

**Guided Computer Tutorials**

**Learning  
Adobe  
Photoshop 2024  
Module 2**

**By Greg Bowden**

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# Learning Adobe Photoshop 2024

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## Photoshop Project 2



# Repairing Images and Moving Content

As you have seen with removing backgrounds or selecting parts of images, Photoshop provides numerous tools to carry out steps. The same applies to repairing sections of images and quickly moving content. The PATCH TOOL and two HEALING BRUSH TOOLS can be used to repair blemishes in images, and the CONTENT AWARE MOVE TOOL can be used to quickly move part of an image to another section of the same image.

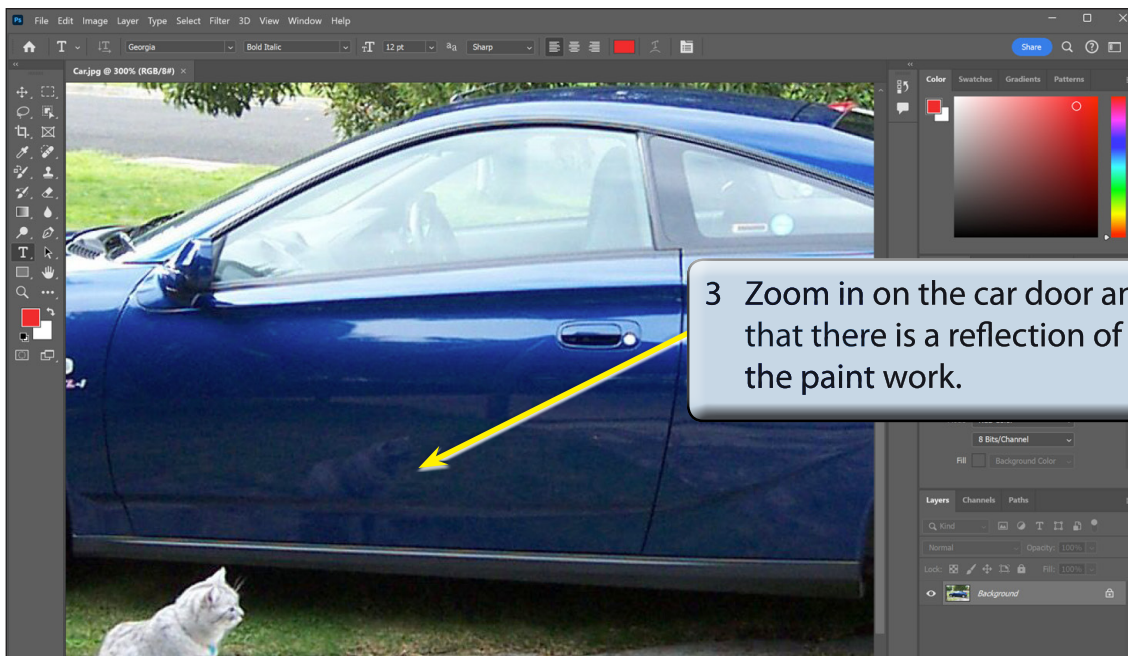
## The Patch Tool

The PATCH TOOL allows you to replace areas of an image with pixels from another area. The PATCH TOOL tries to match the texture, lighting and shading of a sampled area with the area to be covered.

### A Loading the Image

- 1 Load Photoshop or close the current files and click on the OPEN button in the WELCOME screen or select OPEN from the FILE menu.
- 2 Access the PS SUPPORT FILES, open the CHAPTER 15 folder and open the file:

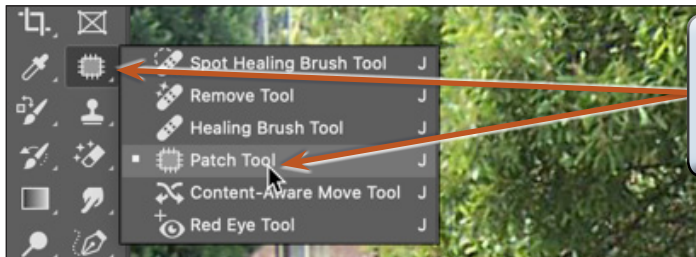
Car



- 3 Zoom in on the car door and notice that there is a reflection of the cat in the paint work.

- 4 Let's remove the reflection from the paint work.

