



Township Public Schools

**Technology Education
Grades 11 - 12
Photography III**

Dr. Mark Toback, Superintendent

*This curriculum may be modified through varying techniques,
strategies, and materials as per an individual student's
Individualized Educational Plan (IEP)*

**Wayne School District
Curriculum Format**

Content Area/ Grade Level/ Course:	Technology Education 11-12/Photography III
Unit Plan Title:	Unit I: Overview of Photography II
Time Frame	4 Weeks
Anchor Standards/Domain* *i.e: ELA: reading, writing i.e.: Math: Number and Operations in Base 10	
<ul style="list-style-type: none"> • The 12 Career Ready Practices • These practices outline the skills that all individuals need to have to truly be adaptable, reflective, and proactive in life and careers. These are researched practices that are essential to career readiness. • 8.1 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. • 8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. • 9.2 Career Awareness, Exploration, and Preparation: This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements. • 9.3 Career & Technical Education (CTE) Content Area: 21st Century Life and Careers: ARTS, AV TECHNOLOGY & COMMUNICATIONS CAREER CLUSTER 	
Unit Summary	
<ol style="list-style-type: none"> 1. Review of Pre- Processing, Processing, Post Processing <ol style="list-style-type: none"> a. Pre Processing (Ideation: Designing the shoot) <ol style="list-style-type: none"> i. Identifying good photographs ii. Photo shoot development iii. The Design Process <ol style="list-style-type: none"> 1. Identify the problem (What are the requirements of the shoot? Content topic?) 2. Research the problem (What has been done in the past?) 3. Define limitations and set goals (What do you want to accomplish? What is your end result?) 4. Generate alternative solutions (Come up with ideas for the shoot using Past Experience, Insight, Trial and Error, and Brainstorming) 5. Determine the best solution for the shoot and why? <ol style="list-style-type: none"> a. List Procedures/Processes necessary to achieve the goal (Make a list or create a storyboard) b. Design specifications (Determine what tools and equipment are necessary?) 6. Implement the solution by completing the shoot 7. Analysis and Critique (Did the end result in the form of the final photos match the desired result?) b. Processing (Photographing) <ol style="list-style-type: none"> i. The camera systems <ol style="list-style-type: none"> 1. Aperture 2. Shutter speed 3. Iso 4. Lenses 5. Filters 6. Flash 7. Film vs digital ii. Situational Awareness and semiotics 	

- iii. Composition
 - 1. Rule of thirds
 - 2. Leading lines
 - 3. Framing
 - 4. Perspective angles
 - 5. Foreground/midground/ background
- iv. Safety
- c. Post Processing (Photo Manipulation)
 - i. Contact printing with Bridge
 - ii. Photoshop
 - 1. Tools
 - 2. Filters
 - 3. Windows
 - iii. File Management

Standard Number(s)

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.
- 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.D.1 Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
- 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.A.2 Analyze a current technology and the resources used, to identify the trade-offs in terms of availability, cost, desirability and waste
- 8.2.12.E.2 Analyze the relationships between internal and external computer components.
- 9.2.12.C.1 Review career goals and determine steps necessary for attainment.
- 9.2.12.C.2 Modify Personalized Student Learning Plans to support declared career goals.
- 9.2.12.C.3 Identify transferable career skills and design alternate career plans.
- 9.2.12.C.6 Investigate entrepreneurship opportunities as options for career planning and identify the knowledge, skills, abilities, and resources required for owning and managing a business.
- 9.3.12.AR.1 Analyze the interdependence of the technical and artistic elements of various careers within the Arts, A/V Technology & Communications Career Cluster.
- 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.1 Manage the printing process, including customer service and sales, scheduling, production and quality control.
- 9.3.12.AR-PRT.2 Demonstrate the production of various print, multimedia or digital media products.
- 9.3.12.AR-PRT.3 Perform finishing and distribution operations related to the printing process.
- 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.
- 9.3.MK.9 Communicate information about products, services, images and/or ideas to achieve a desired outcome.

