

Boonton School District

Course Title:	Web & Graphic Design	Grade Level(s):	9-12		
Curriculum Area / Level:	Technology	Credits:	5		
Course prerequisites and/or co-requisites:	None				
Course Description:	In this course, students will learn how to critically evaluate website quality, learn how to create and maintain quality web pages, and learn to create and manipulate images through the use of Photoshop. The course progresses from introductory work on web design and image engineering towards a culminating project in which students design and develop a functional website including student-designed images.				
Created by:	Daniel Matarazzo	Date:	8/2/16	BOE Approval:	9/26/16
District Equity Statement:	As required by state law, it is the policy of Boonton School District not to discriminate on the basis of race, color, creed, religion, sex, ancestry, national origin, social or economic status, pregnancy, or physical handicap in its educational programs or activities and to maintain a learning environment that is free from sexual harassment. Courses of study and instructional materials shall be designed and selected in order to eliminate discrimination and promote understanding, sex equity, and mutual respect among people. No course offering, including but not limited to physical education, health, technology education, vocational, home economics, music and adult education, shall be limited on the basis of race, color, creed, religion, sex, ancestry, national origin, social or economic status, pregnancy, or physical handicap. Furthermore, there shall be no discrimination against students as to any educational activity or program because of pregnancy, childbirth, pregnancy-related disabilities, actual or potential parenthood, or family or marital status. If a student requests to be excluded or a physician certifies that such is necessary for her physical, mental, or emotional well-being, she must be provided with adequate and timely opportunity for instruction to continue or make up her schoolwork without prejudice or penalty.				

Division of Umbrella & Mini Units

Umbrella Unit 1 Topic / Name: Fundamentals of Design	Mini Unit(s) <i>(Add to the list of mini units as necessary)</i> 1A. Fundamentals of Design Thinking 1B. Intro to Photoshop 1C. Intro to Illustrator
Umbrella Unit 2 Topic / Name: Brand Development and Design	Mini Unit(s) <i>(Add to the list of mini units as necessary)</i> 2A. Intro to Packaging and Dieline Design 2B. Targeted Web Design 2C. Social Media and Online Ads
Umbrella Unit 3 Topic / Name: Design for Production	Mini Unit(s) <i>(Add to the list of mini units as necessary)</i> 3A. Board Game Design 3B. Wearables and Clothing Design 3C. Basics of Digital Fabrication and Production
Umbrella Unit 4 Topic / Name: Converting 2D to 3D Design	Mini Unit(s) <i>(Add to the list of mini units as necessary)</i> 4A. Character Design and Development 4B. Basic Storyboarding and Animation 4C. Character 3D Modeling and Fabrication

UMBRELLA UNIT 1	
Title:	Fundamentals of Design Thinking
Duration:	1 Marking Period (9 Weeks)
Essential Questions:	<p>What is Design? How does Design affect us? How can we utilize Design to create an emotional connection? Why is Design Software both essential and non-essential to Design Thinking?</p>
Summative Assessments: (Assessment at the end the learning period)	Performance-Based Assessment after Each Mini-Unit. Students will perform various Design Thinking, Photoshop, and Illustrator tasks to demonstrate their understanding.
Formative Assessments: (Ongoing assessments during the learning period)	Weekly Portfolio Update & Review and Design Software Quizzes
Differentiation:	<p>All quizzes and coursework will be modified or adapted to fit individual student needs. Assignments will be modified to meet individual needs and expectations. Quizzes or tests will be modified in accordance with an IEP. This may include substituting questions or removing a choice from a multiple choice question. Students may choose to apply a project's method or steps to a different subject matter if they feel uncomfortable with the original subject matter.</p>
TECHNOLOGY STANDARD (STANDARD 8)	
CPI #	CUMULATIVE PROGRESS INDICATOR (CPI)

8.1.12.A.1	Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.
8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.
8.1.12.D.1	Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
21ST CENTURY LIFE AND CAREER (STANDARD 9)	
CPI #	CUMULATIVE PROGRESS INDICATOR (CPI)
9.3.ST-ET.4	Apply the elements of the design process.
9.3.12.AR.6	Evaluate technological advancements and tools that are essential to occupations within the Arts, A/V Technology & Communications Career Cluster.
9.3.12.AR-PRT. 2	Demonstrate the production of various print, multimedia or digital media products.
9.3.12.AR-VIS.2	Analyze how the application of visual arts elements and principles of design communicate and express ideas.
9.3.12.AR-VIS.3	Analyze and create two and three-dimensional visual art forms using various media.

