



# Photoshop 101: The Basics

*How To Get Started and Understand the Tools for Newbies*



# Your Instructor

## Darlene Hildebrandt

- Professional photographer for 33+ years
- Teaching photography since 2011
- Was the Managing Editor of dPS for 5 years
- Owner and instructor of Digital Photo Mentor
- Skylum ambassador
- She's done it all in photography including:
  - Studio product shots
  - Food photography
  - Portraits and weddings
  - Fine art (galleries and art shows)
  - Travel and street photography



# Class Outline

## What you will learn today

1. How to **set up Photoshop preferences** correctly
2. **Getting around inside Photoshop** – overview of navigating the program
3. How to **customize your Photoshop workspace**
4. How to **add copyright information** and metadata
5. All about **Color Profiles** and Working Color Space
6. Overview of the **most common tools** you'll need to use
7. **Adobe Camera Raw (ACR)** overview and how to use it
8. How to use **Photoshop as a plugin for Lightroom**
  - How to transfer images
  - When to use Photoshop
9. Introduction and **overview of layers**
  - How they work
  - Adding a layer
  - Adjustment layers
10. How to **add text**
11. **Saving images**
  - File formats and options



# Class Outline

## What will be covered in 201!

- How to use **Smart Objects** for non-destructive editing
- Using **filters and plugins**
- More **advanced layers**
  - Blend modes and opacity
  - Grouping layers
  - Texture/bokeh overlays
  - Layer effects
  - Text effects (drop out)
- **History settings**
- Making **selections**
- **View modes**
  - Grids
  - Rulers
  - Etc.
- **Alignment tools** for arranging elements
- All about **Brushes**
- **Cloning and Healing** tools
- **Transform** tools
- Using **Adobe Bridge**



# Class Outline

## What will be covered in 301!

- How to use **content-aware fill**
- Using **Liquify** tools
- Using the **Neural filters**
- **Sky replacement**
- **Using a tablet** for editing
- **Color management** and monitor calibration
  - Soft proofing
  - ICC profiles
- More **advanced layer techniques**
  - Combining two or more images
  - Head swaps
  - Combining light painted images
  - Focus stacking
- Using **Photoshop Actions**
- **Batch processing**



# Class format

## What to expect and how to participate to get maximum value

- For each point you'll see a **few slides first**
- Then I'll go to **Photoshop to demonstrate** and explain those points
- There will be a **break halfway** through the class
- I will answer **questions after the break** and **at the end** of the class





# Q&A

## Help us find your questions

- Please put any **questions in the chat**
- Add “**Q:**” or “**Question**” at the beginning of your message so we can find it easier
- **Add the topic** for easy reference
- For example: “**Q: Metadata** – I want to ask about ...”
- You can choose to **ask your question verbally** as well during the Q&A period





