

**Randolph Township Schools
Randolph High School**

**Intro to Computer Graphics
Curriculum**

"What a computer is to me is the most remarkable tool that we have ever come up with. It's the equivalent of a bicycle for our minds."
- Steve Jobs

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**Randolph Township Schools
Department of Social Studies
Intro to Computer Graphics**

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Randolph Township Schools

Mission Statement

We commit to inspiring and empowering all students in Randolph schools to reach their full potential as unique, responsible and educated members of a global society.

Randolph Township Schools Affirmative Action Statement

Equality and Equity in Curriculum

The Randolph Township School district ensures that the district's curriculum and instruction are aligned to the State's Standards. The curriculum addresses the elimination of discrimination and the achievement gap, as identified by underperforming school-level AYP reports for state assessment. The Curriculum provides equity in instruction, educational programs and provides all students the opportunity to interact positively with others regardless of race, creed, color, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, religion, disability or socioeconomic status.

N.J.A.C. 6A:7-1.7(b): Section 504, Rehabilitation Act of 1973; N.J.S.A. 10:5; Title IX, Education Amendments of 1972

RANDOLPH TOWNSHIP BOARD OF EDUCATION EDUCATIONAL GOALS VALUES IN EDUCATION

The statements represent the beliefs and values regarding our educational system. Education is the key to self-actualization, which is realized through achievement and self-respect. We believe our entire system must not only represent these values, but also demonstrate them in all that we do as a school system.

We believe:

- The needs of the child come first
- Mutual respect and trust are the cornerstones of a learning community
- The learning community consists of students, educators, parents, administrators, educational support personnel, the community and Board of Education members
- A successful learning community communicates honestly and openly in a non-threatening environment
- Members of our learning community have different needs at different times. There is openness to the challenge of meeting those needs in professional and supportive ways
- Assessment of professionals (i.e., educators, administrators and educational support personnel) is a dynamic process that requires review and revision based on evolving research, practices and experiences
- Development of desired capabilities comes in stages and is achieved through hard work, reflection and ongoing growth

Randolph Township Schools
Department of Fine Arts
INTRO TO COMPUTER GRAPHICS

Introduction

Introduction to Computer Graphics

This semester class is geared towards the digital artist who is just starting out. Students will use the computer as a medium to explore technology as a form of creative expression. The basics of scanning, image adjustment and manipulation, file formats, digital photography, and web design will be explored. Emphasis will be placed on the elements and principles of art and design, along with history of computer graphics and its impact on the art world.

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Curriculum Pacing Chart
Intro to Computer Graphics

SUGGESTED TIME ALLOTMENT	UNIT NUMBER	CONTENT - UNIT OF STUDY
2 weeks	I	Elements & Principles of Art & Design/Color Theory
3 weeks	II	Computer Graphics Skills and Techniques
8-10 weeks	III	Art Production/Digital Imaging

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Intro to Computer Graphics
UNIT I: Elements & Principles of Art & Design

ENDURING UNDERSTANDINGS		ESSENTIAL QUESTIONS
From cave painting to computer graphic imagery, changes in graphic design have been historically important towards the understanding of cultures.		<ul style="list-style-type: none"> What can be learned about human communication from the history of graphic design?
The elements and principles of design encourage guidelines in the art making process.		<ul style="list-style-type: none"> Why will simply utilizing the design principles not necessarily result in an effective graphic design?
Creative talent is imperative; expressing an idea visually is the primary role of a graphic designer.		<ul style="list-style-type: none"> What are the common basic components of successful design? What qualities must a graphic designer have in order to be considered “highly effective” in his or her field?
KNOWLEDGE	SKILLS	CC/NJCCCS
<p>Students will know:</p> <p>The elements and principles of art and design, as they are applied to the specific media being studied.</p> <p>The element of line, value, form, size, shape, and color as they refer to composition.</p> <p>The principles of balance, focal point, harmony, rhythm, contrast, and movement as they refers to composition.</p> <p>Key vocabulary specific to graphic design, computers, and programs implemented including but not limited to: <i>software, platform, adobe creative suite, pixel, jpeg, resolution, and vector.</i></p> <p>How to use value and contrast to create depth and movement within the artwork.</p>	<p>Students will be able to:</p> <p>Identify and explain the success of the elements and principles of art and design within a composition.</p> <p>Define how the elements of art are used to create the principles of design.</p> <p>Define how the principles combine the elements to create an aesthetic placement of ideas that will produce a good design.</p> <p>Select inquiry tools appropriate to a given project.</p> <p>Examine ways in which people communicate through technology and graphic imagery.</p> <p>Identify aesthetics through the exploration and evaluation of art in its historical context.</p>	<p>1.1.12 A.1 1.1.12 A.2 1.1.12 A.3 1.1.12 A.4 1.1.12 B.1 1.1.12 B.2 1.1.12 C.1 1.1.12 C.2 1.1.12 C.3 1.1.12 D.1 1.1.12 D.2 1.2.12 A.1 1.2.12 A.2 1.3.12 D.1 1.3.12 D.2 1.3.12 D.3 1.3.12 D.4 1.3.12 D.5 1.4.12 A.1</p>

