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FREE EBOOK

DESIGN AND DTP

Photo Editing Basics with Photoshop

Crop, retouch, adjust colour and make simple designs in Adobe Photoshop

INSIDE THIS BOOK

- Getting to know the workspace
- Pixels, resolution and new documents
- Layers
- Making selections
- ...and 7 more chapters, practice questions and a glossary

Beginner

DTP students and anyone editing photos for print or social media

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Photo Editing Basics with Photoshop

Learn to find your way around Adobe Photoshop and edit photos with confidence. You will crop and resize, fix light and colour, remove spots and backgrounds, add text and effects, make a passport-size photo sheet, and save each job in the right file format.

WHO IT IS FOR	DTP students and anyone editing photos for print or social media
LEVEL	Beginner
SUBJECT AREA	Design and DTP
WHAT IS INSIDE	11 chapters, practice questions with answers, and a glossary

HOW TO USE IT

Read one chapter at a time and try the examples as you go: on a computer, at your workbench or in your notebook. The boxes give tips, safety points and short activities. When you finish, test yourself with the practice questions and check your answers at the end. Words you may not know are explained in the glossary.



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Getting to know the workspace

Adobe Photoshop is a program for editing pictures. Photographers use it to fix colours, studios use it for passport and wedding photos, and designers use it to make posters, banners and social media posts. This book teaches the basics step by step, using the Windows keyboard. On a Mac, press Cmd wherever this book says Ctrl, and Option wherever it says Alt.

Photoshop changes a little with each new version. Menus and buttons sometimes move or get new names. If something in this book looks different on your screen, look for the same idea nearby, or search for it with the search icon at the top right.

The parts of the screen

When you open a photo, the screen has five main parts.

Part	Where	What it does
Menu bar	very top	menus such as File, Edit, Image, Layer, Select, Filter, View and Window
Options bar	under the menus	settings for the tool you are using; it changes with each tool
Toolbar	left side	the tools: move, select, crop, brush, text and more
Panels	right side	Layers, Properties, Adjustments, History and others
Document window	centre	your picture, with its name on a tab at the top

A small triangle at the corner of a tool icon means more tools are hidden in that group. Right-click the icon, or click and hold it, to see them. Each tool has a one-letter shortcut, shown when you rest the mouse on it. For example, V is the Move tool and C is the Crop tool.

If a panel is missing, open it from the Window menu. If the screen gets messy, choose **Window > Workspace > Reset Essentials** to put everything back in its usual place.

Moving around your picture

- Press Z for the Zoom tool and click to zoom in. Hold Alt and click to zoom out.
- Ctrl and the plus key zoom in; Ctrl and the minus key zoom out.
- Ctrl+0 (zero) fits the whole picture on the screen. Ctrl+1 shows it at 100%, one screen dot for each picture dot.
- Hold the Space bar and drag to slide the picture around, whatever tool you are using (except while typing text).

TIP

Learn Space-drag and Ctrl+0 on your first day. You will use them hundreds of times in every job.

DID YOU KNOW

The percentage at the bottom left of the window shows how far you have zoomed in. Zooming changes only your view, never the picture itself.

Pixels, resolution and new documents

Zoom far into any photo and you will see tiny coloured squares. Each square is a **pixel**, short for "picture element". A photo from a phone might be 4000 pixels wide and 3000 pixels tall: 1.2 crore pixels, or 12 **megapixels**. Photoshop edits these pixels.

Resolution

Resolution says how many pixels are packed into each inch when the picture is printed. It is measured in **pixels per inch (ppi)**. The rule is simple:

print size in inches = pixels ÷ ppi

Pixels	Resolution	Print size
1800 x 1200	300 ppi	6 x 4 inches
4000 x 3000	300 ppi	about 13.3 x 10 inches
2480 x 3508	300 ppi	A4 sheet

For good photo prints, 300 ppi is the usual target. For screens, such as phones, websites and WhatsApp, the ppi number does not matter. Only the pixel width and height count.

Colour modes

The **colour mode** decides how colours are stored.

- **RGB** (red, green, blue) mixes light. Screens use it, and it is the right choice for almost all photo work, including most photo-lab prints.
- **CMYK** (cyan, magenta, yellow, black) mixes printing inks. Printing presses use it. If a press asks for CMYK, change a copy of your file with **Image > Mode > CMYK Color**.
- **Grayscale** stores only shades of grey, for black-and-white work.

