

INTRO to Studio in Art for Broadcasting Spring 2019

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INTRO TO Studio in Art for Broadcasting

Intro to Studio in Art for Broadcasting is an introductory level, application-based program designed to assist students in the navigation and comprehensive understanding of the functions and techniques in Adobe Photoshop, Illustrator and InDesign as they are used in a Broadcasting context. Students will be able to develop image-processing techniques such as manipulating rasterized images and designing vector graphics in order to create artwork specific to the needs for the Broadcasting program. This course will provide a foundation for students to excel in a myriad of disciplines including graphic design, digital photography and video editing. This will enable them to use these skills in future broadcasting courses as well as a variety of educational and design related career paths.

This is a half year, half credit course paired with a half year course MUSIC for Broadcasting to fulfill their high school art requirement.

This course is ***only*** open to students enrolled in the Broadcasting program.

Curriculum Overview

Unit 1 – Navigating the Mac, file types, DPI

Unit 2 – Intro to Photoshop, Elements & Principles, & intro to a “Spec sheet”

Unit 3 – Photography - Composition, Lighting, & Portraiture

Unit 4 – Intro to Layers: Title Screen for Audio Report

Unit 5 – Intro to Illustrator: Logos, Lower ⅓, Typography and the Infographic

UNIT I: NAVIGATING THE MAC (appx. 2 days)

This unit will go through how to login into your Mac, use the launch pad to find applications and the trash bin as well as file types, folders, renaming and organizing files. Saving on the computer or on external devices such as flash drives and hard drives and sharing files on google cloud will be also be introduced in the unit.

Objective 1- The Mac

Log-In	Allows access to the Mac. There is no individual account protected by a password, all files can be viewed, accessed, and edited by anyone who uses the machine. <ul style="list-style-type: none">• Click on “Student” icon• Hit Return
The Dock	The Dock is the bar of icons that sits at the bottom of your screen. It provides easy access to many of the apps that come with your Mac (Finder, Launchpad, Mail, Safari, Calendar). You can also add your own apps, documents and folders to the Dock. <ul style="list-style-type: none">• Scroll over an icon, it will enlarge slightly and the name will appear above it.• Click to open• To force quit, hover over icon, hold down left mouse key and scroll down to “Force Quit”, hold until application closes
Launch pad	Launchpad helps you find, organize and easily open all of your Apps. By default, items in are arranged in alphabetical order. You can re-arrange icons by dragging them in the order you want. If there's not enough room to show all of your apps on one screen, Launchpad creates multiple pages. The dots at the bottom of the Launchpad screen show you how many pages of apps there are, and which page you are currently viewing. <ul style="list-style-type: none">• Click on Launchpad (Rocketship) icon in the Dock• Locate App icon and click to open• If icon is not located on present page, use right arrow key to scroll to next screen, or click the next dot on the bottom of the screen.• Click anywhere (except on an icon) to exit Launchpad.
Trash Bin	The Trash is where any deleted files go. They are kept here so that if you later change your mind, the files can be rescued. <ul style="list-style-type: none">• <u>Drag and drop</u> a file on the trash icon in the dock• <u>Control-click</u> on a file and select "Move to Trash" from the menu• Select a file or files and choose "File > Move to Trash" from the <u>menu bar</u>• Empty by clicking on icon and hitting “Empty”, this will permanently delete the files from the computer.• To restore a file, click and drag it onto the Desktop or into desired location.• If there is something in the Trash Bin, the icon will have an image of crumpled paper in it, when the Trash Bin is emptied, the paper will disappear.

Suggested Activities/ Exercises:

- Practice using Launchpad
- Practice moving and recovering items from Trash Bin

Objective 2- Saving and Sharing Documents

<i>External Devices</i>	Since Macs do not have a password protected log-in, it is necessary for students save their work to a secure location. To Quit an external device, drag icon to the Trash Bin. When icon disappears, it is safe to remove the device from the computer. Flash Drive External Hard Drive
<i>Google Drive</i>	Students may save their documents in their school provided Google drive. This will also allow them to access their files from any computer in any location and share their files with their teacher and other students. Save file onto desktop. Open Google drive Drag file into “My Drive”
<i>Email</i>	Students can email work to themselves using their gmail account. Save file onto desktop Open gmail, attach file to message

Suggested Activities/ Exercises:

- Practice saving files to a Flash or External Hard Drive
- Practice saving documents to Google drive and sharing with others
- Practice emailing files via attachment

Objective 3- File Types and Organization

Document Extension Files

- .PSD (Adobe Photoshop Document) layered image file
- .AI (Adobe Illustrator Artwork) single-page vector-based drawings
- can only be opened on a computer with compatible Adobe software
- large file size which is great for print but not storage space

Image-editing Extension Files

.PNG (Public Network Graphic)

-raster graphics file format that works with lossless data compression to reduce the file size without degrading the visual quality. This is good for saving on portable devices where storage space is limited
-designed for transferring images on the Internet and great for obtaining images with no background (for web layouts)

-not for professional-quality print graphics because it does not support non RGB color spaces such as CMYK

-more commonly used over .GIF (Graphic Interchange Format) files

.TIFF (Tagged Image File Format)

-computer file format for storing raster graphics images and use for editing since, like a .PNG, it does not reduce the quality of an image

-widely supported by image- manipulation applications, by publishing and page layout applications, and by scanning, faxing, word processing, optical character recognition and other applications

-not recommended for small file or a web-friendly format

.JPG/.JPEG (Joint Photographic Experts Group)

-most commonly used method of lossy compression (degradation of image quality) for digital images, particularly for digital photography



Figure 1 Low Compression (large file) = High Quality Figure 2 High Compression (small file) = Low Quality

-go to format for online photos because it supports a full spectrum of colors and most universally-accepted format for almost all devices and programs

-great for displaying online

*GIF, PNG, JPEG, and TIFF files are designed for different graphic needs

- NEW! Smart Objects

-layers that contain image data from raster or vector images, such as Photoshop or Illustrator files. Smart Objects preserve an image's source content with all its original characteristics, enabling you to perform non destructive editing to the layer.

Sharing/Print Extension Files

- .PDF (Acrobat -Portable Document Format)
 - used for viewing and printing only and cannot be edited
 - best used for preserving original format when opening a document in a different version, edition or program

UNIT II – INTRO TO PHOTOSHOP , ELEMENTS & PRINCIPLES OF DESIGN, SPEC SHEETS

(appx. 8-10 days)

Photoshop is an image editing software program that allows users to manipulate, stylize, crop, resize, and correct color on digital photos. Popularly used by professional photographers and graphic designers, Photoshop optimizes photographs and provides tools that assist in the creation of digital artwork.

Students will learn how to open and start documents, the difference between rasterized and vector images and how to identify royalty free art and internet copyright laws. Students will also understand the design aspects of taking a photo using a camera or phone as well as how to scan and obtain a photo on the internet.

This unit will also cover the tools, menu commands, and panel-based features to open and edit your digital images in the Photoshop workspace.

What is Adobe Photoshop?

Objective 1- Acquiring an Image

- Creating and saving a Photoshop document
- Discuss rasterized vs. vector images
- Internet
 - Royalty free art and copyright infringement laws
 - Size, resolution, search options
- Digital camera; phone
- Discuss Iphone camera settings High Efficiency (.heic) vs. Most Compatible (.jpg) ←
- Scanning

Objective 2 - Photoshop Workspace

Menu Bar: Located on the top of Photoshop screen and contains most Photoshop commands used for any document

<i>Tools</i>	<i>Techniques</i>
<i>File</i>	Used to create and open Photoshop documents; place an image or photograph; save and print documents; exit

	Photoshop
Edit	Allows users to undo; cut/copy/paste images or shapes; apply fill and stroke; resize/distort/align images or shapes
Image	Used to make adjustments to light and color; change image or canvas size; rotate/crop/trim an image
Layer	Allows users to add/duplicate/delete layers; create layer/vector/clipping masks; organizes layers by grouping/hiding/arranging/locking/merging/flatten
Select	Controls quick select/deselect/inverse selection commands to images, layers or masks
Filter	Contains commands to manipulate or stylize images *filter gallery allows users to preview all filters before applying
3D/Analysis	Allows users to add 3D effects on images or layers
View	Access to zoom in and out/full screen functions, rulers, guides and snap to guide options
Window	Contains multi-view functions that assist with combining multiple documents; opens any panel or properties window

Tools Panel Overview: image-editing icons on the left side of the Photoshop program (keyboard shortcut commands are listed in parenthesis)

Tools	Techniques
Selection tools	
<i>Move (Shift-V)</i>	Allows user to move elements on selected layer; Holding control/command on keyboard enables user to select an object on a different layer
<i>Marquee (Shift-M)</i>	Makes geometric shape selections; Works best with creating graphic; cut out functions can be changed on the option bar

<p><i>Lasso (Shift-L)</i></p> <p><i>Quick Selection (Shift-W)</i></p>	<p>Use magnetic lasso for the most control; Best used when elements of an image contrasts sharply with the background</p> <p>Magic wand tool works best with solid color images; Quick select allows users to increase or decrease selected area *Both the tolerance and the brush size can be adjusted on the option bar</p>
<p><i>Crop and Slice tools (Shift-C)</i></p>	<p>Provides crop lines to adjust desired size *Holding shift will constrain proportion; Slice tool can cut rectangular sections from images that can be later copied onto another document</p>
<p><i>Measuring tools (Shift-I)</i></p>	<p>Allows user to copy a specific color from any image using the eyedropper tool</p>
<p><i>Retouching tools</i></p> <p><i>Spot Healing (Shift-J)</i></p> <p><i>Clone Stamp (Shift-S)</i></p> <p><i>Patch</i></p> <p><i>Eraser (Shift-E)</i></p> <p><i>Blur</i></p>	<p>Copies pixels from one area of an image to another to correct defects; recognizes texture and lighting making modification more convincing</p> <p>Cleans up flaws in an image by copying information from one area to another; application works best with a soft brush and low opacity</p> <p>Recognizes a whole section of unflawed pixels to correct a larger defected area; eliminates differences in color and texture</p> <p>Separates elements from their backgrounds; Magic eraser controls and deletes groups of similar pixels, tolerance can be adjusted accordingly</p> <p>Blur and sharpen tools allow users to emphasize or de-emphasize; smudge tool blends pixels simulating as if a finger is dragging through wet paint</p>

<i>Dodge (Shift-O)</i>	Can brighten or darken specific areas of an image; dodge lightens/burn darkens; brush type and exposure can be adjusted on the options bar
<i>Painting tools</i> <i>Brush (Shift-B)</i> <i>History Brush (Shift-Y)</i> <i>Gradient (Shift-G)</i>	Applies colors with many different types of brush styles; assists with multiple Photoshop editing options *Users can also create custom brush styles and save them for later use Transitions one color into another giving the image a shadow or 3D effect
<i>Drawing and Type tools</i> <i>Pen (Shift-P)</i> <i>Type (Shift-T)</i> <i>Path Selection (Shift-A)</i> <i>Rectangle (Shift-U)</i>	Draws an angular or curved path that can either be typed on or turned into a shape Can select any size or font in the options bar; specific type and letters can be edited in Character Panel Allows user to move specific anchor points on a path in order to edit shapes, text, objects, etc. Create any geometric shapes and custom symbols. *Users can also create custom shapes and save them for later use
<i>Navigation tools</i> <i>Hand (Shift-H)</i> <i>Zoom (Shift-R)</i>	Pans to focus on different areas of an image Zooms in and out of canvas area

Option Bar: Displays controls that let user customize the selected tool from the toolbox providing more specific options

Image Window/Document tabs: Contains each image the user opens in Photoshop (Can be arranged

and combined using window options in the menu bar)

Panels: Small, free floating windows that give the user access to common commands and resources. The *essentials* panel option is the most common Photoshop format for beginners. Panel views can be edited in the Windows menu bar.

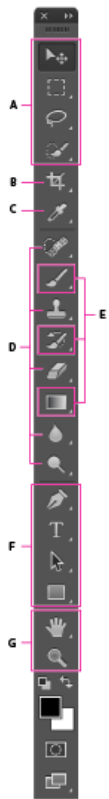
<i>Panels</i>	<i>Techniques</i>
<i>Layers</i>	Creates a history of all created layers as well as quick shortcut editing options for all layer related functions; also contains channels and paths tabs but are used infrequently
<i>Color</i>	Allows user to choose fill and stroke colors and then adjust the value and ratio of RGB hues; also contains a swatches tab that keeps a history of commonly used and newly created colors for quick select
<i>Adjustments</i>	Provides quick selection options for light and color adjustments; also contains style tab that applies a style to the background of a photo

Resources:

Suggested Tutorials: What is Photoshop?; Photoshop Workspace

<https://helpx.adobe.com/photoshop/how-to/introduction-work-area.html?set=photoshop--fundamentals--photoshop-workspace>

Tools Panel Overview



A Selection tools

- Move (V)*
- Rectangular Marquee (M)
- Elliptical Marquee (M)
- Single Column Marquee
- Single Row Marquee
- Lasso (L)
- Polygonal Lasso (L)
- Magnetic Lasso (L)
- Quick Selection (W)
- Magic Wand (W)

B Crop and Slice tools

- Crop (C)
- Perspective Crop (C)
- Slice (C)
- Slice Select (C)

C Measuring tools

- Eyedropper (I)
- 3D Material Eyedropper (I)
- Color Sampler (I)
- Ruler (I)
- Note (I)
- Count (I)

D Retouching tools

- Spot Healing Brush (J)
- Healing Brush (J)
- Patch (J)
- Content Aware
- Red Eye (J)
- Clone Stamp (S)
- Pattern Stamp (S)

- Eraser (E)
- Background Eraser (E)
- Magic Eraser (E)

- Blur
- Sharpen
- Smudge

- Dodge (O)
- Burn (O)
- Sponge (O)

E Painting tools

- Brush (B)
- Pencil (B)
- Color Replacement (B)
- Mixer Brush (B)
- History Brush (Y)
- Art History Brush (Y)

- Gradient (G)
- Paint Bucket (G)
- 3D Material Drop

F Drawing and type tools

- Pen (P)
- Freeform Pen (P)
- Add Anchor Point
- Delete Anchor Point
- Convert Point

- Horizontal Type (T)
- Vertical Type (T)
- Horizontal Type Mask (T)
- Vertical Type Mask (T)

- Path Selection (A)
- Direct Selection (A)

- Rectangle (U)
- Rounded Rectangle (U)
- Ellipse (U)
- Polygon (U)
- Line (U)
- Custom Shape (U)

G Navigation tool

- Hand (H)
- Rotate View (R)
- Zoom (Z)

■ Indicates default tool * Keyboard shortcuts appear in parenthesis

Objective 3: Reviewing the Elements and Principles of Art/Design

Students will spend a few days reviewing the elements and principles of art and design. Followed by a brief photography assignment to demonstrate that they understand the concepts.

The following is an example powerpoint

Elements and Principles of Design

Visual Design Elements

Eight integral components used in the creation of a design:

- Line
- Color
- Value
- Shape
- Form
- Space
- Texture

Line

- Has only a length dimension
- Can be used to
 - Define a boundary
 - Indicate volume
 - Create perspective and depth
 - Create textures and patterns
 - Suggest movement
 - Imply emotion



Lines – Strong, Calm, Silly, Angry, Sad, Lonely, Excited/Happy

Line

Types

- Vertical - Represents dignity, formality, stability, and strength
- Horizontal - Represents calm, peace, and relaxation
- Diagonal - Represents action, activity, excitement, and movement
- Curved - Represents freedom, the natural, having the appearance of softness, and creates a soothing feeling or mood

Vertical Lines

- Vertical lines characterize dignity, formality, stability, and strength



Building
Architect: Shreve, Lamb, and Harmon



Brandenburg Gate
Berlin



Guggenheim
Madrid, Spain

Horizontal Lines

- Horizontal lines represent calm, peace, and relaxation



Community Christian Church
Kansas City, MO
Architect: Frank Lloyd Wright, 1940



Diagonal Lines

- Diagonal lines give the sense of movement, action, and activity.



Curved Lines



- Curved lines give the sense of freedom and a soothing mood



Sydney Opera House
Jørn Utzon

Color

Described by a number of qualities

- Hue: base color (e.g., red)



- Value: lightness or darkness



- Saturation: purity or intensity relative to gray



Color Temperature



Cool Colors

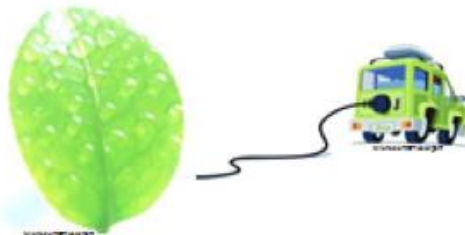
Blues, purples, greens

Warm Colors

Reds, oranges, yellows

Color

- Color has an immediate and profound effect on a design



Value

- Relative lightness or darkness of a color, object, or shape



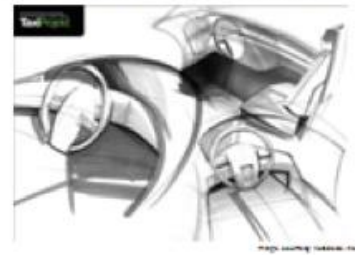
Shape

- A 2D area enclosed by lines or curves
- Types
 - Geometric: square, circle, triangle
 - Mechanical: simple shapes made of straight and curved lines
 - Organic: natural or simulating nature



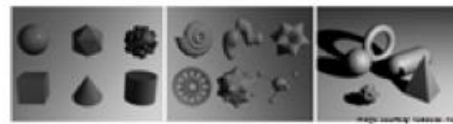
Value

- Allows us to perceive shapes and the illusion of 3D objects on a 2D surface



Form

- A 3D volume or solid
- Often implied on a 2D surface by careful use of value



Form



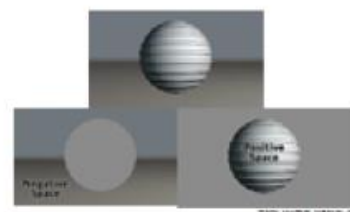
Oriental Pearl Tower
Shanghai
Architect: Jang Huan Chang,
Shanghai Modern Architectural
Design, Co.



Ancient Egyptian Pyramids

Space

- Areas between and around parts of an image/object or the implied depth in that image.
- Types
 - Positive
 - Negative



Space

- Evident in images with depth
- Types
 - Open, uncluttered
 - Cramped, busy



Texture

- The surface look or feel
- Types
 - Smooth
 - Reflects more light
 - More intense color
 - Rough
 - Absorbs more light
 - Appears darker



Texture

Smooth



Dolby metal facade of Dolby
Theatre, Los Angeles

Fluffy



Rough



Park Güell – Barcelona, Spain
Architect: Antoni Gaudí

Principles of Design

- Many principles add to an interesting design
 - Balance
 - Emphasis
 - Contrast
 - Rhythm
 - Proportion
 - Unity

Balance

- Visual and physical balance
- The distribution of elements within a design
- Types
 - Symmetrical (formal)
 - Asymmetrical (informal)
 - Radial

Symmetrical (Formal) Balance

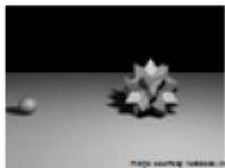
- The elements within the design are identical in visual weight in relation to a centerline or axis



The Taj Mahal Mausoleum
Agra, Uttar Pradesh, India

Asymmetrical (Informal) Balance

- The elements within the design are not identical but are arranged to provide a balanced visual weight



Radial Balance

- Distribution of components in a circular pattern around a center point



Dresden Frauenkirche
Dresden, Germany

Emphasis

- Used to draw attention to one area
- Focal Point – feature in a design that attracts the eye
- Can be achieved through
 - Size
 - Placement
 - Shape
 - Contrast
 - Use of lines

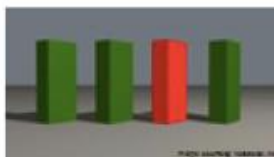


Emphasis



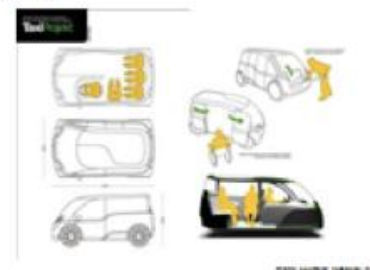
Contrast

- The degree of relative difference between elements



Contrast

- Can be used to emphasize an element of a design



Rhythm

- Repeated use of line, shape, color, texture or pattern
- A harmonious pattern or sequence
- Types
 - Regular
 - Random
 - Gradated
 - Graduated



Regular Rhythm

- An element is repeated at the same repetition/interval



Random Rhythm

- The repetition of the element is random or situated at irregular intervals



Gradated Rhythm

- The repeated element is identical with the exception of one detail increasing or decreasing gradually with each repetition



Graduated Rhythm

- The repeated element becomes closer or further apart



Proportion

- Comparative relationship between elements in a design with respect to size
- Scale – The size of an element.