# #1

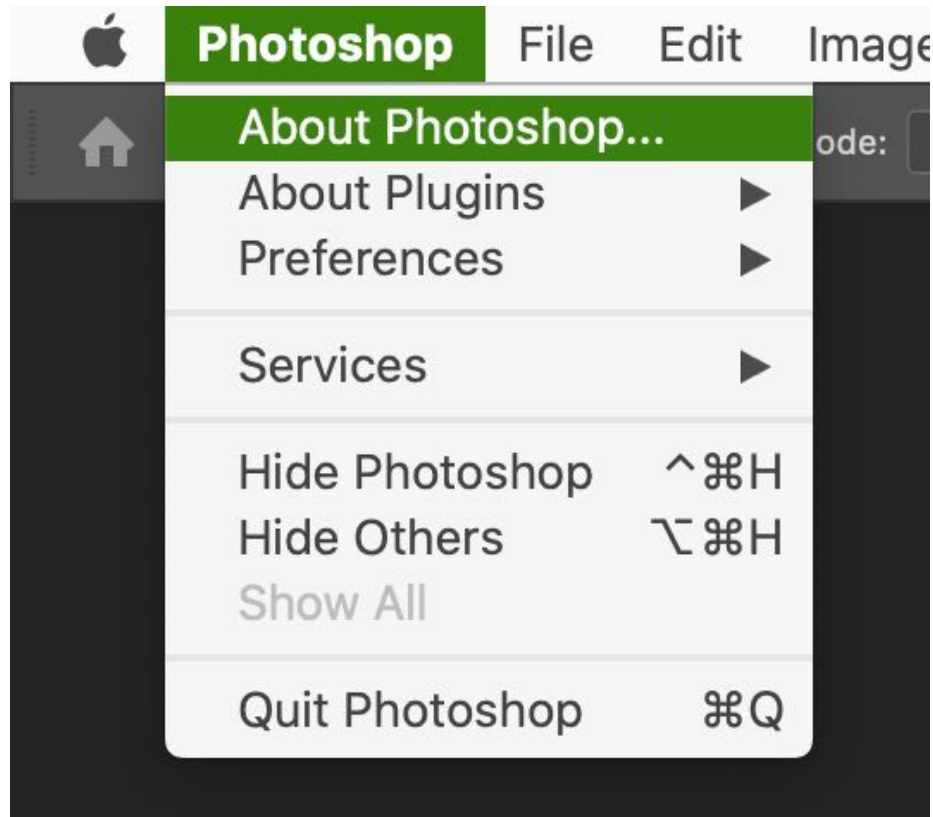
# Getting Started

Opening Photoshop for the first time





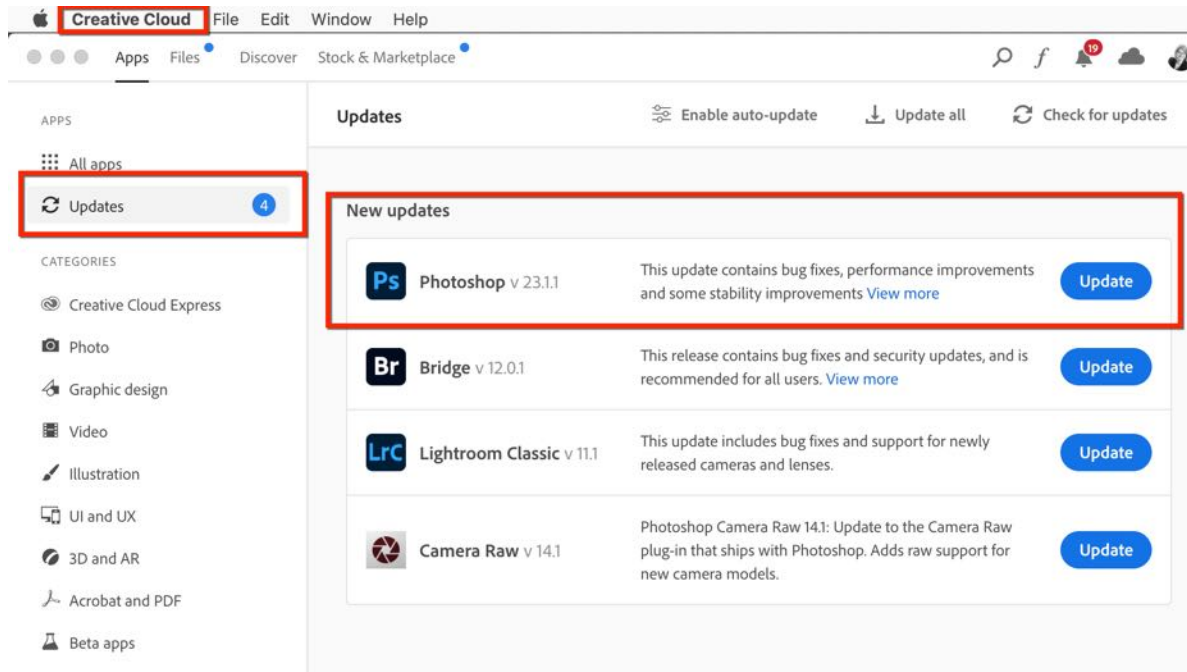
# Photoshop – Version Number



## Check your version number

- As of the time of this class (February 10<sup>th</sup>, 2022) **the current version is 23.1.1**

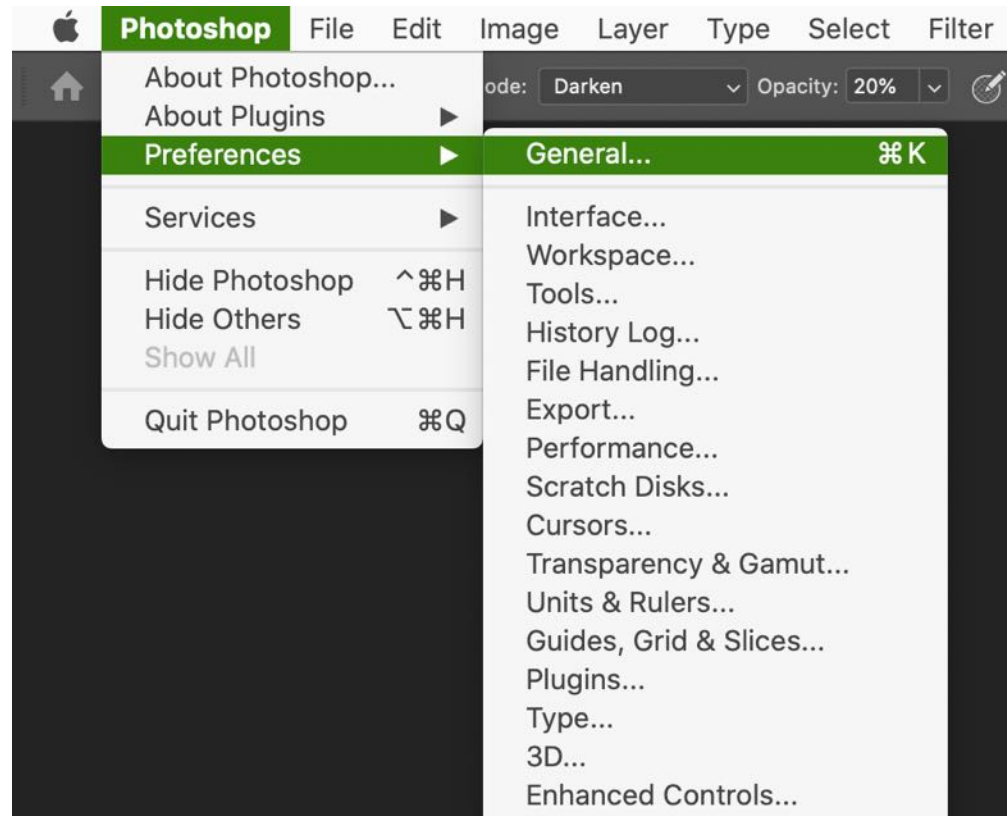
# Photoshop – Version Number



## Check your version number

- As of the time of this class (February 10<sup>th</sup>, 2022) the **current version is 23.1.1**
- Check for updates using the **Creative Cloud app**