MINI UNIT 1A	
Title:	Fundamentals of Design Thinking
Duration:	2 Weeks
Overview:	Students will gain an understanding of Design Thinking and the fundamentals of Visual Design. Students will learn how to utilize professional design software to create simple projects through hands on learning and interactive lectures. A strong focus will be placed on developing an individual style and building a digital portfolio.

Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How to create a portfolio.	8.1.12.A.1
How to maintain a portfolio document.	8.1.12.A.2
How to apply your creativity to a project.	9.3.ST-ET.4 9.3.12.AR.6
How to approach a project for critique.	9.3.12.AR-VIS.2
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Create a portfolio based on self-created work.	8.1.12.A.1
Add to, Edit, and Maintain a portfolio.	8.1.12.A.2
Create unique and meaningful artwork.	9.3.ST-ET.4 9.3.12.AR.6
Critique and offer constructive criticism.	9.3.12.AR-VIS.2
Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards
How to design a portfolio.	8.1.12.A.1
Why an updated portfolio is important.	8.1.12.A.2
How creativity is vital to design thinking.	9.3.ST-ET.4 9.3.12.AR.6
The value of constructive criticism.	9.3.12.AR-VIS.2
Resources Mini Unit 1A:	Adobe Creative Suite Software, Access to online art resources, and Design Samples / Demos

MINI UNIT 1B	
Title:	Intro to Photoshop
Duration:	4 Weeks
Overview:	Students will be formally introduced to Adobe CS4 via Photoshop. This professional level design software will be used to throughout the year and will become an invaluable tool. Students will learn how to utilize layers, masks, brushes, layer effects, and filters to create unique digital projects.
Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How to save and maintain digital artwork files.	8.1.12.A.1
How to utilize layers to create complex PSD files.	9.3.ST-ET.4 9.3.12.AR.6
How to use various PS effects to create unique works of art.	9.3.12.AR.6 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
How to print and present their work.	9.3.12.AR-PRT.2
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Save files and maintain a record or backup.	8.1.12.A.1
Use layers effectively.	9.3.ST-ET.4 9.3.12.AR.6
Utilize various PS effects properly.	9.3.12.AR.6 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
Print digital artwork for presentation purposes.	9.3.12.AR-PRT.2

Essential Outcomes - Upon completion of this course students will understand (conceptual):		Alignment to Standards
Why saving and file management is important.		8.1.12.A.1
Why layers are a vital PS component.		9.3.ST-ET.4 9.3.12.AR.6
The ethical impact that PS effects and editing can have.		9.3.12.AR.6 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3 8.1.12.E.2
How to present their printed work.		9.3.12.AR-PRT.2
Resources Mini Unit 1B:	Adobe Creative Suite 4- PhotoShop, Access to printing supplies, Presentation materials, file storage (flash drive or online storage), Real-World project samples and access to online Design Resources.	