REMEMBER

Do your editing in RGB. Convert a copy to CMYK only if your printer asks for it, because some bright RGB colours cannot be printed with ink and will look duller.

Making a new document

Choose **File > New** (Ctrl+N). The New Document window shows ready-made sizes, called **presets**, along the top, such as Photo, Print and Web. On the right you can set your own:

1. **Width** and **Height**, with a units box beside them: pixels, inches, centimetres or millimetres.
2. **Resolution**: 300 pixels/inch for print. For screen work, set the pixel size you need.
3. **Color Mode**: RGB Color, 8 bit.
4. **Background Contents**: white, black, or transparent.
5. Click **Create**.

To open a photo, choose **File > Open** (Ctrl+O), or drag the file onto Photoshop.

NOTE

Before editing a photo that matters, such as a family picture or a client's file, make a copy of it first. Then a mistake can never cost you the only original.

CHAPTER 3

Layers

Layers are the most important idea in Photoshop. Imagine clear plastic sheets stacked on top of a photo. You can draw or write on any sheet without touching the photo underneath, move a sheet around, or throw it away. Each layer in Photoshop is such a sheet.

The Layers panel

Open it with **Window > Layers** or press F7. The top layer in the list is the one in front.

- The **eye** icon shows or hides a layer.
- The small picture beside it is the **thumbnail**, a preview of the layer.
- Double-click a layer's name to rename it. Good names such as "Sky fix" or "Shop name" save time later.
- Drag a layer up or down the list to change what sits in front.
- **Opacity**, at the top of the panel, makes a layer see-through: 100% is solid, 0% is invisible.

The icons along the bottom of the panel are, from left to right: link layers, layer styles (fx), add a mask, new fill or adjustment layer, new group, new layer and delete. Rest the mouse on any icon to see its name.

The Background layer

A photo opens as one layer called **Background**, with a small padlock. It cannot be moved or made transparent. To turn it into a normal layer, click the padlock, or double-click the layer and click OK.

Everyday layer actions

Action	How
New empty layer	click the + icon at the bottom of the panel
Duplicate a layer	Ctrl+J
Group selected layers	Ctrl+G
Merge a layer into the one below	Ctrl+E
Delete a layer	drag it onto the bin icon
Select several layers	Ctrl+click or Shift+click them in the panel

The drop-down that says **Normal** at the top of the panel sets the **blend mode**, which decides how a layer mixes with the layers below. For now, leave it on Normal.

TIP

Before you change a photo, press Ctrl+J to duplicate the Background layer and work on the copy. Click the eye on the copy at any time to compare before and after.

TRY THIS

Open any photo, duplicate the layer, and lower the copy's opacity to 50%. Nothing seems to change, because both layers are the same picture. Now move the copy with the Move tool (V) and watch the two images overlap.

CHAPTER 4

Making selections

A **selection** marks the part of a picture you want to change. Everything outside it is protected. A selection is shown by a moving dotted outline, often called "marching ants".

The selection tools

Tool	Key	Best for
Rectangular Marquee	M	boxes and straight-edged shapes
Elliptical Marquee	M (same group)	circles and ovals
Lasso	L	rough freehand shapes
Polygonal Lasso	L (same group)	straight-sided shapes, clicked point by point

Tool	Key	Best for
Object Selection	W	a whole object: drag a box around it
Quick Selection	W (same group)	painting over an area with clear edges
Magic Wand	W (same group)	areas of one even colour, such as a white wall

With the marquee tools, hold Shift after you start dragging to get a perfect square or circle, and hold Alt to draw from the centre outwards. The Magic Wand has a **Tolerance** setting in the options bar: a low number picks only very similar colours, a higher number picks a wider range.

Select > Subject looks at the whole photo and selects the main person or object for you. It is often the quickest start, and you can then tidy it with other tools.

Adding and taking away

- Hold **Shift** while selecting to add to the current selection.
- Hold **Alt** to take away from it.
- The options bar has the same choices as small buttons.

Selection commands

Command	Shortcut	What it does
Select All	Ctrl+A	selects the whole layer
Deselect	Ctrl+D	removes the selection
Inverse	Shift+Ctrl+I	swaps selected and unselected parts
Feather	Shift+F6	softens the edge of the selection

Inverse is very useful. To select a building against a plain sky, click the sky with the Magic Wand, then choose Inverse.