## B Using the Patch Tool

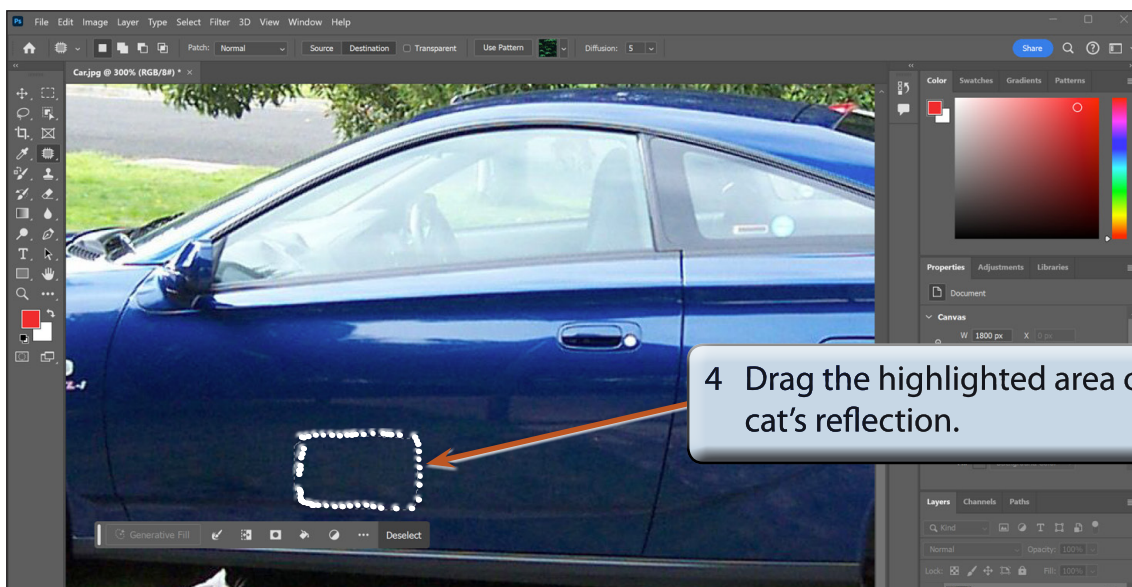


1 Click and hold on the tool below the FRAME TOOL in the TOOLS panel and select the PATCH TOOL.

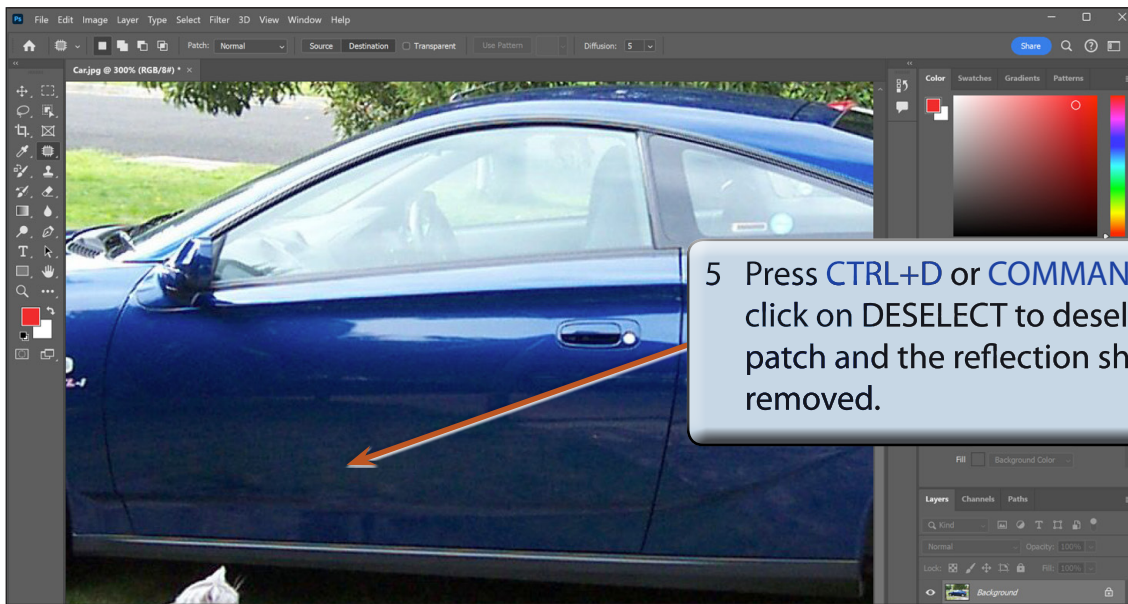


2 In the OPTIONS BAR ensure that the NEW SELECTION button (the left button) is selected and click on DESTINATION.

3 Drag an area roughly the size of the cat's reflection to the left of the reflection.



4 Drag the highlighted area over the cat's reflection.



**NOTE:**

- i You can patch over any sections that are not fully removed.
- ii The PATCH TOOL works best when used with small areas.

- 6 Use SAVE AS from the FILE menu to save the file in your STORAGE folder as a PHOTOSHOP file under the name:

Patch Tool

## The Healing Brush Tools

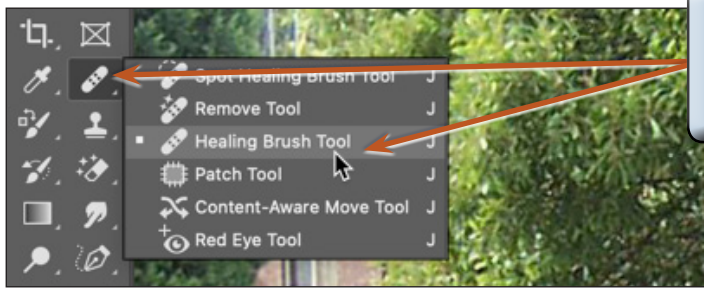
There are two healing brush tools that can be used to repair sections of photos, the HEALING BRUSH TOOL and the SPOT HEALING BRUSH TOOL.

### A The Healing Brush Tool

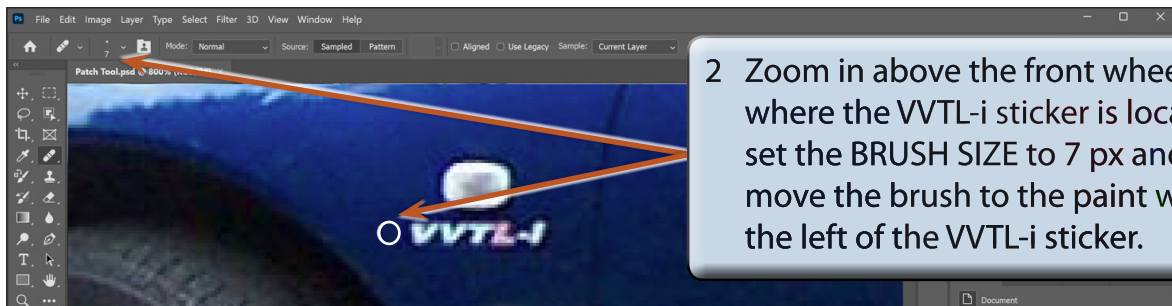
The HEALING BRUSH TOOL allows you select a sample area and apply those pixels to the problem area. It tries to match the texture, lighting, transparency and shading of the sampled area to blend the repaired area with the rest of the image.

Let's use the HEALING BRUSH TOOL to remove the VVTL-i sticker near the front of the car as it is starting to fade.