MINI UNIT 1C		
Title:	Intro to Illustrator	
Duration:	3 Weeks	
Overview:	Students will learn the benefits of vector artwork via Adobe Illustrator. AI's vector artwork and digital publishing capabilities will be utilized to create professional design files and products. Students will create a suite of personal branding documents, compile their portfolio pieces, and publish their portfolio to a personal website.	
Essential Outcomes - Upon completion of this course students will know (declarative):		Alignment to Standards
How to create a portfolio.		8.1.12.A.1
How to maintain a portfolio document.		8.1.12.A.2

How to develop a personal brand.	9.3.ST-ET.4 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
How to publish content to a personal website.	8.1.12.A.2 8.1.12.D.1
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Create a portfolio based on self-created work.	8.1.12.A.1
Add to, Edit, and Maintain a portfolio.	8.1.12.A.2
Create a suite of documents that demonstrate their personal brand.	9.3.ST-ET.4 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
Create, Print, and Upload a portfolio to a website.	8.1.12.A.2 8.1.12.D.1
Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards
How to design a portfolio.	8.1.12.A.1
Why an updated portfolio is important.	8.1.12.A.2
The importance of developing a strong personal brand and design identity.	9.3.ST-ET.4 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
How to maintain a professional online presence.	8.1.12.A.2 8.1.12.D.1
Resources Mini Unit 1C:	Adobe Creative Suite 4- Illustrator, Access to printing supplies, Presentation materials, file storage (flash drive or online storage), Real-World project samples and access to online Design Resources.

UMBRELLA UNIT 2

Title:	Intro to Packaging and Dieline Design
Duration:	10 Weeks
Essential Questions:	Why is packaging important? How is a package a representation of the product or company? How does a package's shape relate to the product or brand? What is targeted web design? Why is social media important in online marketing? How can online marketing be used to promote a product?
Summative Assessments: (Assessment at the end the learning period)	Performance-Based Assessment after Each Mini-Unit. Students will perform specific tasks related to Website Design, Packaging Design, and Online Marketing to demonstrate their understanding.
Formative Assessments: (Ongoing assessments during the learning period)	Weekly Portfolio/ Website Update & Review and Project Milestone / Deliverable Due Dates.
Differentiation	All quizzes and coursework will be modified or adapted to fit individual student needs. Assignments will be modified to meet individual needs and expectations. Quizzes or tests will be modified in accordance with an IEP. This may include substituting questions or removing a choice from a multiple choice question. Students may choose to apply a project's method or steps to a different subject matter if they feel uncomfortable with the original subject matter.
TECHNOLOGY STANDARD (STANDARD 8)	
CPI #	CUMULATIVE PROGRESS INDICATOR (CPI)

8.1.12.A.1	Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.
8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.
8.1.12.D.1	Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
8.1.12.D.4	Research and understand the positive and negative impact of one's digital footprint.
8.2.12.C.5	Create scaled engineering drawings of products both manually and digitally with materials and measurements labeled.
21ST CENTURY LIFE AND CAREER (STANDARD 9)	
CPI #	CUMULATIVE PROGRESS INDICATOR (CPI)
9.3.ST-ET.4	Apply the elements of the design process.
9.3.12.AR-PRT .2	Demonstrate the production of various print, multimedia or digital media products.
9.3.12.AR-VIS. 2	Describe the history and evolution of the visual arts and its role in and impact on society.
9.3.IT-WD.1	Analyze customer requirements to design and develop a Web or digital communication product.
9.3.IT-WD.2	Apply the design and development process to produce user-focused Web and digital communications solutions.
9.3.MK-COM.1	Apply techniques and strategies to convey ideas and information through marketing communications.

MINI UNIT 2A	
Title:	Intro to Packaging and Dieline Design
Duration:	4 Weeks
Overview:	Students will be introduced to packaging and dieline design via real world samples and interactive lessons. Students will design their own product packaging through the concept phase, digital production flat file, all the way to a folded paper prototype.
Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How to create a portfolio.	8.1.12.A.1
How to maintain a portfolio document.	8.1.12.A.2
How to create artwork with ethical considerations.	8.1.12.D.1 8.1.12.D.4
How to design and develop a dieline file.	8.2.12.C.5 9.3.ST-ET.4 9.3.12.AR-PRT.2
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Create a portfolio based on self-created work.	8.1.12.A.1
Add to, Edit, and Maintain a portfolio.	8.1.12.A.2
Apply ethics and legal considerations when designing.	8.1.12.D.1 8.1.12.D.4
Design and develop a packaging dieline file.	8.2.12.C.5 9.3.ST-ET.4

	9.3.12.AR-PRT.2
Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards
How to design a portfolio.	8.1.12.A.1
Why an updated portfolio is important.	8.1.12.A.2
How ethics is connected to their design work.	8.1.12.D.1 8.1.12.D.4
How to create a 2D file based on a 3D form.	8.2.12.C.5 9.3.ST-ET.4 9.3.12.AR-PRT.2
Resources Mini Unit 2A:	Photoshop, Illustrator, Printing materials, and Presentation materials.