- 9.3.ST.1 Apply engineering skills in a project that requires project management, process control and quality assurance.
- 9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.
- 9.3.ST-ET.4 Apply the elements of the design process.

[RST and WHST: New Jersey Student Learning Standards for English Language Arts Companion Standard: Science and Technology](#)

Essential Question(s)

- How does pre-processing differ across the various categories of Photography?
- How does the use of efficient processing affect the outcome of images?
- How does post processing affect the outcome of images? What can, and cannot be accomplished via post production?

Enduring Understandings

- Students need to understand that there are many classifications of photography and each requires a unique perspective and creative development process to ensure successful images.
- A photographer’s precise use of their equipment ensures images that are accurate to their vision and are produced with their goals achieved.
- Post production, photo manipulation allows for creative control beyond the camera’s eye. There are limits to what can be digitally altered and what images will need to return to the processing stage for a re-shoot.

In this unit plan, the following 21st Century themes and skills are addressed.

<i>Check all that apply.</i> 21st Century Themes		<i>Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.</i> 21st Century Skills	
<input type="checkbox"/>	Global Awareness	<input checked="" type="checkbox"/>	Creativity and Innovation
<input type="checkbox"/>	Environmental Literacy	<input checked="" type="checkbox"/>	Critical Thinking and Problem Solving
<input type="checkbox"/>	Health Literacy	<input checked="" type="checkbox"/>	Communication
<input type="checkbox"/>	Civic Literacy	<input checked="" type="checkbox"/>	Collaboration
<input checked="" type="checkbox"/>	Financial, Economic, Business, and Entrepreneurial Literacy		

Student Learning Targets/Objectives (Students will know/Students will understand)

- Understand the design and ideation process from pre-processing through post- processing.
- Explain and identify good photographs
- Recognize the requirements of the photo shoot, with emphasis on the topic.
- Research successful outcomes of professional photographers.
- Define limitations and set goals for each shoot.
- Generate ideas for the shoot using Past Experience, Insight, Trial and Error, and Brainstorming.
- List Procedures/Processes necessary to achieve the goal using written and visual communication (list and storyboard).
- Determine the tools and equipment necessary for each shoot.
- Implement the solution by the specified deadline.
- Analysis and Critique the resulting photos.
- Label and define the camera systems of both digital and film cameras.
- Be actively aware of the surroundings in a photo, whether staged or candid.
- Explain and execute the principles of Composition
- Create a procedure for safety when on assignment outside the studio.
- Prepare a contact print utilizing Adobe Bridge.
- Show proficiency in the use of Adobe Photoshop, including Tools, Filters, and Windows.
- Effectively manage files stored digitally on both internal, external and portable devices, as well as the Cloud.

Assessments (Pre, Formative, Summative, Other)

*Denote required common assessments with an **

Learning experiences will be design and inquiry based. Both extended task activities, as well as shorter, more focused resource tasks/practical tasks will be utilized to maximize learning. Each learning experience will reinforce the following elements for students:
A. The Ideation Design Process (real-world design & problem solving)

- open-ended problems with constraints & specifications
 - visualize, design, and implement their creative vision
- B. Team Building Skills (working on a design team)
- group dynamics
 - social and leadership skills
 - delegating and accepting responsibility
 - 3 R's (respect, responsibility and results)
- C. Technical Writing
- providing a context for written communication
 - producing shoot lists, proposals, critiques, etc.
 - documenting learning in a design portfolio
- D. Public Speaking
- preparing an oral presentation
 - developing poise and self confidence
 - improving oral communications skills
- E. Design Brief
- A real life situation forms the context of the activity
 - Define the problem to be solved
 - Determine design criteria: specifications and constraints
- F. Develop Solutions
- Form design teams/cooperative learning groups
 - Investigate possible solutions
 - Generate alternative solutions
 - Test solutions
 - Optimize solutions
 - Test and evaluate final design solution
- G. Assessment
- Performance of final design solution relative to constraints and specifications
 - Student design portfolios
 - Multimedia and oral presentation of design solution
 - Standardized authentic assessment instrument