# Photoshop – Preferences



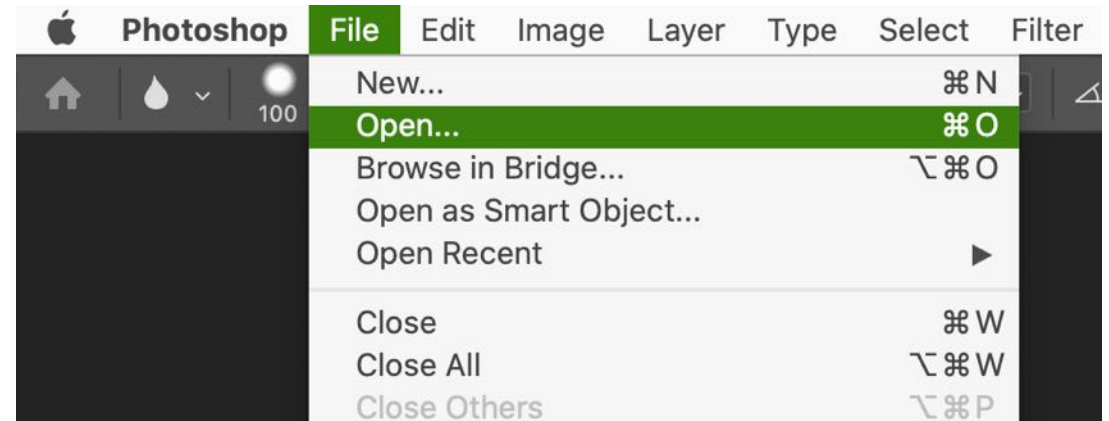
## How to get set up for optimal Photoshop performance

- **We'll go to Photoshop and look at:**
  - General Preferences
  - Tools
  - File Handling (Camera Raw)
  - Performance
  - Scratch Disks
  - Cursors
  - Units and rulers

# Getting Started

## Opening Images

- There are several ways to **start a new project or photo**. Go to File >
  - New...
  - Open...
  - Browse in Bridge...
  - Open as Smart Object...
  - Open Recent >
- You can also **drag an image** into the app or open one right from Bridge





# #2

## Navigating Photoshop

Overview of the interface and how to move around your image as you edit



# Navigating Photoshop

## Zooming and moving your image

- There are a **few ways of zooming** in and out on your image
  - Command/Control + (+/-)
  - Command/Control + 0 (fit to screen)
  - Command/Control + 1 (view at 100%)
  - Zoom tool (Alt/Option to zoom out)
  - View menu
  - *\*See Preferences for a scroll wheel option as well*
- **Space Bar to move** the image when the hand is not active
- Show **view modes** (F)
- **Move versus hand** tools





# Navigating Photoshop

## Windows and panels

- How to **show/hide the different panels**
- How to **move them** around
- How to **close them**

## Tools and rulers

- Show how to **show/hide the ruler** and change units
- Show how to **show/hide the toolbar** and move it around



# Navigating Photoshop

## Keyboard shortcuts – learn them!

- As part of this class you will get this **FREE PDF to download** as a bonus
- I have curated the **most common ones** you will need to use
- **Print it out**, use it, and learn them!
- Doing this will **save you a ton of time**

## Photoshop CC Keyboard Shortcuts

**NOTE:** When the shortcut is different for Mac and Windows, you'll see them given as follows: Mac/Windows with the Mac shortcut first, followed by the Windows/PC shortcut.

Application Menus	
⌘/Ctrl + N	New file
⌘/Ctrl + O	Open file
⌘/Ctrl + W	Close file
⌘/Ctrl + S	Save file
Shift + ⌘/Ctrl + S	Save as
Option + ⌘ + Shift + S	Save for Web (Mac)
Alt + Shift + Ctrl + S	Save for Web (PC)
⌘/Ctrl + Z	Undo/Redo
Option/Alt + ⌘/Ctrl + Z	Step backward in history
Shift + ⌘/Ctrl + Z	Step forward in history
⌘/Ctrl + P	Print
⌘/Ctrl + Q	Quit program
⌘/Ctrl + A	Select all
⌘/Ctrl + D	Deselect all
⌘/Ctrl + X (or F2)	Cut
⌘/Ctrl + C (or F3)	Copy
⌘/Ctrl + V (or F4)	Paste
⌘/Ctrl + T	Free Transform
Option/Alt + ⌘/Ctrl + I	Image size
Option/Alt + ⌘/Ctrl + C	Canvas size
Shift + ⌘/Ctrl + N	New layer
⌘/Ctrl + J	New layer via copy
⌘/Ctrl + G	Group selected layers
⌘/Ctrl + E	Merge selected layers
Shift + ⌘/Ctrl + E	Merge visible layers
Shift + ⌘/Ctrl + A	Camera RAW filter
Shift + ⌘/Ctrl + X	Liquify
⌘/Ctrl + Y	Soft proof colors
⌘/Ctrl + +/-	Zoom in
⌘/Ctrl + -	Zoom out
⌘/Ctrl + 0	Fit to screen
⌘/Ctrl + 1	Zoom to 100%
⌘/Ctrl + H	Show extras
⌘/Ctrl + R	Show rulers
F5	Brush tool window
F6	Color window
F7	Layers window
F8	Info window
F9	Actions window

Tools	
V	Move tool
M	*Rectangular Marquee Tool
M	*Elliptical Marquee Tool
L	*Lasso Tool
L	*Polygonal Lasso Tool
L	*Magnetic Lasso Tool
W	*Quick Selection Tool
W	*Magic Wand Tool
I	*Eyedropper Tool
I	*Color Sampler Tool
C	Crop Tool
J	*Spot Healing Brush Tool
J	*Healing Brush Tool
J	*Patch Tool
B	Brush Tool
S	Clone Stamp Tool
G	*Gradient Tool
G	*Paint Bucket Tool
T	Text Tool
P	*Pen Tool
P	*Freeform Pen Tool
Y	History Brush Tool
E	Eraser Tool
A	Path Selection Tool
U	*Rectangle Tool
U	*Ellipse Tool
U	*Line Tool
U	*Polygon Tool
U	*Custom Shape Tool
H	Hand Tool
R	Rotate View Tool
Z	Zoom Tool
D	Default foreground/background colors
X	Switch foreground/background colors
F	Toggle screen modes
[	Decrease brush size
]	Increase brush size
{	Decrease brush hardness
}	Increase brush hardness



\*Some tools have more than one function. To access the other ones just hold shift plus the shortcut key for that tool. For example, M activates the rectangular marquee tool, pressing Shift + M changes it to the elliptical version of the tool. I have just listed the most commonly used ones for photographers here.