Unity

- The consistent use of design elements & principles. (materials, color, lines, shapes, form etc.)



Name: _____

Photography Assignment

Task: Use a camera or your smart device to take photographs that represent each of the elements and principles assigned.

ZOOM IN!!!! For the most part, you will have much more interesting photographs if you are very close to your subject matter.

Be Creative....Break the Rules...Take Chances...You are problem solvers.

At home, Upload your images to your own folder in Google Drive.

Elements

Line
Shape
Form
Space
Texture
Color
Value

Principles

Balance
Proportion
Unity
Emphasis
Contrast
Rhythm
Movement

Objective 4: Learning the “Workflow” for an image

Workflow:

Our sequence of processes or steps through which a photo passes from beginning to end.

1- Open Photoshop- check for workspace (Toolbar, Layers, History)

2- Open Image

3- Resize (for easier handling)

- Image
- Image Size
- Document Size
 - Width/Height
 - Resolution

4- Color Correct (white balance is your camera’s compensation for the temperature (or color) of the light- color balance allows us to correct it)

- Image
- Adjustments
- Color Balance
- Move the toggle away from what you have too much of

OR

- Image
- Adjustments
- Photo Filter
- Work with the different filters in the dropdown menu AND the density toggle to make it look more natural
-

5- Exposure

- Image
- Adjustments
- Levels (**Always use Input, never output)
- Adjust the black, grey and white toggles to adjust the exposure of the image.
- Moving the black right will darken the darks
- Moving the white left will lighten the lights

- Moving the grey toggle left will lighten the midtones; moving it right will lighten the midtones

6- Crop (tool options)

- Constraints

Students will then use the “Workflow” to edit the pictures they took for their Elements & Principles photography assignment.

Objective 5 - Broadcasting Spec Sheet

Learn the specific constraints necessary for creating documents for the Broadcasting program

What is a Spec Sheet?

A Spec Sheet is a list of specifications provided by a client that will let the designer know exactly how their graphic/product/footage should be created, saved, and delivered.

Sample Spec Sheets:



NMS COMMERCIAL REQUIREMENTS

Video - Apple Pro Res 422HQ .mov file preferred. (H.264 .mp4 file if ProRes not possible)
 920x1080i@29.97 or 720p@59.94fps for High Definition Spots

Audio Format - Stereo on channels 1-2

Audio Levels - Audio levels for ALL channels can peak but not exceed -8dB. We will accept instances that exceed -8dB, but overall audio shall not exceed -8db

- Each spot's content **MUST BE EXACTLY** 30 or 60 seconds in length
- The file name **MUST BE** "client name-spot name-date of upload"

THE SPOT MUST BE **TITLE** and **CENTER-CUT SAFE**

The Importance of 4:3 Center-Cut Safe

The introduction of high definition television super-sized our television sets from the square look of the 4:3 aspect ratio, to the widescreen 16:9 ratio. If you acquire your content in HD, the natural instinct when shooting HD is to use the entire 16:9 frame for composing your shots.

Currently, most television networks in US markets do broadcast in HD. However, since there are still a significant amount of 4:3 television sets still in use, every one of these HD stations also simultaneously feed SD signals of their content to their SD viewers. In fact, the majority of the US viewership is actually watching in SD. This means your cinematic 16:9 content is being down-converted to the 4:3 screen ratio for SD viewers.

If your final program is heading to broadcast on television, it is important to know how your content may actually be seen by your audience (both HD and SD) and how you can prepare your final cut so that it is optimized and looks the best in both formats.

Creating 4:3 Center-Cut Safe Content

In order to be eligible for this often requisite method of down-conversion, your picture (and graphics) need to be center-cut safe.

Creating center-cut safe content starts with proper framing of your talent during production and correct location for your graphics in post. Follow these simple steps to create content that can handle the inevitable down-conversion of your HD content.

1. Shoot protect for "4:3 Visible Area." Keep all important framing/content in the center 3/4 of the 16:9 screen width when capturing footage.
2. Create graphic elements that do not exceed the center 2/3 of the screen width (4:3 safe area).
3. Edit your program using our center-cut safe template dropped on your timeline over your footage.



Why is this important? Old tube (CRT) televisions were designed with significant over-scan built-in (5-10%) to hide a variety of picture imperfections due to design, manufacturing, and technology limitations. As these sets aged a variety of other mechanical issues would cause the scanning area to change or grow. The rule of thumb is still to accommodate for the lowest common denominator, which in this case is the tube television.

The results:



4:3 safe 16:9 image
on an HDTV



4:3 safe 16:9 image center
cut on a tube TV set



4:3 safe center-cut image
on an HDTV

A clean, professional looking image displayed properly across all broadcast outlets.

Send an email to your NMS rep after you upload to:

<https://www.dropbox.com/request/RIQ7qYDYmj4243mJHTz7>

Our dropbox can also be found on our website: www.nationalmediaspots.com (scroll down to the bottom of the page and click on "dropbox")

Any Questions Please Contact Our Production and/or Traffic Departments:

Don Schechter	617-467-5540	don@charlesrivermedia.com
Kelly Bober	508-877-6737	kellyb@nationalmediaspots.com

Please overnight tapes, promotional items or product samples to:

Don Schechter / National Media Spots Inc. / Charles River Media
 15 Cypress Street, Suite 208
 Newton Center, MA 02459

Rich Gold / National Media Spots, Inc.
 1257 Worcester Road, #131
 Framingham, MA 01701
 888-579-8088

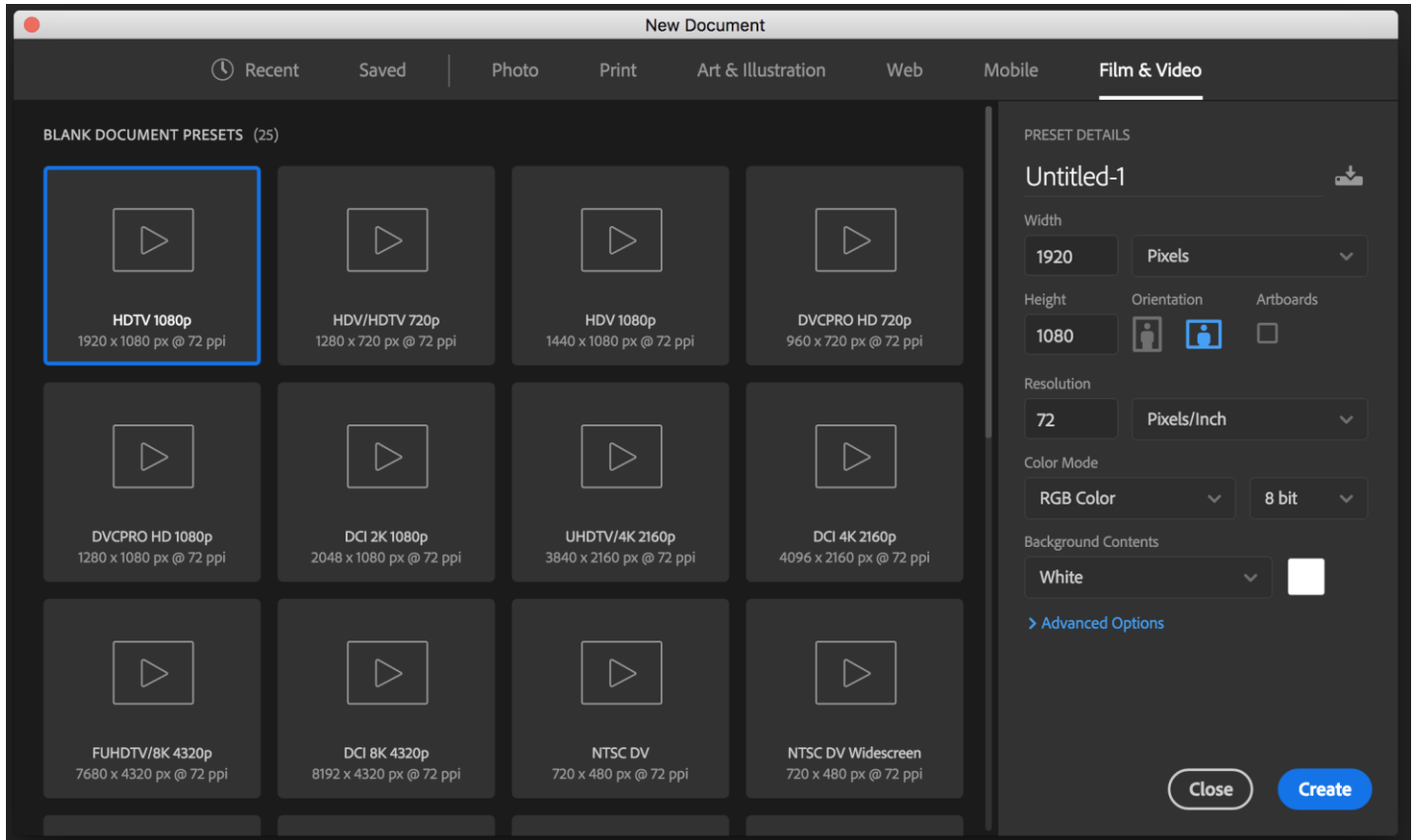
IDENTIFY THE GOALS AND REQUIREMENTS OF THE PROJECT.

Students will ask questions to get a clear understanding of expectations of the project.

- What is the project: graphics, footage, sound bites, etc?
- What style of project are you trying to capture?
- How will the project be used: web and/or print?
- What is the deadline?
- Target audience
- Time, date & location
- Provide layouts or other visual samples
- Client contacts: such as in-house art director
- Shot list and number of required images

- Color Pantone #
- DPI
- Size Inches vs. Pixels
- Setting up a document size etc.

Review beginning a NEW document in Photoshop based on the “Specs” of a new project:



UNIT III – PHOTOGRAPHY - COMPOSITION, LIGHTING, & PORTRAITURE

(appx. 20 days)

Basic Compositional Guidelines

Subject Area: Photography
Title: Basic Compositional Guidelines
Grade Level: 10th
Suggested Time Frame: 2-3 classes

Goal:

Increase student understanding of basic compositional guidelines that create a good photograph.

Learning Objectives:

Students will learn how to verbally define as well as visually recognize a what constitutes a good composition and why. Students will observe examples of good vs. bad compositions and be able to identify the qualities of each.

Motivation:

The lesson will begin with a slideshow of photographs mixed with vocabulary and definitions that will explain each different type of composition. Students will then be allowed to search the internet looking for their own examples.

THE ASSIGNMENT:

DIGITAL SCRAPBOOK

“It is important to be able to recognize the compositional guidelines when they are used in other people's work before you try to use them in your own work. Do not rely on an internet search to pull up photos labeled correctly. Just because you type in leading lines as a search parameter does not mean that is what you will get. therefore, simply search for images. Choose the ones that appeal to you, then decide which guidelines it uses. It IS possible and common for a photo to use more than one guideline. You are looking for photos that have the guideline as the dominant force. So a photo that uses rule of thirds, but is really more of a perspective shot, should be put into the perspective category.

For each guideline discussed, you will find 5 photos that use that guideline. You should try to find photos that appeal to you- not ones that just meet the guidelines. Create a digital photo scrapbook and place the photos on pages- label each category!”

Procedure:

- Prepare materials: slideshow of images & definitions, hand out with vocabulary, definitions, and directions.
- Begin lesson with slideshow.
- Teacher will ask questions to evoke thoughts regarding composition of each photo.
- Teacher will discuss the compositional guidelines used in each.
- Teacher will go over expectations of the assignment and review tools and criteria of images.
- Students will be given ample amount of time to complete assignment.
- Students will present their own slideshow of images.

Vocabulary:

BASIC COMPOSITIONAL GUIDELINES

SIMPLICITY

RULE OF THIRDS

LEADING LINES

HORIZON LINES

FRAMING

PERSPECTIVE/POINT OF VIEW

DEPTH OF FIELD

LOOKING AT THINGS IN A DIFFERENT WAY

MAN MADE PATTERNS

NATURAL PATTERNS

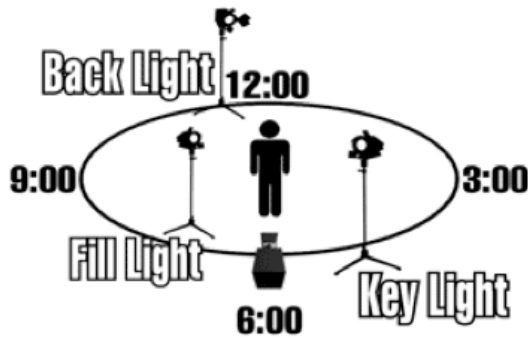
Lighting

There's no substitute for good lighting.

The GIGO principle certainly applies to lighting. The fact is, if you start with grainy, poorly-lit footage, your end result will be compromised. No matter what people tell you, it doesn't matter how good your camera and editing software may be, if you are a lazy lighter, your productions will suffer. Knowing this, the best thing you can do to increase the production quality of your videos is NOT to buy a better camera or a new color-corrector. The first thing you should do is learn to light. While these five tips can't possibly cover all there is to know about lighting, my hope is that they will inspire you to learn to light like the pro that you are.

#1 - SHOOT A THREE-POINTER

Three-point lighting is the time-tested standard for lighting talent for TV and film (Figure 1).



Three-point lighting consists of Key, Fill and Back lights.

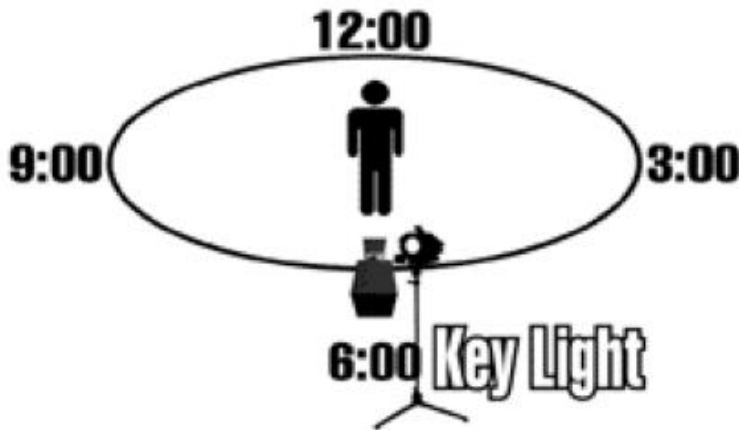
Figure 1

A three-point setup consists of a key, a fill and a back light. The key light is typically positioned to the front of the subject, slightly to one side. It provides the primary source of illumination in this setup and its quality and characteristics help to establish the mood of the scene.

The fill light is less powerful than the key light. It is positioned on the side opposite the key and serves to soften (or fill-in) the shadows created by the key light. The back light (or hair light) is positioned above and behind the subject so that it casts light on the subject's head and shoulders. This adds depth and separates him from the background. Learning and using three-point lighting isn't difficult. It will make a huge difference in the look of your footage and in the overall professionalism of your productions. If you're not using it, it's time to start.

#2 - SET THE MOOD WITH SHADOWS

When a bright key light is positioned close to the camera, the result is "flat" lighting (Figure 2a).

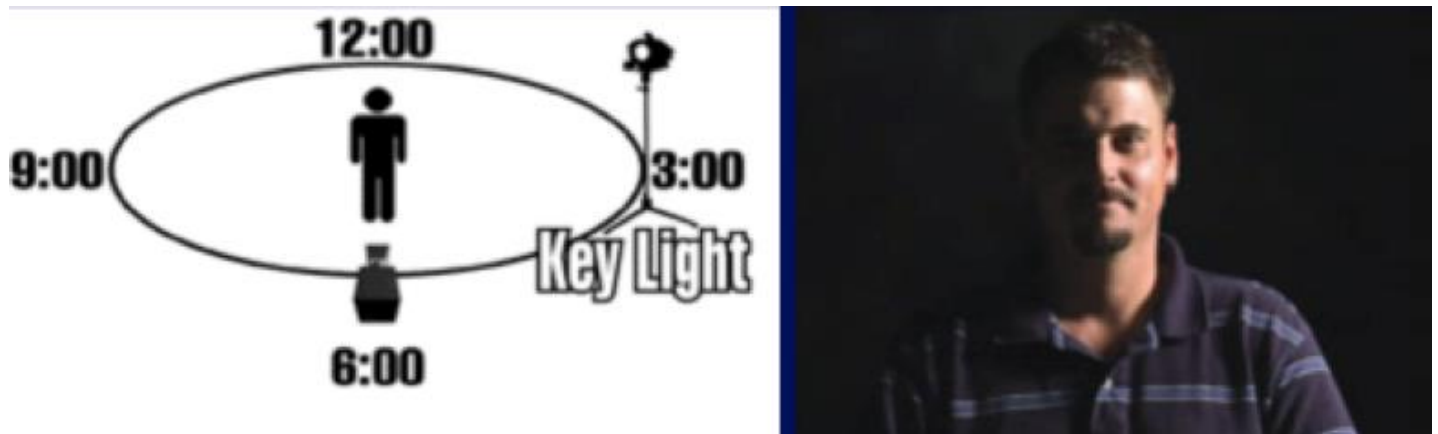


A key light at the 6:00 position creates a flat, "ordinary" look that is absent of emotion. This look is often used for lighting news setups.

Figure 2A

Flat lighting is emotionally neutral. If you're doing news, this may be fine. But if you want to add

emotion, merely flooding your subject with bright, flat, light isn't enough. Lighting can be used to move and manipulate shadows to create the illusion of depth on a two-dimensional screen. To add depth, position the key light so that it strikes your subject at an angle (Figure 2b).



A key light positioned at the 4:30 (or 7:30) position adds the illusion of depth without being overly dramatic. This is the preferred position for the key in most three-point lighting setups.

Once the key is positioned appropriately, use the fill light to soften its shadows to your liking.

#3 - SOFTEN UP

The hardness or softness of a light can be determined by examining the shadows that it casts on your subject. A hard light casts a dark shadow with a sharp edge transfer (Figure 3a).



Hard Light has a narrow shadow edge transfer and a dark, dramatic shadow

Figure 3A

Soft light has a wide shadow edge transfer and a softer, lighter shadow. Soft light is typically preferred for lighting faces

Figure 3B

Soft light casts lighter shadows with a wide gradient shadow-edge transfer (Figure 3b). Soft light is more flattering to the face than hard light and is preferred in most setups. Hard light can make a subject look intense and even wicked. Small, focused lamps cast hard light and shadows. Larger and more diffused lamps cast softer light and shadows. You can soften the effect of a light by adjusting its distance from the subject or by adding diffusion to spread the light.