Teaching and Learning Activities

<i>Activities</i>	<p>Define and explain technical terminology.</p> <p>Begin researching professional photographers. Prepare a visual analysis of their work, the design process used to produce them, and their effect on the photographic industry and global society. Begin preparing a portfolio of work which may be used in the future for academic or career interviews.</p> <p>Begin reviewing advanced techniques and tools in Adobe Photoshop, including terminology, industry standard execution of processes and procedures.</p>
<i>Differentiation Strategies</i>	<ul style="list-style-type: none"> • Individual and collaborative research, design and problem solving • Student interest and skill level assessment • Individual, small group, and large group instruction • Differentiated checklists and rubrics • Level of independence • Differentiation Strategies for Special Education Students • Differentiation Strategies for Gifted and Talented Students • Differentiation Strategies for ELL Students • Differentiation Strategies for At Risk Students

Resources

- <http://www.state.nj.us/education/cccs/>
- <http://www.corestandards.org/ELA-Literacy>
- <http://www.nextgenscience.org/hsets-ed-engineering-design>
- <http://phlearn.com/>
- <http://www.adobe.com>

**Wayne School District
Curriculum Format**

Content Area/ Grade Level/ Course:	Technology Education 11-12/Photography III
Unit Plan Title	Unit II: Processing
Time Frame	8 Weeks
Anchor Standards/Domain* *i.e: ELA: reading, writing i.e.: Math: Number and Operations in Base 10	
<ul style="list-style-type: none"> ● The 12 Career Ready Practices ● These practices outline the skills that all individuals need to have to truly be adaptable, reflective, and proactive in life and careers. These are researched practices that are essential to career readiness. ● 8.1 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. ● 8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. ● 9.2 Career Awareness, Exploration, and Preparation: This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements. ● 9.3 Career & Technical Education (CTE) Content Area: 21st Century Life and Careers: ARTS, AV TECHNOLOGY & COMMUNICATIONS CAREER CLUSTER 	
Unit Summary	
<ol style="list-style-type: none"> 1. Processing <ol style="list-style-type: none"> a. Camera Functions <ol style="list-style-type: none"> i. How Aperture, Shutter speed and ISO are used for creative purpose ii. White Balance iii. Auto Exposure Lock iv. Auto Focus Lock v. How creative filters are used for artistic emphasis vi. On Camera Flash vii. Sensor size and processing b. Studio Lighting <ol style="list-style-type: none"> i. Shoot through umbrellas ii. Bounce Lighting iii. Sharpening Light iv. Diffusing Light v. Choosing the correct type of lighting for the situation (portraits and still Life) c. Commercial Applications: <ol style="list-style-type: none"> i. Advertising ii. Fashion iii. Corporate iv. Architectural v. Event vi. Journalism vii. Food viii. Science 	
Standard Number(s)	
<ul style="list-style-type: none"> ● CRP1. Act as a responsible and contributing citizen and employee. ● CRP2. Apply appropriate academic and technical skills. 	

- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.
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- 9.3.MK.9 Communicate information about products, services, images and/or ideas to achieve a desired outcome.
- 9.3.ST.1 Apply engineering skills in a project that requires project management, process control and quality assurance.
- 9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.
- 9.3.ST-ET.4 Apply the elements of the design process.

Essential Question(s)

- How does controlling your tools affect the outcome of your images?
- How does lighting affect your photographs?
- How do you create artificial light?
- How does controlling your tools affect the outcome of your images?
- How does lighting affect your photographs?
- How do you create artificial light?
- What are the commercial applications for photography?
- What are the qualities of each niche of commercial photography?
- How do photographers in their specific niche work with others to accomplish specific images?