How the development of printing and other graphic design forms have and continue to influence the development of society.	Evaluate the piece of artwork through critiquing using written and verbal communication.	1.4.12 A.2 1.4.12 A.3 1.4.12 A.4 1.4.12 B.1 1.4.12 B.2 1.4.12 B.3
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RANDOLPH TOWNSHIP SCHOOL DISTRICT
Curriculum Pacing Chart
Intro to Computer Graphics
UNIT I: Elements & Principles of Art & Design

SUGGESTED TIME ALLOTMENT	Elements & Principles of Art & Design/Color Theory	SUPPLEMENTAL UNIT RESOURCES
2-3 weeks	Unit I – Introduction to Elements and Principles of Art and Design <ul style="list-style-type: none"> ○ Define and utilize the Elements of Art in introductory activities such as finding evidence of these in photographic and digital imagery. ○ Define and utilize the Principles of Design in introductory activities such as finding evidence of these in photographic and digital imagery. ○ Introduce Art History aesthetics that support Elements and Principles of Art and Design by viewing famous works of art and referencing decisions made by renowned artists. ○ Examples of these projects include student submitted advertisements and photographs which include the elements and principles as well as strong composition and striking appearance, and student created designs that illustrate the elements and principles for use as computer graphic images. 	<p>Lecture and demonstration. Web sites, visuals, prints and videos. Visits to art museums and galleries.</p> <p>Adobe Creative Team. (2013). <i>Design with adobe creative cloud classroom in a book: Basic projects using photoshop, indesign, muse, and more.</i> (1st ed.). Adobe Press.</p> <p>Gomez-Palcio, B. (2011). <i>Graphic design, referenced.</i> Rockport Publishers.</p> <p>Lopez, L. (2006). <i>Advanced adobe photoshop cs2 basics.</i> (1st ed.). Cengage Learning.</p>

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Intro to Computer Graphics
UNIT II: Computer Graphics Skills and Techniques

ENDURING UNDERSTANDINGS		ESSENTIAL QUESTIONS
Computers have become a viable creative medium for the artist.		<ul style="list-style-type: none"> How has technology changed the creative process of the artist? What role does software have on graphic design?
There are a number of options for computer-related image input and output such as scanners, digital cameras, cell phones, and tablets.		<ul style="list-style-type: none"> In what way does the use of different computer software skills and techniques determine the outcome of the work of art? What differences are evident in solving technological issues in the past 25 years?
Artists have discovered the versatility of digital imaging as a creative media.		<ul style="list-style-type: none"> Why is it important to fully understand the technical skills, techniques, and options a computer graphics artist uses? What careers are part of the graphic design field?
KNOWLEDGE	SKILLS	CC/NJCCCS
<p>Students will know:</p> <p>Basic skills and techniques for operating a computer in the RHS computer graphics labs.</p> <p>How to proficiently utilize the Adobe Photoshop program to adjust digital images.</p> <p>Key vocabulary including but not limited to: <i>memory card, downloading, cataloging files, contact sheet, exposure, film, 35mm slides.</i></p> <p>Graphic Design is a form of mass communication and has enhanced the display and delivery of images into our daily life-styles.</p>	<p>Students will be able to:</p> <p>Demonstrate a basic knowledge of the various components of the computer, digital camera, scanner, inkjet and laser printer, projectors, and tablets.</p> <p>Utilize the ability to correctly adjust size, resolution, contrast, and sharpening on digital images in various projects.</p> <p>Demonstrate a basic knowledge of the various file formats used in computer graphics and the advantages and disadvantages of each.</p> <p>Demonstrate the knowledge of the various image storage and backup options available.</p>	<p>1.1.12 A.1 1.1.12 A.2 1.1.12 A.3 1.1.12 A.4 1.1.12 B.1 1.1.12 B.2 1.1.12 C.1 1.1.12 C.2 1.1.12 C.3 1.1.12 D.1 1.1.12 D.2 1.2.12 A.1 1.2.12 A.2 1.3.12 D.1 1.3.12 D.2 1.3.12 D.3 1.3.12 D.4</p>