1 Click and hold on the PATCH TOOL and select the HEALING BRUSH TOOL.



2 Zoom in above the front wheel where the VVTL-i sticker is located, set the BRUSH SIZE to 7 px and move the brush to the paint work at the left of the VVTL-i sticker.

3 Hold down the **ALT** or **OPTION** key and click the mouse button to select that area of paint work then release the **ALT** or **OPTION** key.



4 Move the pointer next to the first V then hold down the mouse button and paint over the first V to remove it.

# Removing Objects From Images

There are more tools that Photoshop provides to remove objects from photos. Two of these are the CLONE STAMP TOOL and the CONTENT AWARE FILL option.

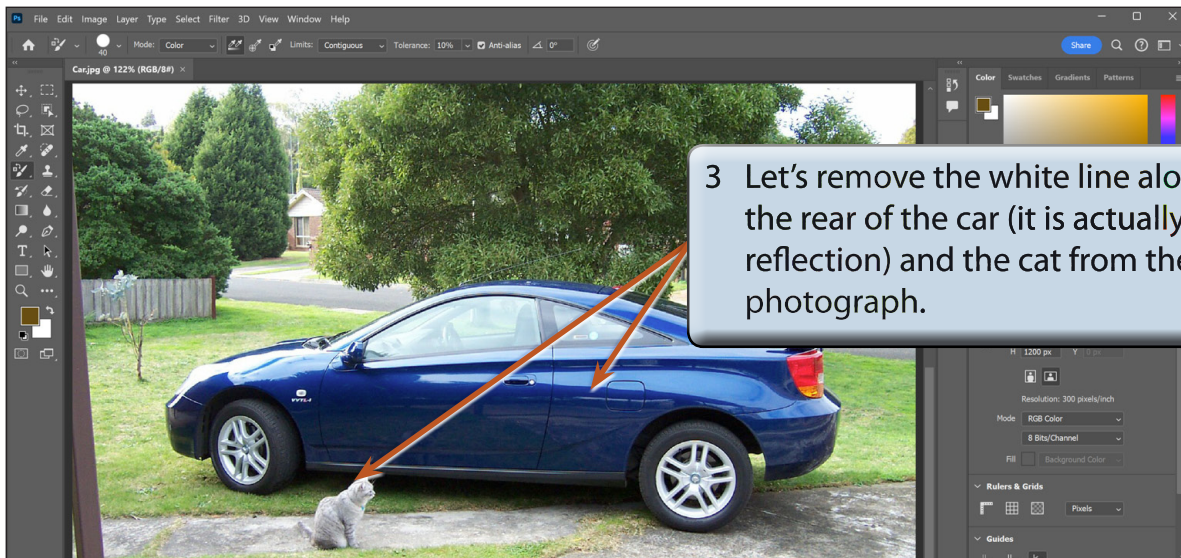
## The Clone Stamp Tool

The CLONE STAMP TOOL is probably a little more accurate than the HEALING BRUSH or CONTENT AWARE MOVE TOOLS when removing objects from photos, but it does take a little more practice to master. To illustrate how to use the CLONE STAMP TOOL we will repair the same photograph of a car that you used in the last chapter.

### A Loading the Image

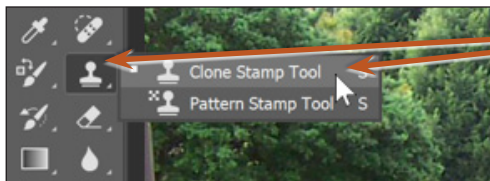
- 1 Load Photoshop or close the current file then select OPEN from the WELCOME screen or FILE menu.
- 2 Access the PS SUPPORT FILES, open the CHAPTER 16 folder and open the file:

Car



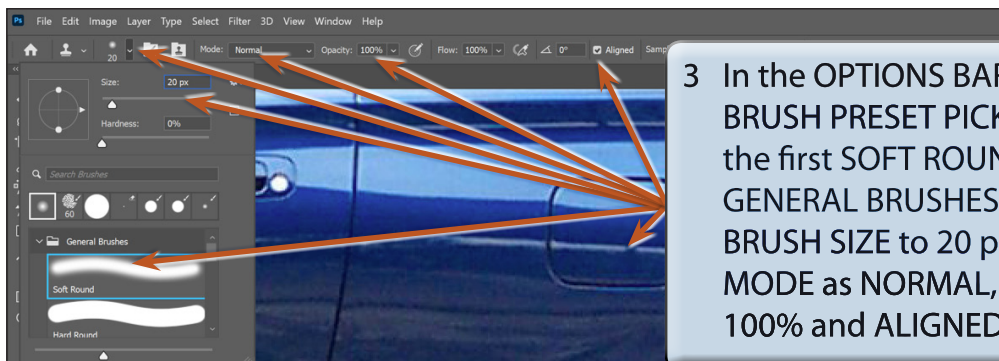
## B The Clone Stamp Settings

There are a number of settings that can be applied to the CLONE STAMP TOOL to make the cloning process more efficient.



- 1 Select the CLONE STAMP TOOL from the TOOLS panel.

- 2 Set the ZOOM to 400% and scroll to the fuel tank cover near the rear of the car.

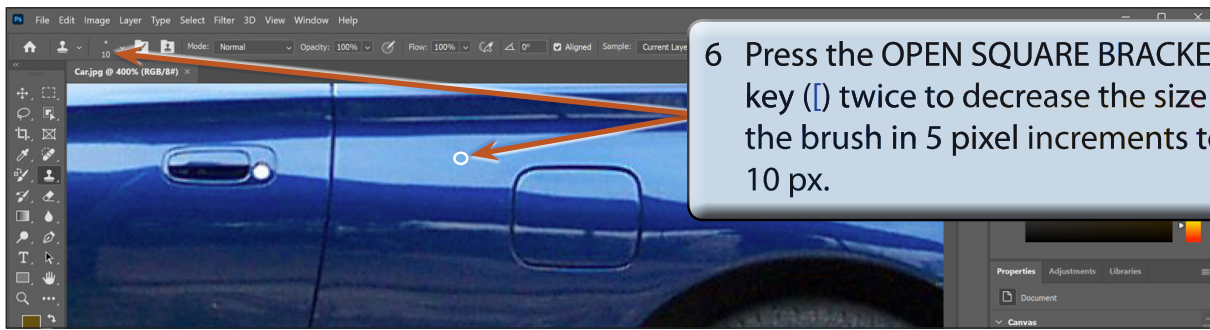


- 3 In the OPTIONS BAR, click on the BRUSH PRESET PICKER arrow, select the first SOFT ROUND brush from the GENERAL BRUSHES folder, set the BRUSH SIZE to 20 pixels, leave the MODE as NORMAL, the OPACITY at 100% and ALIGNED should be ticked.