MINI UNIT 2B	
Title:	Target Web Design
Duration:	3 Weeks
Overview:	Students will build upon their previous packaging design work to create a website. This product and packaging design will be the center of a website designed by the students to promote the new packaging design and product. Students will utilize online website design software to create a custom and targeted web experience.
Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How web and advertising history affects their design.	9.3.12.AR-VIS.2

How to design a targeted website.	9.3.IT-WD.1 9.3.IT-WD.2
How to convey ideas through marketing communications.	9.3.MK-COM.1
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Create a website design with art history in mind.	9.3.12.AR-VIS.2
Design and develop a website.	9.3.IT-WD.1 9.3.IT-WD.2
Convey ideas through marketing communications.	9.3.MK-COM.1
Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards
How art history is connected to their design.	9.3.12.AR-VIS.2
How effective web design can improve	9.3.IT-WD.1 9.3.IT-WD.2
How their design can convey a message.	9.3.MK-COM.1
Resources Mini Unit 2B:	Real-World Examples, Online Web Design software (Wix.com), Photoshop, and Illustrator.

MINI UNIT 2C	
Title:	Social Media and Online Ads
Duration:	3 Weeks
Overview:	Students will build upon the last two mini units' work to create online ads that utilize social media tactics. Students will create online marketing materials to promote their product and packaging.

	These ads will direct users to their product's website. Students will engage in social media advertising tactics and methods to engage their audience.
Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How to create a successful ad campaign.	9.3.IT-WD.1
How to craft an ad based on demographics.	9.3.IT-WD.2
How web and advertising history affects their design.	9.3.12.AR-VIS.2
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Create and manage ads across multiple platforms.	9.3.IT-WD.1
Create a targeted ad.	9.3.IT-WD.2
Create a website design with art history in mind.	9.3.12.AR-VIS.2
Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards
Why a unified approach is crucial to advertising.	9.3.IT-WD.1
How targeted ads can impact product sales and popularity..	9.3.IT-WD.2
How art history is connected to their design.	9.3.12.AR-VIS.2
Resources Mini Unit 2C:	Real-World Examples, Online Web Design software (Wix.com), Photoshop, and Illustrator.

UMBRELLA UNIT 3	
Title:	Design for Production
Duration:	10 Weeks
Essential Questions:	<p>What makes a board game design successful?</p> <p>What is the goal of game design?</p> <p>Why are wearable designs important to our culture of art and design?</p> <p>How can clothing design express emotion or cutting edge technology?</p> <p>What is Digital Fabrication?</p> <p>How is Digital Fabrication changing the way we make things?</p> <p>When would you consider large scale production of a design?</p>
Summative Assessments: (Assessment at the end the learning period)	Performance-Based Assessment after Each Mini-Unit. Students will perform a specific design task related to Game Design and Theory, Fashion, and Digital Fabrication to demonstrate their understanding.
Formative Assessments: (Ongoing assessments during the learning period)	Weekly Portfolio/ Website Update & Review, Project Milestone / Deliverable Due Dates, and Project Presentations.
Differentiation	<p>All quizzes and coursework will be modified or adapted to fit individual student needs.</p> <p>Assignments will be modified to meet individual needs and expectations. Quizzes or tests will be modified in accordance with an IEP. This may include substituting questions or removing a choice from a multiple choice question. Students may choose to apply a project's method or steps to a different subject matter if they feel uncomfortable with the original subject matter.</p>
TECHNOLOGY STANDARD (STANDARD 8)	
CPI #	CUMULATIVE PROGRESS INDICATOR (CPI)

