

PhotoShop - Computer Art

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Photoshop-Computer Art L. Shaw F.D. Roosevelt High School

Program Outline

Grades: *Elementary, Intermediate, and High School*

Students: *This enjoyable and creatively stimulating course is appropriate for any student who shows the ability to utilize a computer keyboard, remember (or write down) a basic computer program's commands (as they are being taught), and is willing to learn something fun while maintaining a mature attitude towards technological equipment.*

PhotoShop--Computer Art allows students to alter both photographic and hand-drawn imagery for a variety of purposes, using Adobe PhotoShop version 4 or higher. Each student, following sequential instruction, learns how to manipulate imagery in an individualized manner to express an artistic point of view or to satisfy the demands of a given project. The individual learner works at his/her own pace. The course offers everyone an opportunity to create something visually interesting without the need for prior art experience. Class members often collaborate on projects or share information regarding techniques.

Additionally, class members receive instruction regarding the operation of the computer and its peripheral devices. This part of the course aids the development of technological awareness, and also encourages students to frequent other avenues that make use of the computer (such as public and private libraries and the Internet) for research and for writing and report making.

Goals and Overview

The primary goal of this course is to provide students with an alternative or adjunct to the traditional art course. Because it is computer based, it offers students a foundation that is timely. I have found that for almost all students, the computer is a draw, or magnet. Because we live in a visual society (video, TV, computer, outdoor advertising, etc.), the students relate to this course with ease.

Also, students who lack confidence in their ability to perform well in a traditional academic art course seem to be less threatened, as the outcome of their projects are aided by an "extension" to their abilities.

The PhotoShop program allows students to have complete control over an image's color, transparency (or opaqueness), or size. No "messiness" occurs, as all painting media is electronic.

The course transcends language limitation. In my experiences teaching this course to both mainstream and Special Education students, I have seen those who have shown difficulty expressing themselves linguistically (either verbally or written) find an outlet that greatly expanded their horizons. One former student who suffered from the effects of profound dyslexia discovered that he was able to perform computer graphics tasks with ease. He is now completing a course in computer graphics at a junior college. Prior to attending the class, his outlook as to his future career possibilities seemed stagnant.

Writing is a major component of the course, as I stress the keeping of a daily journal. The written component also appears on tests that measure task proficiency in the form of written answers. I give these with the conclusion of each new component to the program. (A sample test is provided in this booklet.)

To encourage artistic and social awareness, (art history), I've included projects that reflect the outcome of museum trips. Here students become aware of artistic styles that they relate to, and adopt, to gain a further appreciation of the arts. Another project that has proven to be of great merit in this area is the "Millennium Stamp Project." Students create their own postage stamps that reflect a moment in history during which the human condition was improved through an individual's intervention.

In terms of classroom needs, I recommend: the use of a primary instructor along with a paraprofessional with prior computer knowledge, one computer station (IBM or Apple style with either a Windows or Mac operating system) to serve no more than two students during one class period, a color printer connected to all the computers through a server, a scanner, and a white board rather than a blackboard (to reduce dust) for instruction dissemination.

It is highly recommended that the teacher and students jointly keep and add to, on a regular basis, a class

"image library." Sources such as unwanted image CDs, interesting magazine images, advertising brochures, and record albums help transform a student with limited ideas into one ripe with brainstorm.

Sample Lesson Plans

The majority of lessons taught last more than two days, as students require not only verbal instruction, but also time to master the new information.

The lessons cover the following, in this order:

1) Basic computer operation components, peripherals, and terminology, 2) Basic image editing tools, selection, painting, and drawing), 3) Layering, 4) Photo retouching, and 5) advanced projects.

Sample Lesson One: "Drawing and Erasing"

Objectives: 1) To complete a simple drawing using the Pencil and Eraser tools found in the PhotoShop toolbox. 2) To develop hand - eye coordination. 3) To become more familiar with selecting a PhotoShop tool's options. 4) To create a work of art in line, consisting of open and closed shapes, as the basis for a painting project in a next lesson.