Enduring Understandings

- Student will hone their ability to work with their photographic tools to create well produced images that are technically sound.
- Light, natural and artificial affect the outcome of your images to modify the focal point, mood, and significance within.

- Studio lighting, on camera flash, off camera flash, studio strobes, and hot lights are used to create artificial light. Student will hone their ability to work with their photographic tools to create well produced images that are technically sound.
- Light, natural and artificial affect the outcome of your images to modify the focal point, mood, and significance within.
- Studio lighting, on camera flash, off camera flash, studio strobes, and hot lights are used to create artificial light.
- There are many different commercial applications for photography.
- Each section of the photographic industry comes with its own jargon, and nuances. Students will learn the details of many commercial applications for photography.
- Photographers work at teams in conjunction with others in industry. Students will learn how the industry works together in advertising.

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Student Learning Targets/Objectives (Students will know/Students will understand)

- Explain the relationship between aperture shutter speed and ISO.
- Utilize aperture, shutter speed and ISO to make creative decisions for their photographs.
- Explain how different lighting situations affect your photographs.
- Change the white balance to ensure proper color accuracy in camera.
- Utilize creative on-lens filters for artistic outcomes.
- Define the different types of camera sensors and explain the differences.
- Explain how light can be manipulated: diffused, bent, bounced, sharpened, etc.
- Define the different types of lighting manipulators (combs, diffusers, bouncers)
- Understand how light is affected through a shoot-through umbrella.
- Implement different lighting angles for creative control and visual interest.
- Explain how different lighting situations affect your photographs.
- Know how to actively change lighting sources to control creative outcome
- Explain how different industries use photography.
- Define the different imaging requirements needed for each market sector.
- Execute appropriate images per each commercial application.

Assessments (Pre, Formative, Summative, Other)

*Denote required common assessments with an **

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- social and leadership skills
- delegating and accepting responsibility
- 3 R's (respect, responsibility and results)

C. Technical Writing

- providing a context for written communication
- producing shoot lists, proposals, critiques, etc.
- documenting learning in a design portfolio

D. Public Speaking

- preparing an oral presentation

- developing poise and self confidence
- improving oral communications skills

E. Design Brief

- A real life situation forms the context of the activity
- Define the problem to be solved
- Determine design criteria: specifications and constraints

F. Develop Solutions

- Form design teams/cooperative learning groups
- Investigate possible solutions
- Generate alternative solutions
- Test solutions
- Optimize solutions
- Test and evaluate final design solution

G. Assessment

- Performance of final design solution relative to constraints and specifications
- Student design portfolios
- Multimedia and oral presentation of design solution
- Standardized authentic assessment instrument

Teaching and Learning Activities

<i>Activities</i>	<p>Define and explain technical terminology. Continue researching professional photographers with an emphasis on commercial photography. Prepare a visual analysis of their work, the design process used to produce them, and their effect on the photographic industry and global society. Continue preparing a portfolio of work. Continue reviewing advanced techniques and tools in Adobe Photoshop, utilizing Adobe and Phlearn tutorials.</p>
<i>Differentiation Strategies</i>	<ul style="list-style-type: none"> • Individual and collaborative research, design and problem solving • Student interest and skill level assessment • Individual, small group, and large group instruction • Differentiated checklists and rubrics • Level of independence • Differentiation Strategies for Special Education Students • Differentiation Strategies for Gifted and Talented Students • Differentiation Strategies for ELL Students • Differentiation Strategies for At Risk Students

Resources

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**Wayne School District
Curriculum Format**

Content Area/ Grade Level/ Course:	Technology Education 11-12/Photography III
Unit Plan Title:	Unit III: Post Production
Time Frame	8 Weeks
Anchor Standards/Domain* *i.e: ELA: reading, writing i.e.: Math: Number and Operations in Base 10	
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Unit Summary	
<ol style="list-style-type: none"> 1. Post Production <ol style="list-style-type: none"> a. Software <ol style="list-style-type: none"> i. Adobe Photoshop <ol style="list-style-type: none"> 1. Selections 2. Color Management 3. Puppet Warp 4. Liquefy 5. Multi-Layer Management 6. Color Space ii. Adobe Lightroom <ol style="list-style-type: none"> 1. Camera RAW 2. Digital Exposure adjustments iii. Adobe Bridge <ol style="list-style-type: none"> 1. Contact Sheets 2. File Management 	
Standard Number(s)	