#4 - HANDLE HARD-TO LIGHT PEOPLE

Some people are inherently more difficult to light than others. The top three problems you'll run into are: people wearing glasses, bald heads and dark skin. While the solutions are slightly different, the problem is essentially the same: bright reflections and specular highlights that create unattractive, glowing, hot-spots. When lighting a person with glasses, lights placed anywhere near the camera create specular highlights on the lenses of the subject's specs (Figure 4a). Bald heads are less of a problem, but you'll still get small hard light spots across the cranium. When you expose subjects with dark complexions properly, you often end up with hot spots on the tip of the nose, forehead, cheeks and chin.



Lights positioned anywhere near the camera will create ugly, distracting reflections on the lenses of glasses.

Figure 4A

Eliminate specular highlights in spectacles by moving lights out to the sides and raising them higher on their stands.

Figure 4B

For glasses, the solution is to go up and out. Raise your lights higher and position them as far to the sides as possible until the reflections are gone (Figure 4b). People with bald heads or dark skin need to be lit with very large, very soft lights positioned very close. The goal is to make the specular highlight larger than the subject's face, bathing them in soft light.

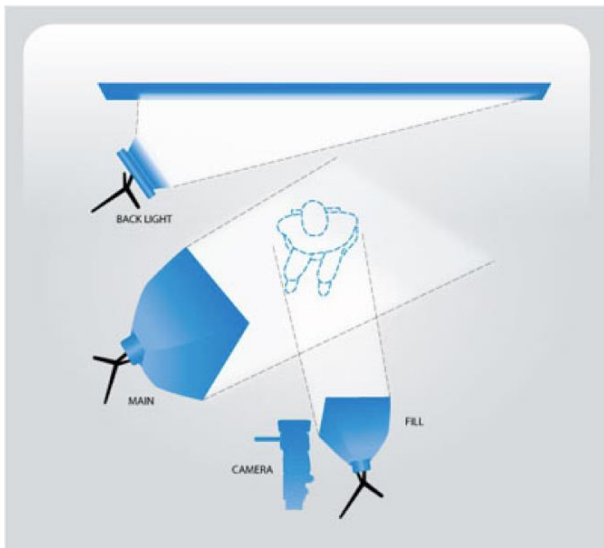
#5 - LIGHT THE WHOLE SHOT, NOT JUST THE SUBJECT

The job doesn't end when your subject is lit. You're not done until you've lit the whole shot. Save a light or two for your background. Pinch your barn doors down to create a shaft of light across the background or add a gel for a splash of color. Taking a little extra time to dress your set with light will greatly improve the look and feel of your shots.

Lighting for Interviews

Equipment

You'll need at least two lights, preferably three. A soft source is best for your subject, a second light for the background, and a third for either fill light, hair light, or a side light (variously called "edge" light or "rim" light). While you can get away with bouncing your light from an umbrella for your main or key, umbrellas tend to scatter light all over the place, making subtlety difficult. A softbox will control spill, accept gels, and offer other accessory options. I have a love-hate relationship with grids: love to use them, hate to pay for them, but once you do, you'll know where the money went. They generally come in 20-, 40- and 60-degree angles. The smaller the number is, the narrower the beam will be. A grid will give you a soft, directional source—almost a contradiction when you consider the characteristics of most bare light sources.

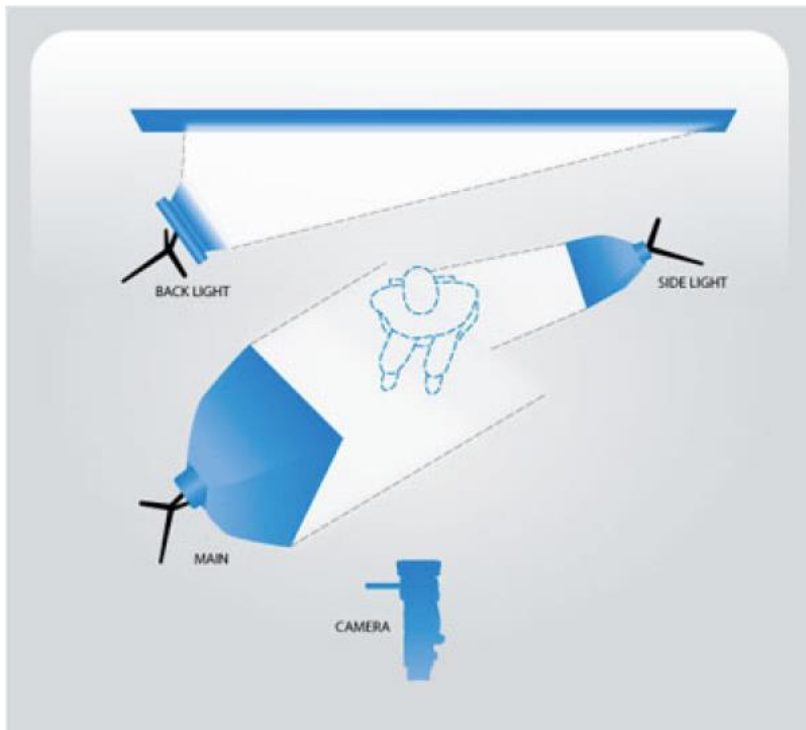


I'd go for a 16 x 22" box (which fits almost anywhere) or a 24 x 32" with a 300-500 watt lamp. Starting position should be 45° off axis both horizontally and vertically to the camera (right).

Used this way, you shouldn't need a fill, but if you wish you can use another soft source on axis with the camera and 1 to 2 stops weaker than your main light. I like 12 x 16" softboxes for this, and again, a grid is handy. If you elevate the light slightly, a 20° grid should drop the light beam behind the subject after providing fill, without hitting your background.

The background light should be a controllable, directional source with some focusing capability, and it should accept barndoors, gels, etc. Choose an area of the location that represents the interests of the subject. Offices usually have bookcases, for instance; an orchestra conductor's office may have a music stand with a score open on it, or a wall of the conductor's favorite antique batons. A gel will add some mood to the scene and make the mundane a bit more exotic. 250-300 watts should be enough for this. You want to bring the objects into view, but you don't want them to overwhelm the shot. Some specialty lights like the Dedolight feature optical projection attachments (sometimes called "cucaloris" or "cookies") so you can add Venetian blind-like or leafy break-up patterns to the background. Rosco makes hundreds of patterns

to choose from. You can even project a custom slide. Gridding your main light is especially important here to maintain the integrity of your carefully lit background.



An alternate set up (left) uses the 12 x 16"; softbox as a side light instead of a fill. Place the light at the subject's head-and-shoulder level and slightly behind, just glancing off the head, cheek and shoulder area. Again, a grid is handy in controlling spill into the lens. If you're using a raw light, use barndoors for this. You might want to gel this light too: orange sidelight and blue background light or vice versa; the warm-cool color friction usually makes for a compelling image.

Although fluorescent sources are increasingly popular, they're a bit bulky, and so, tungsten is still more widely used. This means you have to assess the color balance of your room. Are there windows and if so, what's the exposure? North or east will spread a bluer light than south or west, which will be warmer. Is the room lit with overhead fluorescents? What kind? Is it lit with high-hat recessed fixtures or MR-16 halogens? Can they be turned off?

White Balance: the great equalizer

In order to white balance, you're seeking fairly homogenous light conditions around your subject. But what if they're not? Balancing out one problem can frequently aggravate another. You could overwhelm the ambient light with sheer wattage but that would require a lot of weight and equipment. Interviews are all about speed and portability.

Making all of your sources the same color

Let's assume for the moment that you are using tungsten light. Your lights are 3200K, and the room lights are either 2500-3200K, if they're tungsten. If they're fluorescent they're 3500K for warm white, 4500K for cool white or 6500K for daylight balanced.

Kelvin represents just the red-blue spectrum of color temperature. Most fluorescents have a degree of green to contend with: up to 30 points. Throw your window light into the mix and you have three disparate light sources which you can't white-balance away. A large film production crew would gel the windows and overheads or sleeve the fluorescents to match your lights, but I'm guessing that's not in your budget, either time-wise or financially.

Plan B is to just turn the overheads off or at least disable the lamps in the immediate area around your set. Then you've only got the windows to deal with. Mid- to late-afternoon sun will probably come in close to 3200K, but I'd have some sheets of Rosco 3316 (1/8th blue) or 3208 (1/4 blue) on hand to put on your lights, just in case. For strong blue north window light, pack some 3204 (1/2 blue) or 3202 (full blue) which will raise the color temperatures of your lights from 3200K to 4100K and 5500K respectively, to match the incoming window light. Then you can read for white balance. It's not written in stone. It just has to look good. Of course, you can eliminate this entire step by shooting at night, or in a windowless area.

I haven't listed filtration to match the various temperatures of overhead fluorescents because I'd rather exhaust every other possibility first, but you'll probably be adding #3304 (Rosco "Plus green"; approx. 30 points of green) for 3200K lamps, #3304 + #3204 for 4100K lamps and #3304 + #3202 for 5500K lamps—if you go this route.

It's a bit confusing, but the concept isn't: make all your light sources the same color before white balancing. Remember, these gels are added to your light sources to match them to the ambient source.

Top 8 Goals of Lighting Your Scene



I'm sure you've heard this, "If you light it right..." or "With good lighting, the scene will..." What does that mean? What is "good" lighting?

Lighting has nearly infinite permutations and variations. There is certainly no one "right" way to light a scene. As a result, there is no chance that we can just make a simple list of "proper" lighting techniques. What we can do, however, is try to identify what it is we want lighting to do for us. What jobs does it perform for us? What do we expect of "good" lighting? Starting this way, we have a better chance of evaluating when lighting is working for us and when it is falling short. Naturally, these are generalizations. There are always exceptions, as there are in all aspects of filmmaking — staging, use of the lens, exposure, continuity, editorial, and so on.

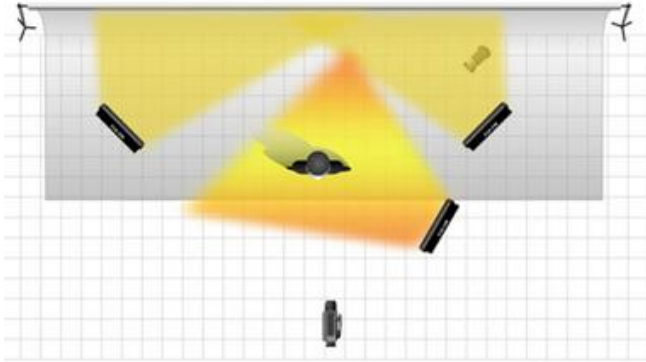
What are the Goals of Good Lighting?

So what is it we want lighting to do for us? There are many jobs, and they include creating an image that has:

- A full range of tones and gradations of tone
- Color control and balance
- Shape and dimension in the individual subjects
- Separation: subjects stand out against the background
- Depth and dimension in the frame

- Texture
- Mood and tone: emotional content
- Exposure

The Lighting Triangle



Now that you have your lights it's handy to know how to use them. Turning them on and pointing them at your subject is a good start, but if you really want to get the most out of them you can use what's known as "the lighting triangle."

Unlike its Bermuda cousin, the lighting triangle doesn't make stuff disappear... it makes it show up!

At least, it makes it more visible, more dynamic, and more dramatic on camera.

Check out the diagram below:



It works like this. First you have the "key light," which is the main light for your setup. It should be off to one side and slightly angled on the face of your subject. This is the light that shows most of the details.

Next is the "back light." As the name implies, this one goes behind the subject and casts a nice little halo of light in their hair and shoulders. This is what's known as a "rim" in professional circles... it helps to separate the subject from the background and highlights their shape and silhouette.

Finally there's the "fill light." This is a flood light that hits the subject from the opposing side from the key light. It should be more diffused than the key light, allowing the

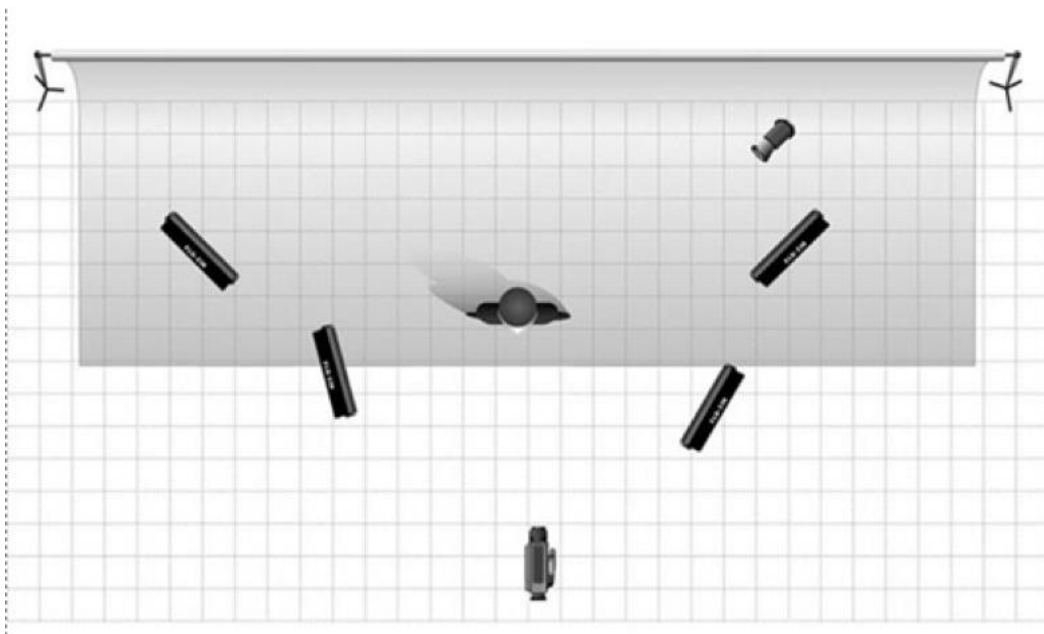
shadows to stay on the subjects face but brightening them up enough to let the detail show through.

If you use the lighting triangle I guarantee you that you'll notice your videos looking a little more "professional." This is handy for interviews, but it can also be used for what we call "product shots." In other words, footage of an item like a birthday gift or a new car or whatever.

And even though it's not always required, sometimes you may want to throw a fourth light into the mix. This one would be the "background light," and it does exactly what the name implies... aim it at the background to highlight it more.

Those are some basic lighting tips and if you play with them they'll take you a long way. You can also try things like throwing colored "gels" on to your lights (available at a theatrical supply store). Just like anything else when working with video the trick is to be creative and inventive.

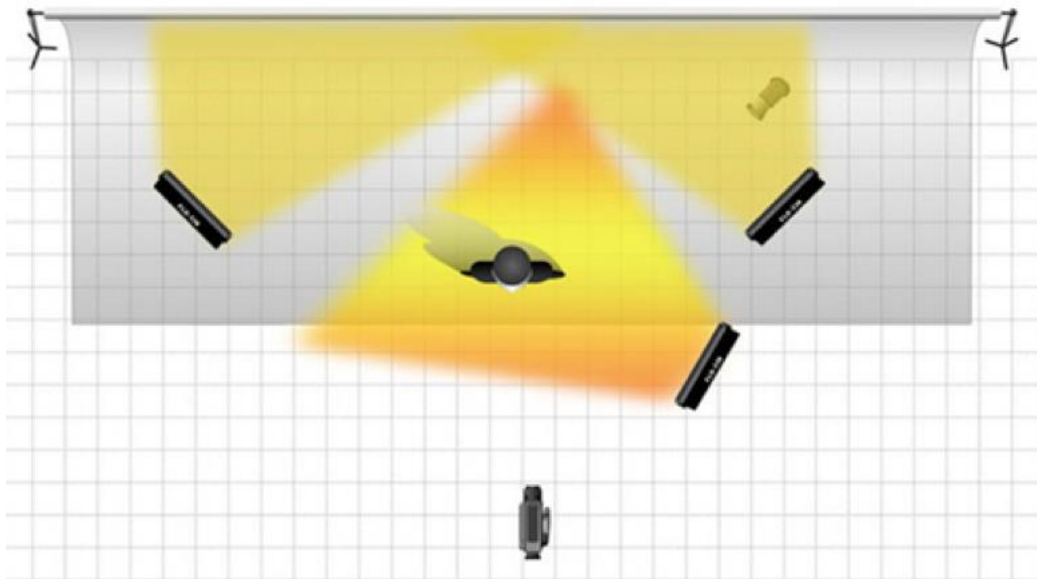
Basic 4-Light Set-up with hair light added:



Basic 4 light setup with added hair light. 2 lights in front are directly lighting the subject, the key and

the fill. The key on the left is closer and brighter. The fill on the right "fills" in the shadows on the right. The difference in brightness between the two lights produces a "lighting ratio" that gives the face shape compared to a single light straight on. If there is no ratio the lighting is considered "flat" and looks less 3 dimensional. Two lights light up the background. Fluorescents are especially good at providing an even lighting for green screen or blue screen work. The hairlight is a smaller light that provides highlights in the subjects' hair, it is the small round fixture close to the background and would be over the subject directed down.

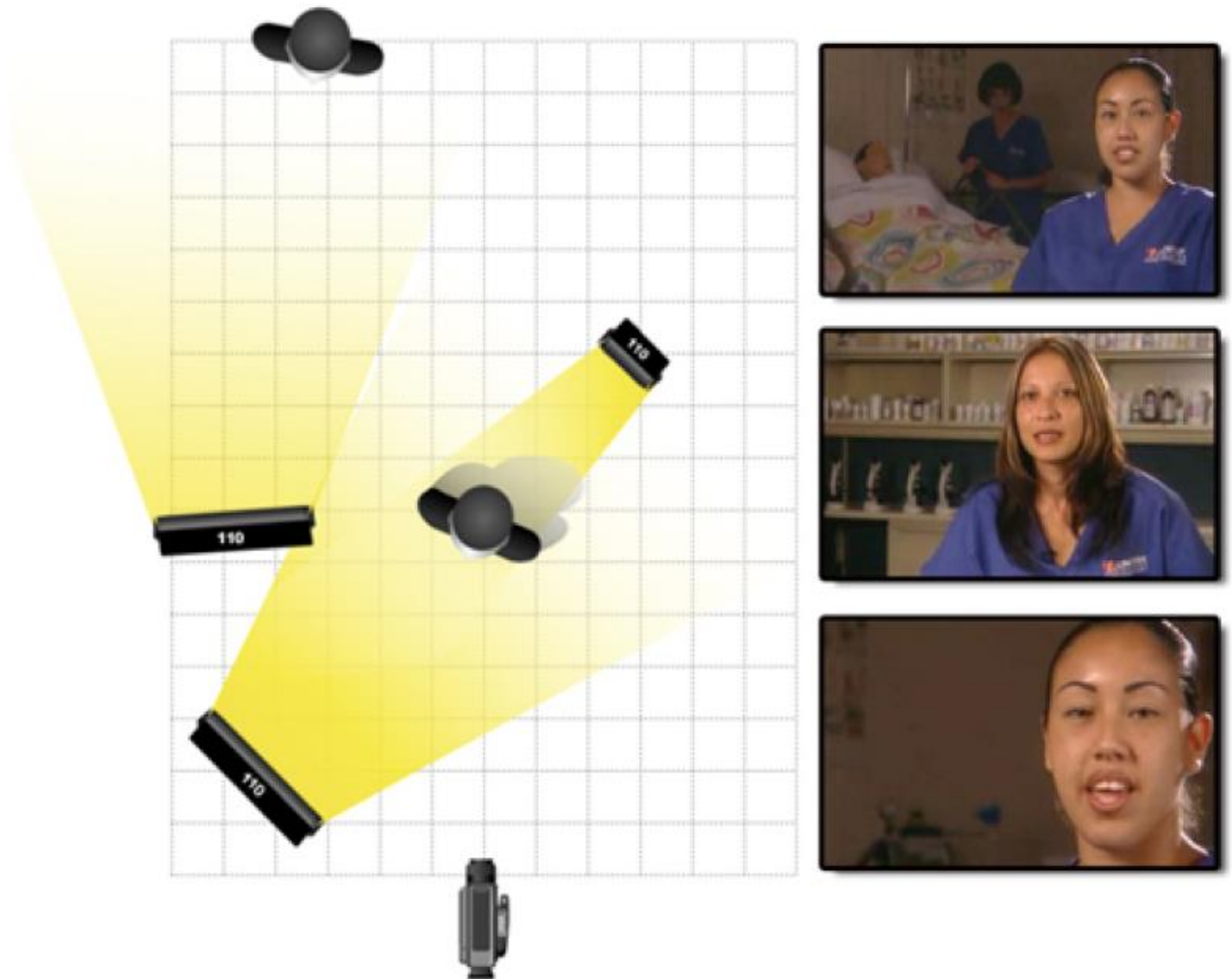
Simple 3 Light Set-up, optional hair light:



This is a simple set-up with 3 lights, still suitable for green screen. 1 light in front lights the subject, the light should be placed so light hits both sides of the subjects face, yet slightly off to the side to

provide some 3-dimensional modeling of the face. A fill card or reflector can also be used on left side to fill in shadows. Two lights on the background provide for even keying.