Motivation: Display simple line drawings, particularly contour-style drawings previously done by students in a basic art class, or perhaps those done by Picasso, Matisse, or Haring. Explain that the students are to create a drawing, perhaps of their hands, or a landscape with a figure that will be used for filling in with color in the next lesson.

Alternate approach: Students can also draw on paper first and then copy by eye using the mouse. It is not recommended that they use the scanner for copying purposes, as this exercise is to develop familiarity with the mouse and drawing tool.

Tools/Materials: The Eraser tool, the Pencil tool, and a floppy disk.

Procedure:

Step 1

With the PhotoShop program open and running, select File > New from the Task/Menu bar at top of screen. Choose an image size of at least 6 inches square, or 6 inches by 8 inches (horizontal format for landscape). This can also be done by going to Edit in the Task/Menu bar at top of screen and selecting Image > Image Size. (The pixel size will change automatically.)

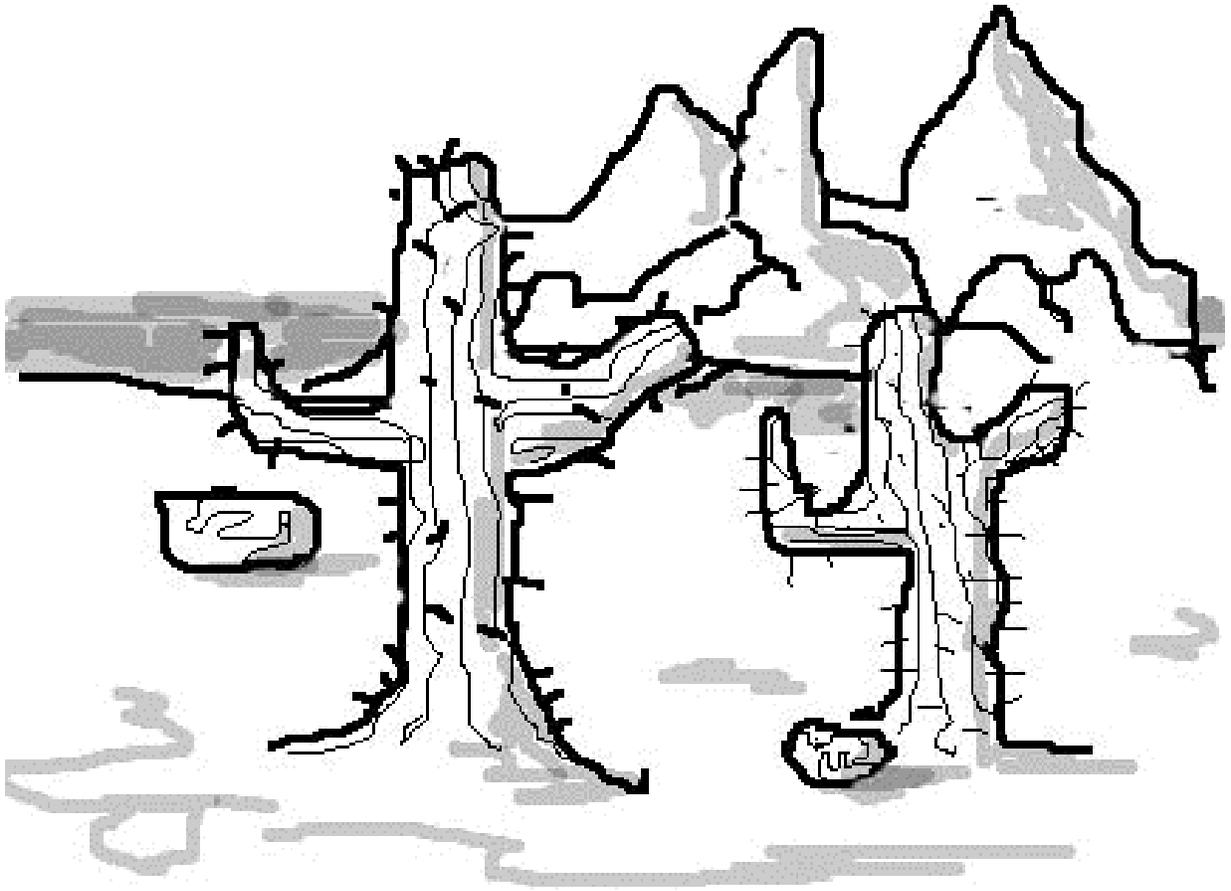
Step 2

Make sure the PhotoShop Toolbox is opened (visible) and select the drawing tool (pencil icon). Double-click on the icon, and the tool's option palette will become visible. (You should have the Navigator Palette visible also. If it isn't, select it from Window > Show Navigator Palette in the Task/Menu bar). The Pencil Tool's Options Palette enables you to change the opacity of the line with a "slider bar" located to the right of the Option palette.

To alter the line thickness, go to and select Window > Show Brushes in the Task/Menu bar. Select by clicking any of the desired brush sizes. Students should practice this a few times to become familiar with the choices available.

To erase a particular area (a whole line or part of a line), select the Eraser tool from the toolbox. Again, double-click the Eraser tool's icon to display its options.

Begin and complete a drawing, planned or unplanned. When finished, save the drawing on a floppy disk by selecting File > Save from the Task/Menu bar. Make sure the floppy disc is labeled. A sample drawing for this exercise is shown next.



Line drawing achieved with Pencil Tool. Suitable for painting.

Sample Lesson Two: "The Paintbrush Tool"

Objectives: 1) To become familiar with selecting and managing the PhotoShop painting tool. 2) To learn how to select colors. 3) To learn how to fill in selected areas with a chosen color. 4) To complete the coloring of a previously completed drawing as a first painting.