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Essential Question(s)

- What tools and techniques are the most effective for accomplishing a specific retouching outcome?
- How does industry use post production at a tool for cost and time efficiency?
- How does looking at the final use of your images determine your post production needs?

Enduring Understandings

- Student will hone their ability to work with industry standard software to learn the best techniques for an array of retouching, and file management.
- Digitally changing fabrics, hair, and environment saves the photographer from needing to reshoot. Students will learn the scope of what can, and cannot be done in post-production.
- Images are used everywhere: websites, print ads, billboards, books etc. Each application has different requirements and requires the photographer to look at the needs of outcome to ensure appropriate post production.

In this unit plan, the following 21st Century themes and skills are addressed.

<i>Check all that apply.</i>		<i>Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.</i>	
21st Century Themes		21st Century Skills	
	<input type="checkbox"/>	Global Awareness	<input type="checkbox"/> E, T, A Creativity and Innovation
	<input type="checkbox"/>	Environmental Literacy	<input type="checkbox"/> E, T, A Critical Thinking and Problem Solving
	<input type="checkbox"/>	Health Literacy	<input type="checkbox"/> A Communication
	<input type="checkbox"/>	Civic Literacy	<input type="checkbox"/> E Collaboration
	<input checked="" type="checkbox"/>	Financial, Economic, Business, and Entrepreneurial Literacy	

Student Learning Targets/Objectives (Students will know/Students will understand)

- Understand the differences and uses for Adobe Photoshop, Lightroom, and Bridge.
- Use Adobe Photoshop, Lightroom, and Bridge appropriately for file management, image creation and manipulation.
- Manipulate images with emphasis on industry standard procedures.
- Modify images with advanced proficiency.
- Understand how images used in different commercial application require different parameters in post-production.

Assessments (Pre, Formative, Summative, Other) *Denote required common assessments with an **

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- providing a context for written communication
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- preparing an oral presentation
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- A real life situation forms the context of the activity
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F. Develop Solutions

- Form design teams/cooperative learning groups
- Investigate possible solutions
- Generate alternative solutions
- Test solutions
- Optimize solutions
- Test and evaluate final design solution

G. Assessment

- Performance of final design solution relative to constraints and specifications
- Student design portfolios
- Multimedia and oral presentation of design solution
- Standardized authentic assessment instrument

Teaching and Learning Activities

<i>Activities</i>	Compare and contrast the different software options for the most effective use. Research professional Photoshop experts for the latest on software techniques and shortcuts. Prepare a tutorial to use with first year students.
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	Continue preparing a portfolio of work. Continue creating a glossary of Photoshop terminology.
<i>Differentiation Strategies</i>	<ul style="list-style-type: none">● Individual and collaborative research, design and problem solving● Student interest and skill level assessment● Individual, small group, and large group instruction● Differentiated checklists and rubrics● Level of independence● Differentiation Strategies for Special Education Students● Differentiation Strategies for Gifted and Talented Students● Differentiation Strategies for ELL Students● Differentiation Strategies for At Risk Students
Resources	
<ul style="list-style-type: none">● http://www.state.nj.us/education/cccs/● http://www.corestandards.org/ELA-Literacy● http://www.nextgenscience.org/hsets-ed-engineering-design● http://phlearn.com/● http://www.adobe.com	