For difficult edges such as hair, use **Select > Select and Mask**. Its Refine Edge Brush, painted along the hair, finds fine strands that ordinary tools miss.

REMEMBER

When nothing seems to happen as you paint or adjust, check for a forgotten selection somewhere else in the picture. Press Ctrl+D to clear it and try again.

CHAPTER 5

Crop, straighten and resize

The Crop tool

Cropping cuts away the edges of a picture to improve the framing or fit a size. Press C for the **Crop tool**. A border with handles appears around the photo.

1. Drag the handles at the corners or sides to choose what to keep.
2. Drag inside the border to move the photo under it.
3. Press Enter to apply, or Esc to cancel.

The options bar lets you fix the shape. Choose a ratio such as 1:1 (square) or 2:3 (4:6) from the drop-down, or choose **W x H x Resolution** and type an exact size, such as 6 in by 4 in at 300 px/in. The **Delete Cropped Pixels** box matters. When it is ticked, the cut parts are thrown away. When it is not ticked, they are only hidden, and you can crop again later to bring them back.

Straightening

A photo of Marine Drive with a tilted sea looks wrong at once. With the Crop tool active, click the **Straighten** icon in the options bar, then drag a line along something that should be level, such as the horizon. Photoshop rotates the photo to match. You can also rotate by dragging just outside a corner of the crop border. Rotating leaves empty corners, which the crop trims off. The **Content-Aware** option can fill them in instead.

TIP

The crop border shows a grid that divides the photo into thirds. Place the main subject where two lines cross. Off-centre photos often look more natural.

Image Size or Canvas Size?

These two are easy to confuse.

Command	Shortcut	What changes
Image > Image Size	Alt+Ctrl+I	the whole picture is made bigger or smaller
Image > Canvas Size	Alt+Ctrl+C	space is added or cut around the picture; the picture is not scaled

In Image Size, the **Resample** box decides what happens to the pixels. With Resample ticked, Photoshop adds or removes pixels. With it unticked, the pixels stay the same, and changing the ppi changes only the print size. A 3000-pixel-wide photo set to 300 ppi prints 10 inches wide, or 20 inches wide at 150 ppi.

Canvas Size is how you add a white border. Tick **Relative**, type the extra width and height you want, choose the colour, and use the **Anchor** grid to say which side the new space goes on.

REMEMBER

Making a picture smaller is safe. Making it much bigger cannot add real detail, so it looks soft. Start with the largest original you have.

Fixing light and colour

Most photos improve with small changes to brightness, contrast and colour. Photoshop offers many tools for this. Four of them cover most everyday work, and all are found under **Image > Adjustments**.

Use adjustment layers

Applying an adjustment straight to a photo changes its pixels for good. A better way is an **adjustment layer**: click the half-filled circle at the bottom of the Layers panel and choose the adjustment. It sits above the photo as its own layer and changes how everything below looks, without touching the pixels. You can reopen its settings in the Properties panel at any time, lower its opacity, or hide it with the eye icon.

Brightness/Contrast

The simplest tool. Brightness lightens or darkens the whole picture. Contrast makes darks darker and lights lighter. Small moves work best.

Levels (Ctrl+L)

Levels shows a **histogram**, a graph of how many pixels there are from pure black on the left to pure white on the right. Under it are three sliders.

1. If the graph does not reach the left end, drag the black slider in to where the graph starts. Shadows become a true black.
2. If it does not reach the right end, drag the white slider in to where it ends. Highlights become clean white.
3. Drag the middle (grey) slider left to brighten the middle tones, or right to darken them.

A dull, foggy photo from a hill station often comes alive with just steps 1 and 2.

Curves (Ctrl+M)

Curves shows a diagonal line. Its lower left stands for the shadows and its upper right for the highlights. Click on the line to add a point and drag it: up brightens that tone, down darkens it. A gentle S shape, with the lower part pulled down a little and the upper part pushed up a little, adds contrast. Curves takes practice, but it is the most precise of the four.

Hue/Saturation (Ctrl+U)

Hue shifts every colour around the colour wheel, **Saturation** controls how strong the colours are, and **Lightness** lightens or darkens. The drop-down at the top, set to Master, lets you change one colour group alone, for example only the Greens to make a lawn fresher.

EXAMPLE

Priya's Holi photos came out grey because of an overcast sky. A Levels layer set the black and white points, a gentle S curve added contrast, and Saturation +15 brought back the colours, all in under two minutes, without changing a single original pixel.