# #3

## Photoshop Workspaces

Arranging your desktop to  
suit your needs



# Workspace customization

Only show the panels and tools you use most often

- You do **NOT** need **ALL** of them
- **Moving, resizing and combining** the panels or windows
- Toolbar **customization**
- Activate only the **ones you use most often** (these are the ones I use)
  - Histogram/Navigator
  - Character/Paragraph
  - Layers/Adjustments
  - History/Actions
  - Properties/Info
  - Color/Swatches
  - Brushes/Brush Settings
  - Tool Presets





# #4

## Metadata

How to add copyright and other important information



# Metadata and copyright



## Exposure information

Helpful if you need to troubleshoot an image issue.



## Copyright information

Add this to all your images so it's embedded in the files to protect you from theft.



## Location information

Even if your camera doesn't have GPS you can add the location information afterward.



## Other things you can add

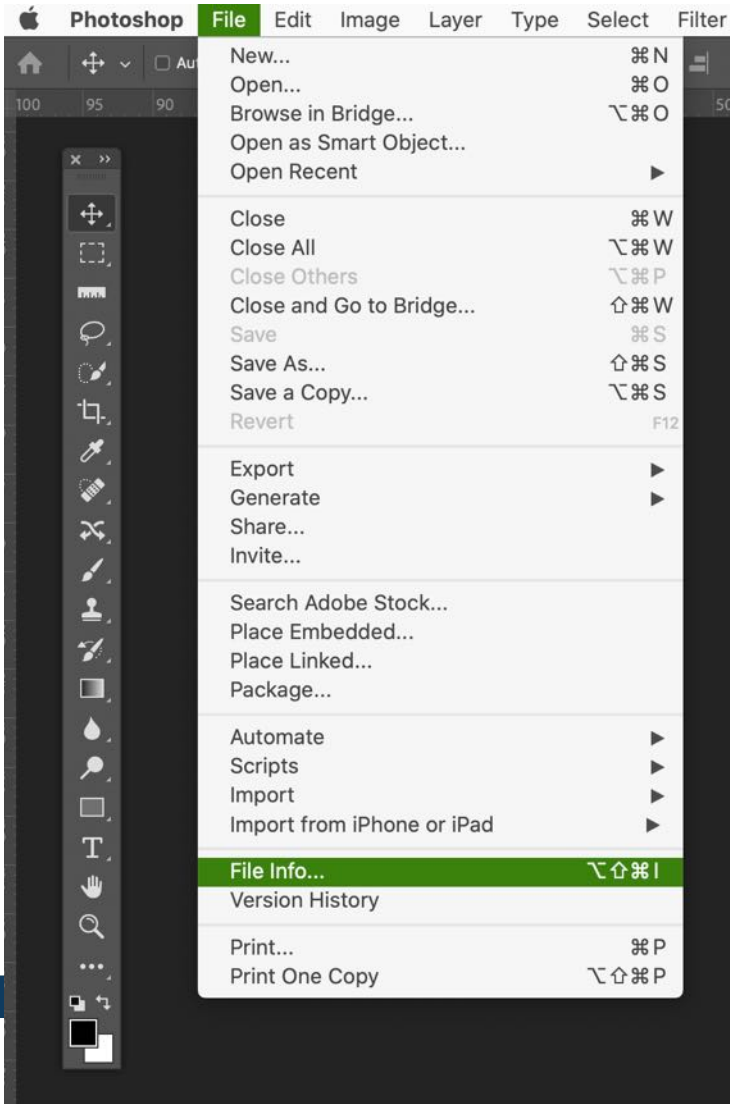
Model's contact info, title, caption, description, keywords, and more.