Motivation : Display the previous sample line drawing and then show a previously completed sample painting. Explain that students will be filling in closed shape areas with color in a sequential manner in order to achieve a final result.

Tools/Materials: A previously completed drawing (saved on a floppy disc) and the Paintbrush tool.

Procedure:

Step 1

Open the PhotoShop program. Then open the saved drawing file by selecting File > Open from the Task/Menu bar at the top of the screen. Check to see whether the Color Palette is also on-screen. If not, select it from Windows in the Task/Menu bar, and click on Show Swatches. Explain that the Swatches Palette contains 122 colors from which to choose. Although colors can be customized and then added to the palette, for now, this will be the area to select colors from. Creating and saving custom colors will be taught in a future lesson.

Step 2

With the Toolbox, Swatches Palette, and drawing visible, go to the Toolbox and select a color in the Swatches Palette by clicking on that color. Notice that the Foreground box at the bottom of the toolbox is now the chosen color. This means that when you use the Paintbrush, it will paint with that color.

Step 3

In order to paint an area with a color, an appropriate- sized brush needs to be selected. To do this, go to the Brushes Palette, which should be visible to the right of the screen, under, or above the Swatches Palette. If it is not visible, go to Windows > Show Brushes in the Task/Menu bar. Once displayed, click on a brush size you feel will adequately fill in the area you've decided to paint. Try a sample stroke within the area. If it's too small or big for your liking, select a different brush size by clicking within the Brushes Palette. Note: Before the actual painting process begins, students may opt to change the opacity of the color they are applying by using the slider in the Options Palette for the Paintbrush. Click on the small black triangle in the tool's options to

reveal the slider. Again, the Options Palette for the paintbrush (and most tools) becomes available once the tool is double-clicked. A swipe with a brush can be undone by going to Edit in the Task/Menu bar and selecting Undo.

Step 4

In order to fill in an area with color but not fill in an adjacent area, click on the Magic Wand tool icon in the toolbox. Then click once within the desired area. Notice that the area clicked on is surrounded by "walking ants." This means that the area within this border is chosen for painting. To increase the painting area, while holding down the Shift key, click on adjacent areas.