TIP

Be gentle with saturation, especially on faces. Skin turns orange long before the rest of the photo looks too strong. Compare with the eye icon as you go.

CHAPTER 7

Retouching: spot healing and clone stamp

Retouching means removing small faults such as dust, pimples, wires or a stray wrapper on the grass. Photoshop's healing tools are in the J group, and the Clone Stamp is S.

Start with an empty layer

Professionals retouch on a new empty layer above the photo, so the original pixels are never touched. Click the + icon in the Layers panel, then:

- for the Spot Healing Brush, tick **Sample All Layers** in the options bar;
- for the Clone Stamp, set **Sample** to **Current & Below**.

If a fix goes wrong, erase it from that layer, or delete the layer and start again.

Spot Healing Brush (J)

The easiest tool. Make the brush a little bigger than the spot, using the square bracket keys: [makes it smaller and] makes it bigger. Then click on the spot. Photoshop replaces it with texture from around it and blends it in. For a scratch or a thin wire, click at one end and Shift+click at the other to heal along a straight line. Set **Type** in the options bar to Content-Aware for most jobs.

Clone Stamp (S)

The Clone Stamp copies pixels exactly from one place to another. It is the right tool when you need a straight edge or a repeating pattern, such as bricks or tiles, that healing would smudge.

1. Hold Alt and click a clean area. This sets the **source**, the place to copy from.
2. Release Alt and paint over the fault. A small cross shows where the copying comes from.
3. Alt-click a new source often, so the repair does not show the same patch twice.

With **Aligned** ticked in the options bar, the source moves along with your brush. A softer brush edge (Shift+[lowers hardness) hides the joins.

Other helpers

The **Healing Brush** works like the Clone Stamp but blends the copied texture with the light and colour of the area you paint. The **Patch tool** lets you draw around a fault and drag it onto a clean area. Newer versions also include a **Remove tool** in the same group, which removes things you paint over.

REMEMBER

Never retouch an identity photo in a way that changes how the person looks. Official photos for documents usually must show the face as it really is. Removing dust from the scan is fine; changing a face is not.

TRY THIS

Find an old scanned photo with dust specks. Add an empty layer, tick Sample All Layers, and clean every speck with the Spot Healing Brush. Hide the layer to see how much you fixed.

CHAPTER 8

Removing backgrounds

Shop owners want products on plain white, people want a tidier wall behind them, and designers want people cut out for posters. Removing a background has two parts: select the subject, then hide everything else with a mask.

Layer masks: hide, do not delete

A **layer mask** is a black-and-white picture attached to a layer. White parts of the mask show the layer, and black parts hide it. Grey parts make it partly see-through. Nothing is erased, so a mistake is fixed by painting the mask again. This is why masks are better than the Eraser tool.

Method 1: the quick way

Recent versions offer a one-click **Remove Background** button. With the photo layer selected, look for it under Quick Actions in the Properties panel, or on the floating Contextual Task Bar. Photoshop selects the subject and adds a mask for you. Check the result closely, then tidy the edges as described below.

Method 2: select, then mask

1. Choose **Select > Subject**.
2. Zoom in and fix the selection: use the Quick Selection tool with Shift to add missed parts and Alt to remove extra ones.
3. Click the **Add layer mask** icon at the bottom of the Layers panel. The background disappears and a grey-and-white checkerboard shows where the picture is now transparent.

Method 3: plain backgrounds

If the background is one even colour, click it with the Magic Wand, choose **Select > Inverse** to select the subject instead, and add a mask.

Tidying the edges

Click the mask thumbnail in the Layers panel, so you paint on the mask and not the photo. Press B for the Brush tool, D to reset the colours to black and white, and X to swap them. Paint with black to hide more, and with white to bring parts back. For hair, open **Select > Select and Mask**, paint the Refine Edge Brush along the hair, and output to a layer mask.

Adding a new background

Choose **Layer > New Fill Layer > Solid Color**, pick a colour such as white or light blue, and drag the new layer below the subject in the Layers panel.

DID YOU KNOW

JPG files cannot store transparency. To keep a cut-out with a see-through background, save it as PNG or keep it in PSD.

EXAMPLE

Imran sells handmade diyas in Jaipur. He photographs each one on a cluttered table, uses Select Subject and a mask, puts a white fill layer behind it and exports a clean product photo, all from one PSD file he can reuse for every new design.

