**Photoshop Chapter 6 (brief steps)**

**Approach**: We will do a combination of editing textbook photos and other practice photos.

Retouching and correcting images can be a thankless task sometimes, but you can dramatically change pictures by using these many techniques.

The notes below are very curt summaries of the first stages. Because they are so condensed, you will still need to read/refer to the chapter.

## STAGE 1 - Retouching Damaged Photos

Generally, **Image Repair** refers to fixing scratches, dust, grainy look, bad edges, etc.

**Retouching** refers to adding or removing something.

Some of the same techniques are used.

Rosemans.jpg — the main problems are the graininess and the scratches.

***TASK 1:*** Sharpening & blurring to remove grainy look

Open Rosemans.jpg

Take a snapshot on History palette

FILTER>Blur>Gaussian Blur

Set radius to 1.5px

This set of blur filters apply both corrective and artistic blurs to an image. They help to create a softer look by averaging brightness out of surrounding pixels.

Gaussian – blurs a specific amount. Note that even 1 pixel can often help to remove grain.

***TASK 2:*** Unsharpen

FILTER>Sharpen>Smart Sharpen

Expand the “Shadow” area of dialog box.

Set to:

Amount: 200%,

Radius: 1.5px

Reduce Noise: 20%

Highlights Fade Amount: 75%

Look at what it does to eyes and lips. What’s happening? Does it know eyes and lips?

***TASK 3:*** Heal Scratches

Spot healing = blending surrounding pixels.

Healing Brush = similar, but you define a source with Alt-Click.

Choose Spot Healing Brush

Set to 10px, hard, choose “Proximity” (to match surrounding pixels.)

Click small black spot on bottom left area.

Fix remaining spots in black area

Now, choose Healing Brush

Set to 9px, Normal, Sampled (to sample source and transparency)

Alt-click below spot. Then click on chin

***TASK 4:*** Clone Out Major Damage

Similar to healing, except that you clone by patching/copying actual pixels, not just color values

Choose Clone Stamp.

Set to soft brush, 45. Checkmark Align (allows start & stop b/c area is relative to cursor)

Put cursor above right of crease.

Then Alt-click to define the cloning source

You can drag-stop-drag-stop… down the crease.

Do the same Clone Stamp technique with bottom right bad edge

***TASK 5:*** Fix scratch on man’s shoulder (p. 328)

Keep Clone tool

Set at 30, uncheck “Align”, 50% hard (to prevent choppy hard edge)

Alt-click to define source from his shoulder (further right)

Click without dragging a few times; notice how cursor shows what’s going on.

**ONLY** fix along tip of shoulder for now.

For scratch below shoulder others, see pages 336-37ain.

(Lasso tool. Edit>Fill> Content Aware

## STAGE 2 – Correcting Lighting Problems

**Highlights**: the lightest areas of an image that include detail.

**Shadows**: the darkest areas of an image that still contain some detail

**Contrast**: tonal variations within an image

**Saturation**: intensity of a color or its variation away from gray.

***TASK 1:*** Brightness & Contrast (buffalo.jpg)

The image has an overall darkness, maybe from poor room lighting or underexposure.

This method is really only good for basic adjustments.

IMAGE>Adjustments>Brightness & Contrast

Brightness +50; Contrast +15 (diff from book)

Then Spot Heal the spot on the meat.

Choose Spot Healing Brush

Set to 1px, hard, choose “Proximity” (To match surrounding pixels. )

Zoom in and click white spots on the meat.

***TASK 2:*** Contrast & Tonal Range with Levels (chef.jpg)

IMAGE>Adjustments>Levels

Move Input slider to right

Move Gamma slider to Left

\*Pro: Look at the food.

\*Con: the chef and uniform look too faded.

To add more detail to her face:
Magnatic Lasso face, feather about 2. ADJUSTMENT>Adjustments>Curves. Drag line down

***TASK 3:*** Correct Lighting (chicken.jpg)

IMAGE>Adjustments>Exposure

White eyedropper, tip of plate

Offset very slightly to left

Gamma correction to 1.25 (on left)

**Gamma:** means ‘midtones’

This is good, but it fades the veggies too much. Let’s try something else -- Levels.

Use History panel to take a snapshot.

Then delete current history state (i.e. undo)

IMAGE>Adjustments>Levels

Drag the black and white input levels to match the tall curves.

Let’s try one more. Take a snapshot. Then undo the Levels. I will guide you through changing to Lab Color mode.

(benefit of LAB: [More colors](http://www.photoshopstar.com/basics/photos-lab-color-mode) can be perceived than RGB)

These steps are really cryptic:

* Ctrl-J to duplicate layer
* IMAGE/Mode/lab colors, don’t flatten
* IMAGE/Adjustment/curves
* Small grid
* Choose **a**
* B & W input slider to 2/10 & 8/10
* Choose **b** and do the same
* IMAGE/Mode/RGB
* If too much redness, lower Layer 1 opacity

## STAGE 3 – Correcting Color Problems

***TASK 1:*** Correct Color Cast

**Color cast** is the result of improper gray balance, when one channel is significantly stronger or weaker than the others.
Salmon.jpg has a strong green cast (unwanted tint).

-Open salmon.jpg

-Display Info panel

-Choose Color Sampler tool (nested in Eyedropper)

-3x3 in Control panel (This references a group of pixels rather than only 1)

-Click on lower left of plate to sample a color

-Add another on top right

-IMAGE>Adjustments>Color Balance

-Choose Highlights (This is used to remove overall color cast.)

-Drag the Magenta/green slider to -10. (Reason, adding a color’s complement neutralizes that color.)

***TASK 2:*** Correct Gray balance with Curves – the most power color corrector

After following my brief steps, you should also follow the textbook to get more details for this starting on page 351. In this exercise, you will be neutralizing the portions of red, green and blue to around 214. This will remove the overall redness from the picture. (You’ll lose a little bit of red from the berries, but it is a worthwhile tradeoff overall.)

* Open flan.jpg
* Use Color Sampler to add point on lower left of plate.
You are getting ready to correct the color cast by equalizing, i.e. by adding equal portions of RGB to a neutral area such as white.

Look at your numbers on the info panel and choose the middle number to be used as the target.
* Image>Adjustments>Curves
* Choose Red Channel.
* Add point at ¾ on grid
* A) Type YOUR original red as input
B) Type YOUR target number as output
* Repeat the above 3 steps for your other channel that needs adjusted.

Curve Tips for simplifying its use:

* Aim for neutral grays. The other colors will usually become more pronounced.
* You can adjust the entire image (RGB), or a channel at a time. Picking your channel can sometimes give you more control.
* X axis shows input; Y axis shows output. When you change the input, you are mapping input pixels to the output number.
* Changes made to one area of a curve affects all areas. Reason is that the change takes place on a continuous curve, not a single point.
* The steeper the curve, the more contrast of tones you have.

***TASK 3:*** Correct Contrast with Curves

The pasta looks washed out, and the green design around the plate is faded. Since the image does not use the entire tonal range, you will be bringing back some of the black pixels and white pixels by changing the input and output values of shadows and highlights. Then you will steepen the curve of the mid-tones to provide some better contrast.

* Open pasta.jpg
* Image>Adjustments>Curves
* Checkmark Show clipping options
	+ Then drag Input black point until a tiny bit of image begins to show (about 14)
	(The effect of this is that any pixels with a value of 14 or lower will be 0)
	+ Do same for Input white point (about 253)
* Turn off Show Clipping options and Preview on/off to see difference
* Add point at about 1/4; then drag slightly right
* Add point at about 3/4; then drag slightly left.