STRETCHLEARN · WORKBOOK

Photo Restoration & Repair — Workbook

This workbook turns the course into a working studio practice. Each section follows one module: you will triage and scan real prints, run a tone-and-colour recovery pass, remove damage with the right tool, and reconstruct, colour, and deliver finished files. Use the exercises on your own scans, the worksheets to plan and document each job, and the templates to track damage, settings, and pricing so you can quote and deliver consistently.

Capturing the Original: Scanning and Setup

Practise safe handling, accurate damage triage, archival scanning, and a non-destructive Photoshop file before you touch a single defect.

Exercise: Raking-Light Damage Survey

Choose three old prints (your own or family). For each, hold a desk lamp low and to the side so light skims the surface, and survey the damage. Write down every defect you see and which category it falls into, and note the print finish.

• List each defect on the print and tag it as surface (dust, scratch, crease), chemical (fading, foxing, silvering), or colour (cast, channel fading).

• For each defect, decide: does the image survive underneath (repair) or is the information gone (reconstruct)?

• Describe the print finish revealed by raking light (glossy, matte, linen-textured) and note any glare or moire risk for scanning.

• Which of the three prints will be the most time-consuming job, and why?

Worksheet: Scan Settings Decision Sheet

Fill this out for one print before you scan it, so resolution and format are driven by the intended output rather than habit. Recheck it against the course rules (600 ppi baseline, 1200 ppi for small or enlarged, 16-bit, TIFF, auto-corrections off).

Original size (inches)

Intended output and size (e.g. 8x10 print, screen only)

Chosen scan resolution (ppi) and reason

Bit depth (8-bit / 16-bit)

File format for raw scan

Scanner auto-corrections and sharpening turned OFF? (yes/no)

Digital ICE / infrared dust removal used? (yes/no and why)

Glass cleaned and print dust-blown? (yes/no)

Checklist: Non-Destructive File Setup Checklist

[ ] Saved the raw scan as a TIFF master and made a working copy
[ ] Duplicated the background layer and locked the original
[ ] Added a blank Retouch layer with healing and cloning set to sample All Layers
[ ] Created adjustment-layer groups named Tone, Colour, and Damage
[ ] Named every layer for its job (no Layer 12)
[ ] Saved a layered PSD master, separate from any flattened export

Recovering Tone, Contrast, and Fading

Run the global tone-and-colour pass that comes before any retouching: restore black and white points and neutralise casts using measurements, not guesswork.

Exercise: Histogram Read and Levels Recovery

On a faded scan, open the Levels adjustment and study the histogram before moving anything. Then restore the endpoints using the Alt-drag clipping preview.

• Describe the histogram shape: where does the data begin and end, and how wide are the empty gaps at the black and white ends?

• After dragging the black and white sliders to the data edges, what detail reappeared that was invisible before?

• While Alt-dragging, at what point did real shadow or highlight detail start to clip, and where did you stop?

• Did you add a Curves S-curve afterward? Note the opacity you settled on and why.

Worksheet: Colour Cast Correction Log

Use this to remove a cast by measurement. Pick a neutral target in the image, read its RGB before and after with the Info panel, and record the correction. Aim for roughly equal R, G, and B on the neutral after correction.

Neutral target chosen (e.g. white collar, gray path)

RGB reading BEFORE correction (R / G / B)

Suspected cast (e.g. orange from faded cyan dye)

Method used (gray-point eyedropper / per-channel Curves)

RGB reading AFTER correction (R / G / B)

Residual cast remaining, if any

Local masked corrections added for blotchy areas? (list regions)

Exercise: Monochrome Neutralise-or-Keep Decision

Take a yellowed or sepia black-and-white print and decide whether the warm tone is intentional or age damage, then act on it.

• Is the warm tone an intentional sepia/selenium tone or age-yellowing? What evidence led to your call?

• If removing the cast, what did you use (Black & White layer or Hue/Saturation at zero saturation) and how did contrast change after?

• If a client wanted the vintage look, describe how you would rebuild an even sepia over a neutralised base.

• Did you spot any silvering? Note where it is and how fully you expect to reduce it.

Checklist: Global Pass Sign-Off Checklist

[ ] Tone corrected: true black and white points set without clipping real detail
[ ] Midtone brightness adjusted to taste
[ ] Colour cast neutralised and verified with equal-ish RGB on a neutral target
[ ] Blotchy local casts handled with masked adjustment layers
[ ] Monochrome images neutralised or intentional tone confirmed
[ ] All corrections live on adjustment layers, original pixels untouched

Removing Damage: Dust, Scratches, Tears, and Stains

Match the right Photoshop tool to each defect and work coarse to fine, removing damage without smearing detail or over-smoothing texture.

Exercise: Tool-Matching Drill

On a damaged scan, deliberately repair four different defect types, each with the tool the course assigns, and observe the result. Then try one defect with the wrong tool to see the failure.