CHAPTER 9

Text and layer styles

Adding text

Press T for the **Horizontal Type tool**.

- **Click** once to add a single line, called point text. It grows as you type.
- **Drag** a box to add paragraph text, which wraps inside the box like a page.

Before or after typing, set the font, style, size and colour in the options bar. To finish, click the tick in the options bar or press Ctrl+Enter. Each piece of text becomes its own **type layer**, marked with a T thumbnail.

Text stays editable. Choose the Type tool and click into the text to change words, or double-click the T thumbnail to select all of it. Because text is stored as letter shapes rather than pixels, it stays sharp at any size. **Window > Character** opens more controls, such as the space between lines (leading) and between letters (tracking).

To resize or rotate text, press Ctrl+T for **Free Transform**, drag a corner handle, and press Enter.

TIP

Use two fonts at most in one design: one bold font for the heading and one plain, easy-to-read font for details. Too many fonts look untidy and confuse the reader.

Layer styles

Layer styles add effects such as shadows and outlines to a whole layer. Click the **fx** icon at the bottom of the Layers panel, or double-click the empty area to the right of a layer's name.

Style	What it adds	Good for
Drop Shadow	a shadow behind the layer	lifting text off a busy photo
Stroke	an outline	making text readable on any background
Outer Glow	soft light around the edge	night or festive designs
Bevel & Emboss	a raised 3D look	buttons and badges, used lightly
Color Overlay	fills the layer with one colour	changing a logo's colour

Tick a style on the left of the Layer Style window to turn it on, and click its name to change its settings. An fx mark appears on the layer, and the eye beside each effect turns it on or off. To copy a style to another layer, right-click the layer and choose **Copy Layer Style**, then right-click the other layer and choose **Paste Layer Style**.

A small design

Ramesh's stationery shop in Agra wants a festival offer post. Make a new document of the pixel size the platform recommends. Add a photo of notebooks, then a bold heading, "Diwali Offer", with a white Stroke and a soft

Drop Shadow so it stands out. Add a second line, "Notebooks from ! 40", in a plain font. Finally, add the shop name and phone number in small text at the bottom.

REMEMBER

Readability first. If you have to squint at text on a phone screen, make it bigger or give it more contrast with its background.

CHAPTER 10

Project: a passport-size photo sheet

Photo studios print several passport-size photos on one sheet of 6 x 4 inch photo paper. In this project you will make such a sheet yourself.

NOTE

Photo sizes and rules differ for each purpose: passports, visas, exam forms and ID cards each have their own. Many Indian forms ask for 3.5 x 4.5 cm, so this project uses that size as an example, but always check the official instructions for your purpose first: the size, the background colour, how much of the photo the face should fill, and, for online forms, the pixel size and file size.

Step 1: crop to size

1. Open a recent, well-lit photo taken against a plain, light wall, with the face looking straight at the camera. Press Ctrl+J to work on a copy.
2. Press C for the Crop tool and choose **W x H x Resolution** in the options bar.
3. Type 3.5 cm for the width, 4.5 cm for the height and 300 for the resolution in px/in.
4. Drag the photo inside the border so the head is centred and placed as the rules ask. Press Enter.

At 300 ppi, 3.5 x 4.5 cm is about 413 x 531 pixels.

Step 2: tidy, but do not change the face

Use a Levels layer if the photo is dark. If the wall is uneven, clean it to the required colour using the methods in the Removing backgrounds chapter. Do not smooth skin or reshape features.

Step 3: add a cutting border

Choose **Image > Canvas Size**, tick **Relative**, enter 0.2 cm for both width and height, set the extension colour to white, and click OK. This gives each photo a thin white margin, which leaves room to cut between copies.

Step 4: build the sheet

1. Press Ctrl+A, then Shift+Ctrl+C (**Edit > Copy Merged**), which copies the photo as you see it, from all its layers.
2. Make a new document: 6 inches wide, 4 inches high, 300 px/in, RGB, white background.
3. Press Ctrl+V to paste. Use the Move tool (V) to drag the photo to the top left corner.
4. Press Ctrl+J three times and drag each copy to the right, so that there are four photos in a row. Holding Shift while dragging keeps them level.
5. Shift+click to select all four photo layers. In the options bar of the Move tool, use the align buttons to line up their top edges and the distribute buttons to space them evenly.
6. Press Ctrl+G to group the row, press Ctrl+J to duplicate the group, and drag the copy down to make a second row.