- 4 Click on the BRUSH PRESET PICKER arrow in the OPTIONS BAR to close the BRUSHES panel if it is still open.

**NOTE:** Some people prefer to clone with the **OPACITY** (or colour strength) set to 50% and build the clone up gradually. We will use 100% here, but you might like to experiment with 50% once you are familiar with the cloning process.

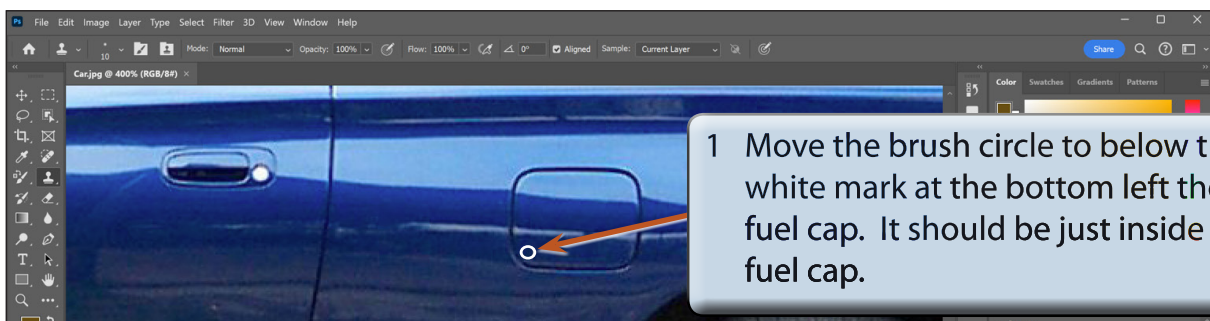
- 5 You can increase or decrease the BRUSH SIZE using keyboard shortcuts ([ ]).



**NOTE:** You can use the CLOSE SQUARE BRACKET key (]) when you want to increase the size of the brush.

## C Cloning

The cloning process involves selecting an area of an image that looks close to what the faulty area should look like, **ALT** or **OPTION** clicking to select that area, then painting over the problem area.

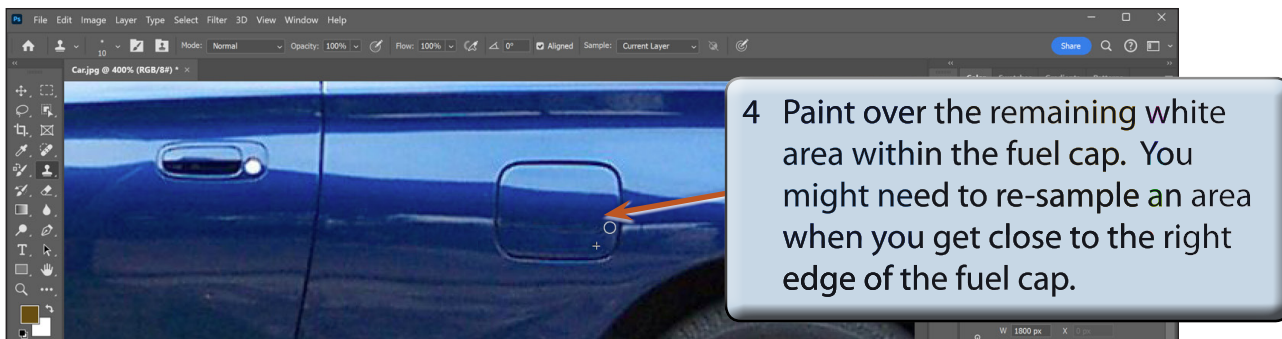


- 2 Hold down the **ALT** or **OPTION** key and click the mouse button to copy the sample area.





- NOTE:**
- i Notice that you have a circle brush shape and a cross-hair. The circle is the paint brush and the cross-hair is the sample area being copied.
  - ii As you paint along the problem area, the sampled area moves as well. This is what is meant by **ALIGNED**. If you wanted the sample area to remain from the original horizontal plane you would deselect **ALIGNED** in the **OPTIONS BAR**.
  - iii The **CLONED STAMP TOOL** was not designed to have lots of mouse clicks associated with it. The effect will not be realistic if you do this. You need to **ALT** or **OPTION** click once on a sample area and paint over the faulty part, then re-select a sample area when the cloning starts to look unrealistic.





# The Remove Tool

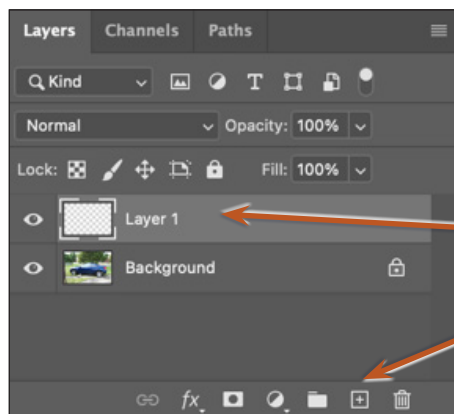
The REMOVE TOOL combines many other the tools you have been using in the last two chapters and applies AI technology to assist in the repairing of images. It is most effective when used on small areas of an image and other tools such as the CLONE STAMP TOOL and the SPOT HEALING TOOLS can be used to manually improve changes made with the REMOVE TOOL.