**Wayne School District
Curriculum Format**

Content Area/ Grade Level/ Course:	Technology Education 11-12/Photography III
Unit Plan Title:	Unit IV: History Of Photography and Archival and Digital Imaging Storage
Time Frame	6 Weeks
Anchor Standards/Domain* *i.e: ELA: reading, writing i.e.: Math: Number and Operations in Base 10	
<ul style="list-style-type: none"> ● The 12 Career Ready Practices ● These practices outline the skills that all individuals need to have to truly be adaptable, reflective, and proactive in life and careers. These are researched practices that are essential to career readiness. ● 8.1 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. ● 8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. ● 9.2 Career Awareness, Exploration, and Preparation: This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements. ● 9.3 Career & Technical Education (CTE) Content Area: 21st Century Life and Careers: ARTS, AV TECHNOLOGY & COMMUNICATIONS CAREER CLUSTER 	
Unit Summary	
<p>History Of Photography and Archival and Digital Imaging Storage</p> <ol style="list-style-type: none"> 1. History of Photographic Images <ol style="list-style-type: none"> iv. Imaging advancements for permanence <ol style="list-style-type: none"> 1. Ledgewood 2. Niepce 3. Eastman - Kodak 4. Steve – Kodak 5. Floppy > ZIP > CD > DVD> HD> SSD > Cloud 2. Archival Printing <ol style="list-style-type: none"> v. Ink jet v Toner vi. Acid Free vii. History of image permanence 3. Image Storage <ol style="list-style-type: none"> viii. Data corruption ix. Security x. File organization xi. File management 	
Standard Number(s)	
<ul style="list-style-type: none"> ● CRP1. Act as a responsible and contributing citizen and employee. ● CRP2. Apply appropriate academic and technical skills. ● CRP4. Communicate clearly and effectively and with reason. ● CRP6. Demonstrate creativity and innovation. ● CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. ● CRP11. Use technology to enhance productivity. ● CRP12. Work productively in teams while using cultural global competence. ● 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.D.1 Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
- 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.A.2 Analyze a current technology and the resources used, to identify the trade-offs in terms of availability, cost, desirability and waste
- 8.2.12.E.2 Analyze the relationships between internal and external computer components.
- 9.2.12.C.1 Review career goals and determine steps necessary for attainment.
- 9.2.12.C.2 Modify Personalized Student Learning Plans to support declared career goals.
- 9.2.12.C.3 Identify transferable career skills and design alternate career plans.
- 9.2.12.C.6 Investigate entrepreneurship opportunities as options for career planning and identify the knowledge, skills, abilities, and resources required for owning and managing a business.
- 9.3.12.AR.1 Analyze the interdependence of the technical and artistic elements of various careers within the Arts, A/V Technology & Communications Career Cluster.
- 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.1 Manage the printing process, including customer service and sales, scheduling, production and quality control.
- 9.3.12.AR-PRT.2 Demonstrate the production of various print, multimedia or digital media products.
- 9.3.12.AR-PRT.3 Perform finishing and distribution operations related to the printing process.
- 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.
- 9.3.MK.9 Communicate information about products, services, images and/or ideas to achieve a desired outcome.
- 9.3.ST.1 Apply engineering skills in a project that requires project management, process control and quality assurance.
- 9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.
- 9.3.ST-ET.4 Apply the elements of the design process.

Essential Question(s)

- How do the tools of the past influence our tools of today?
- As technology has evolved, how did photographers, adapt?
- What can we learn from early photographers?
- How do you manage your digital image files so they are ever available with today's changing technology?
- What does it mean to have an archival image?
- What are the properties that destroy images over time?
- How can you protect printed images to ensure they are safe for generations to come?

Enduring Understandings

- Tools of the present were based upon tools of the past. Modern computer and camera tools retain the names and functions from tangible historical tools.
- Strong photographers adapt with technology and continue to incorporate the past into the present and stay ever abreast with upcoming technology.
- Optical images are created via a convex lens and a recording device, not different than today. Early photographers, spent time looking at the 3-dimentional world and understood how it correlated into 2-dimention with a focus on light, form, shape and shadows.
- As mediums change, the information contained on the media needs to stay current. Students will learn the differences in digital recording mediums and their unique strengths.
- Archival Images are images that are chemically prepared to stand the test of time.
- Acid, glues, sunlight, and humidity affect the longevity of an image.
- Keeping your images protected from known irritants helps to ensure durability and longevity.