With the border, each photo is 3.7 x 4.7 cm, so four fit across the 15.2 cm sheet and two fit down its 10.2 cm height: eight photos in all.

Step 5: save and print

Save the sheet as a PSD to keep the layers, and save a copy as a high-quality JPG or a PDF for printing. When printing, choose 6 x 4 inch photo paper and print at actual size (100%). Turn off any "fit to page" option, or every photo will come out slightly the wrong size.

TRY THIS

Print one test sheet and measure a photo with a ruler before printing many. If it is not 3.5 x 4.5 cm inside the border, check your print settings.

CHAPTER 11

Saving files and good habits

Which format?

Format	Keeps layers?	Transparency?	Best for
PSD	Yes	Yes	your working file, to edit again later
JPG	No	No	photos to share, print or upload
PNG	No (flattened)	Yes	logos, cut-outs, screenshots, text graphics
PDF	Optional	Yes	sending finished designs to a print shop

- **File > Save** (Ctrl+S) saves your working file. Use PSD for anything you might change later.
- **File > Save As** (Shift+Ctrl+S) saves under a new name or format. In recent versions, JPG and PNG may appear under **File > Save a Copy** instead. Either way, your PSD stays open with its layers.
- **File > Export > Export As** is handy for screen images: you choose JPG or PNG, the pixel size and the quality, and see the file size before saving.

JPG makes files small by throwing away detail you hardly notice. Its quality scale runs from 0 to 12. Use 10 to 12 for printing and 8 or more for sharing. Every time a JPG is edited and saved again, it loses a little more, so always go back to the PSD to make changes.

REMEMBER

Name versions clearly, such as "diwali-post-v2.psd", and keep the PSD even after you export the JPG. A client always asks for "one small change" the next day.

Non-destructive habits

Non-destructive editing means working in a way that never damages the original pixels, so every change can be undone or adjusted later. These habits come from everything in this book:

1. Keep the original file untouched and work on a copy.
2. Duplicate the Background layer (Ctrl+J) before editing.
3. Use adjustment layers instead of direct adjustments.
4. Use layer masks instead of the Eraser.
5. Retouch on an empty layer.
6. Before resizing a layer or adding filters, right-click it and choose **Convert to Smart Object**. A Smart Object remembers its original pixels, so you can resize it many times without it getting blurry, as long as you do not go bigger than the original.
7. Name your layers and group them.

Ctrl+Z undoes one step, and pressing it again goes further back. Shift+Ctrl+Z steps forward again. The **History** panel (Window > History) lists recent steps, and clicking one jumps back to it. History is lost when the file is closed, which is one more reason to keep layers.

Keyboard shortcuts worth learning

Shortcut	Action	Shortcut	Action
V	Move tool	Ctrl+N	New document
M	Marquee tools	Ctrl+O	Open
L	Lasso tools	Ctrl+S	Save
W	Quick Selection tools	Ctrl+Z	Undo
C	Crop tool	Ctrl+J	Duplicate layer
J	Healing tools	Ctrl+G	Group layers
S	Clone Stamp	Ctrl+T	Free Transform
B	Brush	Ctrl+D	Deselect
T	Type tool	Ctrl+L	Levels
Z	Zoom	Ctrl+M	Curves
H or Space	Hand (pan)	Ctrl+U	Hue/Saturation
[and]	Brush size	Alt+Ctrl+I	Image Size
D	Default black and white	Alt+Ctrl+C	Canvas Size
X	Swap colours	Ctrl+O	Fit on screen
F7	Layers panel	Tab	Hide or show panels

TIP

Do not try to learn all of these at once. Pick three new shortcuts each week and use them on purpose until your fingers remember.

Practice questions

1. What are the five main parts of the Photoshop screen?
2. What does a small triangle at the corner of a tool icon mean?
3. A photo is 2400 x 1800 pixels. How big will it print at 300 ppi?
4. Which colour mode should you edit in, and when would you use CMYK?
5. Why is it a good idea to press Ctrl+J before editing a photo?
6. How do you turn the locked Background layer into a normal layer?
7. Which selection tool is best for a plain white wall, and which setting controls how much it picks up?
8. How do you add to a selection, and how do you take away from it?
9. What does Select > Inverse do? Give an example of when it helps.
10. What is the difference between Image Size and Canvas Size?
11. What happens to cropped areas when Delete Cropped Pixels is not ticked?
12. Why should you use an adjustment layer instead of Image > Adjustments?
13. In Levels, what do the black and white sliders do?
14. What shape of curve adds contrast in Curves?
15. When would you choose the Clone Stamp instead of the Spot Healing Brush?
16. What do white, black and grey mean on a layer mask?
17. Why must a cut-out with a transparent background be saved as PNG and not JPG?
18. What is the difference between point text and paragraph text?