## Removing Objects

To illustrate how to use the REMOVE TOOL some of the adjustments made in the previous two chapters will be repeated.

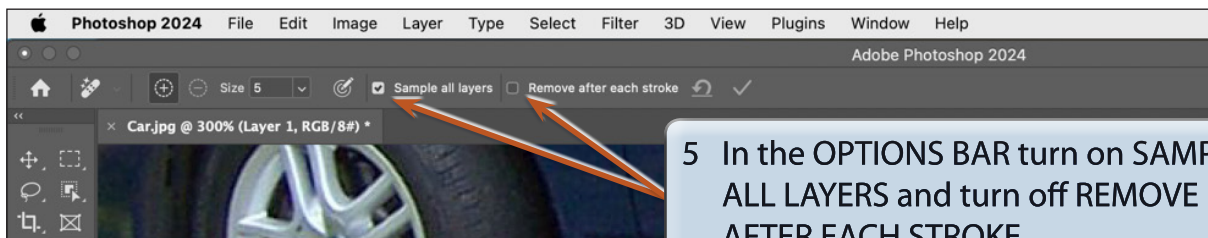
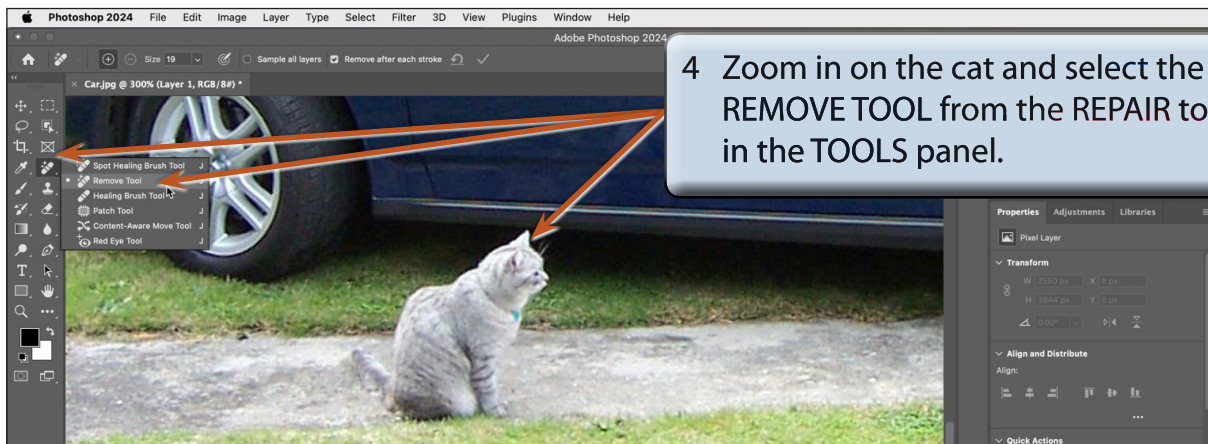
- 1 Load Photoshop or close the current file then select OPEN from the WELCOME screen or FILE menu.
- 2 Access the PS SUPPORT FILES, open the CHAPTER 17 folder and open the file:

Car

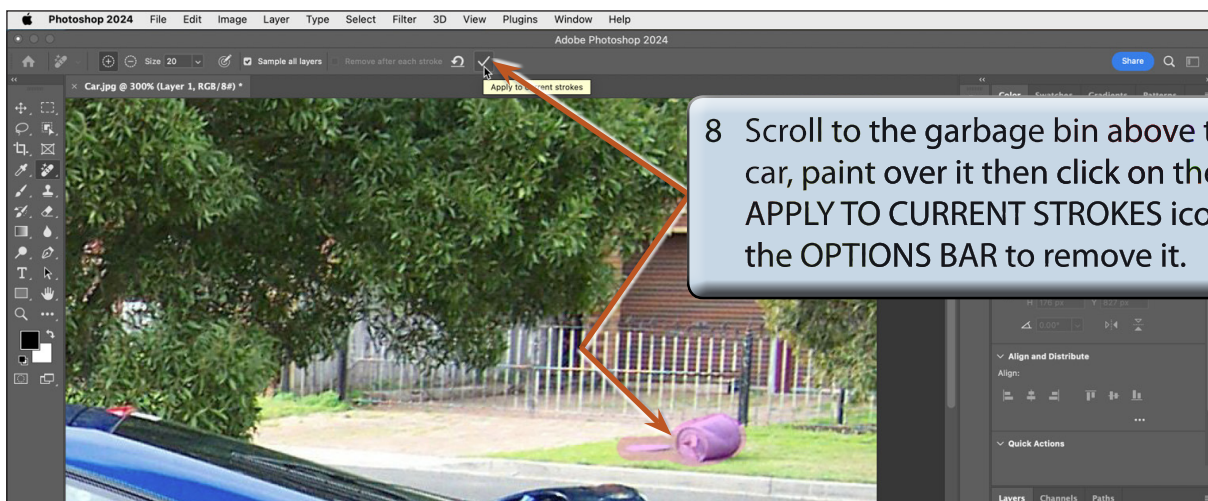
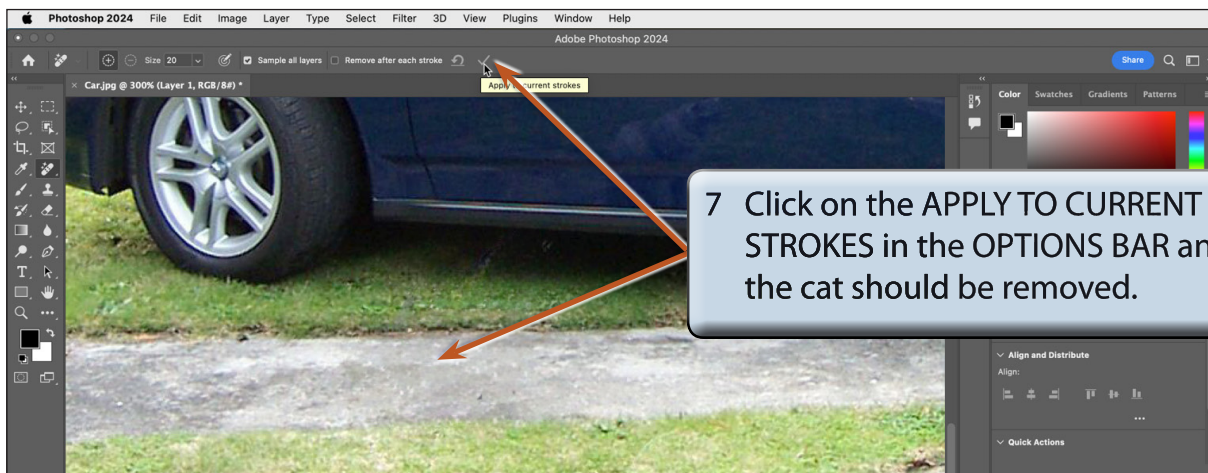


