

COURSE TITLE

Multimedia Production

LENGTH

One Semester

DEPARTMENT

Computer Technology
Barbara O'Donnell, Supervisor

SCHOOL

Union Middle School

DATE

Spring 2017

Multimedia Production

I. Introduction/Overview/Philosophy

In this course, students will learn “how things work” by investigating how software and hardware function. This course is designed to go beyond basic computer application skills. Students will explore intermediate and advanced multimedia topics, including, but not limited to, presentations, animation, movie making, digital image and sound editing, and 3D modeling.

II. Objectives

Students will show their understanding of software systems by being able to:

- Use a variety of devices to access, import, store and exchange files
- Design images and vector shapes
- Import, export, edit and convert a variety of file types
- Capture and edit digital audio and video clips
- Create original audio, video, animation and three dimensional products
- Understand the function of computer hardware and software
- Troubleshoot common hardware and software issues

III. Course Outline

- 1) Hardware and Software basics
 - a) Input, output and storage devices
 - b) RAM and ROM
 - c) Operating system and applications
- 2) Digital Image Editing
 - a) Import and use images from devices
 - b) Change image size and resolution
 - c) Crop images
 - d) Use painting tools
 - e) Convert images to various file formats
- 3) Digital Sound Editing
 - a) Capture sounds from devices
 - b) Applying changes such as copying/pasting/mixing and effects
 - c) Digitally create and edit audio using various tools
- 4) Digital Video Editing
 - a) Create and edit movies and/or video files
 - b) Capture/import digital video
 - c) Export digital videos/movies

- 5) Digital Animation
 - a) Manipulate text and images to create an animated product
 - b) Edit animated products

- 6) 3D Modeling
 - a) Understand how a 3D printer works
 - b) Design and create three dimensional models

New Jersey Student Learning Standards

VISUAL AND PERFORMING ARTS

Standard 1.1: The Creative Process: All students will demonstrate an understanding of the elements and principles that govern the creation of works of art in dance, music, theatre, and visual art.

TECHNOLOGY

Standard 8.1: Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.

Standard 8.2: Technology Education, Engineering, and Design: All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.

21ST CENTURY LIFE AND CAREERS

Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.

Standard 9.3: Career Awareness, Exploration, and Preparation: All students will apply knowledge about and engage in the process of career awareness, exploration, and preparation in order to navigate the globally competitive work environment of the information age.

IV. Proficiency Levels

This course is open to grades 7 and 8.

V. Methods of Assessment

Student Assessment

The teacher will provide a variety of assessments during the course of the year. Among these are: homework, laboratory exercises, teacher-made tests and quizzes, and long-term projects.

Curriculum/Teacher Assessment

The teacher will provide the subject area supervisor with suggestions for changes on an ongoing basis.

VI. Grouping

This is a middle school elective course offered to students in grade 7 and grade 8.

VII. Articulation/Scope & Sequence/Time Frame

Course length is one semester.

VIII. Resources

Resources include but are not limited to:

- 3D Modeling
 - <https://www.tinkercad.com/>
 - <http://www.sketchup.com/>
- PhotoShop
 - <http://lifelifehacker.com/5758404/learn-the-basics-of-photoshop-the-complete-guide>
 - <http://www.photoshop.com/learn>
 - <https://helpx.adobe.com/photoshop/tutorials.html>
- Garageband
 - <http://www.macworld.com/article/2083402/getting-started-with-garageband.html>
 - <https://www.atomiclearning.com/garageband>
- iMovie
 - https://www.atomiclearning.com/imovie_hd
 - <https://vimeo.com/blog/post/video-101-editing-with-imovie>

IX. Methodologies

The following methods of instruction are suggested: lecture, group projects, demonstration, and hands-on applications class presentations.

X. Suggested Activities

Student pre-planning and storyboarding preparation, long-term projects, daily written log entry reflections, active participation in class discussions and activities.

XI. Interdisciplinary Connections

Infused within this course are connections to mathematics, language arts and technology including the effective use of applications and the exhibit of appropriate digital citizenship by practicing safe, legal, and responsible use of information and technology.

XII. Differentiating Instruction for Students with Special Needs: Students with Disabilities, English Language Learners, and Gifted & Talented Students

Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways as they celebrate students' prior knowledge. By providing appropriately challenging learning, teachers can maximize success for all students.

Examples of Strategies and Practices that Support:

Students with Disabilities

- Use of visual and multi-sensory formats
- Use of assisted technology
- Use of prompts
- Modification of content and student products
- Testing accommodations
- Authentic assessments

English Language Learners

- Pre-teaching of vocabulary and concepts
- Visual learning, including graphic organizers
- Use of cognates to increase comprehension
- Teacher modeling
- Pairing students with beginning English language skills with students who have more advanced English language skills
- Scaffolding
 - word walls
 - sentence frames
 - think-pair-share
 - cooperative learning groups

Gifted & Talented Students

- Adjusting the pace of lessons
- Curriculum compacting
- Inquiry-based instruction
- Independent study
- Higher-order thinking skills
- Interest-based content
- Student-driven
- Real-world problems and scenarios

XIV. Professional Development

The teacher will continue to improve expertise through participation in a variety of professional development opportunities.

Curriculum Map

Week 1	Week 2	Week 3	Week 4	Week 5
Hardware & Software Basics		Digital Image Editing		
Week 6	Week 7	Week 8	Week 9	Week 10
Digital Sound Editing			Digital Animation	
Week 11	Week 12	Week 13	Week 14	Week 15
Digital Animation	3D Modeling			Digital Video Editing
Week 16	Week 17	Week 18	Week 19	Week 20
Digital Video Editing		Culminating Project		