

When you created your artwork in Illustrator, you did so with vector.

However, scans are inherently pixel-based raster.

This exercise introduces what I call “Photoshop Math”. All that means is that it’s not just length and width you need to consider with raster images. It’s now length and width *and* resolution.

OVERVIEW:

Theoretically, say I want you to scan your traced image to be large enough to **print** perfectly at 11in instead of 6in.

FYI: The average high-resolution printer should be considered 300DPI (DPI=PPI, ink vs. pixel approximately).

The Phaser at school prints at something more like 150DPI. The more resolution, the more digital information and the larger your file, so we will keep things to print on the Phaser.

Your artwork is traced at 6in, but it would need to print at almost 200% to fill the 11in width of the print.

Therefore, if we scanned in your work at 100% (6in) at 150DPI, it would look pixelated (YUCK!) when printed.

The answer would be to “tell” the scanner to *either*:

- Scan at 200%, 150 DPI *(the length × width is doubled with the correct DPI)*
- Scan at 100%, 300 DPI *(the length × width is correct with a doubled DPI)*

TO SCAN:

(see directions on 3rd and 4th pages for scanners we will use in Art Annex

1. First to an Overview Scan. Then adjust (see numbers below) how it will scan.
Scan at **100%, 300 DPI**; Keep the default **RGB**.
2. Click and drag so the scan is roughly only the square you drew. Scan.
3. Save the file as the default **JPEG**.

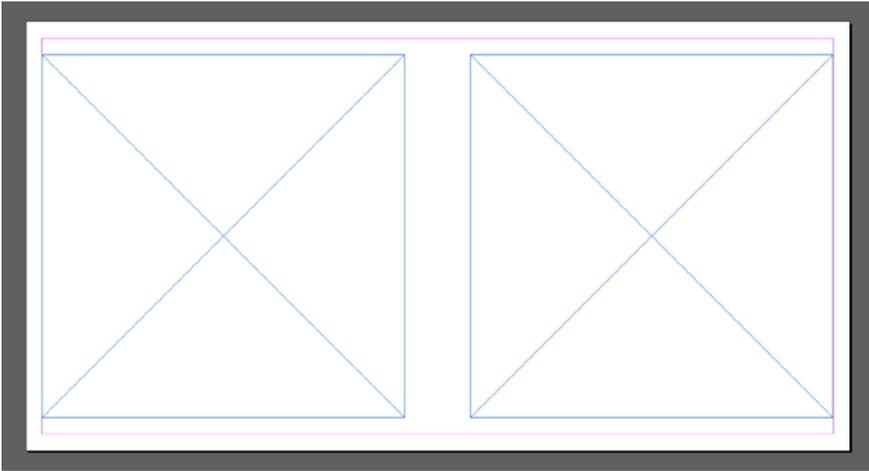
ADJUST IN PHOTOSHOP ON YOUR OWN COMPUTER:

1. Open this image on your computer in Photoshop. Check Image : Image Size.
2. *Pull a guide to be sure your image is exactly straight. If you need to rotate it, you will likely need to unlock the layer. You may do this by unlocking or simply pasting it into a new layer and deleting the locked background layer. Use the trim/crop marks you sketched to guide you in lining things up exactly.*
3. Now be more exact with your crop. Choose the Crop tool. At the top, type in 11in x 11in, 150 DPI.
4. Crop it according to the trim/crop marks.
5. Save as “YOUR LAST NAME_Proj2_SCAN.JPG”.

(see next page)

NOW USE INDESIGN TO SHOW BOTH PIECES OF ARTWORK:

1. Open InDesign and create a new document that is 25in (length) x 13in (height).
2. Draw two squares that are each 11in x 11in with a 1pt. black stroke, no fill (=red line through the white fill box).



