Multimedia & CAD

Course # S7120

August 2018

Academic Curriculum Unit Planner

Content Area:	**Multimedia/CAD**	Grade(s)	9
Unit Plan Title:	Introduction to Proprietary & Open Source and Web-Based Programs		

NJSLS & NJCCCS Standard(s) Addressed in this unit

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.A.3 - Research and present information on an existing technological product that has been repurposed for a different function. personal, social, lifelong learning, and career needs.
8.2.12.B.3 - Analyze ethical and unethical practices around intellectual property rights as influenced by human wants and/or needs.
8.2.12.B.4 - Investigate a technology used in a given period of history, e.g., stone age, industrial revolution or information age, and identify their impact and how they may have changed to meet human needs and wants.
8.2.12.C.1 - Explain how open source technologies follow the design process.
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.
8.1.12.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.
8.1.12.F.1 - Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.

Essential Questions (3-5)

How do I choose which technological tools to use and when it is appropriate to use them?
How can I transfer what I know to new technological situations/experiences?
How does the Internet allow you to share files, resources, and equipment?
What are an individual's responsibilities for using technology?

Anchor Text

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Informational Texts (3-5)

Short Texts (1-3)

Formative & Summative Assessments

PASSAIC COUNTY TECHNICAL INSTITUTE
45 Reinhardt Road
Wayne, NJ

Academic Curriculum Unit Planner

Project Based Activity
Resources (websites, Canvas, LMS, Google Classroom, documents, etc.)
Canvas, Autodesk Suite, Microsoft Office, Google & Inkling.com
Suggested Time Frame:	5 Weeks

Content Area:	**Multimedia/CAD**		Grade(s)	9
Unit Plan Title:	Formatting Presentations			

NJSLS & NJCCCS Standard(s) Addressed in this unit

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.
8.2.12.B.3 - Analyze ethical and unethical practices around intellectual property rights as influenced by human wants and/or needs.
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.D.6 - Synthesize data, analyze trends and draw conclusions regarding the effect of a technology on the individual, society, or the environment and publish conclusions
8.1.12.E.1- Produce a position statement about a real-world problem by developing a systematic plan of investigation with peers and experts synthesizing information from multiple sources.
8.1.12.F.1 Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.

Essential Questions (3-5)

Who can use the data?
Who wrote the information?
Where is information that I plan to use located?
How does one manage information and utilize it effectively and legally?
How can I effectively use the Internet to gather a variety of research from valid/reliable sources?

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Academic Curriculum Unit Planner

Informational Texts (3-5)

Short Texts (1-3)

Formative & Summative Assessments
Project Based Activity
Resources (websites, Canvas, LMS, Google Classroom, documents, etc.)
Canvas, Autodesk Suite, Microsoft Office, Google & Inkling.com

Suggested Time Frame:	7 Weeks

Content Area:	Multimedia/CAD	Grade(s)	9
Unit Plan Title:	Enhancing Presentations with Animation, CAD files, Video, Tables, and Charts		

NJSLS & NJCCCS Standard(s) Addressed in this unit

8.1.12.A.4 - Construct a spreadsheet workbook with multiple worksheets, rename tabs to reflect the data on the worksheet, and use mathematical or logical functions, charts and data from all worksheets to convey the results.
8.1.12.A.5 - Create a report from a relational database consisting of at least two tables and describe the process, and explain the report results.
8.2.12.C.2 - Analyze a product and how it has changed or might change over time to meet human needs and wants.
8.2.12.C.4 - Explain and identify interdependent systems and their functions.
8.2.12.C.5 - Create scaled engineering drawings of products both manually and digitally with materials and measurements labeled.
8.1.12.D.1 - Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
8.2.12.D.2 - Write a feasibility study of a product to include: economic, market, technical, financial, and management factors, and provide recommendations for implementation.
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.6 - Synthesize data, analyze trends and draw conclusions regarding the effect of a technology on the individual, society, or the environment and publish conclusions.