Step 5

Again, click on the Paintbrush tool icon, and begin painting within the selected area. Do this until the area is filled. To hide the edges of the selection border, go to View > Hide Edges in the Task/Menu bar. When completed, soften the edges of the painted area with a softening filter. Go to Filter > Blur > Gaussian Blur. Make sure the Preview option is selected, and experiment with this filter's abilities by dragging the Radius slider to the right. The higher the value in the Radius text box, the more blurred the colors will be in the selection.

Step 6

To complete this portion of the painting exercise, select Select > Deselect to deselect everything. Look at the Layers palette to the right. Notice that there are two layers: one for drawing and one for the completed painting. The painted area should be positioned over the drawing. Click on the painted area, and hold down the mouse button while on that layer. Drag the painted layer below the drawing layer. Do this each time a subsequent layer is painted. The purpose of the layer is to enable the artist complete control over each section, should any changes be desired later. Review the painting steps with students, and explain that the remaining portions of the drawing are to be filled in. Students should record the procedures in their journal, so that they can work independently.

Sample Lesson Three: Erasing

Objectives: 1) Students will learn how to touch-up mistakes or return an area to its previous condition, and become familiar with the Eraser tool.

Step 1

Open a new file and create a simple line drawing of doodles with the Pencil tool. When done, click the Eraser Tool in the Photoshop Toolbox and move the pointer into the image area. The Eraser tool, by default, becomes the size and shape of the last paintbrush tool selected. To change the size and shape, return to the Brushes Palette.

It is recommended, at this point, that students select a hard-edged brush from the Brushes palette.

Step 2

Drag the eraser over any portion of the drawing. Experiment with different-sized brushes picked from the Brushes palette. Explain that the eraser is actually returning a transparency to an area, rather than actually erasing it. Experiment with the Opacity slider attached to the eraser's options to explore this feature.

Sample Project Ideas

Design a CD cover.

Create a symbolic self-portrait.

Create a self-portrait from a scanned line drawing.

Create a postage stamp celebrating a human achievement.

Create a postage stamp celebrating an historical event.

Illustrate a story.

Create a book cover or a movie poster.

Retouch a photo, adding or removing image elements.

Restore an old family photo.

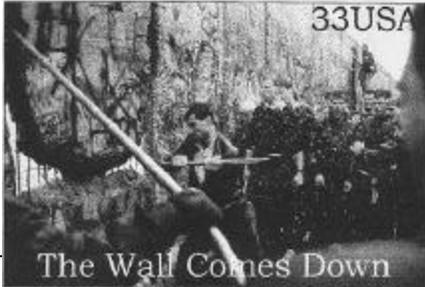
Design an interior space.

Create an image of your room.

Design a food or clothing label.

Design safety signs.

Design an article of clothing.



Sample Student Work



Postage stamp, Anthony Lee
Postage stamp, R. Podorski



Postage stamp,
D. Viterbo

CD cover, Chris Frazetta

A Museum Trip, Cary Borsic

Resources

The opportunity to acquire imagery for this course is unlimited. Images were acquired from old and new photos, magazines, library books, record albums, newspapers, etc. It is recommended that the teacher keep an "artist's morgue" or "image library" in the confines of the room for student use.

It is also possible to download copyright-free images from the Internet. Using a search engine such as Lycos, Yahoo, or Hotbot, a researcher can easily peruse obtainable images from almost any museum (the Smithsonian is excellent) or company that offers them. Make sure that downloadable imagery is copyright-free so as to avoid infringement.

For equipment purchases such as scanners, digital cameras, disks, and printers, the following outlets are recommended:

*J and R Music World, Park Row, NYC
Phone: 1-800- 221-8180, or www.jandr.com*

Buy.com (an Internet wholesale outlet) www.buy.com

*www.cnet.com
(for product review and price comparison)*

*Adobe Systems
345 Park Avenue, San Jose, CA 95110-2704, or
www.adobe.com (for the PhotoShop program and product updates)*

Staples Office Supplies (for printer paper, floppy disks, etc.)