<p>The development of Graphic Design has played an integral role in the advancement of technology.</p> <p>The pros and cons to different types of camera usage and functions for each.</p>	<p>Use iPads, tablets, Apple TV, and other forms of new technology for artwork creation in the computer graphics classroom.</p> <p>Identify and correctly use the different parts of the digital camera.</p>	<p>1.3.12 D.5</p> <p>1.4.12 A.1</p> <p>1.4.12 A.2</p> <p>1.4.12 A.3</p> <p>1.4.12 A.4</p> <p>1.4.12 B.1</p> <p>1.4.12 B.2</p> <p>1.4.12 B.3</p>
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RANDOLPH TOWNSHIP SCHOOL DISTRICT
Curriculum Pacing Chart
Intro to Computer Graphics
UNIT II: Computer Graphics Skills and Techniques

SUGGESTED TIME ALLOTMENT	Computer Graphics Skills and Techniques	SUPPLEMENTAL UNIT RESOURCES
1 week	Unit II.1 – Computer Procedures <ul style="list-style-type: none"> ○ Starting up computer ○ Opening applications ○ Making folders ○ Saving files ○ Backing-up files 	Lecture and demonstration. Web sites, visuals, prints and videos. Visits to art museums and galleries. Abduzeedo. (2013). <i>Abduzeedo design inspiration</i> . Retrieved from http://www.abduzeedo.com/
4-5 days	Unit II.2 – Scanning <ul style="list-style-type: none"> ○ Two-dimensional objects ○ Three dimensional objects ○ Film ○ 35mm slides 	Adobe Creative Team. (2013). <i>Design with adobe creative cloud classroom in a book: Basic projects using photoshop, indesign, muse, and more</i> . (1st ed.). Adobe Press. Adobe Systems Incorporated. (2013). <i>Adobe</i> . Retrieved from http://www.adobe.com/
3-4 days	Unit II.3 – Digital Camera <ul style="list-style-type: none"> ○ Exposure settings ○ Composition ○ Downloading files 	Gomez-Palcio, B. (2011). <i>Graphic design, referenced</i> . Rockport Publishers. Gube, J. (2009). <i>35 basic tutorials to get you started with photoshop</i> . Retrieved from http://sixrevisions.com/graphics-design/35-basic-tutorials-to-get-you-started-with-photoshop/
1 day	Unit II.4 – Media Card Reader <ul style="list-style-type: none"> ○ Downloading images ○ Key wording/cataloging files ○ Deleting images 	Logic Arts Corporation. (2012). <i>Ideabook tutorials</i> . Retrieved from http://www.ideabook.com/tutorials/
1 day	Unit II.5 – Downloading digital photographs <ul style="list-style-type: none"> ○ Downloading and saving of images Unit II.6- Digital photo contact sheet <ul style="list-style-type: none"> ○ Representing all photographs on contact sheet 	Lopez, L. (2006). <i>Advanced adobe photoshop cs2 basics</i> . (1st ed.). Cengage Learning. Sherwin, D. (2011). <i>Creative workshop, 80 challenges to sharpen your design skills</i> . (1st ed.). HOW Books.

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Intro to Computer Graphics
UNIT III: Art Production/Digital Imaging

ENDURING UNDERSTANDINGS		ESSENTIAL QUESTIONS	
Graphics is a way of visually communicating design solutions in a more direct and precise manner than other artistic mediums such as painting.		<ul style="list-style-type: none"> What factors contribute to the majority of today's advertisements being computer generated? 	
Software is the creative tool that enables the computer graphic artists to create and express visual ideas, parallel to that of the painter and their palette and brush.		<ul style="list-style-type: none"> How does an artist develop a personal style? How can the designs of an advertisement, poster, or web page, impact its value as a communications tool? 	
Sensitivity of the visual impact of design principles is essential for successful design solutions.		<ul style="list-style-type: none"> What does the process of critiquing art contribute to the development of a work of art? How does the understanding works of art from other cultures contribute towards the broadening of an artist's personal perspective? 	
KNOWLEDGE	SKILLS	CC/NJCCCS	
<p>Students will know:</p> <p>Graphic design is a way of visually communicating design solutions.</p> <p>How to manipulate software as the creative tool that enables the artist to create and express visual ideas.</p> <p>How to use a sketchbook as a diary of process, essential to the creation of art.</p> <p>Key vocabulary including but not limited to: <i>layers, resolution, adjustment, levels, filters, contrast, transform, kerning, tracking, color balance.</i></p> <p>How to give and use suggestions and new ideas in order to grow and mature as an artist.</p>	<p>Students will be able to:</p> <p>Design and create works of art with an emphasis on graphic design and layout.</p> <p>Employ software to effectively illustrate subjects in a stylized and creative way.</p> <p>Implement step-by-step design process from brainstorm, rough sketch, rough, to final design.</p> <p>Use digital photography to effectively compose, expose, adjust, print, and manipulate photographs.</p> <p>Assess and critique individual work as well as the artwork of others in terms of effectiveness and overall success to the design problem.</p>	1.1.12 A.1 1.1.12 A.2 1.1.12 A.3 1.1.12 A.4 1.1.12 B.1 1.1.12 B.2 1.1.12 C.1 1.1.12 C.2 1.1.12 C.3 1.1.12 D.1 1.1.12 D.2 1.2.12 A.1 1.2.12 A.2 1.3.12 D.1 1.3.12 D.2 1.3.12 D.3 1.3.12 D.4 1.3.12 D.5	