In this unit plan, the following 21st Century themes and skills are addressed.

Check all that apply. 21 st Century Themes		Indicate whether these skills are E-Encouraged , T-Taught , or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill. 21 st Century Skills
X	Global Awareness	E,T,A
	Environmental Literacy	E,T,A
	Health Literacy	E,T,A
	Civic Literacy	E,T,A
X	Financial, Economic, Business, and Entrepreneurial Literacy	E,T,A
		Creativity and Innovation
		Critical Thinking and Problem Solving
		Communication
		Collaboration

Student Learning Targets/Objectives (Students will know/Students will understand)

- Identify the key players in the evolution of image permanence.
- Understand how the key players affected the outcome of image permanence.
- Track the evolution of digital storage mediums and their advancements to society.
- Analyze and identify the optical and physical differences between ink jet and toner images.
- Assess the effectiveness of acid free products.
- Understand and describe how to prevent data corruption.
- Explore different options for data security.
- Implement an efficient file organization structure for effective file management.

Assessments (Pre, Formative, Summative, Other)

*Denote required common assessments with an **

Learning experiences will be design and inquiry based. Both extended task activities, as well as shorter, more focused resource tasks/practical tasks will be utilized to maximize learning. Each learning experience will reinforce the following elements for students:

A. The Ideation Design Process (real-world design & problem solving)

- open-ended problems with constraints & specifications
- visualize, design, and implement their creative vision

B. Team Building Skills (working on a design team)

- group dynamics
- social and leadership skills
- delegating and accepting responsibility
- 3 R's (respect, responsibility and results)

C. Technical Writing

- providing a context for written communication
- producing shoot lists, proposals, critiques, etc.
- documenting learning in a design portfolio

D. Public Speaking

- preparing an oral presentation
- developing poise and self confidence
- improving oral communications skills

E. Design Brief

- A real life situation forms the context of the activity
- Define the problem to be solved
- Determine design criteria: specifications and constraints

F. Develop Solutions

- Form design teams/cooperative learning groups
- Investigate possible solutions
- Generate alternative solutions
- Test solutions
- Optimize solutions
- Test and evaluate final design solution

G. Assessment

- Performance of final design solution relative to constraints and specifications
- Student design portfolios

- Multimedia and oral presentation of design solution
- Standardized authentic assessment instrument

Teaching and Learning Activities

<i>Activities</i>	<p>Compare and contrast the different printing methods and assess alternate outcomes. Create a visual timeline of the changes in archival and digital image storage. Relate these advancements to current events of the time. Continue preparing a portfolio of work. Continue creating a glossary of Photoshop terminology.</p>
<i>Differentiation Strategies</i>	<ul style="list-style-type: none"> • Individual and collaborative research, design and problem solving • Student interest and skill level assessment • Individual, small group, and large group instruction • Differentiated checklists and rubrics • Level of independence • Differentiation Strategies for Special Education Students • Differentiation Strategies for Gifted and Talented Students • Differentiation Strategies for ELL Students • Differentiation Strategies for At Risk Students

Resources

- <http://www.state.nj.us/education/cccs/>
- <http://www.corestandards.org/ELA-Literacy>
- <http://www.nextgenscience.org/hsets-ed-engineering-design>
- <http://phlearn.com/>
- <http://www.adobe.com>