• Spot Healing Brush on isolated dust, Healing Brush on a scratch across smooth tone, Clone Stamp along a hard edge, Patch tool on a stain: describe how each behaved.

• Run the Healing Brush across a high-contrast edge on purpose. Describe the smudge it created and why it happened.

• Where did re-sampling often with Alt-click visibly improve the result versus dragging one source?

• Which defect on your print is best left for manual Clone Stamp work at high zoom, and why?

Worksheet: Coarse-to-Fine Damage Pass Plan

Plan and track a full damage-removal pass on one image. List defects largest-to-smallest, the tool for each, and tick them off as you grid through the image at 100 percent.

Largest defects (tears, creases, big scratches) and chosen tool

Medium defects (scratches, spots, foxing) and chosen tool

Fine dust fields and approach (Dust and Scratches radius/threshold, masked area)

Detailed areas needing manual cloning (eyes, lettering, jewellery, fabric)

Grid coverage progress (sections checked at 100%)

Texture/grain protected? (note where you added noise back)

Checklist: Tears, Creases, and Stains Checklist

[ ] Classified each major defect as surviving-image (repair) or destroyed (reconstruct)
[ ] Stains corrected as tone/colour first with masked adjustment layers, cloned only where detail is gone
[ ] Creases repaired in short re-sampled segments, tone then texture
[ ] Switched to Clone Stamp where creases cross hard edges
[ ] Made a Lasso selection to protect faces and edges before cloning nearby
[ ] Checked the repair is invisible at fit-on-screen view, not just at 100%

Reconstruction, Colour, and Delivery

Rebuild missing areas honestly, add or correct colour with layers and channels, and finish files to archival print and screen standards with a clear price.

Exercise: Rebuild a Missing Corner or Edge

Find or create a print with a torn-away corner or a hole and reconstruct it using content-aware fill plus hand cloning, matching the surrounding age and texture.

• Where did Content-Aware Fill succeed (background, texture) and where did it smear (structure, faces)?

• Did you use a flipped-and-blended symmetric half for any subject? Describe how you broke the mirror symmetry.

• How did you match grain and sharpness so the rebuilt area does not look crisp and modern next to the old photo?

• Mark which parts of the result are reconstructed guesswork versus recovered original, as you would tell a client.

Worksheet: Delivery Export Specification

Record the exact export settings for one finished job so re-orders are effortless. Produce both an archival print file and a screen file from the same untouched master.

Master file kept as layered PSD? (yes/no)

Sharpening tool and amount for PRINT (checked at 100%?)

Print export: format, bit depth, ppi, print size, colour profile

Sharpening amount for SCREEN

Screen export: format, long-edge pixels, quality %, colour profile (sRGB)

Per-client folder created with master + both exports?

Pricing tier assigned (basic / standard / premium) and hand-colouring hours if any

Exercise: Colour Add or Correct Pass

Either hand-colour a black-and-white print or fix channel-specific damage on a colour original, using the non-destructive methods from the module.

• If colourising: which elements got their own Color-mode layers, and how did you build skin tone from a reference at low opacity?

• How much did you lower overall saturation at the end, and why does vintage colour need restraint?

• If correcting a colour original: view the R, G, B channels separately. Which channel held most of the damage?

• Which single-colour Hue/Saturation correction (e.g. Blues) did you make, and did you mask it for precision?

Checklist: Final Delivery Checklist

[ ] Reconstruction matched to surrounding grain, sharpness, and tone
[ ] Honest note prepared on which areas are reconstructed for the client
[ ] Colourisation saturation pulled back to a believable, muted level
[ ] Sharpening applied to a flattened copy, master left untouched
[ ] Archival TIFF and screen JPEG both exported with correct profiles
[ ] Before-and-after presentation prepared and price tier assigned

Your Action Plan

1. Set up a flatbed scanner profile with auto-corrections off, 16-bit, TIFF output, and a 600 ppi baseline preset.
2. For each new job, run the raking-light damage survey and classify every defect as repair or reconstruct before quoting.
3. Build the non-destructive Photoshop master: locked original, Retouch layer sampling All Layers, named adjustment-layer groups.
4. Do the global pass first: restore black and white points with Levels, then neutralise casts by measurement with the Info panel.
5. Remove damage coarse to fine, gridding the image at 100 percent and matching the tool to each defect and to edges.
6. Correct stains and creases as tone-and-colour first, cloning only where detail is truly destroyed.
7. Reconstruct missing areas with content-aware fill plus hand cloning, matching age and texture, and noting any guesswork.
8. Add or correct colour on separate Color-mode and channel-targeted layers, keeping saturation restrained.
9. Export an archival TIFF and a screen JPEG from the untouched master, sharpening a flattened copy per output.
10. Present a before-and-after, assign a pricing tier from the damage triage, and file the master plus exports per client.