

# Bits and pieces

Here we discuss things that apply to more than just one of the Adobe Creative Suite applications, or were not covered in the lessons and exercises, or where I feel you need further practice.

## 1 Colour

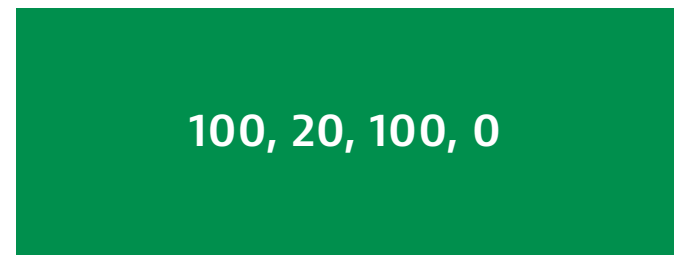
The rendering of colour, on various media and devices, is a sophisticated topic and not dealt with here in detail.

For **PRINT** one uses four colours to create all colours — think of pigments: **CMYK** (“K” stands for “Key” meaning Black so as not to be confused with Blue “B” in RGB.).



For example, the darkish green colour on the right is C 100%, M 20%, Y 100%, K 0%.

For projected **LIGHT**, as in computer/phone monitors hence the internet too, one uses **RGB**.



The same colour can look different when seen on different monitors, or printed on different printers, because a device rendering of colour is seldom accurate. Graphic professionals use special hardware to colour calibrate their monitors and printers! This is further complicated by something called a colour “gamut” and device colour profile — which is to do with how much detail one can see at the extremes and how colours are mapped.

**For offset printing**, use CMYK, and a printing company will tell you what PDF print settings (including colour profile) are required. **For web and other electronic media** use RGB.

To switch between colour spaces (CMYK or RGB), in Photoshop you go » [Image](#) » [Mode](#).

For print, one *sometimes* uses special (generally non CMYK) colours. For a business card one might want to use two colour printing, for example a particular red and a particular cool grey, and for this you stipulate colour based on a PANTONE colour set, which I will show you in class.

## 2 Image size and quality

For image pixel density in offset printing one talks of "DPI", which means "dots-per-inch". Typical is 300 dpi which is about 120 dots (pixels) per centimetre. 120 pixels per centimetre is a good rule-of-thumb for print.

One can grow images in Photoshop, but with growing one loses quality, and often it is dangerous to grow by more than 20%. This is further explained in the last page of this lesson.

### Exercise for saving images for web

Download the resources file from [iscom.millner.fr/download/bits-and-pieces.zip](http://iscom.millner.fr/download/bits-and-pieces.zip) and open "and.jpg" in Photoshop.

1. Go » **Image** » **Image Size...**, and click "Resample" and make sure that the units are "Pixels".
2. We are now going to make this image 1200px wide for use on a website.  
So make the width 1200 pixels and set Resample to "Bicubic Sharper" for reduction. Click OK.  
The image is now smaller.
3. We are now going to reduce the file size (hence quality) for web, because web pages download faster when the images are smaller.  
Go » **File** » **Export** » **Save For Web (Legacy)...**, and
  - choose JPEG as the format (second item top right)
  - choose sRGB as the colour space for web
  - choose "2-up" top left, so that you can see the original image alongside the reduced image.
  - (Do not worry that this is "legacy": it remains a much used way to do this.)
4. Move the quality setting to zero, and look at the quality difference (look at the bow-tie, collar and writing).
5. Now keep increasing the quality setting until you just cannot see a difference. Then add another 10%.
6. Look at the difference in file size (under the image) between the original and the web optimised image.
7. Click "Save" to save this new image.

Aside: people often want to slightly over-sharpen an image when preparing for web, and this is considered good practice, so try the following on the original (reduced size but not reduced quality image). Go » **Filter** » **Sharpen** » **Unsharp Mask...**, and set Amount to 40% and Radius to 1.0, and click and un-click Preview to see the difference.

(Image sharpening is an interesting and complex subject: look at » **Filter** » **Sharpen** » **Smart Sharpen...**, which has many more parameters.)