3 Light Interview Setup:



This setup was used for a television commercial production promoting a vocational school. I used 3 lights of equal power: a main at full power, a hair light in the vertical position with barn doors at full power and a background light to illuminate the action behind the main talent. The main light was just off camera left. I was looking for minimal modeling on the talents face. It saved time and allowed me to use the 3rd light on the background. I find this setup more pleasing on females; males look better with a stronger contrast achieved by moving the main light forward and left. The hair light provides good separation from the background and the background light shows detail but is 1.5 f/stops darker than the main subject. This was done to show the action without overpowering the main subject

Add Background Lighting To Achieve Three-Dimensional Space

Lighting the background of your shot can add depth to a scene and up the production value of your project. Here's everything you need to know about the technique.

The primary focus of lighting is to expose your talent in a manner that correctly accentuates the tone of the story, as well as maintaining the practical principles of a composition — exposure, shadow detail, highlight detail and so forth. A secondary, and often overlooked area, is background lighting.



Background lighting is the act of illuminating the area behind the actors, which is often out of focus and perhaps even obstructed by the talent themselves. The first question: Why even bother to light the background if it's going to be out of focus and possibly only partially viewable? The principal reason is that background lighting helps create **three-dimensional space within a two-dimensional plane**.

In real life, everything has a dimension — height, width, depth. We can answer questions relating to visual properties from having this information. How tall is that building. How far is that man? The core principle of any screen is that it is **two-dimensional**. Cinema screens, television sets, mobile phones, and computer screens are flat surfaces. The visual information from those screens cannot be measured, especially, and most importantly, the depth.

Naturally, an audience member should be able to watch the film or TV and accept that what is being shown is an actual representation of the three-dimensional characteristics of those objects. It is a filmmaker's duty to portray this correctly. On the flipside of that, a filmmaker can also use it to his or her advantage by manipulating what the audience perceives as an actual three-dimensional representation.

A primary example would be **forced perspective**, a technique that was used in *The Lord of the*

Rings to make Ian McKellen's Gandolf seemingly tower over his Hobbit friends.

The term to describe the on-screen depth is called **deep space**. Sometimes it's referred to as deep staging. This is the illusion of a **three-dimensional space on a two-dimensional surface**. This is achieved using a number of depth cues:

- Perspective
- Size Difference
- Object Movement
- Camera Movement
- Camera Focus
- Tonal Separation
- Color Separation

The key features we will look at are tonal separation and color separation, because this is chiefly achieved with lighting. Background lighting serves to add interest, not attention; as soon as the background feature becomes more important than your talent, you've failed.

Background lighting can also act as a function to separate your actor from the darkness of a dark set. In this shot below, I was attempting to mimic the cinematography found in NBC's gone-too-soon Hannibal.



The shot on the left had not correctly set the lighting up to fully separate the actress from the dark environment. As a result, the actress merges into the darkness of the set.

Before we continue, it's important to distinguish the difference between **backlighting** and **background** lighting. A backlight hits an actor or object from behind and is usually placed higher than the object it is lighting. A backlight is often used to separate an object or an actor from a dark

background, and to give the subject more shape and depth. Backlighting can help bring your subject out and away from looking two dimensional.



That lamp in the shot helps to break Hannibal away from the background.

Four Techniques for Great Background Lighting

There are a few ways to go about lighting your scene's background. Here are four that work every time.

1. Color (Temperature) Separation



If you don't have a full lighting kit at hand, this could be your cheapest and easiest method to break your actors away from flat space and further your production value. If your actor is being exposed with tungsten lighting, you can use sunlight or converted tungsten light to illuminate the background. Of course, it can also be the other way around. Take

the shot above from Terrence Malick's *The Tree of Life*.

Brad Pitt's character is being exposed by a household lamp, which the camera has been calibrated for, and the background has been lit with natural sunlight. It separates the talent from the background and forms natural depth to the scene. Using **complementary colors** will always add a nice aesthetic to the scene.

2. Practical Lighting



I have to apologize for the following tip. If you haven't noticed this already, it's going to ruin a lot of films (like *A Serious Man*, seen above) and TV shows for you. Household lamps are perfect for adding pools of light across the background of your set. It can bring your actors away from their environment and stop the composition from becoming flat. Here's the part which you might hate me for: Almost all practical lights used in the background serve no actual purpose to the scene or characters. In fact, in most circumstances, there's enough light for there not to be a lamp on. However, in practicality, they do a good job of adding texture (and interest) to the background.

3. Sunlight Slash



In the book *Set Lighting Technician's Handbook – Film Lighting Equipment, Practice, and Electrical Distribution*, author Harry C. Box says:

Light tends to build up on backgrounds and can start to flatten everything out. The gaffer looks for ways to break up the background or create variation, gradation, or particular highlights. If a scene takes place in a set with lots of windows, it is natural to scrape

a slash of sunlight across the far wall, and across the furnishings. Large Fresnels or PARs are commonly placed outside of windows for this purpose.

A single streak of light is one of the most efficient ways to break up the foreground from the background. Filmmaking company Stillmotion used this technique in a book trailer for author Stephanie Henry.

Fortunately for us, they also made a blog to accompany the video, and they provide stills of the light streak and how it was created. It's worth reading the entire blog, as

Patrick Moreau breaks down a lot of lighting tips. As you can imagine, the scene below would fall pretty flat without that streak going across the background.



A sun streak can be achieved by using a set of flags, and it's widely recommended to use a Fresnel lamp because of their small surface area (that will create a harder light, great for shadows). If you're not in possession of flags, look around at your location and see what on-set obstacles you can find to cut the light. I once achieved this effect by placing the Fresnel behind a door that was ajar.

4. Shadows



Alternatively, instead of just a solid streak of light, you can employ the use of shadows to your composition. A favorite and classic of cinema in itself are the use of blinds or window frames. With many Fresnels, you can place a gobo to project a pattern onto the wall. If you don't have a gobo, you can use actual objects like plants or trees. It's hard because we don't have the before

shot, but I can tell you that the still above (from *Akeelah and the Bee*) wouldn't be the same without the background light and shadow.

Bonus Consideration: Flat Space



It's worth mentioning that sometimes flat space is exactly what you want to achieve. Flat space emphasizes the two-dimensional aspect and can work toward your goal of highlighting a particular symbolic meaning.

Take the still above from *Garden State*. Zach Braff's character is very much having an identity crisis in the film and doesn't know where he belongs in the world. The flat cinematography (along with the matching shirt) puts him in a position of almost being invisible. This would not have had the same symbolic meaning if any of the depth cues — perspective, size difference, object movement, camera movement, camera focus, tonal separation or color separation — were present.

Still Portrait Photography Shoot

PORTRAIT PHOTOGRAPHY

The main purpose of portrait photography is to capture the essence of a person. There are 4 different genres of portraits you are going to experiment with in this unit.

1. FORMAL PORTRAITS- POSED, SERIOUS, USUALLY SMILING, UPPER BODY OR FULL BODY SHOTS, SUBJECT IS IN A NON-NATURAL LOCATION/POSITION/CIRCUMSTANCE
2. CASUAL PORTRAITS – MORE RELAXED, SUBJECT MAY OR MAY NOT BE SMILING, MAY

BE A TIGHTER CLOSE-UP SHOT, CATCHES THE MOOD OF A SUBJECT, MORE NATURAL CHOICE OF LOCATION/POSITION

3. PERSONALITY PORTRAITS – FUN SHOTS, VERY CUTE, DEPICTS THE PERSONALITY OF THE SUBJECT THROUGH FACIAL EXPRESSIONS OR ACTIONS, CAN INCLUDE “DRESSING UP”. THIS TYPE CAN ALSO INCLUDE INCONGRUITY OF ELEMENTS ASPECT TO DEPICT A PERSONALITY.

4. ENVIRONMENTAL PORTRAITS – THE ENVIRONMENT IS SHOWN, HELPS TO GIVE THE WHOLE STORY OF WHO THAT PERSON IS – YOU SHOULD CONSIDER BOTH THEIR PRIMARY ROLE IN LIFE, AS WELL AS ANY OTHER PERSONA THEY ADOPT ON A REGULAR BASIS.

PORTRAIT ASSIGNMENT:

Choose someone who is going to be your subject for this unit. You will take the following sets of portraits.

FORMAL PORTRAITS: Have your subject dress in appropriate attire for a formal photograph – suit, dress, slacks and shirt, etc. and choose a location which is appropriate for a formal portrait. If you have access to a studio set-up with a background, use it. If not, choose a building or location with good background architecture to use. Shoot 5 different poses for a FORMAL portrait session. Shoot each one full length AND bust only, for a total of 10 shots.

CASUAL PORTRAITS: Have your subject dress in appropriate casual wear and choose a location, which is more relaxed than you used for the formal portraits. Blue jeans, a cute skirt outfit, a sundress, or a short set might be appropriate attire. Locations could be in a yard, a field, a riverbank setting, a beach, a front porch, a staircase, etc. The poses should be more relaxed – sitting on the ground, lying on the ledge, sitting on the stairs, etc- and the subject should experiment with facial expressions – smiling, thoughtful, pensive, etc. Shoot 10 different shots – different poses or locations or angles.

PERSONALITY PORTRAITS: Subject can dress up or use props or you can have the location or the action in the shot depict the subject’s personality. Examples: a teenager playing with a toy, a child playing hide and seek, an adult making silly faces – etc. Shoot a series of 5 shots for this set. Now, discuss your subject’s hobbies and activities. Choose at least two DIFFERENT elements of their personality or hobbies or interests which you can use to create an incongruity of elements shot. For example: a girl who takes ballet, but loves football. Take a shot of her in a tutu with a football jersey. Take a series of 5 shots for this set.

ENVIRONMENTAL PORTRAITS: Set up and shoot 5 different environmental portraits of your subject depicting that client’s primary role in life – student, teacher, parent, etc. These should not

require any unusual costume changes or props or locations, since these are to depict the person's primary role. Discuss with your client what other type of persona they wish to present during an environmental shoot. It could be that they are AN ATHLETE, A THEATER PERSON, AN AWARD WINNER, OR AN OUTDOORSY PERSON. Decide what clothes and props are needed for the persona shots, and make arrangements to procure them. Set up a shoot in a location that is compatible with the chosen persona and take 5 different environmental portraits of your subject depicting the chosen persona.

When you finish, you should have a total of 40 GOOD shots of your subject. You will load all 40 shots into an album on Google Drive. Have your subject sit with you and critique your efforts. Transcript the critique turn it in with the photos. Have the subject choose his/her favorite 10 shots of the 40. You will turn in those 10 for grading and peer critiquing.

Enhancing Photos

This section focuses on both the enhancement and restoration of photographs. These techniques can be used to fix a damaged or old photo through lighting, color and focus. Students will also learn how to edit and manipulate a photo by altering the actual pixels of a photo. This is commonly used in print layouts to retouch photographs in terms of omitting, adding or moving parts of a photo. You can also create a stylized design by applying filters to the pixels.

Resizing and controlling light and color without changing physical attributes of the image

Tools	Techniques
	<i>Process and Outcome</i>
Crop tool	<p>Select the Crop tool from the Tools panel (or press C on the keyboard)</p> <p>Adjust the crop box by dragging the handles or sides</p> <p>Double-click inside the crop box</p> <p>*Function contains handle (adjustment anchor points), shield (tinted crop preview) and rule of third (displays intersecting focal points) guides to optimize crop</p>

	<p>technique</p> <p><i>Removal of the outer parts of an image to improve framing</i></p>
Red Eye	<p>Select the Red Eye tool</p> <p>Click the red portion of the eye in your image</p> <p>Pupil Size: Use the slider to increase or decrease the size of the pupil.</p> <p>Darken Pupil: Use the slider to darken or lighten the color of the pupil.</p> <p>*Red Eye tool works only with RGB or Lab color images</p> <p><i>Eliminates red eyes within a photo caused by large amounts of light from a camera flash reflecting off the surface of a person's eye when their pupils did not have enough time to constrict</i></p>
Adjustment Layers	<p>Duplicate photo layer</p> <p>Click create new fill or adjustment layer button on layers panel</p> <p>Layer – New Adjustment Layer</p> <p><i>Alters the light/color of a photo by adjusting elements such as brightness/contrast, levels/exposure and hue/saturation; Enhances the quality of photos</i></p>

<p><i>Dodge/Burn</i></p>	<p>Open an image with under- or overexposed areas</p> <p>Duplicate the layer</p> <p>Select the Dodge or Burn tool from the Tools panel</p> <p>(O key chooses the active toning tool; Shift+O to cycle through toning tools)</p> <p>In Option Bar:</p> <p>*Select a brush from the Brush Preset Picker or toggle open the larger Brush panel.</p> <p>*Larger, softer brushes spread the dodging and burning effect over a larger area, making blending with the surrounding area easier; range options use Shadows to lighten or darken detail in the darker areas of your image, Mid tones to adjust the tones of average darkness, and Highlights to make the brightest areas even lighter or (more frequently) darker.</p> <p>Select the amount of the effect to apply with each stroke by using the Exposure slider or text box.</p> <p>Enable the Airbrush option for a softer, more gradual effect.</p> <p>*Check the Protect Tones option.</p> <p>Paint over the areas you want to lighten or darken with the toning brush, gradually building up the</p>
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	<p>desired effect.</p> <p>If you go too far, press Command+Z to reverse your most recent stroke.</p> <p><i>Dodging and burning originated in the darkroom, where photographers salvage negatives containing areas that are too dark or too light by adding or subtracting a bit of exposure</i></p>
Layer Mask	<p>Option 1</p> <p>Click quick select tool – select part of image to keep</p> <p>Layer – Add layer mask – reveal all/hide all</p> <p>Click move tool – place bottom image to desired spot</p> <p>Option 2</p> <p>Layer – Add layer mask; brush tool – select brush size/hardness/style type – opacity</p> <p>Set foreground color to black (inverse black to white to reverse mask; gradient tool to fade mask)</p> <p><i>Can be applied after any other tool to have the function only effect part of the photo; black reveals/white conceals layer underneath</i></p>
Filters Blur	Select the Blur/Sharpen Tool

<p>Sharpen</p>	<p>Select brush size/hardness/style type</p> <p>Click and hold mouse on area to be blurred/sharpened</p> <p>*For Smudge Tool, apply same technique except drag mouse in the direction you would like the smudge to be directed</p> <p>*Also has tilt-shift blur (gradient blur applied above and below an axis line) and smart sharpen (more specific sharpen effect options) under Filter on the menu bar</p> <p><i>Blur and sharpen tools allow users to emphasize or de-emphasize image pixels; smudge tool blends pixels simulating as if a finger is dragging through wet paint</i></p>
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Resources:

Suggested Topics: Crop and Transform; Image Adjustments; Filters (view all tutorials within each topic)

<https://helpx.adobe.com/photoshop/how-to/graphic-design-basics.html?set=photoshop--fundamentals>

Suggested Tutorial: Edit your first photo in Photoshop

<https://helpx.adobe.com/photoshop/how-to/photo-editor.html>

SUGGESTED EXERCISES: “Old to New” (Restoration and/or enhancement of personal photograph); Black and white with color tint emphasis

Photo Editing Lesson Plan

Aim: Students will be able to cut and edit objects in a photo to create a radial design on Adobe Photoshop creating a color wheel. They will use adjustments, effects and filters to add depth, space, contrast and balance to their work

Objectives:

- Understand basic photo editing functions in Adobe Photoshop to create digital media art
- Identifies when to use the elliptical lasso, rectangular lasso and quick selection tools.
- Uses free transform and rotate commands to demonstrate overlapping and repetition in radial design
- Utilizes Fx, opacity, blend modes, layer adjustment and filter gallery functions to develop an aesthetically strong composition

Materials:

Example art prints





Print out of step-by-step instructions

Students will be able to:

- Order hues on the color wheel
- Design a color wheel using images
- Manipulate layers
- Use layer masks
- Use the line tool
- Use adjustment layers
- Find and appropriately use copyright free images

Prior knowledge: Students should have some familiarity with primary and secondary colors.

Students should know how to open and save files in Photoshop. Students should know how to use the Transform function to rotate and resize images. Students should know how to use rulers and guides.

Time: approximately 2-4 classes

Teach:

Part One – Preparing file

- Open a 7" x 7" image at print resolution
- Have students add horizontal and vertical guidelines centered on the image
- Demonstrate how to use the line tool

- Have students use the line tool to divide canvas into 12 wedges (go from the center to the edge in 30 degree increments)

Part Two – Finding an image

- Discuss copyright with students
- Introduce students to where to find copyright free images
- Remind students they can always use their own photographs
- Have students find an image with two bright, contrasting colors that are a shape that will fit in a wedge when sized appropriately

Part Three – Duplicating the image

- Have students copy and paste image into their color wheel.
- Have students transform and resize image until it fits a wedge
- Have students use a layer mask to hide all but one wedge
- Have students duplicate layer, transform, and rotate 30 degrees to fit another wedge
- Repeat the last step. Students should now have three wedges, all touching.
- Select all three layers with wedges, duplicate all, transform and rotate 90 degrees and move so that now half of the wedges are filled
- Select all six layers, duplicate all, transform, and rotate 180 degrees and place so that all wedges are filled

Part Four – Adjusting the colors

- Students will now add adjustment layers to each wedge. Have them make sure the image is selected (not the layer mask) when adding the Hue/Saturation adjustment layer
- Students will adjust each layer so that the item matches the following colors, going clockwise from top: yellow, yellow-orange, orange, red-orange, red, red-violet, violet, blue-violet, blue, blue-green, green, and yellow-green
- When finished, students will save the file as both a .psd and a .jpg
- Students will then adjust the image so that the background behind their item matches the color wheel hues, and save under a new name as a .psd and a .jpg

Part Five – Critique and Discussion

- (For art students) How do the colors on the computer behave differently from paint? Is there a color that is more dominant in your color wheels than when one is painted? (CYMK vs. RGB)
- How do the colors of the background change in the color wheel where you varied the hue of the images? How does this color wheel compare to the one where you varied the hue of the background? Why do you think this is?
- What difficulties did you have? What was harder than expected? What was easier?
- Do you know of any steps in this process that could have been done a different way? Would it be quicker or slower to do it that way?
- Who do you think did an exceptionally good job on this assignment? Why?

Summary:

Assess student work on the following criteria...