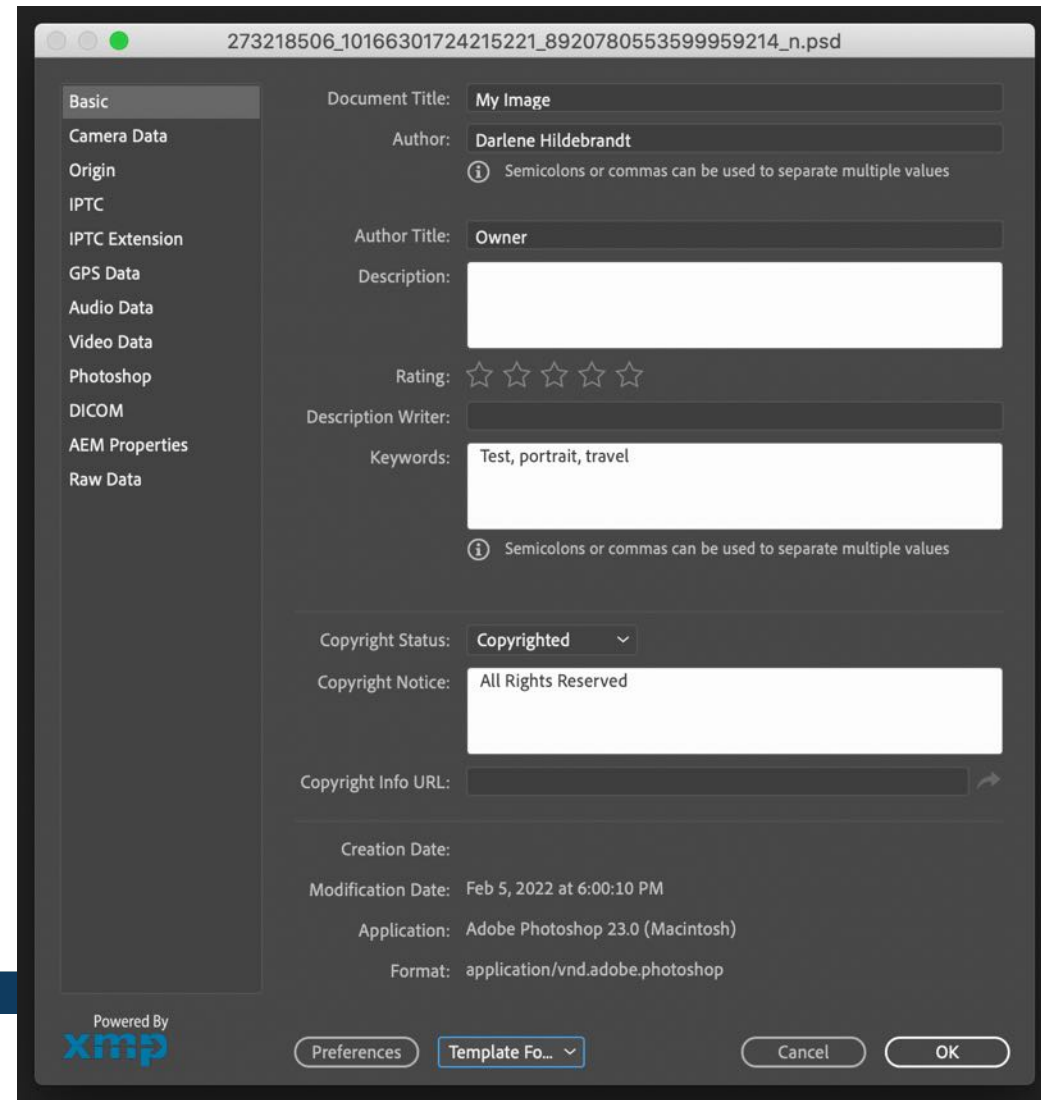


# Metadata

## File > File Info



## Basic tab





# #5

## Color Settings

What you need to know about file formats and color spaces



# Maximum data retention

Always start with the largest files possible

- **Color space** (in descending order)
  - ProPhoto RGB
  - Adobe RGB
  - sRGB
- **Bit depth**
  - 32-bit
  - 16-bit
  - 8-bit



# Why shoot RAW format?

Pros and cons



# Raw file format

## PROS

- Raw files contain **more data** in exposure and white balance
- You can make a JPG from RAW – **not the other way** around
- Raw files are **16-bit**
- You have **more control** over how your final images look
- Raw files have **more latitude** if you screw up the exposure

## CONS

- RAW files **MUST be processed**
- You need a dedicated **raw photo editor** to process them
- Take up **more space** on your memory card and hard drive
- May **slow down** your computer
- You **can't share them** online immediately





# Color Space

What is it?

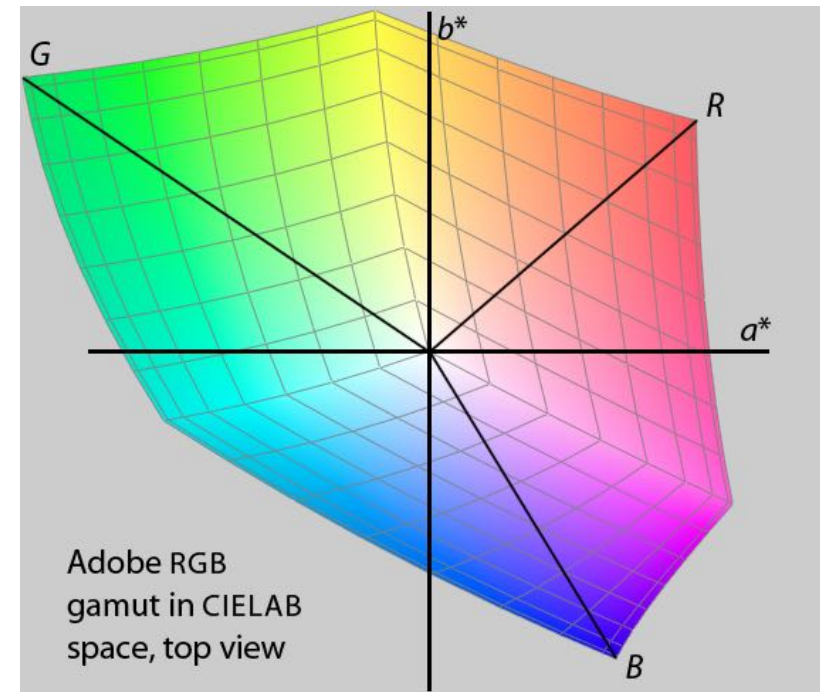
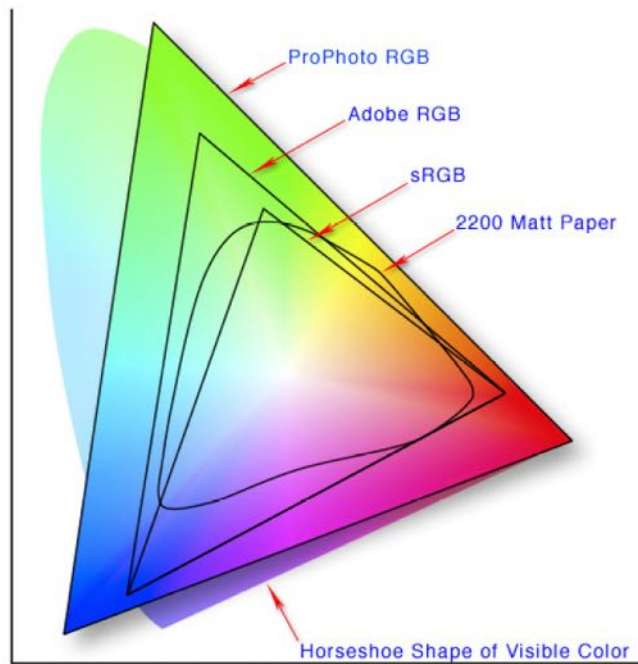
What do you do with it?