3. Select the first box and **File : Place**. Place your vector artwork.
With box selected, go **Object : Fitting : Fit Content Proportionally**. Because the artwork is a square already, it will fill the square box perfectly. Also because it is vector, it will be just as clean as when it was smaller. It is not DPI-dependent. Think of it more as a math equation of lines that the computer uses to render it.
BUT InDesign “holds” vector and doesn’t process the postscript (this is roughly the “math equation”) unless it needs to. Go **View : Display Performance : High Quality Display**. Even if you did not do this, it would still print (or export in our case) correctly.
4. Select the second box and **File : Place**. Place your scanned artwork.
With box selected, go **Object : Fitting : Fit Content Proportionally**. Because you cropped the artwork to be 11in x 11in at the correct DPI, it will fit the box perfectly at 100% and not lose resolution.
5. Save this as “YOUR LAST NAME_Proj2.INDD”.
This *could* print to a piece of paper that is 25in x 13 in and be perfectly clean.

PREPARE FILE TO POST AS AN IMAGE ON FACEBOOK:

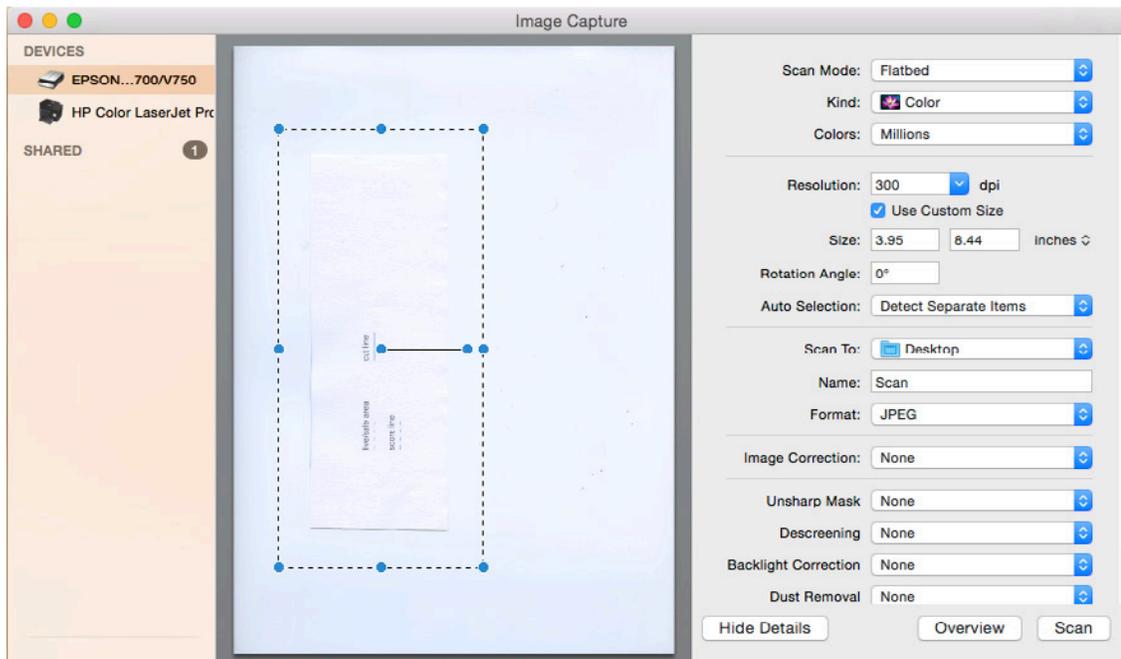
1. File : Export. Pull the File Type to JPEG. (*This is because I want you to share it as an image on Facebook. A PDF is considered a file on Facebook and a JPEG is an image.*) Medium Quality, 150 DPI.
FYI: The file does not need its linked files because you have asked it to export as a JPEG image. Also the file is not huge even at this length x width at 150 DPI because JPEG images compress.
2. Comment to my Post with this image.

Don't worry if this is a lot to understand. It gets easier with application and practice.

Also ART-2423 Print and Publication Design (your next class) should cover this extensively.