Performance Indicator	1 Falls Below	2 Approaches	3 Meets	4 Exceeds
Objects <ul style="list-style-type: none"> Manipulation of images 	Used less than 3 varied shapes, poorly cut out using a selection tool; incorrectly masked from original photo	Shapes are limited in variation, imperfections in edge quality in both cutting masking from original photo	Shapes are varied, cut out using correct selection tool and correctly masked from original photo with little imperfections in edge quality	Shapes are varied, properly cut out using correct selection tool and correctly masked from original photo
Technique <ul style="list-style-type: none"> Use of Free Transform & Opacity Use of Adjustments, Filters & Effects 	Rarely demonstrates good use of opacity and effects to show depth and space and aesthetically pleasing design	Sometimes demonstrates use of opacity and effects to show depth and space and aesthetically pleasing design	Often demonstrates good use of opacity and effects to show depth and space and aesthetically pleasing design	Demonstrates strong use of opacity and effects to show depth and space and aesthetically pleasing design
Composition <ul style="list-style-type: none"> Visual Balance Radial Symmetry 	Shapes are not circulating from a center point and are improperly rotated and scaled	Few shapes are correctly circulating from a center point and properly rotated and scaled	Most shapes are correctly circulating from a center point and properly rotated and scaled	All shapes are correctly circulating from a center point and properly rotated and scaled

Objective 2 - Retouching/Repairing Photos

Manipulating images by adding, removing or altering parts of a photo

Tools	Techniques
	Process and <i>Outcome</i>
Clone Stamp	<p>Open an image</p> <p>Select the Clone Stamp tool (S key on the keyboard)</p> <p>Select brush size/hardness/style type, blend mode and opacity in option bar</p>

	<p>*Adjust options such as Flow Rate percentage (how fast clone is applied), Airbrush (blends pixels more evenly)</p> <p>*Aligned selected, moves clone source cursor to a different location. Align deselect, clones multiple times from the same location</p> <p>Select Sample- All Layers to clone part with multiple layers; click the Adjustment Layer icon on the Options bar to ignore any adjustment layers when cloning.</p> <p>Click or drag along the area where you want the clone to appear</p> <p>Hold Option-click the area of your image that you want to clone</p> <p>Choose Window – Clone Source to open the Clone Source panel. You can also click the Clone Source panel icon in the Options bar (just left of the Blend Mode options)</p> <p><i>Cleans up flaws in an image by copying information from one area to another; application works best with a soft brush and low opacity</i></p>
<i>Layer Mask (Review)</i>	<p>Option 1</p> <p>Click quick select tool – select part of image to keep</p> <p>Layer – Add layer mask – reveal all/hide all</p>

	<p>Click move tool – place bottom image to desired spot</p> <p>Option 2</p> <p>Layer – Add layer mask</p> <p>Brush tool – select brush size/hardness/style type – opacity</p> <p>Set foreground color to black (inverse black to white to reverse mask; gradient tool to fade mask)</p> <p><i>Can be applied after any other tool to have the function only effect part of the photo; black reveals/white conceals layer underneath</i></p>
Patch tool	<p>Select the Patch tool</p> <p>Choose patch mode from Normal (adjusts color and tone of the cloned patch to match the destination without moving pixels around within the patch) or Content-Aware (adapts the cloned patch by moving pixels around to fit the destination)</p> <p>Normal – select Source (flawed area) or Destination (good area to clone) on the Options bar.</p> <p>Select the Transparent option to patch from your source pixels with less opaqueness.</p> <p>You can use the Clone Source panel with the Patch tool.</p> <p>Content-Aware – choose your desired Adaptation setting</p>

	<p>(flexibility of shifted pixels)</p> <p>Drag around the flawed area of your image.</p> <p>*Drag completely around the flawed area like you would when selecting with the Lasso tool. Apply a slight feather to soften the edge of the selection.</p> <p>Drag your selection to the area on your image that you want to clone (or sample) from.</p> <p>Release the mouse button to patches flawed selection with the cloned pixels</p> <p><i>Recognizes a whole section of unflawed pixels to correct a larger defected area; eliminates differences in color and texture</i></p>
<i>Spot Healing Brush</i>	<p>Select Spot Healing Brush tool</p> <p>Select brush size/hardness/style type and blend mode in option bar</p> <p>Select a type from the Options bar.</p> <p>Proximity Match: Samples the pixels around the edge of the selection to use to fix the flawed area.</p> <p>Create Texture: Uses all the pixels in the selection to create a texture to fix the flaw</p>

	<p>Content-Aware: Compares and uses actual content from the image close to the flaw.</p> <p>*Use Content-Aware when removing large items like noise or scratches on your image</p> <p>Choose Sample All Layers to heal an image by using all visible layers</p> <p>Click, or click and drag, the area you want to fix</p> <p><i>Copies pixels from one area of an image to another to correct defects; recognizes texture and lighting making modification more convincing</i></p>
Filters	<p>Duplicate layer – Filter – Filter Gallery (choose style in preview window)/Choose filter option to apply to layer directly</p> <p>*filters that can be applied include but are not limited to artistic brush, texture, liquefy, render</p> <p><i>Contains commands to manipulate or stylize images</i></p> <p><i>*filter gallery allows users to preview all filters before applying</i></p>

Resources:

Suggested Topics: Retouching (view all tutorials within topic)

<https://helpx.adobe.com/photoshop/how-to/graphic-design-basics.html?set=photoshop--fundamentals>

Suggested Tutorials: Get started – Essential for beginners – Fix flaws and repair photos

<https://helpx.adobe.com/photoshop/how-to/fix-flaws-retouch-photos.html?set=photoshop--get-started--essential-beginners>

SUGGESTED PROJECTS/ASSESSMENTS: “Spot the Difference”; Social media magazine cover

UNIT IV – INTRO TO LAYERS

(appx. 10-15 days)

A layer is one image stacked on top of another and allows users to edit photos without damaging the original image. This unit goes through all the functions Photoshop offers to create, edit and organize layers in order to enhance or combine images and to design a strong digital composition for print or web.

Objective 1 - What is a Title Screen?

Title Screen: A design layout used with the intention of being informative to communicate a concentrated level of information within the shortest possible time period.

Sample Title Screens:



Note taking worksheet below:

BMB Spec sheet for Title Screens:

Size in pixels hwx specific to BMB Title Screens:	
Set Typeface specific to BMB:	
Set Color Pantone #'s for specific to BMB	

Objective 2- Creating Layers

<i>Tools</i>	<i>Techniques</i>
	Process and <i>Outcome</i>
<i>Layers</i>	<p>Click create new layer button of layers panel</p> <p>Layer – New – Layer</p> <p>Layer – Duplicate Layer</p> <p><i>Provides editing options for specific parts of a photo; enables user to keep original image intact</i></p> <p><i>*Make sure to manage layers by arranging, renaming and grouping layers to avoid clutter</i></p>
<i>Trash</i>	<p>Drag a layer to the trash can icon on the layers panel</p> <p>Layer – Delete – Layer</p> <p><i>Deletes layers</i></p>

Objective 3 - Editing Layers

Combining multiple photos and revealing/Concealing parts of an image

<i>Tools</i>	<i>Techniques</i>
	Process and <i>Outcome</i>
<i>Select</i>	
<i>Move (Shift-V)</i>	<p>Click the move tool, click and drag your selection; this will cut the selection out from the current location, and reposition it to wherever the mouse button is released.</p> <p><i>The move tool is used for moving selected areas of an image, layers, shapes, and other objects.</i></p>
<i>Marquee (Shift-M)</i>	<p>Click marquee tool, hold down your mouse button over the active image area, and drag out your shape.</p> <p><i>The marquee tools are used to make rectangular, elliptical, horizontal and vertical line selections.</i></p>
<i>Lasso (Shift-L)</i>	<p>Click the lasso tool, drag a freehand selection with your mouse</p> <p><i>The Lasso Selection Tools allow you to make selections of irregular shapes.</i></p> <p><i>*The magnetic lasso tool tries to automatically create points itself while you follow the edge of your object</i></p>
<i>Quick Selection (Shift-W)</i>	<p>Click the quick select tool, click and hold to select desired amount. Increase or decrease selection in the option bar</p>

	<p><i>The quick select tool recognizes similar pixels and quickly selects area to be edited.</i></p> <p><i>*The magic wand tool, allows you to click the color you want to select in the active image area. Best used for solid colored objects</i></p> <p><i>Identifies what part of a layer or photo will be edited. User should decide what selection tool based on the type of editing that will be done</i></p> <p><i>* Cmd/Ctrl+Shift + J to Move a selection to a new layer</i></p>
Layer Mask	<p>Option 1</p> <p>Click quick select tool – select part of image to keep</p> <p>Layer – Add layer mask – reveal all/hide all</p> <p>Click move tool – place bottom image to desired spot</p> <p>Option 2</p> <p>Layer – Add layer mask</p> <p>Brush tool – select brush size/hardness/style type – opacity</p> <p>Set foreground color to black (invert black to white to reverse mask; gradient tool to fade mask)</p> <p><i>Hides or reveals parts of different layers for purposes</i></p>

	<p><i>such as separating an object from its background or combining parts of two different photos; Allows you to paint away parts of your layer without damaging your original image.</i></p> <p><i>* Hold Option/Alt while adding a mask to create an inverted layer mask</i></p>
Adjustment Layer	<p>Click create new fill or adjustment layer button on layers panel</p> <p>Layer – New Adjustment Layer</p> <p><i>Alters the light/color of a photo by adjusting elements such as brightness/contrast, levels/exposure and hue/saturation; Enhances the quality of photos</i></p>
Blend Modes	<p>Click drop down menu on layers panel</p> <p><i>Determines the way pixels in two layers react with each other when painting or editing them</i></p>
Opacity	<p>Change opacity percentage on layers panel</p> <p>Change opacity on option bar when specific tool is selected</p> <p><i>Identifies the amount of transparency a layer or object has compared to another layer</i></p>
FX	<p>Click FX button on the layers panel</p> <p>Layer – Layer Styles – Blending Options</p> <p><i>Applies layer effects such as drop shadows, strokes, overlays, gradients, bevel emboss and glows to images or text</i></p>

Objective 3- Organizing Layers

<i>Tools</i>	<i>Techniques</i> Process and <i>Outcome</i>
<i>Stacking Order</i>	<p>Slide layers above or below one another</p> <p>Layer – Arrange</p> <p><i>Layers that are placed on top of another are more in front on the canvas; layer that are meant to overlap another should be placed above in the layers panel</i></p> <p><i>The background should remained locked as the bottom layer if the user does not want to original image to be compromised</i></p>
<i>Eye Icon</i>	<p>Click eye icon next to each layer</p> <p>Layer – Hide Layer</p> <p><i>Allows users to view certain layers at a time or hide layers that do not need to be edited without having to delete them</i></p>
<i>Group</i>	<p>Click create new group button on layers panel</p> <p>Layer – New – Group</p> <p><i>Combines multiple layers to be moved or edited simultaneously; keeps smaller or similar edits organized together</i></p>

<i>Merge</i>	<p>Turn on the visibility of only the layers you want merged then choose merge visible from the Layers Panel</p> <p><i>Merging layers is helpful when you no longer need every layer to be independent. It combines layers to create a composite and want to consolidate it to one layer</i></p>
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Resources:

Suggested Tutorials: Learn Essentials – Design Techniques – Create your first design in Photoshop – Get to know layers, Combine images using layers

<https://helpx.adobe.com/photoshop/how-to/graphic-design-basics.html?set=photoshop--fundamentals>

SUGGESTED EXERCISES PROJECT: Using your own original images to create their own **Title Screen** for Mephams’s Broadcasting **Audio Reports Segments**

Using a combination of photographed imagery and original titles create a Title screen in Adobe Photoshop for specific Mephams broadcast segments such as...

- Broadcasting Journalism Anchors
- This moment in Sports teams: captains, players or generic sports paraphernalia
- This moment in Arts: Paintbrushes, cameras, film, Art work etc.
- Mephams moments, etc.
- In the classroom... Smart Boards, pencils, books, etc.

Title Screen for Audio Report Masking & Stacking Layers LESSON 1

Aim: Students will be able to cut objects out of images and combine them into one cohesive composition

Objectives:

- Create an original title screen by removing image backgrounds from each element (see suggestions from list above) using selection, lasso, eraser and marquee tools
- Use transformation tools to combine and organize the layers
- Demonstrate a more realistic look by adding effects, adjustments and opacity

Materials: Original images for creating their own title screen for BMB segments.

For example:

- Paintbrush.jpg
- Palette.jpg
- NAHSbanner.jpg
- Sample Image of Banner

Step-by-step instructions for Stacking & Masking Layers

1. Save all images into a TITLE SCREEN folder
2. Open all .jpeg images in Photoshop
3. Check the DPI of each
 - Go to: Image→ Image size→ Be sure DPI/Resolution is 300+
 - File → Save as→ easily recognizable name. jpg
 - Do this for all files. → ***Possible class extension: how to Batch files***
4. Go to: **File → New**
 - Select **Film & Video** presents → Choose: DPI specific to BMB Specifications
5. Go to: **File → Scripts → Load Files into Stacks → Click Browse**
This will place all images within that folder into layers of a document within Photoshop
6. Direct students to the layer bar and introduce them to the Visibility Icon (eyeball)
 - Use the eyeball/ Visibility icon to hide all but the top layer
7. Direct students to the Layer Mask Icon on the bottom of the layer bar and CLICK the layer mask icon to add a mask on that layer. Activate the Layer mask!
 - How do you activate the layer mask?
 - a. Click on the Mask (will initially appear to be a white box)
 - b. White border will appear to indicate either the Layer Mask or the Imagery are activated/selected

8. Choose Brush Tool – and show changes

- Review how to change the brushes edge hard vs. soft
- Review how to change the brush size size changes
(Bracket tools left/right to make brush large/smaller using key commands)

While on the layer mask...

- Use the color picker to choose black to paint away/remove imagery (background info.)
- Use the color picker to choose white paint information back into the layer mask (subject)

This process can be combined with magic wand or quick selection tools.

Repeat this step to remove background for each layer

9. Check edging by **zooming into the layer mask**

- How do you zoom into the layer mask?
 - a. **Click ALT** to zoom into the layer mask click on the image layer to get out of zoom.
 - b. Repeat this step to remove background for each layer

10. **Apply layer mask** to make the mask permanent

- How do you apply a layer mask?
 - a. Right click on the layer mask icon to:
 - Apply the layer Mask (making it permanent)
 - Disable the Layer mask (temporarily hide masking)
 - Delete the Layer mask (remove the mask all together)

11. To save all work go to:

- File→ Save as: Title Screen_lastname.psd
- Be sure to choose the .PSD extension in the drop down menu
 - **.PSD files** will retain all your working layers ← :)
 - **.JPG files** will flatten your layers making the imagery uneditable ← X

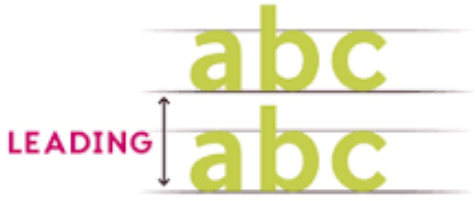
Title Screen for Audio Report Project Resizing and Rearranging LESSON

2

Step-by-step instructions for Arranging and Resizing layers

1. Open Photoshop → File → Open → TitleScreen_Lastname.psd
 2. Select your **MOVE tool** in the top of your toolbar.
 3. Be sure to check the **AUTO SELECT box** to activate/select the individual layer that you click on.
 4. Rearrange your layers in the composition that you like the best
 - Where are my layers?
 - Go to → Window → Layers to pull open your window panel (this is also where most of the Photoshop panels are located.)
 - How do you know what layer you are on?
 - The current layer selected will be highlighted on your layer bar... for complex layers you may turn off (uncheck) AUTO SELECT to select the layer you wish to adjust manually via the layer bar.
 5. Rearrange your layers in the proper order on the layers panel from top to bottom
 - a. Look for the layer you wish to select in your layer panel
 - b. Click to select the layer you wish to rearrange (it should appear highlighted)
 - c. Drag that layer to the top of bottom of the layer panel to switch the order (top to bottom) and overlap where appropriate
 6. Resizing individual layers
 - a. Look for the layer you wish resize in your layer panel
 - b. Click to select the layer you wish to resize (it should appear highlighted)
 - c. Go to: Edit → Transform → Scale
Key command Shortcut: COMMAND T to activate transform
 - d. Hover over the corner of that image to see the arrow icon... that means you are currently able to transform.
- IMPORTANT: **HOLD SHIFT** while transforming to keep the image in proportion
- e. Double click or press ENTER to complete the transformation
- TIP: You may select multiple layer at once by selecting multiples layers at once (Hold CNTRL to select multiple layers at once) then TRANSFORM
7. File → Save (or Command + S) to save over old edits as a .PSD

Title Screen for Audio Report Project Typography LESSON 3

Typography	The style and appearance of printed matter, the art or procedure of arranging type or processing data and printing from it.
Kerning	The spacing between letters or characters in a piece of text to be printed.
Baseline	In typography, the baseline is the imaginary line upon which a line of text rests. In most typefaces, the descenders on characters such as g or p extend down below the baseline while curved letters such as c or o extend ever-so-slightly below the baseline.
Leading	<p>The definition of leading is: the distance between two baselines of lines of type. The word 'leading' originates from the strips of lead hand-typesetters used to use to space out lines of text evenly. The word leading has stuck, but essentially</p>  <p>it's a typographer's term for line spacing</p>
Tracking	<p>In typography, letter-spacing, also referred to as tracking by typographers working with pre-WYSIWYG digital systems, refers to an optically consistent degree of increase (or sometimes decrease) of space between letters to affect visual density in a line or block of text.</p> <p style="text-align: center;">Tracking Tracking Tracking</p>
Serif	In typography, a serif is the little extra stroke found at the end of main vertical and horizontal strokes of some letterforms. Serifs fall into various groups and can be generally described as hairline (hair), square (slab), or wedge and are either bracketed or unbracketed.
Sans Serif	A category of typefaces that do not use serifs, small lines at the ends of

	characters. Popular sans serif fonts include Helvetica, Avant Garde, Arial, and Geneva. Serif fonts include Times Roman, Courier, New Century Schoolbook, and Palatino.
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Step-by-step instructions for downloading, installing and manipulating Typography

Important: Be sure to reference your spec sheet for all official BMB graphic work. Should you need to use a new typeface for a specific project you may download and install new typefaces but for continuity it is important that all official BMB graphic work utilize the same visual standards. That said, should there be a need for a new typeface be Types can be created, purchased or open sourced. ie. www.1001freefonts.com

Downloading and Installing typefaces

1. Go to your favorite font site and browse the categories of fonts appropriate to your subject.
2. Type your Title Screen into the PREVIEW BOX and press UPDATE to see your TITLE in the font of your choice before selecting.
3. Click DOWNLOAD to download the .txt files you wish to use.
4. Go to the FINDER on your desktop and click DOWNLOADS to locate your new type files txt
 - Many of these files will need to be unzipped...
 - Right click on the file folder and select EXTRACT to unzip your type file
5. Go to the Launchpad (Rocketship) on your desktop and type FONTBOOK in on the top search bar
6. Open the FONTBOOK application
7. Drag and drop your extracted (unzipped) type falls to ALL FONTS at the top of the FONTBOOK panel to install your new type files. Some font files require you to click install in a separate window after dragging.
8. Files will now appear in your Adobe Programs!

How to Manipulate your fonts in Photoshop

1. Open Photoshop → File → Open → TitleScreen_Lastname.psd
2. Select one of your **Type tools “T”** in the top of your toolbar.
 Hold down the type tool to select one of the two options
 The Horizontal Type Tool
 or
 The Vertical Type Tool
3. Begin typing your Title Screen to create a TYPE “T” layer in your Layer Panel.
 - Double click on the “T” in your layer panel at any point to reactivate your TYPE options/settings
 - The Type settings will also appear on the top of the Photoshop Panel to adjust the typeface, size, color, etc.
4. Try the TYPE WARP tool (this looks like a T over a rainbow) on the top of the Photoshop Panel to distort

the shape of the words to be Arced, Arched, Waved, Inflated etc.