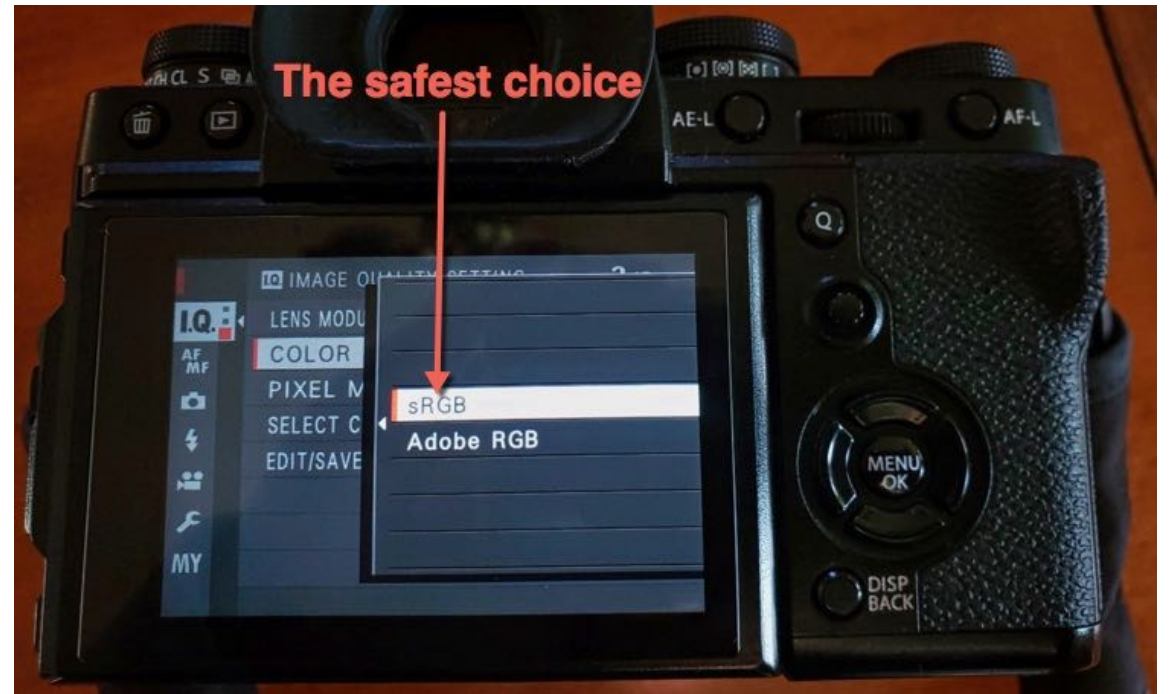
# Color space

What is it?



# Color space

Which one to use in-camera?



# Color space

## Which one to use in processing?

- Raw files are **not assigned** a color space yet
- You assign the color space when you **save it as a new file** (*JPG, TIF, PNG, or PSD*)
- Use **ProPhoto RGB** working in Photoshop
- Export to **Adobe RGB or sRGB for print** (ask your lab)
- Export or Save As... **sRGB for online or email**



# Bit Depth

What is it?

How important is it?



# Number of possible colors

**8-bit**

**16.8 Million**

- 2 to power of 8
- $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$
- 256 colors per channel

**12-bit**

**68 Billion**

- 2 to power of 12
- $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$
- 4096 colors/channel

**16-bit**

**281 Trillion**

- 2 to power of 16
- $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$
- 65,536 colors/channel



**~1670 TIMES more colors**

**8-bit**

**16.8 Million**

- 2 to power of 8
- $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$
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**12-bit**

**68 Billion**

- 2 to power of 12
- $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$
- 4096 colors/channel

**16-bit**

**281 Trillion**

- 2 to power of 16
- $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$
- 65,536 colors/channel





# What does that mean?

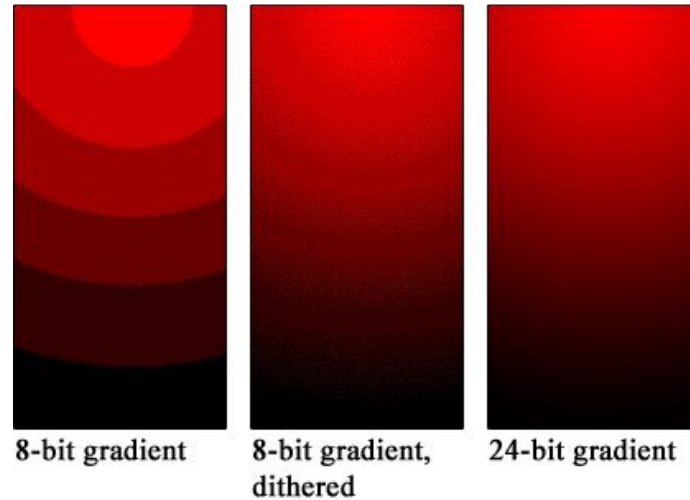
## Choose the best option for the job

- Always capture and use the **most data possible**
  - Shoot and **EDIT large** > resize down later as needed
- Shoot **RAW and KEEP THEM**
- Process in **16-bit**
- Save and **keep layered PSD files**
- Save the finished image as **8-bit JPGs**



# Issues with low quality files

- Banding
- Pixelation
- Lack of sharpness
- Noise





# #6

## Photoshop Tools

Overview of the most common tools  
you'll likely need to use for photo  
editing



# Tools for photographers

These are the ones I use the most often

- Hand tool
- Move
- Brush
- Healing tools/Patch tool
- Clone stamp
- Text
- Marquee
- Eyedropper
- Paint bucket/Gradient tool
- Lasso/Magnetic lasso
- Magic wand/Quick selection tool
- Rectangle/Line tool
- Foreground/Background colors





## 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)

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

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

## 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

## G Navigation tool

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

## 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)



# Photoshop is HUGE

**But don't pull your hair out!**

- Just worry about learning the tools you need and **ignore the rest!**
- Learn **one new tool at a time**, then move on to another.
- **Take your time.**
- Take **breaks.**
- Come back and **watch these lessons again** anytime you want.





