product.