5. To adjust the kerning...

Go to: WINDOW → CHARACTER to make adjustments to the font kerning, badline, leads, etc. to increase legibility

Summary:

Assess student Title Screen designs for their audio reports based on the following criteria...

Performance Indicator	1 Falls Below	2 Approaches	3 Meets	4 Exceeds
Completion	Title Screen design is incomplete	Title Screen design is incomplete with some missing layers components	Title Screen design completed with most layers components accurately executed	Title Screen design completed with all layer components accurately executed
Craftsmanship/ BMB Specifications	No BMB specifications were followed.	Few BMB specifications were followed, making design appear unrelated to the brand.	Most BMB specifications are followed properly used making design appear somewhat on brand.	All BMB specifications are followed properly used making design appear professional and on brand.
Composition	The Design has no visual clarity, or alignment, the design is difficult to read or illegible.	The design has a little visual clarity, alignment needs adjusting to create better visual clarity.	The design has some visual clarity, the design is legible and elements are somewhat aligned.	The design is legible, has a great deal of visual clarity all elements feel aligned and the overall design feels intentional.

Photoshop extension:

Photoshop CC offers many 3D capabilities, including 3D extrusions from layers, type and paths, control over the spatial relationships among objects, improved rendering, and generally improved performance. It allows you position and animate 3D models, edit textures and lighting, and choose from several render modes.

Objective 1 - Create a 3-D Object

Extrusion	Select a path, shape layer, type layer, image layer, or specific pixel areas. Choose 3D > New 3D Extrusion From Selected Path, Layer, or Current Selection. Note: To quickly extrude type while editing with the Type tool,
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	<p><i>click the 3D button in the options bar.</i></p> <p>With the mesh selected in the 3D panel, select the Deform or Cap icons at the top of the Properties panel.</p> <p>Edit numerical settings in the Properties panel, or drag the interactive extrusion controls in the document window.</p>
<i>Meshes</i>	<p>Provide the underlying structure of a 3D model. A mesh is often visualized as a wireframe, a skeletal structure built from thousands of individual polygons. A 3D model always has at least one mesh, and may combine multiple meshes. In Photoshop you can view meshes in a variety of render modes, and manipulate meshes independently of each other. While you can't alter the actual polygons in a mesh, you can change its orientation and transform it by scaling along different axes. You can also create your own 3D meshes, using pre-supplied shapes or by converting existing 2D layers.</p>
<i>Materials</i>	<p>A mesh can have one or more materials associated with it, which control the appearance of all or part of the mesh. The material in turn relies on subcomponents called texture maps, whose cumulative effect creates the appearance of a material. The texture map itself is a 2D image file that creates various qualities such as color, pattern, shininess, or bumpiness. A Photoshop material can use up to nine different texture map types to define its overall appearance.</p>

Suggested Activities / Exercises:

- Create a 3-D object from a 2-D beetle image.
- Create a 3-D photo cube

Resources:

- Inflation: <https://www.youtube.com/watch?v=kqAi5mNa2gM>
- Text: <http://planetphotoshop.com/inflated-text-using-3d-in-photoshop-cc.html>
- Photo cube: <http://photoshopcafe.com/photocube-tutorial.htm>

Objective 2 - Manipulate a 3-D Object

Create 3 dimensional logos and graphics for BMB segments using Photoshop

<i>Vanishing Point Filter</i>	<p>Quickly create perspective planes with the Vanishing Point filter, and snap an imported object to them.</p> <p>Select an image layer, and choose Filter > Vanishing Point. Using the Create Plane and Edit Plane tools, create a grid to define a ground plane. Then click OK.</p> <p>Choose 3D > New 3D Layer from File. The imported object is placed on the ground plane you defined.</p>
<i>3-D Axis Widget</i>	<p>You can manipulate individual 3-D objects within a 3-D layer to compose realistic scenes. The 3D Axis shows the current X, Y, and Z-axis orientation of models, cameras, lights, and meshes in 3D space. It appears when you select any 3D tool, providing an alternative way to manipulate the selected item.</p> <p>Minimize, restore, move, or resize the 3D Axis</p> <p>Move the pointer over the 3D Axis to display the control bar.</p> <p>Do one of the following:</p> <ul style="list-style-type: none">To move the 3D Axis, drag the control bar.To minimize, click the minimize icon.To restore to normal size, click the minimized 3D Axis.To resize, drag the zoom icon. <p>Move, rotate, or scale selected items with the 3D Axis</p> <p>To use the 3D Axis, move the mouse pointer over an axis control to highlight it, and then drag as follows:</p> <ul style="list-style-type: none">• To move the selected item along the X, Y, or Z-axis, highlight the conical tip of any axis. Drag in either direction along the axis.• To rotate the item, click the curved rotation segment just inside an axis tip. A yellow circle appears showing the rotation plane. Drag in a clockwise or counterclockwise circle around the 3D Axis center. To rotate more gradually, move the mouse farther away from the center of the 3D Axis.• To resize the item, drag the center cube in the 3D Axis up or down.• To compress or elongate the item along an axis, drag one of the colored transform cubes either toward or away from the center cube.• To constrain movement to an object plane, move the mouse pointer into the area where two axes intersect, near the center cube. A yellow plane icon appears between two axes. Drag in any direction. You can also move the pointer over the lower part of the center cube to activate the plane icon.

Lighting	Types include Infinite, Spot, Point lights, as well as Image-based lights that wrap around a scene. You can move and adjust color and intensity of existing lights, and add new lights to your 3D scene.
Camera View	<p>Use the 3D camera tools to move the camera view while leaving the position of the 3D object fixed.</p> <ul style="list-style-type: none"> In the Tools panel, click a 3D camera tool, and hold down the mouse button to select from the following types: <i>Hold down Shift as you drag to constrain the Rotate, Pan, or Walk tools to a single direction of movement.</i> <ul style="list-style-type: none"> Rotate - Drag to orbit the camera in the x or y direction. Hold down Alt (Windows) or Option (Mac OS) as you drag to roll the camera. Roll - Drag to roll the camera. Pan - Drag to pan the camera in the x or y direction. Hold down Alt (Windows) or Option (Mac OS) as you drag to pan in the x or z direction. Walk - Drag to walk the camera (z translation and y rotation). Hold down Alt (Windows) or Option (Mac OS) as you drag to walk in the z/x direction (z translation and x rotation). Zoom - Drag to change the field of view of the 3D camera. Maximum field of view is 180. Perspective Camera (Zoom only) - Displays parallel lines converging to vanishing points. Orthographic Camera (Zoom only) - Maintains parallel lines without convergence. Displays the model in accurate scale view without any perspective distortion. DOF (Zoom only) - Sets depth of field. Distance determines how far the in-focus field is from the camera. Blur obscures the remainder of the image <p>In the options bar, numeric values show the x, y, and z position of the 3D camera. You can also edit these values manually to adjust the camera view.</p> <ul style="list-style-type: none"> Change or create 3D camera views <ul style="list-style-type: none"> Select a preset camera view of the model from the View menu. To add a custom view, place the 3D camera in the desired position using the 3D camera tools, then click Save in the options bar. To return to the default camera view, select a 3D camera tool, and click the Return To Initial Camera Position.

Suggested Activities / Exercises:

- Experiment moving various 3-D objects free hand and using coordinates
- Place 3-D object in a photograph and adjust light and texture to seamlessly integrate into scene.
- Explore lighting effects with the various options, create a convincing light source for objects on several different layers.

Resources:

- Moving 3-D Objects: <http://blogs.adobe.com/richardcurtis/2015/05/15/creativefriday-moving-3d-objects-cameras-and-rendering-in-photoshop-cc/>
- 3D Lighting: <https://helpx.adobe.com/photoshop/how-to/overview-standard-3d-lights.html>
- Moving Text: https://www.youtube.com/watch?v=Np_WfV-Q9mA
- Spinning object with revolving text: <https://www.youtube.com/watch?v=fWk9KEILN7M>

PROJECTS/ASSESSMENTS

1. 3-D Text
2. Text revolving around spinning planet, logo, etc.
3. 3-D object placed in an environment

Creating 3-D Objects Lesson Plan – Text

Objective:

To create a 3-D object from a two-dimensional text image.

Materials:

Photoshop CC program

Procedure:

1. Type a the segments name using a font that has rounded edges and corners. This will help add to the rounded shapes of the finished 3-D text.
2. Convert the text into a 3-D object. With the text layer or the shape layer active in the Layers panel, go to 3D>New 3-D Extrusion from Selected Layer. This will immediately extrude the text and make the wire mesh ground plane visible.
3. In the 3-D panel, locate the 3-D text item in the list and click on it. Then, open the Properties panel and adjust the Extrusion Depth to 0.
4. At the top of the Properties panel, click on the Cap icon, (the third icon from the left). This is where you can modify the bevel and inflation settings. First, click on the drop-down menu at the top and set the Sides to Front and Back. Then, go down to the Inflate section and set the Angle to 90° and increase the Strength to about 20%.
5. Before splitting up the letters, set up the surface properties for the text elements. In the 3-D panel, highlight the Front Inflation Material for the text. In the Properties panel, click on the ball icon near the top right to open the Material Picker, and select the No Texture material. Click on the color swatch next to Diffuse, select white in the Color Picker, and click OK. Set the Shine to 100%, the Reflection to 75%, and the Roughness to around 25%. Apply these same settings to the Back Inflation Material.
6. Go to 3D>Split Extrusion. This will allow you to manipulate each letter individually while keeping all the letters in the same 3-D layer. Switch to the Move tool (V), and click on the first letter to put a 3D box around just that letter. You can now use the 3-D tools and widgets to change the position and scale this letter in relation to the other letters.
7. Starting with that first selected letter, click on its Front Inflation Material in the 3-D panel. At the top of the Properties panel, click on the color swatch next to Diffuse and choose a color in the Color Picker. Click OK when done. Do the same thing for each of the remaining letters, giving each one a different color. You'll notice that the reflection properties all stay the same even when the color changes.
8. In the 3-D panel, click on Environment at the very top of the list. At the top of the Properties panel, just under Global Ambient, will be the IBL (Image Based Light). Click on the icon to the right of the preview thumbnail and choose New Texture. In the New dialog, look for the name of the 3-D file in the Preset drop-down menu to use the same dimensions as the main file for this new file, make sure Background Contents is set to White, and click OK.
9. Once the new file is created, go back to the IBL menu and choose Edit Texture. Once the file opens, press Command-I to invert the white background to black. Then, click the Create a New Layer icon at the bottom of the Layers panel, and use the Elliptical Marquee tool (nested under the Rectangular Marquee tool [M] in the Toolbox) to create a large oval selection inside the canvas. Press Shift-Delete, choose 50% gray from the Use drop-down menu in the Fill dialog, and click OK. Close and save the Image Based Light file.
10. This will change the appearance of the light and reflected elements on the text. With the Environment property still selected in the 3-D panel, you can use the 3-D tools to move and rotate the IBL to change

the way it appears on the text. You're essentially moving the reflection around the surface of the object. To access the 3-D tools, activate the Move tool, and you'll see all the 3-D tools at the end of the settings in the Options Bar.

11. Reposition and scale each letter using the 3D tools or widgets. The letters will interact with each other by reflecting not just the Image Based Light but also each other once the 3D object is rendered (3-D>Render). Even though you can manipulate each letter individually, they all still remain on a single 3D layer.

Summary:

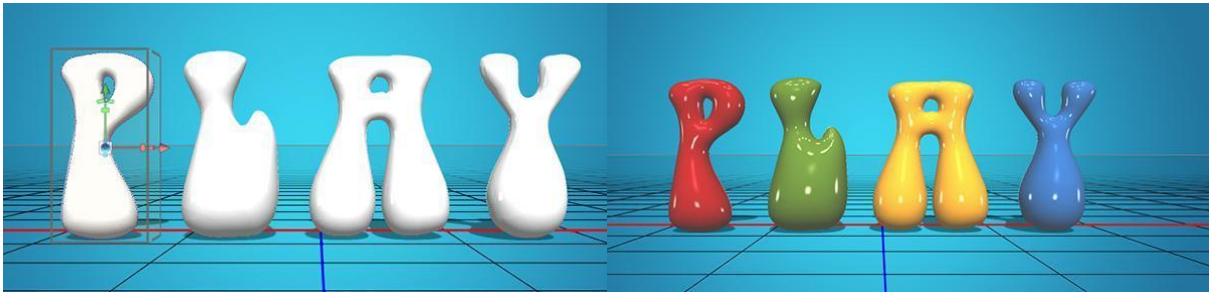
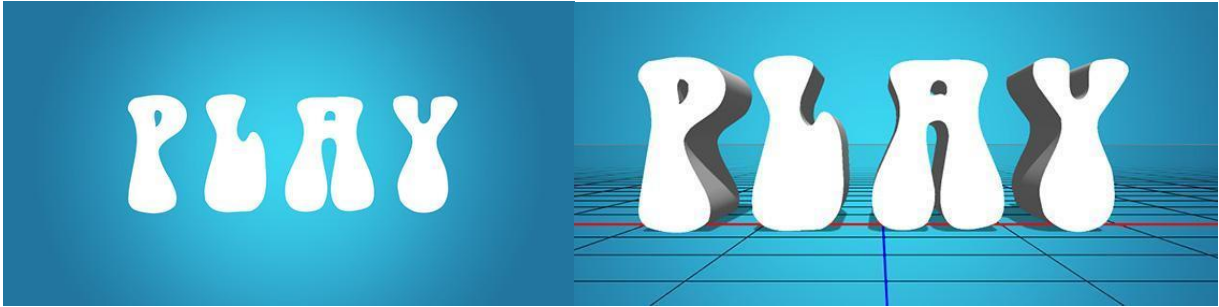
Assess student work using critique and self-evaluation methods. Additional question and answer sessions can help clarify technique and review project objectives.

How does a 3-D layer differ from others in Photoshop?

How can you change the camera view?

How do you apply materials to an object?

Performance Indicator	1 Falls Below	2 Approaches	3 Meets	4 Exceeds
Dimension <ul style="list-style-type: none"> Edges Texture 	Type has no depth.	Type is awkward and inconsistent in depth.	Type appears to have consistent depth.	Type is completely consistent, each letter has the same amount of depth.
Lighting <ul style="list-style-type: none"> Color Value/form 	No consistent light source present.	Inconsistent lighting, some letters do not follow light source pattern.	Light source is properly employed to create a unified look.	Light source creates convincing form and successful use of color.
Conceptual Consistency <ul style="list-style-type: none"> Creative Problem solving 	Rarely shows coherency of the intended concept.	Sometimes shows coherency of the intended concept.	Shows coherency, but requires greater clarity of intended concept.	Almost always shows coherency and clarity of intended concept.





Tools SHORTCUTS				
History Brush tool	Y	Y		
Art History Brush tool*	Y	Y		
Eraser tool	E	E		
Background Eraser tool	E	E		
Magic Eraser tool	E	E		
Gradient tool	G	G		
Paint Bucket tool	G	G		
Dodge tool	O	O		
Burn tool	O	O		
Sponge tool	O	O		
Pen tool	P	P		
Freeform Pen tool	P	P		
Horizontal Type tool	T	T		
Vertical Type tool	T	T		
Horizontal Type mask tool	T	T		
Vertical Type mask tool	T	T		
Path Selection tool	A	A		
Direct Selection tool	A	A		
Rectangle tool	U	U		
Rounded Rectangle tool	U	U		
Ellipse tool	U	U		
Polygon tool	U	U		
Line tool	U	U		
Custom Shape tool	U	U		

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UNIT V: INTRO TO ADOBE ILLUSTRATOR

(appx. 3-4 weeks)

Students will learn the key differences between the Adobe Photoshop and Illustrator platforms including file extensions and the main distinction of pixels vs. vector.

Students will gain experience creating illustrator documents, adjusting the orientation and size using increments and begin to understand how Illustrators files can be endlessly manipulated to accommodate any print size without restriction or loss of quality.

Students will begin to experience the difference between a vector and a pixel by creating and manipulating their own vectors and anchor points using basic tools in Adobe Illustrator.

Overview: Key lessons for the Unit

1. Introduction to Illustrator, Appearance Panel, Window, Toolbar, Zoom,
2. The difference between Illustrator and Photoshop, Vectors vs. Pixels
3. Introduction to geometric shapes and fills vs. strokes
4. Introduction to basic drawing tools in illustrator
 - o Differences between different drawing tools
 - o Adjusting stroke thickness
5. Introduction to **modifying and anchor point tools**
6. Introduction to **simple shapes**
Identifying simple shapes within graphic design pieces and more complex forms
7. Introduction to **Type tools**
 - o Horizontal vs. Vertical Type Tools
 - o Type on a Path
 - o Area Type tools
 - o Expanding your type to convert it to Vector
8. Creating layered imagery using a combination of simple shapes and drawing tools
 - o Introduction to layers
9. Exporting your Illustrator files to meet BMB specifications: file type,size, resolution etc.
 - o Using Art Boards to Save
 - o Selecting dpi after exporting, etc.
 - o

Objective 1 - Navigating Illustrator (appx. 1 day)

- What is the difference between: Photoshop vs. Illustrator... Vector vs. Pixel
- Introduction to the appearance panel, where tools and windows are located
- How to switch between tools, move and zoom in and out within an artboard

Tools	Navigating Illustrator
Hand (H)	Moves the Illustrator artboard within the illustration window. <ul style="list-style-type: none">• Click & drag to move around the document.
Print Tiling	Adjusts the page grid to control where artwork appears on the printed page.
Zoom (Z)	Increases and decreases the view magnification in the illustration window.
Artboard	Creates separate art boards for printing or export. <ul style="list-style-type: none">• Click & drag anywhere on the window to create a new art board.

Suggested Activities:

- Show examples of graphic arts made in Adobe Illustrator
- Discuss appearance panel
- Open templates
- Create new documents for varying specifications
- Adjusting Units and Increments: Resize documents
- Changing Page Orientation
- Workspace vs. Canvas

Resources: <http://www.creativebloq.com/digital-art/illustrator-tutorials-1232697>

Objective 2 - Silhouettes, Shapes in Illustrator (appx. 2-3 Days)

- What is the difference between paths, anchor points and handles
- How to create paths and anchor points (See **modify anchor point tools** for instruction)
- How to edit paths and anchor points (See **modify anchor point tools** for instruction)
- What is the difference between open and closed shapes
- What is a **Stroke color** vs. a **Fill color** and how to adjust it.
 - Double click on the **fill color** box to select a **fill color**
 - Double click on the **stroke box** to select a **stroke color**
 - Click once on the **double arrow** to switch between **fill & stroke color**
- Introduce the color palette as well as: Fill color vs. Stroke Color and the no stroke Icon
- Using smart guides to draw straight, parallel and perpendicular lines (see **pen tools** for instructions)

Tools	Basic Drawing in Illustrator
Pen (P)	<p>Draws straight and curved lines to create objects.</p> <ul style="list-style-type: none">● To create a straight line: Click and hold shift and click again● To create a curve: Click to create anchor point then click and drag to create a handle to determine an angle and amount of curve● To create a closed shape: Click at beginning anchor point● Hold alt to break or modify anchor points to create sharp corners

Pencil (N)	<p>Draws and edits freehand lines.</p> <ul style="list-style-type: none"> ● Select the line, Click on the end anchor point and drag and draw holding ALT to the opposite ending anchor point to close the shape ● (You may also edit an existing geometric shape by selecting the shape by dragging (drawing) the pencil near the shape's edge from starting anchor point to ending anchor point while holding ALT to combine the two.
Path Eraser	<p>Erases paths and anchor points from the object.</p> <p>Click and swipe to erase or break up anchor points of an object (object must be selected)</p>
Smooth	Smooths Bezier paths.
Line Segment (\)	Draws individual straight line segments.
Arc	Draws individual concave or convex curve segments.
Spiral	Draws clockwise and counterclockwise spirals.