8.1.12.A.1	Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.
8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.
8.1.12.D.5	Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs.
8.2.12.D.3	Determine and use the appropriate resources (e.g., CNC (Computer Numerical Control) equipment, 3D printers, CAD software) in the design, development and creation of a technological product or system.
8.2.12.D.5	Explain how material processing impacts the quality of engineered and fabricated products.
21ST CENTURY LIFE AND CAREER (STANDARD 9)	
CPI #	CUMULATIVE PROGRESS INDICATOR (CPI)
9.3.ST-ET.4	Apply the elements of the design process.
9.3.12.AR.6	Evaluate technological advancements and tools that are essential to occupations within the Arts, A/V Technology & Communications Career Cluster.
9.3.12.AR-PRT .2	Demonstrate the production of various print, multimedia or digital media products.
9.3.12.AR-VIS. 3	Analyze and create two and three-dimensional visual art forms using various media.

MINI UNIT 3A	
Title:	Board Game Design
Duration:	4 Weeks
Overview:	Students will explore the world of game design by creating their own interactive board game. This game could be connected to a self-created app, program, or website and will include many game design elements such as world and character building. Students will create marketing materials to promote their games.
Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How to create a portfolio.	8.1.12.A.1
How to maintain a portfolio document.	8.1.12.A.2
How to create an interactive board game.	9.3.ST-ET.4 9.3.12.AR.6 9.3.12.AR-PRT.2
How to design and build board game components.	8.1.12.D.5 9.3.12.AR-VIS.3
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Create a portfolio based on self-created work.	8.1.12.A.1
Add to, Edit, and Maintain a portfolio.	8.1.12.A.2
Create an interactive board game experience.	9.3.ST-ET.4 9.3.12.AR.6 9.3.12.AR-PRT.2
Design, develop, and build board game components and materials.	8.1.12.D.5 9.3.12.AR-VIS.3

Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards
How to design a portfolio.	8.1.12.A.1
Why an updated portfolio is important.	8.1.12.A.2
Why a unique game experience is important.	9.3.ST-ET.4 9.3.12.AR.6 9.3.12.AR-PRT.2
How to craft a board game's components.	8.1.12.D.5 9.3.12.AR-VIS.3
Resources Mini Unit 3A:	Photoshop, Illustrator, Printing materials, Paper-craft supplies, and real-world examples.

MINI UNIT 3B	
Title:	Wearables and Clothing Design
Duration:	2 Weeks
Overview:	Students will explore the world of wearable design. This field of design focuses on creating unique works of art that can be worn. Projects may include clothing design, fashion trends, screen printing, and promotion/ marketing.
Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How to utilize professional design tools effectively.	8.1.12.D.5
How to select the materials that best fit the project.	8.2.12.D.3 8.2.12.D.5 9.3.ST-ET.4

How to design, develop, and create a wearable design.	8.1.12.A.2 8.2.12.D.5 9.3.ST-ET.4 9.3.12.AR-PRT.2
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Use professional design tools to create unique designs.	8.1.12.D.5
Identify and select appropriate materials and tools.	8.2.12.D.3 8.2.12.D.5 9.3.ST-ET.4
Design, develop, and create a wearable design.	8.1.12.A.2 8.2.12.D.5 9.3.ST-ET.4 9.3.12.AR-PRT.2
Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards
The role of design tools in the real-world.	8.1.12.D.5
How important the right tools are.	8.2.12.D.3 8.2.12.D.5 9.3.ST-ET.4
The fundamentals of wearable design.	8.1.12.A.2 8.2.12.D.5 9.3.ST-ET.4 9.3.12.AR-PRT.2
Resources Mini Unit 3B:	Photoshop, Illustrator, Printing materials, Fabric supplies, and real-world examples.

