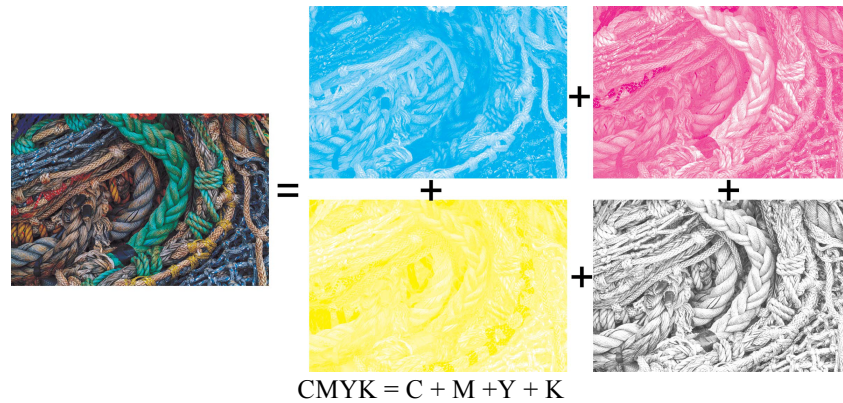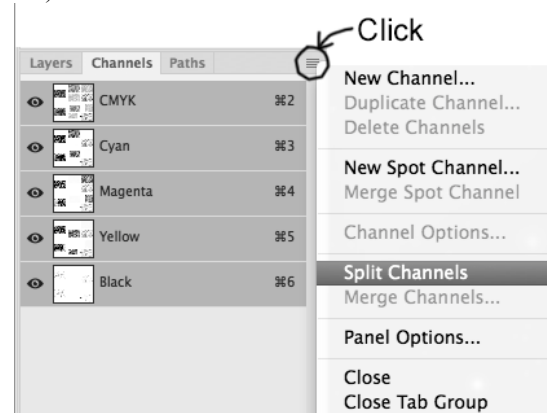**CMYK Split:** This is a fun Photoshop trick that gives a feel for how printed color works and also gives you some colorful creative opportunities.

A color print is made by combining a limited number of ink colors (classically four: **C**yan, **M**agenta, **Y**ellow and blac**K**, known together as **CMYK**.) You will take a color image and print each ink color that makes it up separately on transparencies, so that they may be manipulated and stacked to re-combine into the full color image as desired.
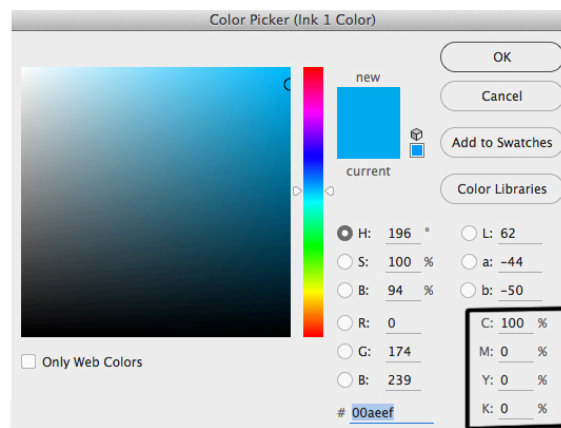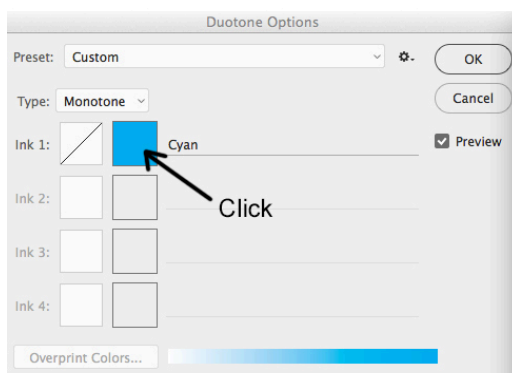

CMYK = C + M +Y + K

Convert each color channel into a separate image:
1. Open up your photo in PS. Save it as a copy if you don't want to mess up your original.
2. If the image has any layers, go to Layer > Flatten Image and click to flatten.
3. Go to Image > Mode. Change the mode (likely from RGB Color) to CMYK Color.
4. Click on the Channels tab (usually by the Layers tab) to open the Channels palette. If you can't find it, click on Window > Channels to make it appear.
5. In the upper-right corner of the panel group, click on the menu icon
6. Click on Split Channels. Photoshop will take each color channel and make it into its own separate image file, all open in different tabs in the program window. Each separate image will be a 8-bit grayscale map of where that color ink will print.

Make each image the right color:
7. Choose **filename_Cyan** to start with, for example.
8. Go to Image > Mode > Duotone to change the image from grayscale to duotone.
9. A Duotone Options dialogue box should appear. Make sure the Type is set to Monotone.
10. Click on the Ink 1 color box to bring up the Color Picker.
11. Change the value for Cyan ink to 100% and set the rest to 0%, then click OK a couple times.
12. Save the **_Cyan** image file.
13. Repeat for the **_Magenta** and **_Yellow** images, changing their colors to 100% magenta and yellow respectively.

Change the appropriate color to 100% and the rest to 0.

Recombine the images:
The **filename_Black** image is already the right color. You can add the other color files into it as layers so they are all in one file and you can see how things will look.

1. With the filename_Black image selected, change the color mode from grayscale to CMYK (Image > Mode > CMYK Color).
2. Create a new blank layer (Layer > New Layer OR Command-Shift-N OR click on the new layer icon at the bottom of the layers palette, right next to the trash can)
3. Click on the **_Cyan** image to make it active (or open it again if you closed it). Type Command-A to select all and Command-C to copy
4. Go back to the **_Black** image, make sure the new blank layer is the active layer (it should be highlighted in the layer palette) and type Command-V to paste the Cyan image into the layer.
5. Change the blend mode of the Cyan layer from Normal to Linear Burn to see how the inks will combine
6. Repeat steps 2-5 for the **_Magenta** and **_Yellow** images, copying them into new layers in the **_Black** image. Make sure all the color layers are above the black layer.

Be creative!
Mask off parts of different color layers so that in some places all colors combine and in some places just one or two show.