Computer Animation and Photo Editing

Unit Title: Computer Animation

Stage 1: Desired Results

Standards & Indicators: **2020 NJSLS**

8.1 Computer Science and Design Thinking

8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.

8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate

8.1.5.AP.2: Create programs that use clearly named variables to store and modify data.

8.1.5.AP.4: Break down problems into smaller, manageable sub-problems to facilitate program development.

8.1.5.AP.5: Modify, remix, or incorporate pieces of existing programs into one's own work to add additional features or create a new program.

9.3 Career & Technical Education Standards

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.

Career Readiness, Life Literacies and Key Skills

Standard	Performance Expectations	Core Ideas
9.4.12.CI.3	Examine challenges that may exist in the adoption of new ideas.	Gathering and evaluating knowledge and information from a variety of sources, including global perspectives, fosters creativity and innovative thinking.
9.4.12.CT.2	Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option.	Multiple solutions often exist to solve a problem.
9.4.12.TL.1	Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task (e.g., W.11-12.6.).	Digital tools differ in features, capacities, and styles. Knowledge of different digital tools is helpful in selecting the best tool for a given task.

Computer Animation and Photo Editing

<table>
<tr><td>Central Idea/Enduring Understanding:
Students will understand the importance of animation and its potential for enhancing all facets of computer applications.</td><td>Essential/Guiding Question:
How can I use the tools available to me to allow an idea to come to life on my computer screen?</td></tr>
<tr><td>Content:

Understanding the workspace
Toolbox and menus
Applications
Preferences
Navigation
Algorithms
Variables
Conditionals</td><td>Skills(Objectives):
Students will
● Demonstrate self awareness, creative thinking, confidence, self-discipline, collaboration, and risk taking.
● Implement simple algorithms
● Evaluate works of art based on aesthetic principles and artistic elements using critical thinking skills.</td></tr>
<tr><td colspan="2">Interdisciplinary Connections:
As students learn about the different skills and processes when it comes to animation, they will create works that demonstrate an understanding in math, computer science, literacy, and social studies.</td></tr>
<tr><th colspan="2">Stage 2: Assessment Evidence</th></tr>
<tr><td>Performance Task(s):
Projects at the end of each lesson
One final project
One exam per unit</td><td>Other Evidence:
● Vocabulary
● Sketches/research
● Participation
● Following Class Procedures
● Projects assessed using rubrics focused on skills taught and processes used</td></tr>
<tr><th colspan="2">Stage 3: Learning Plan</th></tr>
<tr><td>Learning Opportunities/Strategies:

Whole group learning with teacher lecture, discussion, and demonstration
Guided practice Independent practice
Small group instruction
Individual instruction
Cooperative learning

At the end of each unit, students will turn in projects, notes, and quizzes on each topic.</td><td>Resources:

● Wick Editor- Online animation tool
● Edpuzzle - Online video resource for skill based videos, reviews, and do-nows

LGBT and Disabilities Resources:
● LGBTQ-Inclusive Lesson & Resources by Garden State Equality and Make it Better for Youth
● LGBTQ+ Books

DEI Resources:
● Learning for Justice
● GLSEN Educator Resources
● Supporting LGBTQIA Youth Resource List
● Respect Ability: Fighting Stigmas, Advancing Opportunities
● NJDOE Diversity, Equity & Inclusion Educational Resources
● Diversity Calendar</td></tr>
</table>