MINI UNIT 3C	
Title:	Basics of Digital Fabrications and Production
Duration:	4 Weeks
Overview:	Students will utilize digital fabrication to bring their work from this unit to reality. Digital fabrication covers many fields including 3D printing, CNC machining, and Digital printing. A strong focus will be placed on determining the appropriate fabrication method and materials for their specific project.
Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How to apply ethics to their design work.	8.1.12.D.1 8.1.12.D.4
How to create dimensioned drawings.	8.2.12.C.5 9.3.ST-ET.4
How to apply the right digital fabrication methods.	8.2.12.D.3 8.2.12.D.5 9.3.12.AR-VIS.3
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Use ethical standards to create unique digital creations.	8.1.12.D.1 8.1.12.D.4
Create dimensioned drawings for fabrication.	8.2.12.C.5 9.3.ST-ET.4
Identify and apply the right digital fabrication method for the job at hand.	8.2.12.D.3 8.2.12.D.5 9.3.12.AR-VIS.3
Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards

The ethical issues surrounding digital fabrication.	8.1.12.D.1 8.1.12.D.4
The importance of dimensioned drawings in the fabrication process.	8.2.12.C.5 9.3.ST-ET.4
Why choosing the right tool for the job is vital.	8.2.12.D.3 8.2.12.D.5 9.3.12.AR-VIS.3
Resources Mini Unit 3C:	3D modeling software (SketchUp, TinkerCad, and other online modeling software), Illustrator, Fabrication supplies, and real-world examples.

UMBRELLA UNIT 4	
Title:	Converting 2D to 3D Design
Duration:	7 Weeks
Essential Questions:	<p>How does 3D Printing influence 3D Modeling? What determines the tools and materials you should use for 3D Printing or 3D Modeling? How can your character bring life to a story? How does your design and story express an idea? Why is a storyboard useful in animation?</p>
Summative Assessments: (Assessment at the end the learning period)	Performance-Based Assessment after Each Mini-Unit. Students will perform a specific design task related to Character Design, Storyboarding, Animation, and 3D Modeling to demonstrate their understanding.
Formative Assessments: (Ongoing assessments during the learning period)	Weekly Portfolio/ Website Update & Review and Character Design, Storyboard, and 3D Modeling Milestone / Deliverable Due Dates.
Differentiation :	All quizzes and coursework will be modified or adapted to fit individual student needs. Assignments will be modified to meet individual needs and expectations. Quizzes or tests will be modified in accordance with an IEP. This may include substituting questions or removing a choice from a multiple choice question. Students may choose to apply a project's method or steps to a different subject matter if they feel uncomfortable with the original subject matter.
TECHNOLOGY STANDARD (STANDARD 8)	
CPI #	CUMULATIVE PROGRESS INDICATOR (CPI)
8.1.12.A.1	Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.

8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.
8.1.12.D.1	Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
8.2.12.D.3	Determine and use the appropriate resources (e.g., CNC (Computer Numerical Control) equipment, 3D printers, CAD software) in the design, development and creation of a technological product or system.
8.2.12.D.5	Explain how material processing impacts the quality of engineered and fabricated products.
21ST CENTURY LIFE AND CAREER (STANDARD 9)	
CPI #	CUMULATIVE PROGRESS INDICATOR (CPI)
9.3.12.AR-PRT .2	Demonstrate the production of various print, multimedia or digital media products.
9.3.12.AR-VIS. 1	Describe the history and evolution of the visual arts and its role in and impact on society.
9.3.12.AR-VIS. 2	Analyze how the application of visual arts elements and principles of design communicate and express ideas.
9.3.12.AR-VIS. 3	Analyze and create two and three-dimensional visual art forms using various media.