**#7**

# Adobe Camera Raw

Editing RAW files in Photoshop





# Adobe Camera Raw - ACR

## Opening and editing RAW files

- Open from **Bridge**
- Use the **Camera Raw filter for JPGs** as well (*will be covered in more detail in Photoshop 201*)
- The tools here work **exactly the same as Lightroom** so...
- If you use Lightroom – stay with me, I'll cover a **LR workflow in the next section**



# Camera Raw (ACR)

## Things to note!

- **DONE** – saves the information and closes the image
- **OPEN** – opens the image in Photoshop with the ACR edits applied
- You can add star or color **ratings, flags, keywords**, etc., using ACR
- You can choose the **working color space** here as well
- The **masking tools** can be used in ACR and the Camera Raw Filter
- All RAW edits are **non-destructive** so you CANNOT mess it up!
- You can apply **Presets** in ACR as well
- You can **copy and paste settings** from image to image
- You can also **sync settings**





# #8

## Photoshop and Lightroom

How they integrate and when to use each in your workflow



# Which program to use when?

## Use Lightroom for:

- **Basic edits** (global and local)
- **Cataloging and sorting** your images
- **Culling** images
- Editing or **adding metadata**
- Making **collections**
- Designing a **Blurb book**
- Making a **slideshow**
- **Publishing to Smugmug** or social media sites
- Printing **contact sheets**

## Use Photoshop for:

- Adding **texture or bokeh overlays**
- **Combining multiple images** together (head swaps, light painting, making composite works of art, etc.)
- **Adding text**
- Using third-party **plugins non-destructively** (Luminar, Topaz, Nik, On1 Effects, etc.)
- **Advanced cloning** or removing objects with content-aware fill
- **Replacing the sky** or background
- Making more **complex collages** or poster-like layouts (artboards)



# The short answer is . . .

## Use Lightroom for:

- For **basic editing**

## Use Photoshop for:

- For **complex editing**





# #9

## Introduction to Layers

Just an overview and the basics of  
how to use layers in Photoshop



# Photoshop Layers

## What they can do, why you need them?

- Adjustment layers for doing **non-destructive** editing
- Combining **multiple images**
  - Blended layers
  - Creative overlays
  - Collage or design layouts
- For **adding text**
- For making **transparent backgrounds**
- Separating things to **edit them independently**
- **Advanced masking**
- **Advanced cloning** and content-aware fill
- **AND LOTS MORE!!!**





# Photoshop Layers

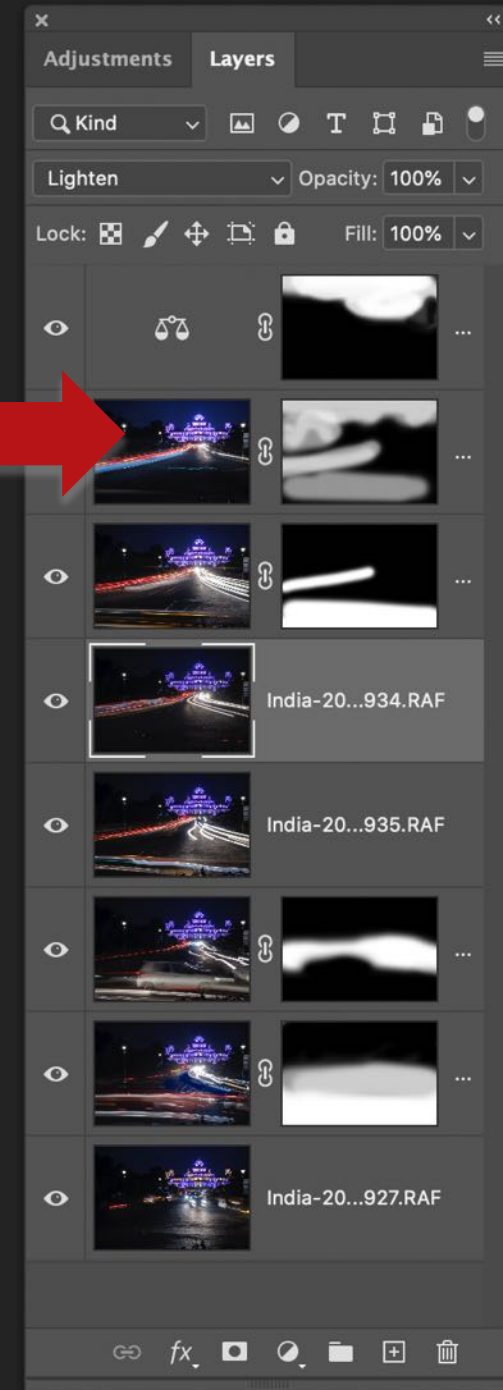
## Things you can do with layers

- **Add new** layers
- **Copy** and duplicate a layer
- **Rename** them
- **Rearrange** their order
- **Link or lock** them
- **Mask** them
- **Merge** layers
- **Group** two or more
- **Transform** a layer
- Add a **clipping mask**
- Adjust the **opacity**
- Change the **blend mode**
- Add **layer effects**
  - Drop shadow
  - Color overlay
  - Stroke
  - Bevel and emboss
  - And more...





# LAYERS





# #10

## Adding Text


How to use the Text tool



# Adding text on your images

## The Text Tool and more

- **Adding text**
  - Click and type
  - Make a text box
- Changing the **font, size, and color**
- Adjusting the **alignment**
- Line and letter **spacing**

A large, bold, dark blue capital letter 'T' is centered on the right side of the slide. It is a simple, sans-serif font.



# #11

## Saving Images

Formats, options, and sizes – oh my!