		1.4.12 A.1 1.4.12 A.2 1.4.12 A.3 1.4.12 A.4 1.4.12 B.1 1.4.12 B.2 1.4.12 B.3
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RANDOLPH TOWNSHIP SCHOOL DISTRICT
Curriculum Pacing Chart
Intro to Computer Graphics
UNIT III: Art Production/Digital Imaging

SUGGESTED TIME ALLOTMENT	Art Production/Digital Imaging	SUPPLEMENTAL UNIT RESOURCES
2 weeks	Unit III.1 – Logo Design <ul style="list-style-type: none"> ○ Use text and applications of typography to create a logo design. 	Lecture and demonstration. Web sites, visuals, prints and videos. Visits to art museums and galleries.
2 weeks	Unit III.2 – Positive/Negative Design <ul style="list-style-type: none"> ○ Focus on composition in regards to positive and negative design aspects in an artwork. 	Abduzeedo. (2013). <i>Abduzeedo design inspiration</i> . Retrieved from http://www.abduzeedo.com/
1 week	Unit III.3 – Repetitive Design <ul style="list-style-type: none"> ○ Focus on composition in regards to designs including repetitive features. 	Adobe Creative Team. (2013). <i>Design with adobe creative cloud classroom in a book: Basic projects using photoshop, indesign, muse, and more</i> . (1st ed.). Adobe Press.
2 weeks	Unit III.4 – Caricature <ul style="list-style-type: none"> ○ Focus on the self-portrait as it relates to computer manipulation. 	Brackman, H. (1984). <i>The perfect portfolio</i> . Amphoto Books.
2-3 weeks	Unit IV.5 – Image Combine <ul style="list-style-type: none"> ○ Focus on techniques and skills learned to create a multiple image document. 	Campbell, B. (1981). <i>World photography</i> . (1st ed.). Ziff-Davis Books
2 weeks	Unit V.6- Animation <ul style="list-style-type: none"> ○ Understand the process of moving images as it relates to extended areas of computer graphics. 	Gube, J. (2009). <i>35 basic tutorials to get you started with photoshop</i> . Retrieved from http://sixrevisions.com/graphics-design/35-basic-tutorials-to-get-you-started-with-photoshop/
2 weeks	Unit VI.7-Cubist Image <ul style="list-style-type: none"> ○ Introduction of art history techniques and time periods as it relates to computer graphics. 	London, B., Upton, J., & Stone, J. (2013). <i>Photography</i> . (11th ed.). Pearson.
3-4 weeks	Unit VII.8-Illustration	Logic Arts Corporation. (2012). <i>Ideabook tutorials</i> . Retrieved from http://www.ideabook.com/tutorials/
		Youtube. (2010). <i>Photoshop tutorial: Making text photo</i> . Retrieved from http://www.youtube.com/watch?v=DCWloOrUm9E

	<ul style="list-style-type: none"> ○ Introduction of illustration techniques for projects as it relates to computer graphics. 	Youtube: Sharif. (2011). <i>Photoshop watercolour effect tutorial</i> . Retrieved from http://www.youtube.com/watch?v=rvrLhCGvIGQ
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Appendix A - Resources:

Sample Rubric

Rubrics, Checklists, Self-assessment, Group critique, Reflective writing, Peer assessments, Portfolio evaluation, Sketchbooks, Journal entries, Presentations, Classroom participation, Quizzes and tests, Research papers.