MINI UNIT 4A	
Title:	Character Design and Development
Duration:	3 Weeks
Overview:	Students will use their graphic design skills to create a new and unique animated character. They will spend time analyzing the character's features, animation style, and ideological voice. Students will use a mix of traditional hand skills, digital painting, and photo editing to bring their character from concept

	to reality.
Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How to create and maintain a digital portfolio.	8.1.12.A.1 8.1.12.A.2
How to apply ethics when creating a new design.	8.1.12.D.1
How to give a character life and a voice.	9.3.12.AR-VIS.1 9.3.12.AR-VIS.2
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Properly save, backup, and assemble a digital portfolio.	8.1.12.A.1 8.1.12.A.2
Use ethical reasoning when creating a new design.	8.1.12.D.1
Design and develop a character that can express ideas.	9.3.12.AR-VIS.1 9.3.12.AR-VIS.2
Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards
The importance of maintaining accurate digital records.	8.1.12.A.1 8.1.12.A.2
The value and impact ethics play in character and brand development.	8.1.12.D.1
The meaningful way a character can influence the audience.	9.3.12.AR-VIS.1 9.3.12.AR-VIS.2
Resources Mini Unit 4A:	Real-world examples, Digital and Online resources on Animation and character development, Hand drawing tools, Photoshop, and Illustrator.

MINI UNIT 4B	
Title:	Basic Storyboarding and Animation
Duration:	3 Weeks
Overview:	Students will advance their character design into the next level by creating a short animation or interactive comic. Storyboards will be created in order to show how the story unfolds before actual animation begins. Students will use their storyboards to direct their own animated movie or interactive comic.
Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How to assemble a storyboard.	8.1.12.A.2 9.3.12.AR-PRT.2
How to create an immersive world.	9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
How to create an animated story.	9.3.12.AR-VIS.1 9.3.12.AR-VIS.3
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Break down a story into components.	8.1.12.A.2 9.3.12.AR-PRT.2
Design and develop a fully realized world.	9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
Utilize digital tools to create an animation.	9.3.12.AR-VIS.1 9.3.12.AR-VIS.3

Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards
How a storyboard lays out a story effectively.	8.1.12.A.2 9.3.12.AR-PRT.2
The importance of world building in animation.	9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
How to plan and create an animated story.	9.3.12.AR-VIS.1 9.3.12.AR-VIS.3
Resources Mini Unit 4B:	Real-world examples, Digital and Online resources on Animation and World Building, Digital drawing tools, Digital Animation Tools (Scratch, Powtoon, Moovly, etc...), Photoshop, and Illustrator.

MINI UNIT 4C	
Title:	Character 3D Modeling and Fabrication
Duration:	2 Weeks
Overview:	Students will use their character design and animated world to translate their 2D character into a 3D Model. Students will use online digital sculpting tools to create, mold, and transform their character. The modeling process will be heavily influenced by the types of digital fabrication available to them. Each model must be built in accordance with the chosen fabrication method. Students will then learn how to translate their 3D model to the digital fabrication device.
Essential Outcomes - Upon completion of this course students will know (declarative):	Alignment to Standards
How to translate their 2D design to 3D.	8.1.12.D.1 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
How to choose the appropriate tools or materials for the job.	8.2.12.D.3 8.2.12.D.5

How to create an all-encompassing portfolio.	9.3.12.AR-PRT.2 9.3.12.AR-VIS.1 9.3.12.AR-VIS.2
Essential Outcomes - Upon completion of this course students will be able to (procedural):	Alignment to Standards
Translate 2D designs into 3D models.	8.1.12.D.1 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
Choose the right tool or material depending on the desired outcome.	8.2.12.D.3 8.2.12.D.5
Summarize their work and express their growth as an artist.	9.3.12.AR-PRT.2 9.3.12.AR-VIS.1 9.3.12.AR-VIS.2
Essential Outcomes - Upon completion of this course students will understand (conceptual):	Alignment to Standards
How to interpret 2D designs into a fully realized 3D model.	8.1.12.D.1 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
The importance of materials and tool selection.	8.2.12.D.3 8.2.12.D.5
How to present their work in a professional manner.	9.3.12.AR-PRT.2 9.3.12.AR-VIS.1 9.3.12.AR-VIS.2
Resources Mini Unit 4C:	3D Printer, 3D Modeling software (TinkerCAD, SketchUp, Autodesk Suite), Real-world examples, Digital Resources, Printing supplies, Photoshop, and Illustrator.

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