# Resize your images correctly

You need to know the right size and format for the job

- Sizing for **online use** and sharing
- Sizing for **printing** (PPI and DPI)
- Increasing size for **large printing**

## DPI and PPI

***NOTE: These ONLY apply when printing!***

- **PPI** = pixels per inch
- **DPI** = dots per inch
- Most home **inkjet printers** use 240 dpi/ppi
- Most **commercial labs** print at 300 dpi
- **Canvas** is often at 150 dpi





# PPI and DPI

To print an 8x12 your image must be:

- At **100 DPI** – 800 (8x100) x 1200 (12x100) pixels
- At **200 DPI** – 1600 x 2400 pixels
- At **300 DPI** – 2400 x 3600 pixels



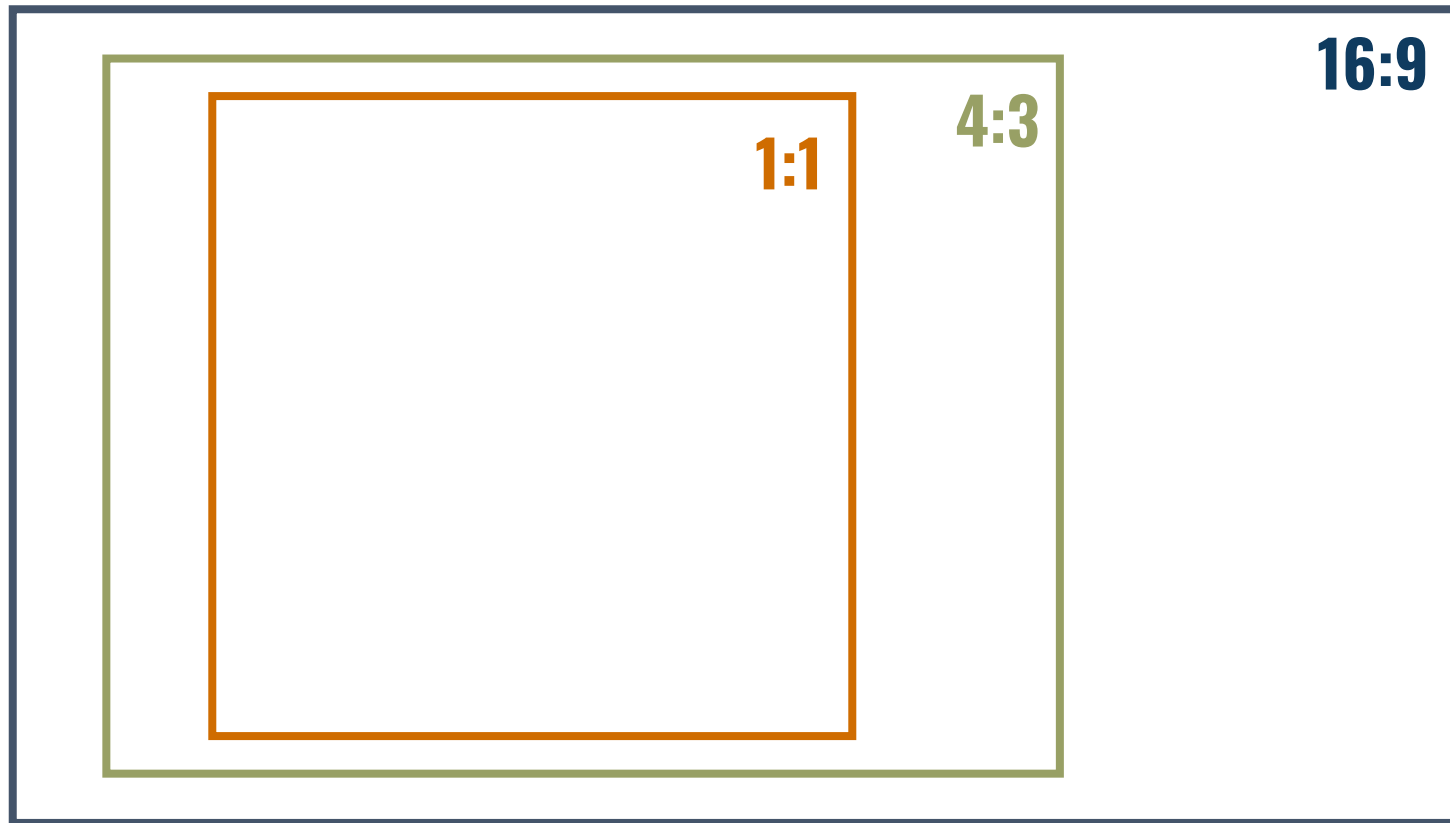
# PPI and DPI – Handy Chart

Print size	DPI needed	File size in pixels
4x6	300 dpi	1200x1800
5x7	240 dpi	1200x1680
8x12	150 dpi	1200x1800



# Aspect Ratio

This is the relative proportion you assign to your photo



# Sizing for online use

## Pixel size matters online - not DPI/PPI

- Always check the **PIXEL SIZE** - DPI/PPI is irrelevant online
- Save as **JPGs in sRGB color**
- For **Facebook size to 2048 pixels** on the long side for best , sharpest, result
- **Do NOT upload full size** images (easier to steal – exception sites like SmugMug)
- **Do NOT email full size images**, the files are too big - resize them to 800 pixels on the long side



# Sizing for printing

## DPI and PPI matter now!

- Find out **the printer resolution** and save/export images at that DPI/PPI (240ppi or 300ppi)
- Save images in the **color space your lab uses** (either sRGB or Adobe RGB)
- Save **as JPGs** (yes I meant JPG)
- For magazine or **offset printing use CMYK format** (you likely will never need to do this)





# Congratulations!

You made it to the end!





# Thank you for attending!



# Keep in touch



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[www.Facebook.com/DigitalPhotoMentor](http://www.Facebook.com/DigitalPhotoMentor)



[www.DigitalPhotoMentor.com/store](http://www.DigitalPhotoMentor.com/store)