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Essential Questions (3-5)
How does software enhance the productivity of the workforce? What technological tools can we use to help us understand the world around us? How can one use spreadsheets to efficiently manage data in a changing environment for routine activities? How can one use charts and graphs to efficiently display data in a changing environment for routine activities?
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Informational Texts (3-5)
Short Texts (1-3)
Formative & Summative Assessments
Project Based Activity
Resources (websites, Canvas, LMS, Google Classroom, documents, etc.)
Canvas, Autodesk Suite, Microsoft Office, Google & Inkling.com

Suggested Time Frame:	6 Weeks

Content Area:	Multimedia/CAD		Grade(s)	9
Unit Plan Title:	Formatting Presentations; Ordering, Review, Compare, Combine, and Protect Presentations			

NJSLS & NJCCCS Standard(s) Addressed in this unit

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.A.4 - Construct a spreadsheet workbook with multiple worksheets, rename tabs to reflect the data on the worksheet, and use mathematical or logical functions, charts and data from all worksheets to convey the results.
8.1.12.D.1- Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
8.1.12.D.2 - Evaluate consequences of unauthorized electronic access (e.g., hacking) and disclosure, and on dissemination of personal information
8.2.12.D.6 - Synthesize data, analyze trends and draw conclusions regarding the effect of a technology on the individual, society, or the environment and publish conclusions.
8.1.12.E.2 - Research and evaluate the impact on society of the unethical use of digital tools and present your research to peers.
8.2.12.E.1 - Demonstrate an understanding of the problem-solving capacity of computers in our world.

Essential Questions (3-5)

What constitutes misuse and how can it best be prevented?
In a world of constant change, what skills should we learn?
What are the common tools used for collecting, organizing, and distributing information electronically?
In the age of information, how can data be optimally stored, retrieved, and organized?

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Informational Texts (3-5)

Short Texts (1-3)

Formative & Summative Assessments

Project Based Activity

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Canvas, Autodesk Suite, Microsoft Office, Google & Inkling.com	
Suggested Time Frame:	5 Weeks

Content Area:	**Multimedia/CAD**		Grade(s)	9
Unit Plan Title:	Applying Advanced Graphic, Audio and Video Techniques			

NJSLS & NJCCCS Standard(s) Addressed in this unit

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.
8.2.12.B.1 - Research and analyze the impact of the design constraints (specifications and limits) for a product or technology driven by a cultural, social, economic or political need and publish for review.
8.1.12.B.2 - Apply previous content knowledge by creating and piloting a digital learning game or tutorial.
8.1.12.C.1 - Develop an innovative solution to a real-world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.
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.
8.1.12.F.1 - Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.

Essential Questions (3-5)

How can the use of multimedia enhance presentations?
How does software enhance the productivity of the workforce?
How do I choose which multimedia format is appropriate to use for a specific audience ?
How can you create an effective technological product to help improve the efficacy of learning new information?

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Informational Texts (3-5)

Short Texts (1-3)

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Suggested Time Frame:	7 Weeks

Content Area:	**Multimedia/CAD**		Grade(s)	9
Unit Plan Title:	Presentation Delivery			

NJSLS & NJCCCS Standard(s) Addressed in this unit

8.2.12.B.5 - Research the historical tensions between environmental and economic considerations as driven by human needs and wants in the development of a technological product, and present the competing viewpoints to peers for review.
8.2.12.C.7 - Use a design process to devise a technological product or system that addresses a global problem, provide research, identify trade-offs and constraints, and document the process through drawings that include data and materials.
8.2.12.D.1 - Design and create a prototype to solve a real-world problem using a design process, identify constraints addressed during the creation of the prototype, identify trade-offs made, and present the solution for peer review.
8.2.12.D.2 - Write a feasibility study of a product to include: economic, market, technical, financial, and management factors, and provide recommendations for implementation.
8.1.12.E.1- Produce a position statement about a real-world problem by developing a systematic plan of investigation with peers and experts synthesizing information from multiple sources.
8.2.12.D.6 - Synthesize data, analyze trends and draw conclusions regarding the effect of a technology on the individual, society, or the environment and publish conclusions

Essential Questions (3-5)

How can technology be used for the good of society?
How can technology lead to entrepreneurial opportunities?
What technological tools can we use to help us understand the world around us?
How can you create an effective technological product to help improve the quality of life?

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Informational Texts (3-5)

Short Texts (1-3)

Formative & Summative Assessments
Project Based Activity

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Suggested Time Frame:	6 Weeks