- How to create curved lines (see **pen, pencil & paint brush tools** for instructions)
- Basics of using the drawing table

Suggested Activities: Students may gain experience with the above tools and techniques by creating:

- Using the pen tool create closed shapes such as clouds with smooth curves & sharp angles
- Using the pen tool trace a silhouetted photographic image
- File → Place to select and import an image
Then follow instructions for the **pen tool**
- Using a variety of the above tools and techniques create:
 - a simple graphic, logo or icon to be used for segments of BMB news reports:
Ie. This Mephram Moment, Pirate Pride, Live from the Locker room, Behind the Desk, etc.

Resources:

<https://helpx.adobe.com/illustrator/atv/cs6-tutorials/essentials-of-the-pen-and-pencil-tools.html>

Objective 3 - Modifying Anchor Points (*appx. 3 days*)

- The difference between selection & direct selection tools
- How and why to add or delete an anchor point in order to modify a path
- Group, Magnetic, Lasso tool

Tools	Modifying Anchor Points
The Selection tool (V)	Selects entire objects. Click on the object, shape or line to resize, move, and edit
Direct Selection tool (A)	selects points or path segments within objects. Click on the object's, shape or line to select an anchor point to move the anchor point, adjust handles
Add Anchor Point tool (+)	adds anchor points to paths Select the add an anchor point tool, then Click to (add/subtract) an existing selected object in order to adjust the angle or morph the shape in some way
Delete Anchor Point tool (-)	deletes anchor points from paths Select the delete an anchor point tool, then Click to (add/subtract) an existing selected object in order to adjust the angle or morph the shape in some way

The Group Selection tool	selects objects and groups within groups.
The Magic Wand tool (Y)	selects objects with similar attributes.
The Lasso tool (Q)	selects points or path segments within objects.

Suggested Activities:

- Live trace a simple icon and simplify given anchor points
 - File→ Place, select the placed object, Object→ Live Trace
- Morph circles into stars, stars into circles
(See **Add/Subtract Anchor points** & **Select/Direct selection tools** for instruction)
- Stretch, rescale simple geometric shapes into complex ones

Resources:

<https://helpx.adobe.com/illustrator/using/selecting-objects.html>

Objective 4 - Simple Shapes (appx. 2 days)

- Key Commands for working with shapes
 - Option Click to draw from the center point
 - Space Bar Click and Drag to move object into position
 - Option Click & Drag to duplicate a shape
 - Shift & Drag to keep shapes in alignment
 - Shift to select multiple objects
 - Shift X to invert stroke vs. fill selections
 - FWD Slash / to select No Fill
- Experience with drawing simple shapes in illustrator
- Using key commands to create concentric & perfect simple shapes
 - Click and hold to select the specific shape click and drag to create a shape of a specific size or orientation.
 - Hold SHIFT while creating a shape to make it an equilateral or “perfect” shape
 - Hold ALT to create a concentric shape centered around the your crosshairs starting point.
 - Making adjustments to simple shapes by adjusting anchor points and handles
- Copying, Pasting, Duplicating simple shapes (key command review) CNTRL C, V, X, etc.
- Arranging simple shapes (front to back)

Tools	Simple Shapes
Rectangle tool (M)	Draws squares and rectangles.
Rounded Rectangle	Draws squares and rectangles with rounded corners.
Ellipse (L)	Draws circles and ovals.
Polygon	Draws regular, multi-sided shapes

The Star tool	Draws stars (Up arrow to add a point, Down arrow to delete a point)
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Suggested Activities:

- Create simple graphic to used as a logo for one of the BMB segments
- Design the name of a BMB segment using a combination of simple geometric shapes

Resources:

<https://helpx.adobe.com/illustrator/atv/cs6-tutorials/creating-objects-with-the-shape-tools.html>

Objective 5 - Editing Simple shapes *(appx. 1 week)*

- Combining, Rotating, Resizing and Transforming simple shapes to create complex shapes

Suggested Activities:

- Combine simple BMB logo graphics with your original segment name design using a combination of simple geometric shapes, then join/ simplify those shapes by merging (shape builder/pathfinder) into the fewest possible anchor points.

Resources:

<https://helpx.adobe.com/illustrator/using/rotating-reflecting-objects.html>

<https://www.youtube.com/watch?v=d7G4O1N2Q6g>

<https://helpx.adobe.com/illustrator/using/creating-shapes-shape-builder-tool.html>

<https://www.youtube.com/watch?v=LCboshXPKeA>

Objective 6 - Color Blends and Special Effects *(appx. 1 week)*

- Using paintbrushes (and libraries) to create calligraphic lines using illustrator
- Using the mesh, gradient tools to create light effects
- Using the color guide to find perfect color harmonies, families
- Using the blob tool to fill large areas of color while simplifying anchor points
- Applying special effects drop shadows to objects and layers
- Adding gradients to Strokes
- Adding depth Drop Shadows, Bevels
- Give Graphics a glossy shine
- How to adjust lighting, layers and opacity

	Painting tools
Paintbrush (B)	Draws freehand and calligraphic lines, as well as art, patterns, and bristle brush strokes on paths

Mesh (U)	Creates and edits meshes and mesh envelopes.
Gradient (G)	Adjusts the beginning and ending points and angle of gradients within objects, or applies a gradient to objects.

Blend tool (W)	creates a series of objects blended between the color and shape of multiple objects
Eyedropper (I)	Samples and applies color, type, and appearance attributes, including effects, from objects.
Flare	Creates lens-flare or solar-flare-like effects.
Live Paint Bucket (K)	Paints faces and edges of Live Paint groups with the current paint attributes.
Live Paint Selection (Shift-L)	Selects faces and edges within Live Paint groups.
Blob Brush (Shift-B)	Draws paths that automatically expand and merge calligraphic brush paths that share the same color and are adjacent in stacking order.

Suggested Activities/ Exercises:

- Create detailed 3 dimensional objects for BMB graphics and segments.

Resources:

<http://design.tutsplus.com/articles/22-fun-gradient-mesh-tutorials-in-adobe-illustrator-for-beginners--vector-22544>

<http://www.creativebloq.com/illustrator/how-use-blob-brush-tool-71412405>

ILLUSTRATOR – SAMPLE LESSONS

Sample Lesson 1: Color Blending (*appx. 1 week*)

Do Now: Gather around for a demonstration

Aim: How can you merge multiple color/value gradients within one complex shape?

Motivation: Up to this point you have had the ability to alter the color, tone of each object you create in illustrator. However we have only just begun to discuss the depth with which you can create lighting effects. Thanks to tools like the gradient, mesh and blend tools designers can achieve flawless transitions between colors, tones and complex shapes. Now we already have some experience with the gradient tool on its own selecting two or more colors within the gradient and choosing how slow or fast those transitions happen within a given object. However what if you wanted to apply multiple gradients along more complex shapes? While the Gradient tool allows you to create or modify a gradient fills and strokes by combining the gradient tool with the Blend tool, illustrator makes it possible to blend the shapes and colors of objects together into a new object with multiple gradations.

Procedure:

- Motivation
- Demonstration of the Gradient & Blend tools
 1. Create a gradient fill.
 2. Apply and edit a radial gradient.
 3. Add colors to a gradient.
 4. Adjust the direction of a gradient blend.
 5. Blend the shapes of objects in intermediate steps.
 6. Create smooth color blends between objects.
 7. Modify a blend and its path, shape, and color.
- Class time/work period: Recreate an organic image using the blob tool

Review/Closure: What are some possible scenarios (subject matter) that might be necessary to use blends between multiple gradients? (portraits, anatomy, organic forms of any kind)

Assessment:

- Q&A, during the process, & (1 on 1 during work period after)
- The execution of their own organic image, caricature, portrait, etc.
- Rubric or Reflection Sheet

Sample Lesson 2: Paintbrush vs. the Blob tool (appx. 1 week)

Do Now: Gather around for a demonstration

Aim: What are some ways we can we mimic the complex organic shapes seen here with Illustrator?

Motivation: As you know Adobe Illustrator is a vector program, working in vector has a great many perks for the designer who can decide on a whim to change the scale dramatically. You know how to create strokes and closed shapes as well as manually combining geometric shapes. However, if I wanted to create an organic shape, ie: wispy clouds, grassy fields, this becomes much more difficult.

- What are some ways we can we mimic the complex organic shapes seen here with Illustrator?

Yes, it is possible we could draw individual strokes using a calligraphic setting on the paint brush however each stroke would then become individual paths without fill options. We could also use the shape builder tool however that tool requires you to individually create the simple shapes to combine complex ones. An alternative to this is the **blob brush**. The **blob brush** allows the artist to create organic shapes in a way that is similar to painting (a more natural gesture to the artist/painter) as one swipe of blob brush creates both a stroke and a fill at the same time. This allows for complex organic shapes to be created and edited very quickly.

Procedure:

- Motivation
- Demonstration of the Blob tool
- Class time/work period: Recreate an organic image using the blob tool

Review/Closure: What are some ways that the blob tool differs from the shape builder or paintbrush tool?

Assessment:

- Q&A, during the process, & (1 on 1 during work period after)

- The execution of their own organic image
- Rubric or Reflection Sheet

UNIT IX: TYPOGRAPHY / LOGO DESIGN (appx. 4 weeks)

Students will work collaboratively to conceive and develop a Logo design for a segment of a BMB Broadcasting segment that successfully communicates the perceived value, meaning and concept of the segment.

- *The Propositional Principal & Logo unit will be based on the Design based project learning model.*
- *Students create their own original logo designs that clearly communicate the value and meaning behind of their clients product.*

Overview:

1. *Introduction to Type tools in illustrator*
2. *Differences between serif and sans serif and the anatomy of Typography:*
3. *How to download and import & text via fontbook*
4. *How to expanding text to create editable vectors*
5. *Using precision grids to align visual elements creating balanced, proportional designs.*
6. *Qualities of a successful Logo: Simple, clear, deep meaning (not surface)*
7. *Identify the propositional principal in existing logos (Fed Ex, Target, etc.)*
8. *Students will be working within BMB segment specifications while designing logo variations that communicate positive qualities of their segment.*
9. *Brainstorm and design creation of Logo*

Objective 1 (*appx. 1 week*)

- Using Type tools to create fully editable type
- Discuss the differences between serif and sans serif
- The anatomy of Typography:
 - ascender, descender and base lines, bowl, shoulder, body, bracket, stem, loop, terminal, bracket, etc.
- Importing & text via font book
- Expanding text to be editable vectors

	Type tools
Type (T)	Creates individual type and type containers and lets you enter and edit type.
Area Type	Changes closed paths to type containers and lets you enter and edit type within them.
Type On A Path	Changes paths to type paths, and lets you enter and edit type on them.
Vertical Type	Creates vertical type and vertical type containers and lets you enter and edit vertical type.
Vertical Area Type	Changes closed paths to vertical type containers and lets you enter and edit type within them.
Vertical Type On A Path	Changes paths to vertical type paths and lets you enter and edit type on them.

Objective 2 (appx. 3-5 days)

- Using Grids to align text and visual elements, creating a sense of order balance and proportion

	Precision Tools
Rectangular Grid	Draws rectangular grids
Polar Grid	Draws circular chart grids
Measure	Measures the distance between two points.
Perspective Grid	Allows creating and rendering artwork in perspective.
Perspective Selection	Allows you to bring objects, text, and symbols in perspective, move objects in perspective, move objects in perpendicular to its current direction.

Suggested Activities/ Exercises:

- Using the quote of your choice use type to illustrate the meaning of the phrase
- Illustrate an action word
- Create a personal Logo
- How to design headline Typeface

Projects/Assessments:

- Client Design for Logo/ Poster/ Avatar/Character Design that meets a particular set of criteria and clearly conveys a particular concept

Resources:

<https://www.youtube.com/watch?v=xq8d3KtYWLo>

<http://www.creativebloq.com/typography/column-grid-poster-design-made-neat-and-easy-10122682>

Sample Lesson 1: Introduction to Logo Design

Motivation:

Introduction to the logo as design and the Propositional principal deeper meaning vs. surface meaning

Materials: Adobe Suite, Computers, Projector, paper, pen, pencil,

Procedure: Students will brainstorm product/company associations that relate to the positive qualities of their clients product.

1. Students experiment with combining words and images to design new imagery that may represent their client's product.
2. Students will thumbnail sketch their own original designs using their word & image association bank in an attempt to visually communicate their concept.
3. Students will share and generate additional association lists and sketched thumbnail designs.
4. After meeting with peers across the classroom, students will break into their own small group design teams and question which of their existing ideas are clearly communicating the best elements of their clients product and which designs use both propositional and surface based meaning..

Assessment:

- Students will narrow to the best 3 design concepts and then question and observe the strongest qualities of each design. (list)
- Based on the list they have developed, students will experiment with redesigning (at least 10 variations) for each of the 3 design ideas for the client.
- Students will continue to evaluate and assess their designs and solidifying the concept and strongest design elements

Worksheet/notes

INTRO TO ADOBE ILLUSTRATOR

Vector	Pixels
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File Formats

AI	PSD	PDF	JPG

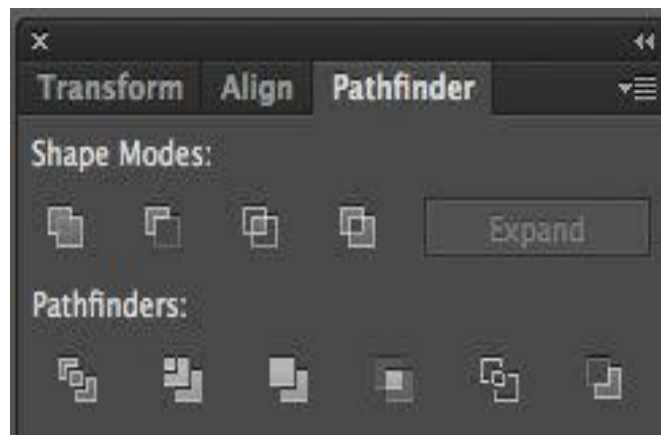
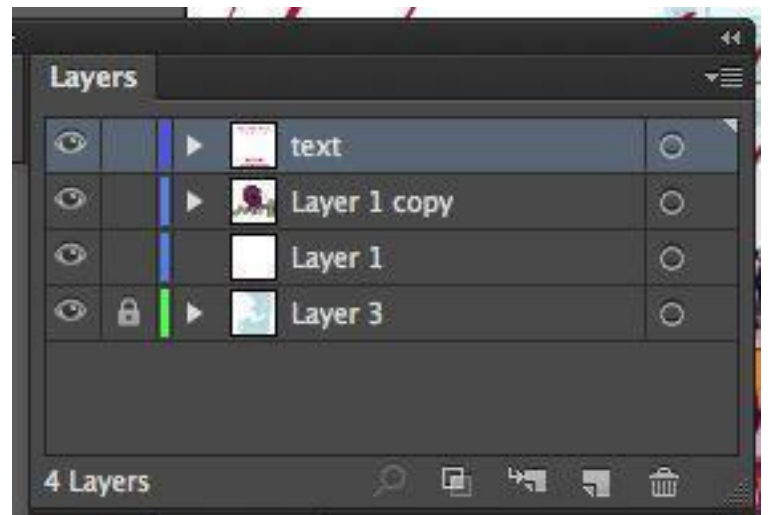
*** YOU CANNOT “SAVE” FOR PRINT; YOU MUST EXPORT AND SELECT HIGH 300 PP
(Not Screen or Medium)**

KEY SHORTCUTS

Cntrl C	
Cntrl V	
Cntrl X	
Cntrl Z	
Cntrl T	
Cntrl +	
Cntrl –	

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Document Set Up	
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RUBRIC

Name: _____ Unit _____

Objective: _____

Briefly describe your concept/idea as well as the strengths and weaknesses of your design:

Assignment Criteria	Developing 0-69	Emerging 70-79	Proficient 80-89	Strong 90-100	Teacher Comments
Concept Appropriate look and feel for chosen event; eye catching imagery, color, and text	No clear concept is developed; concept is developed but inappropriate to the assignment.	Concept is original and somewhat clear; idea is appropriate to the assignment; some effort shown with color, imagery and content.	Concept is clear and appropriate to the event; logical and pleasing use of color, imagery, and content to create an eye catching design	The concept is very clear, exemplary effort in color use, imagery and content is used to create an exciting and successful design.	
Composition, Layout & Design	Elements are confusing and scattered; there is little to no visual organization.	There is some visual organization but elements feel misaligned or out of place.	Shows clear visual order by use of the elements and principles of design	Strong visual organization is used through the elements and principles; visual risks are taken to create powerful and exciting imagery.	
Use of Illustrator proficiency at using Illustrator to create quality vector artwork	Does not have understanding of application Program; no effort in using new skills, tools & techniques	Some understanding of program but little effort displayed with new tools & techniques	Good understanding of application program with some experimentation / effort in the use of new skills, tools & techniques	Excellent understanding of application program; advanced use of new skills, tools & techniques	
Following specifications Quality, print ready design prepared in a package folder	Illustrator file not linked properly, incorrect color mode, incorrect format and/or scale; package folder was not made correctly	More than two of the criteria were not considered: -file format /linkin -color mode -scale/format -package folder	One or two of the criteria were not considered: -file format / linking -color mode -scale/format -package folder	All of the package criteria were met.	

Art Direction & Critique	Feedback/ Instructions were largely ignored.	Some feedback/ instructions were taken into consideration.	Most feedback/ instructions were represented in the completion of the design.	A dialogue of feedback was created between teacher, student & peers; work was analyzed critically, and the piece reflects thoughtful application of ongoing critique.	
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Pathing a Low-Poly Butterfly

For this formative, you will be pathing half of a geometric butterfly. You will then duplicate this half and reflect it to have one complete, symmetrical butterfly. Low Poly means there is a small number of polygons making up an entire image. They typically look very geometric.

PART I

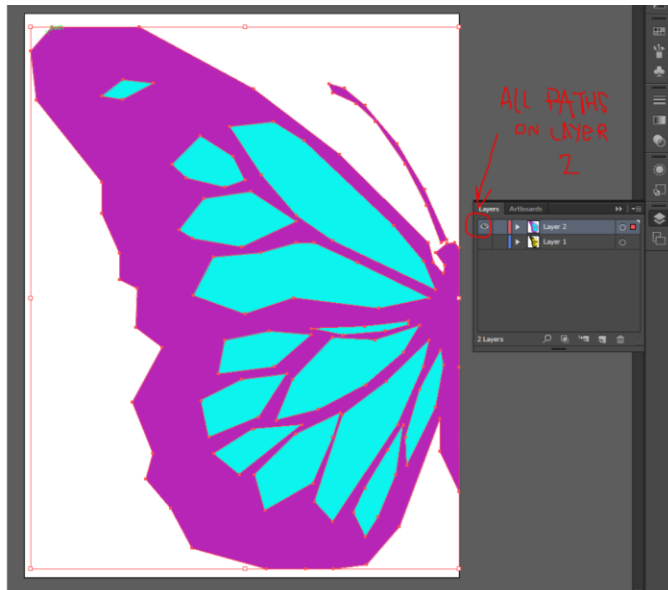
1. Download the .jpg file from Google Classroom. To do this, right click on the image and open it in new tab. Press the download arrow and you will see it appear at the bottom once it downloads.
2. Open Illustrator. From the File menu, select Open>Downloads> lowpoly.jpg.
3. Open a New Layer.
4. Select the pen tool. Set your fill color as no fill (red slash through foreground swatch) and your stroke color as black.
5. Using the pen tool, create straight lines around the outside shape of the butterfly first. This includes the wing, body, and antenna.
6. Next, path each of the designs on the inside of the wing. Once you have this finished, it should look something like this:



8. Hide the first Layer with the photo of the butterfly on it. Looking only at your paths, fill each part of the butterfly with a **different color and NO STROKE**.