19. Name three layer styles and say what each one adds.
20. Before making a passport-size photo sheet, what should you check, and where?
21. Why should you turn off "fit to page" when printing the photo sheet?
22. Name four non-destructive habits.

ANSWER KEY

Answers

1. The menu bar, the options bar, the toolbar, the panels and the document window.
2. More tools are hidden in that group. Right-click it, or click and hold, to see them.
3. 8 x 6 inches, because $2400 \div 300 = 8$ and $1800 \div 300 = 6$.
4. RGB. Use CMYK only on a copy, when a printing press asks for it.
5. It duplicates the layer, so you work on a copy and can always compare with, or go back to, the original.
6. Click its padlock, or double-click the layer and click OK.
7. The Magic Wand. Its Tolerance setting controls how wide a range of colours it selects.
8. Hold Shift to add and Alt to take away, or use the buttons in the options bar.
9. It swaps the selected and unselected parts. For example, select a plain sky with the Magic Wand, then choose Inverse to select the building.
10. Image Size scales the whole picture. Canvas Size adds or removes space around it without scaling the picture.
11. They are only hidden, so you can crop again later and bring them back.
12. An adjustment layer does not change the pixels, so you can change, lower or remove it at any time.
13. They set the darkest and lightest points. Moving them in to where the histogram starts and ends gives true blacks and clean whites.
14. A gentle S shape: the lower part pulled down a little and the upper part pushed up a little.

15. When the area has a straight edge or a pattern, such as bricks or tiles, which healing would smudge.
16. White shows the layer, black hides it, and grey makes it partly see-through.
17. JPG cannot store transparency, while PNG can.
18. Point text is one line made by clicking, and it grows as you type. Paragraph text is made by dragging a box, and it wraps inside the box.
19. Any three, such as Drop Shadow (a shadow behind), Stroke (an outline) and Outer Glow (soft light around the edge).
20. The required size, background colour, face position and, for online forms, the pixel and file size. Check the official instructions for the purpose the photo is for.
21. Fit to page scales the sheet, so every photo would print slightly the wrong size.
22. Any four of: work on a copy, duplicate the Background layer, use adjustment layers, use masks instead of the Eraser, retouch on an empty layer, use Smart Objects, and name and group layers.

WORD LIST

Glossary

Adjustment layer

a layer that changes the colour or light of the layers below it without changing their pixels.

Blend mode

a setting that decides how a layer mixes with the layers below it.

Canvas

the whole working area of a document; Canvas Size changes it without scaling the picture.

Clone Stamp

a tool that copies pixels exactly from a source point to where you paint.

CMYK

the colour mode of printing inks: cyan, magenta, yellow and black.

Colour mode

the way a document stores colour, such as RGB, CMYK or Grayscale.

Crop

to cut away the outer parts of a picture.

Feather

to soften the edge of a selection so changes blend in.

Histogram

a graph of how many pixels there are at each brightness, from black to white.

JPG

a common photo format that keeps files small but has no layers or transparency.

Layer

a separate sheet in a document that can be edited, moved or hidden on its own.

Layer mask

a black-and-white map that shows or hides parts of a layer without erasing them.

Layer style

an effect, such as a drop shadow or stroke, added to a whole layer.

Non-destructive editing

editing in a way that leaves the original pixels unharmed.

Opacity

how solid a layer is, from 0% (invisible) to 100% (solid).

Pixel

one tiny coloured square, the smallest part of a digital picture.

PNG

an image format that keeps full quality and supports transparency.

PPI

pixels per inch, the measure of print resolution.

PSD

Photoshop's own file format, which keeps layers, masks and text editable.

Resample

to add or remove pixels when changing a picture's size.

Resolution

how many pixels are printed in each inch of paper.

RGB

the colour mode of screens, which mixes red, green and blue light.

Selection

a marked area of a picture; only that area is affected by changes.

Smart Object

a layer that remembers its original pixels so it can be resized without losing quality.



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