Computer Animation and Photo Editing

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation			
High-Achieving Students	**On Grade Level Students**	**Struggling Students**	**Special Needs/ELL**
• Projects/lessons designed to the style that matches the student. • Students are encouraged to explore various tools and options to extend their knowledge beyond what was presented in the classroom and to apply these techniques in their projects • Rubrics are structured to reward students who apply new techniques • Students are encouraged to collaborate with peers to explore and apply new techniques	• Projects/lessons designed to the style that matches the student. • Projects are designed to allow students to design their project around their own interest. • Rubrics are structured to reward students who apply new techniques • Students are encouraged to collaborate with peers to explore and apply new techniques	• Projects/lessons designed to the style that matches the student. • Projects are designed to allow students to design their project around their own interest. • Adjusted/shortened assignment if needed. • One on one help as needed	Any student requiring further accommodations and/or modifications will have them individually listed in their 504 Plan or IEP. These might include, but are not limited to: breaking assignments into smaller tasks, giving directions through several channels (auditory, visual, kinesthetic, model), and/or small group instruction for reading/writing ELL supports should include, but are not limited to, the following:: Extended time Provide visual aids Repeated directions Differentiate based on proficiency Provide word banks Allow for translators, dictionaries

Computer Animation and Photo Editing

Unit Title: Photo Editing

Stage 1: Desired Results

Standards & Indicators: **2020 NJSLS**

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Career Readiness, Life Literacies and Key Skills

Standard	Performance Expectations	Core Ideas
9.4.12.CI.3	Examine challenges that may exist in the adoption of new ideas.	Gathering and evaluating knowledge and information from a variety of sources, including global perspectives, fosters creativity and innovative thinking.
9.4.12.CT.2	Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option.	Multiple solutions often exist to solve a problem.
9.4.12.TL.1	Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task (e.g., W.11-12.6.).	Digital tools differ in features, capacities, and styles. Knowledge of different digital tools is helpful in selecting the best tool for a given task.

Central Idea/Enduring Understanding:	Essential/Guiding Question:
Students will understand the different use cases for photo editing and its potential for enhancing all facets of computer applications.	What steps will I need to take, and what tools will I need to use, to successfully edit this photo to the final product I want?

Content:	Skills(Objectives):
Layers	Students will

Scenes Mixers Silhouette Shading Cloning Blurring	• Demonstrate self awareness, creative thinking, confidence, self-discipline, collaboration, and risk taking. • Evaluate works of art based on aesthetic principles and artistic elements using critical thinking skills.

Interdisciplinary Connections:
As students learn about the different skills and processes when it comes to photo editing, they will create works that demonstrate an understanding in math, computer science, literacy, and social studies.

Stage 2: Assessment Evidence

Performance Task(s):	**Other Evidence:**
Projects at the end of each lesson One final project One exam per unit	• Vocabulary • Sketches/research • Participation • Following Class Procedures • Projects assessed using rubrics focused on skills taught and processes used

Stage 3: Learning Plan

Learning Opportunities/Strategies:	**Resources:**
Whole group learning with teacher lecture, discussion, and demonstration Guided practice Independent practice Small group instruction Individual instruction Cooperative learning At the end of each unit, students will turn in projects, notes, and quizzes on each topic.	• Photopea - an online photo editing program • Edpuzzle - an online platform for review videos, guides, and extra skill challenges. LGBT and Disabilities Resources: • LGBTQ-Inclusive Lesson & Resources by Garden State Equality and Make it Better for Youth • LGBTQ+ Books DEI Resources: • Learning for Justice • GLSEN Educator Resources • Supporting LGBTQIA Youth Resource List • Respect Ability: Fighting Stigmas, Advancing Opportunities • NJDOE Diversity, Equity & Inclusion Educational Resources • Diversity Calendar

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Pacing Guide

Course Name	Resource	Content Standards
UNIT 1 (55 days) ● Scenes ● Conditionals (if-statements) ● Tweens ● Mouse effects ● Sound ● Interactions ● Hovers ● Timed effects	Wick editor Edpuzzle	8.1.2.CS.1 8.1.5.AP.4 9.3.12.AR-PRT.2 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
UNIT 2 (34 Days) ● Layers ● Scenes ● Mixers ● Silhouette ● Shading ● Cloning ● Blurring	Photopea Edpuzzle	8.1.2.CS.1 8.1.5.AP.4 9.3.12.AR-PRT.2 9.3.12.AR-VIS.2 9.3.12.AR-VIS.3
Total: 89 Days		