Skills	Criteria				Total Points
Elements & Principles	6 or Less	7	8	9-10	
	Project incomplete or complete but shows no evidence of understanding elements/principles, no planning	Project complete but shows little evidence of planning or understanding elements/principles	Project shows adequate understanding of elements/principles, evidence of some planning	Project planned carefully, several preliminary sketches, used elements/principles effectively to create strong composition	
Creativity & Originality	Project incomplete or finished with no evidence of experimentation	Project finished but with trite imagery/solutions, no evidence of experimentation/originality	Project finished but no completely original, problem solved logically	Project finished with total originality after thorough experimentation	
Effort & Perseverance	Project finished or completed only after many prompts/ideals/physical help & solutions from others	Project finished with minimum effort/met minimum requirements with no extra effort	Project finished with hard work but some details lacking	Project finished with maximum effort, went well beyond requirements	
Craftsmanship & Skill	Project finished with no attention to details, quickly thrown together	Project finished but somewhat messy	Project finished with most details, minor flaws present	Project beautifully/carefully made	
Attitude & Responsibility	Student off task most of the time, didn't care for materials, sought ways to avoid work	Student did bare minimum	Student worked enthusiastically, assisted with preparation and cleanup	Student worked enthusiastically toward group goals, mentored others needing help, mature behavior	
Teacher Comments:					

Appendix B - Resources: Sample Handout

Elements and Principles of Art and Design

THESE DEFINITIONS BRING SUCCESS TO ANY PIECE OF ARTWORK

Composition--An orderly arrangement of elements using the principles of design. The principles of design help you to carefully plan and organize the elements of art so that you will hold interest and command attention. This is sometimes referred to as **visual impact**. In any work of art there is a thought process for the arrangement and use of the elements of design. The artist who works with the principles of good composition will create a more interesting piece of art it will be arranged to show a pleasing rhythm and movement. The center of interest will be strong and the viewers will not look away, instead, they will be drawn into the work. A good knowledge of composition is essential in producing good artwork. Some artists today like to bend or ignore these rules and therefore are experimenting with different forms of expression. We think that composition is very important. The following will assist you in understanding the basics of a good composition:

Elements Of Art

Line - is a mark on a surface that describes a shape or outline. It can create texture and can be thick and thin. Types of line can include actual, implied, vertical, horizontal, diagonal and contour lines.

Color - refers to specific hues and has 3 properties, Chroma, Intensity, and Value. The color wheel is a way of showing the chromatic scale in a circle using all the colors made with the primary triad. Complimentary pairs can produce dull and neutral color. Black and white can be added to produce tints (add white), shades (add black) and tones (add gray).

Texture - is about surface quality either tactile or visual. Texture can be real or implied by different uses of media. It is the degree of roughness or smoothness in objects.

Shape - is a 2-dimensional line with no form or thickness. Shapes are flat and can be grouped into two categories, geometric and organic.

Form - is a 3-dimensional object having volume and thickness. It is the illusion of a 3-D effect that can be implied with the use of light and shading techniques. Form can be viewed from many angles.

Value - is the degree of light and dark in a design. It is the contrast between black and white and all the tones in between. Value can be used with color as well as black and white. Contrast is the extreme changes between values.

Size - refers to variations in the proportions of objects, lines or shapes. There is a variation of sizes in objects either real or imagined.

These elements are used to create the Principles of Design. Principles are the results of using the Elements. When you are working in a particular format (size and shape of the work surface) the principles are used to create interest, harmony and unity to the elements that you are using. You can use the Principles of design to check your composition to see if it has good structure.

Elements and Principles of Art and Design (cont'd)

Principles of Compositional Design

The principles of design are the recipe for a good work of art. The principles combine the elements to create an aesthetic placement of things that will produce a good design.

Center of interest - is an area that first attracts attention in a composition. This area is more important when compared to the other objects or elements in a composition. This can be by contrast of values, more colors, and placement in the format.

Balance - is a feeling of visual equality in shape, form, value, color, etc. Balance can be symmetrical or evenly balanced or asymmetrical and unevenly balanced. Objects, values, colors, textures, shapes, forms, etc., can be used in creating a balance in a composition.

Harmony - brings together a composition with similar units. If your composition was using wavy lines and organic shapes you would stay with those types of lines and not put in just one geometric shape. (Notice how similar Harmony is to Unity - some sources list both terms)

Contrast - offers some change in value creating a visual discord in a composition. Contrast shows the difference between shapes and can be used as a background to bring objects out and forward in a design. It can also be used to create an area of emphasis.

Directional Movement - is a visual flow through the composition. It can be the suggestion of motion in a design as you move from object to object by way of placement and position. Directional movement can be created with a value pattern. It is with the placement of dark and light areas that you can move your attention through the format.

Rhythm - is a movement in which some elements recurs regularly. Like a dance it will have a flow of objects that will seem to be like the beat of music.

The Principles of Design are the **RESULTS** of your working with the **Elements of Art**. Use them in every piece of art you do and you will be happy with the results.