- 3 Create a NEW LAYER by clicking on the NEW LAYER icon in the LAYERS panel.

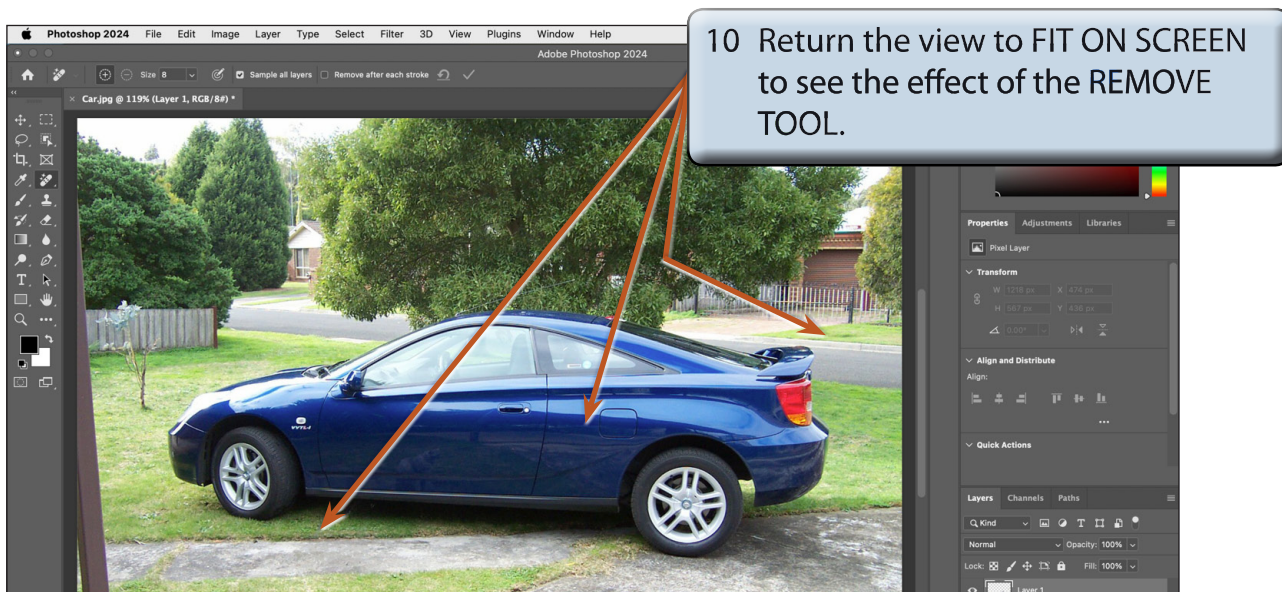
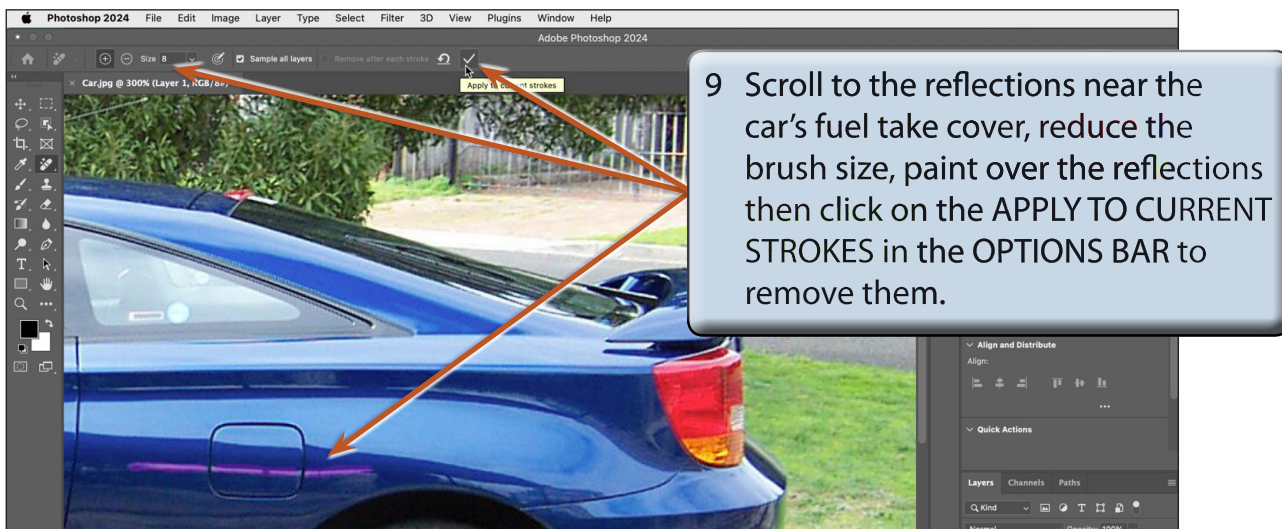
**NOTE:** You can make changes directly to the BACKGROUND layer, but when you do that, those changes are permanent. By creating the changes in layers, you can always return to the original image.