9. Click on your **selection tool** (black arrow, shortcut V). Click and drag from just outside of the top left corner to the bottom of the document. This will highlight all of your paths at once in RED since they are on the red color-coded layer.

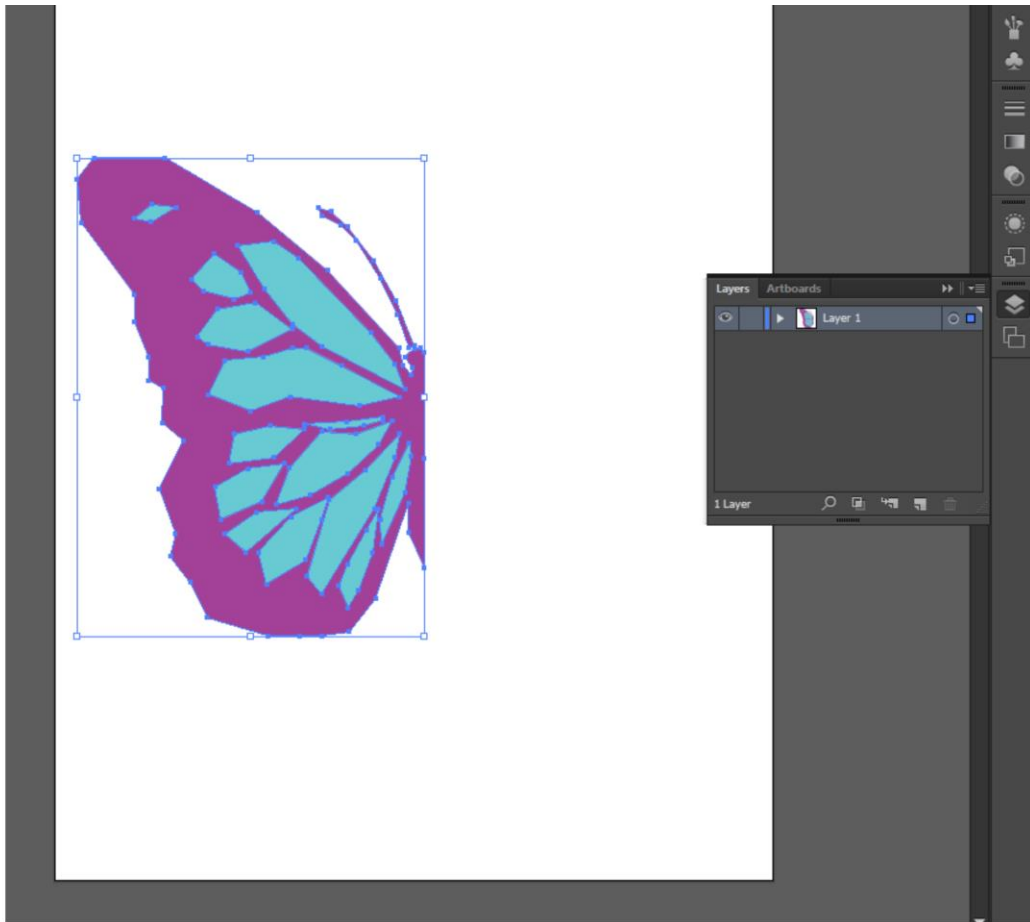


10.

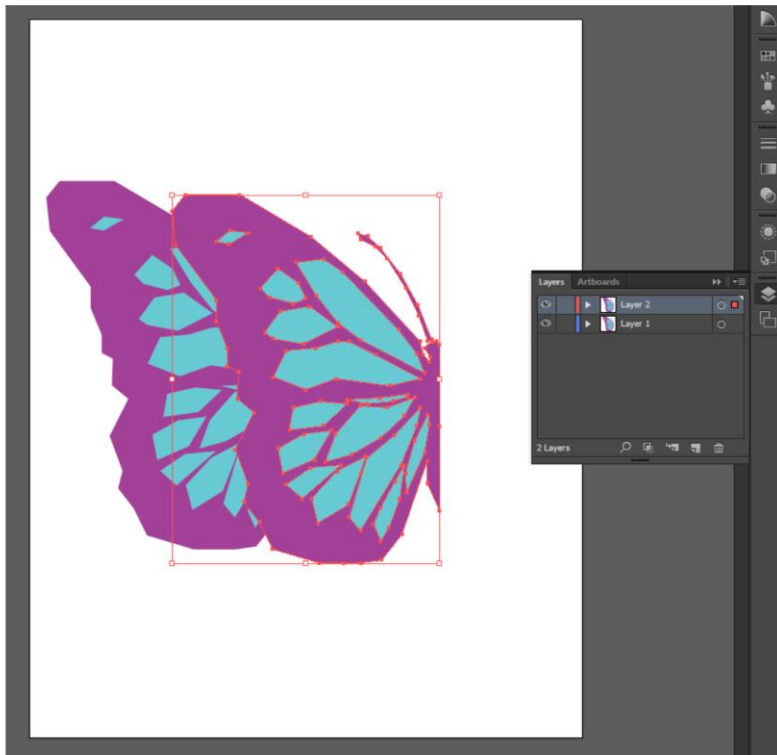
11. **CTRL+C** to copy these paths.

PART II

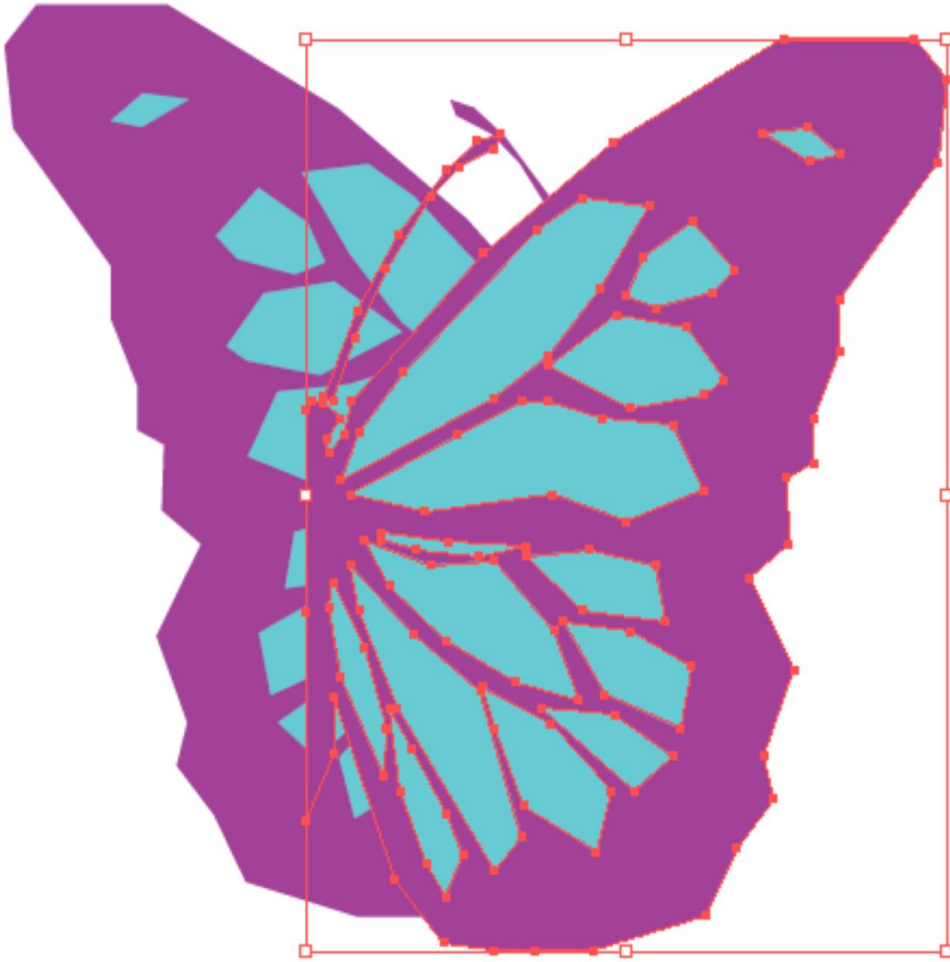
12. Open a **New Document** (CTRL+N) in the size that says Letter (612x792 pt).
13. **Paste** the butterfly (CTRL+V) and drag the corners to resize it so that you can fit 2 on one page.



14. **Copy this smaller butterfly** by selecting it with your Selection Tool. Paste it on a **New Layer**.



15. With the second half of the butterfly active, go to **Object>Transform>Reflect**. You will see the half flip the other way.



16. Move this to fit with the original image you had.



You should now have a completed low poly butterfly.

Low-Poly Wildlife Project



For your next project, you are going to take the steps you used to create a butterfly and apply them to a low-poly animal of your choice. Just like the butterfly, you are going to use your pen tool to create straight-edged, geometric polygons on HALF of a photo. Once all of your polygons have been outlined, you will fill them with color, and reflect a copy of your creation to finish the second half of your animal.

Keys to Success

- All of your paths must be complete before changing the stroke or fill color. Remember, we are working in terms of shapes. A set of incomplete lines are not a shape.
- Take your time!
- If you try to connect an anchor point of a new shape to one that is already active, it may delete the anchor point. To avoid this, hold down shift while clicking on an active anchor point in order to add to it.
- Outline the animal's silhouette FIRST, followed by any larger areas you would like to stay defined. This can include the eyes, nose, mouth, inside of the ears, and large patches of solid color. Then, fill in all smaller areas with polygons.
- The more shapes you add, the more detail there will be at the end.

Mastery Objectives

Why are we making these? By the end of this project, you will have an understanding of how to use the pen tool to make geometric shapes. You are learning to manipulate Fill and Stroke color, Layers in Ai, Transform, and how vector graphics are created.

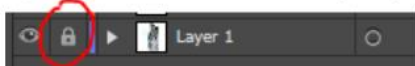
Low Poly Wildlife Step-by-Step Tutorial

1. Select a photo of an animal and crop it in half using Adobe Photoshop. Select the image with the rectangular marquee, copy, and paste it into a **new Adobe Illustrator file of the dimensions 500x500 pt.**

The following steps are ALL in Illustrator only:

Part I

2. Once this image is pasted onto the document, adjust it to one side and **LOCK the layer**. This will prevent any confusion with your pathing.
3. Open a **NEW LAYER** to do all of your pathing on.



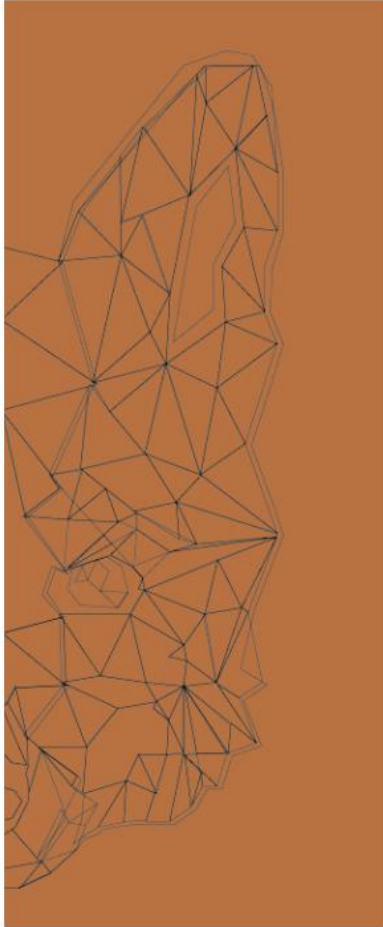
4. Outline the animal's silhouette **FIRST**, followed by any larger areas you would like to stay defined. This can include the eyes, nose, mouth, inside of the ears, and large patches of solid color.
5. Then, fill in *all smaller areas* with polygons of various shapes and sizes. By the time this step is finished, there will be a geometric mesh over your entire animal.



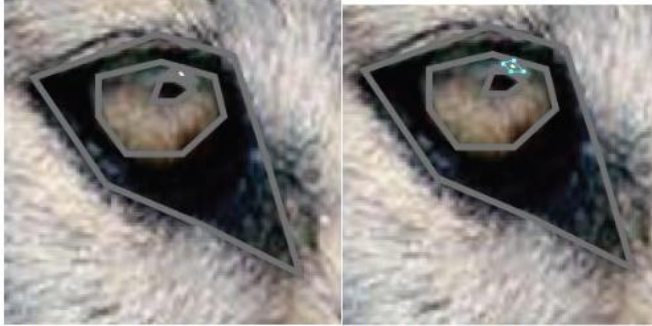
- a. The more shapes you add, the more detail there will be at the end.

Part II

6. Once your geometric mesh is complete, you must make sure **EVERY PATH IS COMPLETE** before moving into color. Use **CTRL+Y** to isolate only your paths. Click on any anchor point to re-activate it and add the necessary points to complete your shape. It will look like this:



7. Use the **direct selection** tool to select one path at a time. Work from the inside out (i.e. select smallest shapes first and they will appear above the larger shapes).



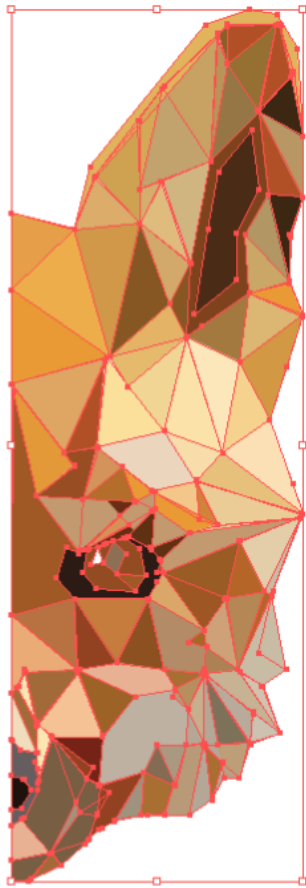
8. Use the Eyedropper (I) to select color from inside each path, and it will choose an average tone to color the entire shape.
- a. In shortcuts, you can alternate pressing A, clicking a path, and pressing I.



9. Repeat these steps until the entire image has colorful shapes. To remove the original strokes that you had on your paths, select the target icon on Layer 2, which will select all paths on this layer, and then change your stroke fill to none—red slash through icon.



Target icon



Selecting everything on layer 2



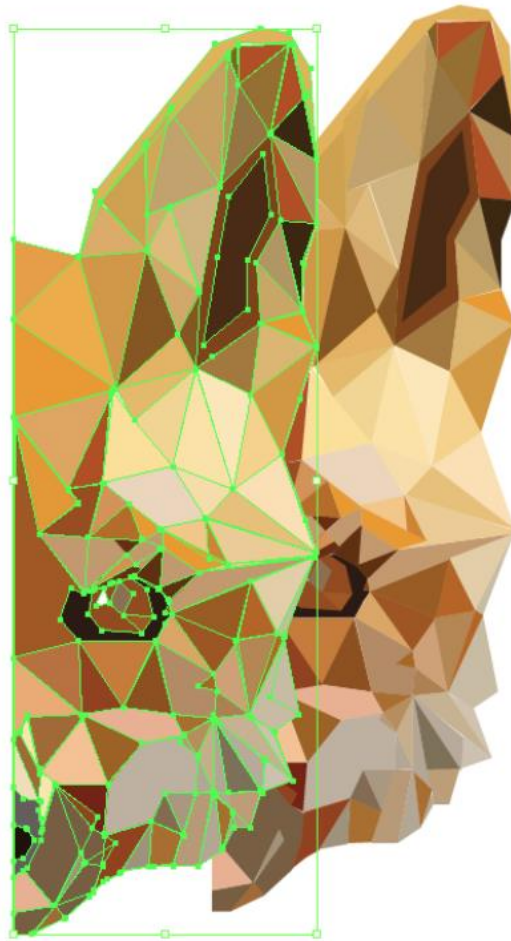
No Stroke

10. What you're left with should look like this:



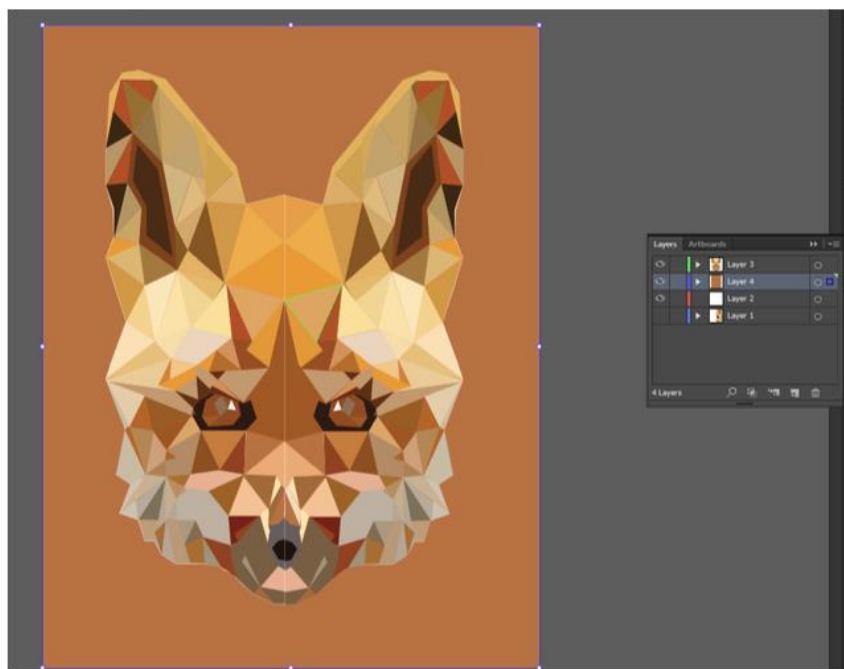
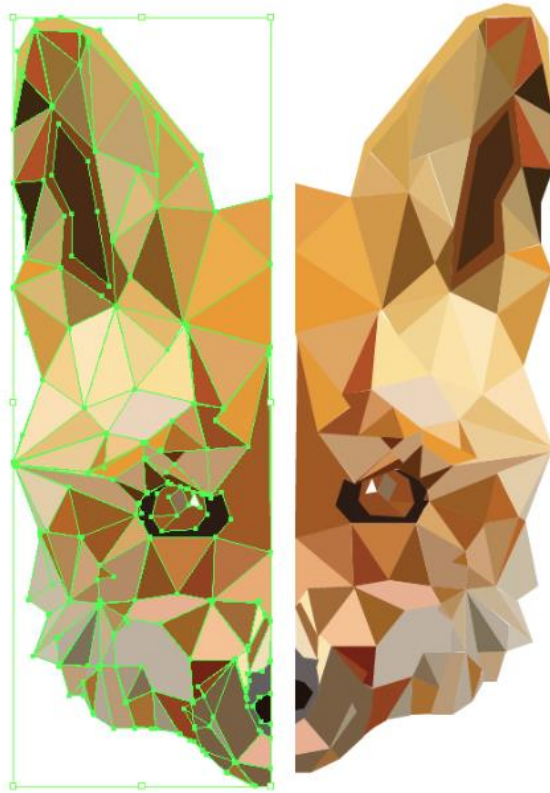
Part III

11. The last step for this project is exactly the same as your butterfly formative. Click the target icon again to select everything on layer 2. Copy and paste it **on a new layer** so that it appears next to your original image. **THE HIGHLIGHTS WILL BE GREEN.**



- 12.
13. With this layer selected, go to **Object> Transform>Reflect** and your image will mirror itself.

14. Use your selection tool to line this up with the original. Adjust any seams on the middle shapes so that it fits together without distracting outlines between them.





Congratulations! You have completed your low-poly animal!