Appendix B - Resources:
Sample Handout

Connecting & Scanning

How to connect to the scanner:

- On the top bar click “Go”
- Select “Network”
- Go into the folder “My Network”
- Select “HSArtB133FilmScanner” or “HSArtB133MacScanner”
- Click “connect”

Username: student

Password: art

- Select “Student” and click OK

How to scan an image:

- Log onto computer using:

Username: student

Password: art

- **Turn the scanner on!**

- Open Photoshop on the scanner computer

- Select file IMPORT EPSON SCANNER

- Preview your image before scanning

- Click Scan Image and save your image to the correct folder. (Drop Box-Fogas-Scans)

- Close out of everything and go back to your computer

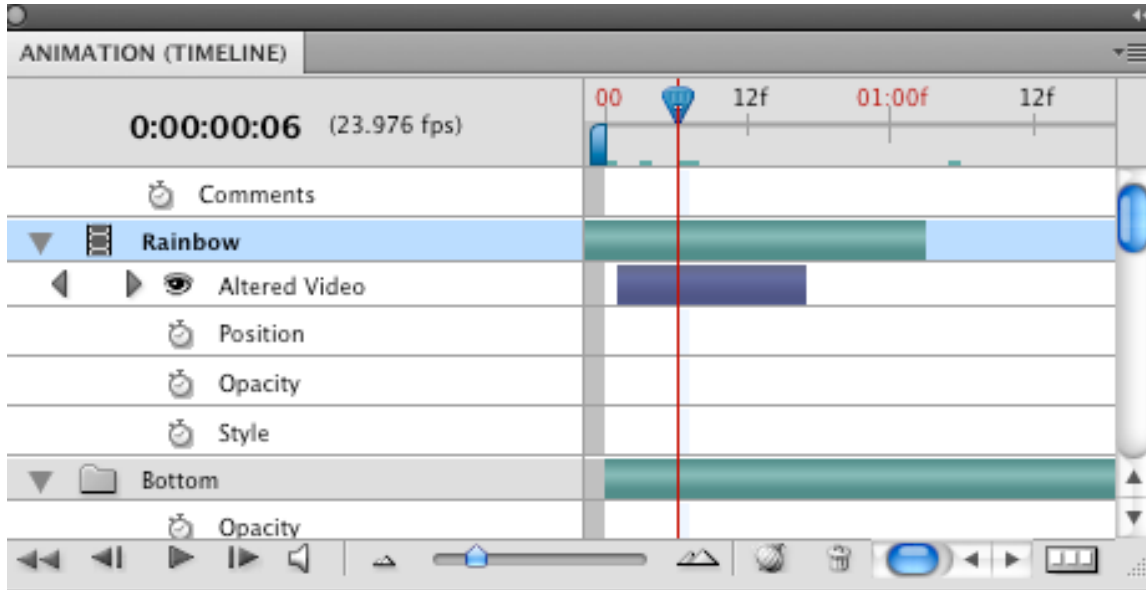
- Connect to the scanner computer and drag your image file to your folder

Appendix B - Resources: **Sample Handout**

Animation Project Helpful Hints

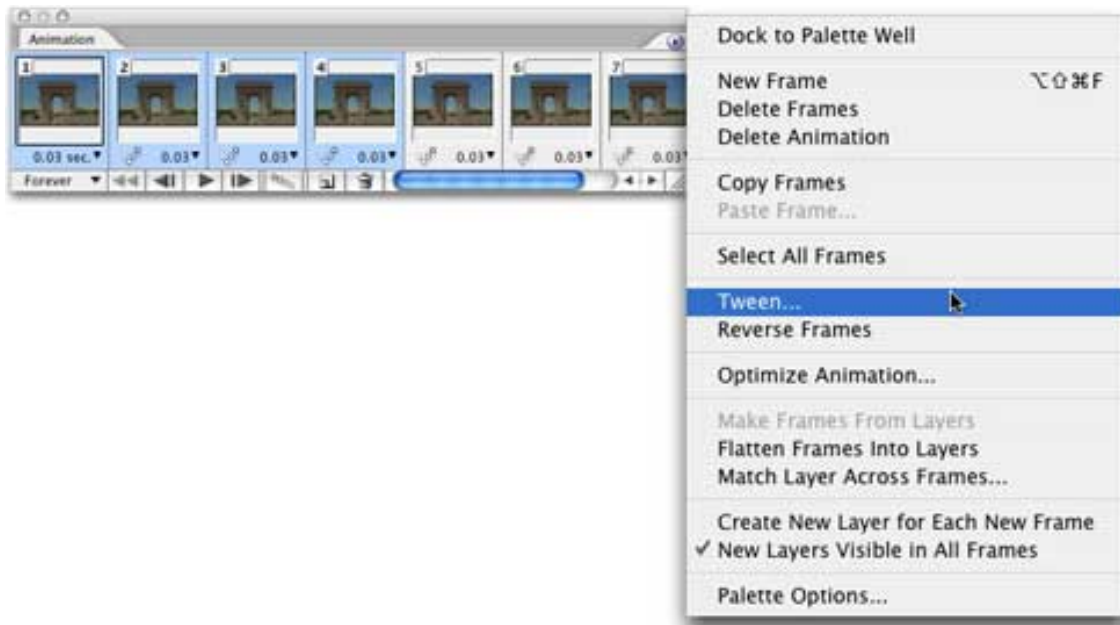
To pull up the animation toolbar choose WINDOW>ANIMATION

To Select the FRAMES MENU > Select the three Squares to change the view to the Frames Mode. See below.