## 3 Creating a mockup using a Photoshop PSD template

A very good way to show off a new logo (or an old one), or a poster, flyer whatever, is to mock it up in a real situation using a pre-made Photoshop PSD template. So, for example, if you wanted to show what your logo would look like when printed on a mug, you can google something like “free mug PSD Photoshop mockup template”.

### Exercise

Open in Photoshop the file (from the downloaded resources) “mockup-mug.psd”, then...

1. Double click the layer entitled “Your Design Goes Here”, and the layer opens in a separate Photoshop workspace, showing just a mockup graphic.
2. Make this layer invisible by clicking on the eye on the left side of the layer on the Layers Panel.
3. Add a new blank layer by clicking on the “Create new layer” icon at the bottom of the layers panel.
4. Open in Illustrator your “Hello+” logo you made recently, and copy it to your clipboard (» [Edit](#) » [Copy](#)).
5. Go back to the blank layer in Photoshop and paste (» [Edit](#) » [Paste](#)), then resize as appropriate, and go Enter.
6. Save just this separate object workspace (go » [File](#) » [Save](#)).
7. Now return to the Photoshop workspace that displays the full mug, and note that your logo is displayed.

Cool?

Different PDS mockup templates might be a little different in its application, but I’m sure you can work it out.

I have prepared a small collection of PSD mockups at [millnerdesign.com/stuff/x-mockups.zip](http://millnerdesign.com/stuff/x-mockups.zip): a wall, stationary set, A4 page, cap and street billboard.

### Important

A PSD file is normally very big (very heavy). If you want to save as a JPG, you need to first flatten the image. Go » [Layer](#) » [Flatten Image](#). Then go » [File](#) » [Save As](#), and select JPG as the format.

Save your work here as a JPG.



## 4 Further practice

### Photoshop: change colour in a selected area

Open the image man-whiteboard.jpg in Photoshop, and make the T-shirt and only the T-shirt red.  
(Select the T-shirt, then add the Selective Color adjustment layer, and adjust say the Neutral Colors —easy!)

### Illustrator: practice with the pen tool

1. Using say your smartphone, photograph your neighbour's face and neck in profile.
2. Import the image into Illustrator.
3. Create a new layer and create a profile shape by tracing with the pen tool.
4. When finished (when you have the profile traced), delete the photo to leave just the profile.  
Make the fill colour PANTONE Warm Gray 11 U ("U" means uncoated).  
To get the PANTONE colour palette...  
go » [Windows](#) » [Swatch Library](#) (near bottom) » [Color Book](#) » [PANTONE+Solid Uncoated](#),  
and use the search window to search for "warm gray 11".
5. Save your work.
6. Then create a new Illustrator file 240px x 240px, and paste this profile.
7. Resize the profile image as appropriate.
8. Then save as a PNG file.
9. Show me!



## 5 Read blog

Read my blog at [millner.fr/iscom/odds-and-ends](http://millner.fr/iscom/odds-and-ends) entitled "Odds and ends".

## 6 Practice, practice, practice, and revise

Choose a part of this course that you are the least comfortable with, and re-do the appropriate lesson.

# Sizing images for print

**This is very important, and not altogether intuitive.**

In offset and digital printing (that is for “usual” paper printing like in business cards, brochures, posters, books...), one talks of “DPI” for image size requirement.

DPI means “dots-per-inch”. A typical requirement is 300 dpi which is about 120 dots (pixels) per centimetre. 120 pixels per centimetre is a good rule-of-thumb for print.

So how does one know if ones image is large enough such that you have at least 300dpi?

First of all one can calculate: an image 3000px wide would be okay in print if about  $3000/120$  wide = 25cm.

But here is a method:

1. Open elephant.jpg in Photoshop.  
Go » **Image** » **Image size**, and set resolution to 300 Pixels/inch as shown (“Re-sample” must be unchecked). Save the file.
2. Create an A4 portrait document in InDesign, and place the elephant and green background as shown here.
3. Double-click on the elephant image to show the image frame (the brown frame), and note that the recorded size is much more than 100% (160% in this example). One can usually safely go up to 120%, but more than this becomes potentially “dangerous”.

So in this example we have a problem: the image is not large enough for how we want to use it, so either find another image, try grow the image to some extent in Photoshop, or try another design.