- NOTE:**
- i Turning on **SAMPLE ALL LAYERS** means that the content will be available from all the layers. If it is turned off, you will not be able to make changes to the image because the new layer will be empty.
  - ii Turning off **REMOVE AFTER EACH STROKE** means that you can release the mouse when painting over areas and the changes will only be made when you tell the program to do so. With **REMOVE AFTER EACH STROKE** on, changes are made as soon as you release the mouse button.
  - iii As with other tools, you can increase or decrease the **BRUSH SIZE** using keyboard shortcuts ([ ]).







**NOTE: The CLONE STAMP TOOL could be used to clean up any removed parts that do not look natural.**

11 Close the file, there is no need to save it.

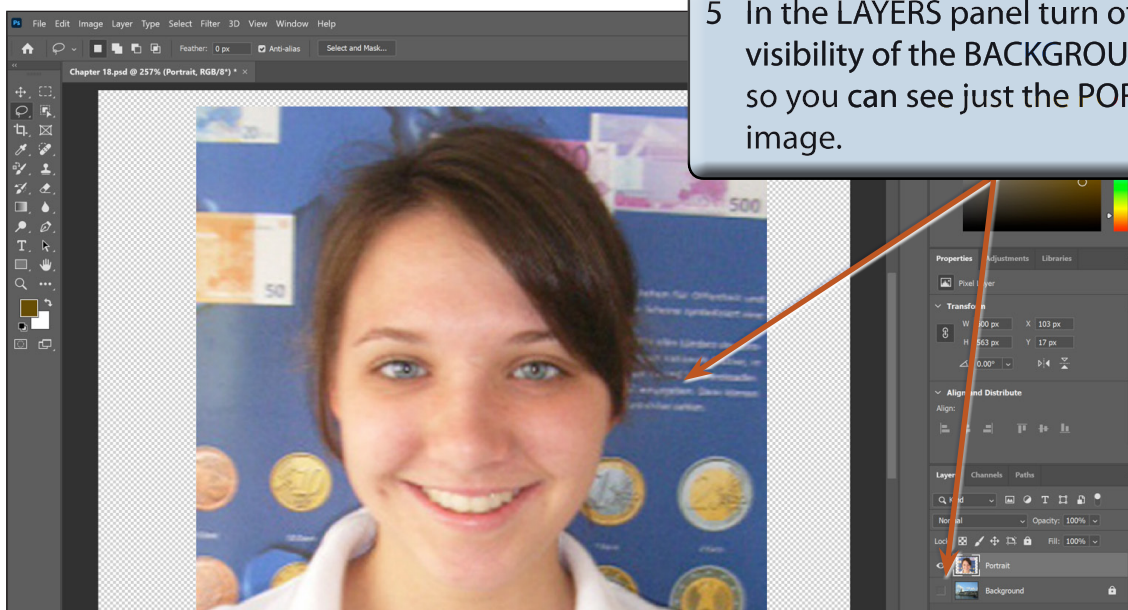
# Refining Selections

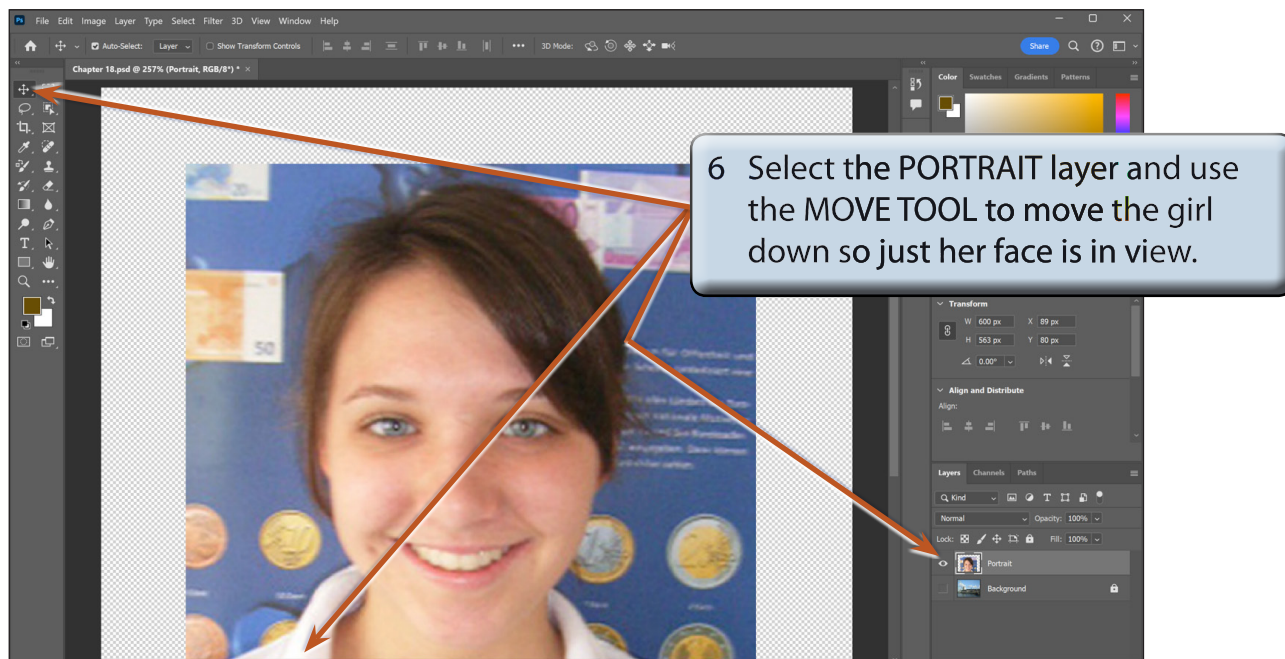
Selecting part of a photo and inserting the selection into another document is one of the most common tasks that Photoshop is used for. It is important that the selection is highly accurate, but areas such as hair are always difficult to select. In Module 1 you selected an object in a photo and used the SELECT AND MASK dialogue box to refine the selection. In this chapter a picture of a girl will be removed from one background and placed on another using the tools from within the SELECT AND MASK dialogue box.