**Wayne School District
Curriculum Format**

Content Area/ Grade Level/ Course:	Technology Education 11-12/Photography III
Unit Plan Title:	Unit VI: Career Readiness
Time Frame	6 Weeks
Anchor Standards/Domain* *i.e: ELA: reading, writing i.e.: Math: Number and Operations in Base 10	
<ul style="list-style-type: none"> ● The 12 Career Ready Practices ● These practices outline the skills that all individuals need to have to truly be adaptable, reflective, and proactive in life and careers. These are researched practices that are essential to career readiness. ● 8.1 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. ● 8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. ● 9.2 Career Awareness, Exploration, and Preparation: This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements. ● 9.3 Career & Technical Education (CTE) Content Area: 21st Century Life and Careers: ARTS, A/V TECHNOLOGY & COMMUNICATIONS CAREER CLUSTER 	
Unit Summary	
<ol style="list-style-type: none"> 1. Career Readiness <ol style="list-style-type: none"> a. Portfolio Development <ol style="list-style-type: none"> i. Digital portfolio ii. Traditional Portfolio iii. Uses for portfolios b. Career + Avocation <ol style="list-style-type: none"> i. Ethics in photography ii. How to get started in a photographic career iii. Different career options for photographers iv. Requirements for owning a photographic side business v. Trace a commercial photographer – How do I get there from here? 	
Standard Number(s)	
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Essential Question(s)

- What is a portfolio used for?
- How do you develop a portfolio?
- What are the different types of portfolios?
- How can a career in photography be lucrative?
- What are the different types of occupations within photography?
- Where are the best places to pursue a post-secondary education in photography?

Enduring Understandings

- A portfolio is used to showcase an array of completed work that showcases a photographer's ability.
- Developing a portfolio takes time to create the work needed to be showcased, and display the work in impeccable condition.
- Portfolios can be digital, print, or a combination of both the traditional and digital form. Student will work to generate a college and career ready portfolio to showcase their body of work.
- Many colleges offer photography and visual arts programs that will prepare students for a career in industry.
- Being a photographer, is just one of many job opportunities in the digital imaging field. Students may find that they rather be in an industry tandem to photography incorporating advertising, marketing, and journalism.
- Students will spend time researching requirements for post-secondary education in the field and being to prepare to ensure a successful transition.

In this unit plan, the following 21st Century themes and skills are addressed.

Check all that apply.
21st Century Themes

Indicate whether these skills are E-Encouraged, T-Taught, or A-Assessed in this unit by marking E, T, A on the line before the appropriate skill.

21st Century Skills

X

Global Awareness

E,T,A

Creativity and Innovation

Environmental Literacy

E,T,A

Critical Thinking and Problem Solving

Health Literacy

E,T,A

Communication

X

Civic Literacy
Financial, Economic, Business, and
Entrepreneurial Literacy

E,T,A

Collaboration

Student Learning Targets/Objectives (Students will know/Students will understand)

- Generate a digital portfolio
- Generate a printed portfolio
- Understand the importance of a professional portfolio
- Understand the ethics of a professional photographer
- Research different careers in the imaging industry
- Develop a career plan to succeed in the photographic industry
- Explore the requirements for owning a photographic side business.

Assessments (Pre, Formative, Summative, Other) *Denote required common assessments with an **

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- Multimedia and oral presentation of design solution
- Standardized authentic assessment instrument

Teaching and Learning Activities

<i>Activities</i>	<p>Explore an ethical issue in Photography. Use class gained knowledge to state your viewpoint. Support this viewpoint with addition research gathered from current events. Continue preparing a portfolio of work. List and defend the pros and cons of digital vs. traditional portfolios. Continue creating a glossary of Photoshop terminology.</p>
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<i>Differentiation Strategies</i>	<ul style="list-style-type: none"> ● Individual and collaborative research, design and problem solving ● Student interest and skill level assessment ● Individual, small group, and large group instruction ● Differentiated checklists and rubrics
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|--|---|
| | <ul style="list-style-type: none">● Level of independence● <u>Differentiation Strategies for Special Education Students</u>● <u>Differentiation Strategies for Gifted and Talented Students</u>● <u>Differentiation Strategies for ELL Students</u>● <u>Differentiation Strategies for At Risk Students</u> |
|--|---|

Resources

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- <http://www.adobe.com>