To TWEEN from one slide to another> Select the Four Circles Icon or Right Click and Choose TWEEN. Make sure your layers are selected as well as the next frame. See below.

Animation Project Helpful Hints (cont'd)



Other Helpful Hints:

GROUP your layers together to create selections so you do not get confused.

DO NOT use Apple T or transform to change the size or positions of text; you MUST create a NEW LAYER.

Be sure to save your document as .PSD until you are ready to save your animation as .GIF. You can do this by going to SAVE FOR WEB AND DEVICES > GIF.

Tween in between motions to create a flow for your image. Do this for changing backgrounds as well.

Make sure you DO NOT duplicate slides prior to moving them. If you work slide by slide like your animation will build upon itself correctly.

Appendix-C Resources:
Sample Lesson Plan

Visual and Performing Arts Lesson Plan

Teacher: Kelly Fogas

Subject: Computer Graphics

Date: September-October

Unit: Scanning/Collage

Enduring Understandings/Objective:

- 1. Use the different elements of art and principles of design to strengthen a layout.**
 - 2. Demonstrate knowledge of planning and designing a multimedia project.**
 - 3. Understand and use the application Photoshop and its filters to alter scanned images.**
-

NJCCCS Addressed: (check all that apply)

(X) 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.*

(X) Standard 1.2 History of the Arts and Culture: *All students will understand the role, development, and influence of the arts throughout history and across cultures.*

(X) Standard 1.3 Performing: *All students will synthesize skills, media, methods, and technologies that are appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art.*

(X) Standard 1.4 Aesthetic Responses & Critique Methodologies: *All students will demonstrate and apply an understanding of arts philosophies, judgment, and analysis to works of art in dance, music, theatre, and visual art.*

Essential Questions:

- 1. How can the use of different computer software skills and techniques determine the outcome of the work of art?**

2. What role does software have on graphic design?

3. What techniques have the computer graphic artists used in a work of art?

Materials:

Mac Computers, media card readers, flatbed scanner, film scanner, color ink jet printer, inkjet paper, digital camera, memory cards, mat board, mat knives, Adobe Creative Suite.

Vocabulary:

Scanning-The process of translating photographs into a digital form that can be recognized by a computer.

Layers-Layers are like transparencies stacked one on top of one another. Each layer can have different images and effects. When the layers are stacked, the images appear as if they are all a single image.

Layer Styles-Layer styles are special effects that can be applied to an entire layer overall. Layer styles include a variety of lighting effects, textures and overlays.

Brightness/Contrast-Photoshop allows you to adjust the brightness and contrast of your image. If an image is too light or too dark, you can use the brightness and contrast controls to improve the picture.

Procedure/Learning Experiences:

1. Demonstration-Students will view how to scan 2-D and 3-D objects. Students must bring in at least 5 different objects with texture. Examples will be shown of previous student work. (1 Days)

2. Setup-Students will begin to scan their own objects, as well as connect to their computer to start using the objects. At this stage students will begin learning how to use multiple layers in Photoshop. (2-3 Days)

3. Study-Students will start creating thumbnail versions of their images, adjusting contrast, color, and filters. (2 Days)

4. Process-Students will choose one final thumbnail to explore as a larger 8 x 10 version. Students must have a minimum of 5 different textures and 3 different color overlays. (3 Days)

5. Critique-Students will submit artwork to the teacher via the scanner. All artwork will be shown over the LCD projector. Students will participate in a verbal critique. (1 Day)

Differentiation: (check all that apply)

(X) Process

(X) Content

(X) Product

Assessment: (list types utilized)

- 1. Students will be given a participation grade during critique.**
- 2. Students will be given points for bringing in multiple objects with texture.**
- 3. Students will be graded using a rubric for their final project.**

Appendix-C Resources:
Sample Lesson Plan

Visual and Performing Arts Lesson Plan

Teacher: Kelly Fogas

Subject: Computer Graphics

Date: October

Unit: Digital Portraits

Enduring Understandings/Objective:

- 1. Use the different elements of art and principles of design to strengthen a layout.**
 - 2. Demonstrate knowledge of planning and designing a multimedia project.**
 - 3. Understand and use the application Photoshop and its filters to alter scanned images.**
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NJCCCS Addressed: (check all that apply)

(X) 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.*

(X) Standard 1.2 History of the Arts and Culture: *All students will understand the role, development, and influence of the arts throughout history and across cultures.*

(X) Standard 1.3 Performing: *All students will synthesize skills, media, methods, and technologies that are appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art.*

(X) Standard 1.4 Aesthetic Responses & Critique Methodologies: *All students will demonstrate and apply an understanding of arts philosophies, judgment, and analysis to works of art in dance, music, theatre, and visual art.*

Essential Questions:

- 1. How can the use of different computer software skills and techniques determine the outcome of the work of art?**

2. What role does software have on graphic design?

3. What techniques have the computer graphic artists used in a work of art?

Materials:

Mac Computers, media card readers, flatbed scanner, film scanner, color ink jet printer, inkjet paper, digital camera, memory cards, mat board, mat knives, Adobe Creative Suite.

Vocabulary:

Scanning-The process of translating photographs into a digital form that can be recognized by a computer.

Layers-Layers are like transparencies stacked one on top of one another. Each layer can have different images and effects. When the layers are stacked, the images appear as if they are all a single image.

Liquify-There are many sub tools under the liquify application. These are used to bloat, pucker, mirror, and distort facial features to create a caricature.

Caricature-a portrait that exaggerates or distorts the essence of a person or thing to create an easily identifiable visual likeness. The portrait uses exaggeration and oversimplification of features.

Art History Implication:

David Levine (December 20, 1926 – December 29, 2009) was an American artist and illustrator best known for his caricatures in The New York Review of Books. He has been often called "the greatest caricaturist of the last half of the 20th Century".

Procedure/Learning Experiences:

1. Demonstration-Students will learn how to take digital pictures during class. They will set up the umbrellas and photography equipment. (1 Days)

2. Setup-Each student will take a turn posing for 4 pictures of their faces as well as taking pictures. The students will have their own artwork to complete as well as the experience of taking the pictures. (2-3 Days)

3. Study-Students will start creating thumbnail versions of their images, adjusting contrast, shadows, highlights, and color. (2 Days)

4. Process-Students will complete 3 caricature portraits of themselves. They will submit their best caricature for grading. (5 Days)

5. Critique-Students will submit artwork to the teacher via the scanner. All artwork will be shown over the LCD projector. Students will participate in a verbal critique. (1 Day)

Differentiation: (check all that apply)

- (X) Process**
 - (X) Content**
 - (X) Product**
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Assessment: (list types utilized)

- 1. Students will be given a participation grade during critique.**
- 2. Students will be given points for bringing in multiple objects with texture.**
- 3. Students will be graded using a rubric for their final project.**

Appendix-D Resources: **Sample Sources**

Software

Adobe Creative Suite 3,4, & 6 (Photoshop, Bridge, InDesign, DreamWeaver, Illustrator, Flash, Acrobat) iPhoto, iPads, Apple TVs, Projector, iTunes, GarageBand, QuickTime, Microsoft Word, Safari, Firefox

Abduzeedo. (2013). *Abduzeedo design inspiration*. Retrieved from <http://www.abduzeedo.com/>

Adobe Creative Team. (2013). *Design with adobe creative cloud classroom in a book: Basic projects using photoshop, indesign, muse, and more*. (1st ed.). Adobe Press.

Adobe Systems Incorporated. (2013). *Adobe*. Retrieved from <http://www.adobe.com/>

Brackman, H. (1984). *The perfect portfolio* . Amphoto Books.

Campbell, B. (1981). *World photography* . (1st ed.). Ziff-Davis Books

FolioHD. (2011). *Online portfolio*. Retrieved from <http://foliohd.com>

Gomez-Palcio, B. (2011). *Graphic design, referenced*. Rockport Publishers.

Gube, J. (2009). *35 basic tutorials to get you started with photoshop*. Retrieved from <http://sixrevisions.com/graphics-design/35-basic-tutorials-to-get-you-started-with-photoshop/>

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PhotoshopCafe. (2013). *Photoshop cafe: The ultimate in photoshop training*. Retrieved from <http://photoshopcafe.com/>

Sherwin, D. (2011). *Creative workshop, 80 challenges to sharpen your design skills*. (1st ed.). HOW Books.

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Youtube. (2010). *Photoshop tutorial: Making text photo* . Retrieved from <http://www.youtube.com/watch?v=DCWloOrUm9E>

Youtube: Sharif. (2011). *Photoshop watercolour effect tutorial*. Retrieved from <http://www.youtube.com/watch?v=rvrLhCGvlGQ>