Local museums

Bibliography

Magazines

*American Artist (excellent for images)
Maximum PC (excellent for computer knowledge)
Time and Newsweek (excellent for images)*

Books

*The MacMillan Publishing Company, division of computer literature, publishers of Adobe Photoshop "Classroom in a Book" *The most concise and well-written book on the current version of Adobe Photoshop. (Complete with tutorials, a tutorial CD, and step-by-step instructions)*

PhotoShop for Dummies a "Cliff Notes" for PhotoShop. Available at any large retail bookshop. Simple and handy for reference if the MacMillan PhotoShop book is unavailable.

Booksellers

Amazon.com

Borders Books (available online)

Barnes and Noble (available online)

Miscellaneous

The U.S. Postal Service (excellent source for stamp ideas)

B and H Photographic Supplies, 8th Avenue & 34th St., NYC (for digital cameras)

A Sample Photoshop Test

Test 1 / Vocabulary

ACA-1 Units 1-2 Date _____

Mr. L. Shaw

Name _____

Explain the function(s) of each term below. If the term is preceded by an asterisk (), give at least 1 to 2 examples of that term with your explanation. Use the loose-leaf sheets provided for your answers. Make sure you number your answers correctly and write **neatly**. (5 pts.each)*

- | | |
|---------------------|--|
| 1- Floppy Disk | 11- Task/Menu bar |
| 2- C.P.U. | 12- Recycle bin |
| 3- Scanner | 13- Zoom tool |
| 4- Disk Drive | 14- Palette Group |
| 5- Operating System | 15- Navigator/Info/Options |
| 6- *Input device | 16- Toolbox |
| 7- *Output device | 17- A work file, or file |
| 8- Hard drive | 18- Info Bar's two numbers example- [58k/123K] |

- 9- Delete 19- .DOC , or .PSD
10- Monitor 20- Landscape, or Portrait Orientation

Extra Credit (Do these in case you were stuck trying to figure out one or more terms above.)

These are worth 2 points each. Please don't forget to number the answers. You don't have to do them all or do them in order. Just choose the ones you're sure you know.

1. One method of enlarging an image or image element is to select "Zoom - In" in the task menu bar. Describe two other ways of enlarging the image or image element.
2. Suppose the image that you open is displayed small. What are the steps or commands you would need to enlarge it on the screen?
3. Define the term "pixel."
4. Explain the term "hidden tools." Include how you find, expose and select them.
5. Define "icon"--as in "Toolbox icons."
6. Define what "layers" are and what they can do for the PhotoShop artist.

The following is an example of what a student would keep in a daily journal. The Daily Journal is just that: a daily recording (diary style) of one's experiences in the classroom, and one's plans or goals for the upcoming day or project.

Monday, May 5

Today we learned how to use the Clone tool. It's really handy for fixing bad areas in a photo, or other parts of a picture. Mr. Shaw also showed us how we can use it with the Rubber Stamp tool to add elements of a picture into the same picture's area. This way, we don't always have to select a shape and cut it. It's a neat shortcut. I think I'll use it in a picture I have that I scanned. I want to multiply the leaves on a tree to fill up some of the tree's empty branches. Also, I want to use it to fix my hair in a picture I have of myself.

Tuesday, May 6

We learned more about the Rubber stamp tool. I worked on the tree again. It looks great. I also used it with the eraser tool. When I changed the eraser's opacity, I was able to lighten up some of the leaves to give it a lighting effect. I asked Mr. Shaw how to change the lighting of the picture, and he suggested that I either wait until next week when we'll discuss a special effects filter, or to go ahead and experiment with it on my own. He said he'd be available to answer any questions, and to show me some tips and tricks.

Looking at the makeup of an image has gotten more complex since I took this class. It's also given me a different understanding of what an artist has to consider when a picture is created. Oh, test next Thursday on the Cloning tool.

A Testimonial

The following is a copy of a student's response to the written component of a final exam. The question posed to the students was:

"How did the PhotoShop experience help enrich you artistically, and can it provide a positive experience for those who are not artistically inclined?"