Scanning in classroom (large lab):

1. Place file on scanner - line it up with the edge of the flatbed. Keep things as straight as possible to make less work later.
2. Log in. Continue Log In with first Keychain warning.
There may be a million more warnings about Message Agent and Keychain logins.
Just keep hitting Cancel until you can get in. It won't stop, so just move it to the side of the screen when it's not actually stopping you from doing things.
Also ignore all update warnings. DO NOT tell it to update.
3. Use magnifying glass (search) in top right corner. Type in "**Image Capture**". Open the application.
4. Under Devices, choose Epson Perfection.... (not HP).
5. Show Details
(if not already showing - if there is only a Hide Details button, then the details are indeed showing)
6. Scan (for an overview first if it doesn't do it automatically)



7. **Color** (it will default to RGB JPG)

Millions of Colors

300 DPI

It defaults to **Custom Size**, so **click and drag around your scan**. You don't need to be at the crop marks because you will fix that later on your computer. (Exact numbers shown above are not what you should copy.)

Scan to Desktop

8. Scan!
9. Save the file to your external device. The file will be on the desktop because you told it go there.
10. Trash the file on the desktop when you have checked it really is on your storage device.
11. Log out of the computer. Take your artwork with you.

Scanning in Prof. Arnell's office to laptop:

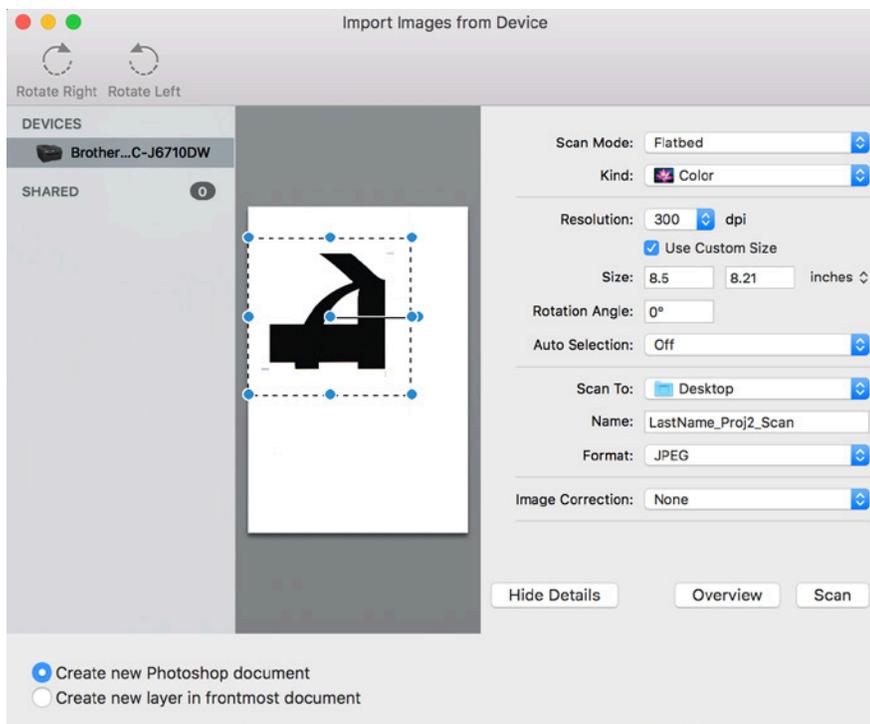
1. Place file on scanner - line it up with the edge of the flatbed. Keep things as straight as possible to make less work later.
2. Open Photoshop
3. File : Import : Images from device. Select Brother (the only option).
4. Select Overview to see what is now on the scanner.
5. **Color** (it will default to RGB JPG)

300DPI

Select : Use **Custom Size** so you can **drag the crop in a little closer**. You will make it exact at your computer.
(Exact numbers shown above are not what you should copy.)

Scan to desktop

6. Scan!



7. Save the file to your external device. (The scanner is using the USB on the right, but there is another USB on the left on my laptop.) The file will be on the desktop because you told it go there.
8. Trash the file on my desktop when you have checked it really is on your storage device.
9. Take your artwork with you.