## Loading the Sample Photo

A photo of a girl has been prepared for you and she will be placed onto a more interesting background.

- 1 Load Photoshop or close the current file and select OPEN from the WELCOME screen or FILE menu.
- 2 Access the PS SUPPORT FILES, open the CHAPTER 18 folder and load the CHAPTER 18 file.
- 3 Set the view to FIT ON SCREEN by pressing **CTRL+0** or **COMMAND+0**.
- 4 The photo of the girl is in one layer and the new background is in another layer.





## The Select and Mask Dialogue Box

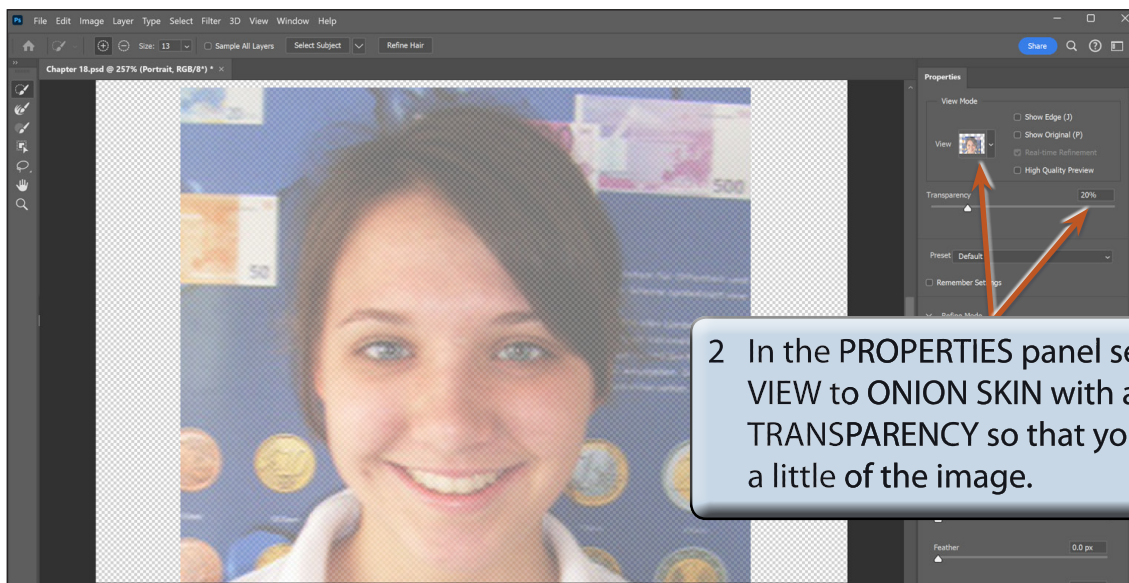
In this case the selection of the girl will be made within the SELECT AND MASK dialogue box. You could use any of selection tools such as the OBJECT SELECTION TOOL or the QUICK SELECTION TOOL to select the girl first as you have done previously then open the SELECT AND MASK dialogue box, and it is personal choice which method you wish to use.

### A Selecting the Girl

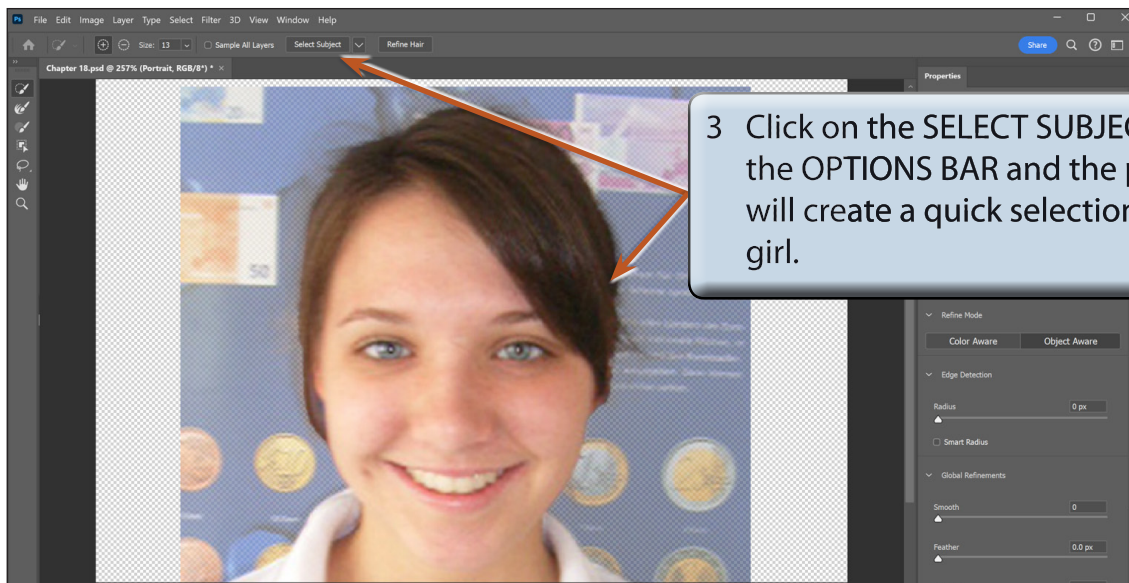
- 1 Display the SELECT menu and choose SELECT AND MASK to open the SELECT AND MASK dialogue box.

**NOTE:** If a selection tool is selected from the TOOLS panel, the SELECT AND MASK icon is displayed in the OPTIONS BAR and it can be used to open the SELECT AND MASK dialogue box.





2 In the PROPERTIES panel set the VIEW to ONION SKIN with a 20% TRANSPARENCY so that you can see a little of the image.

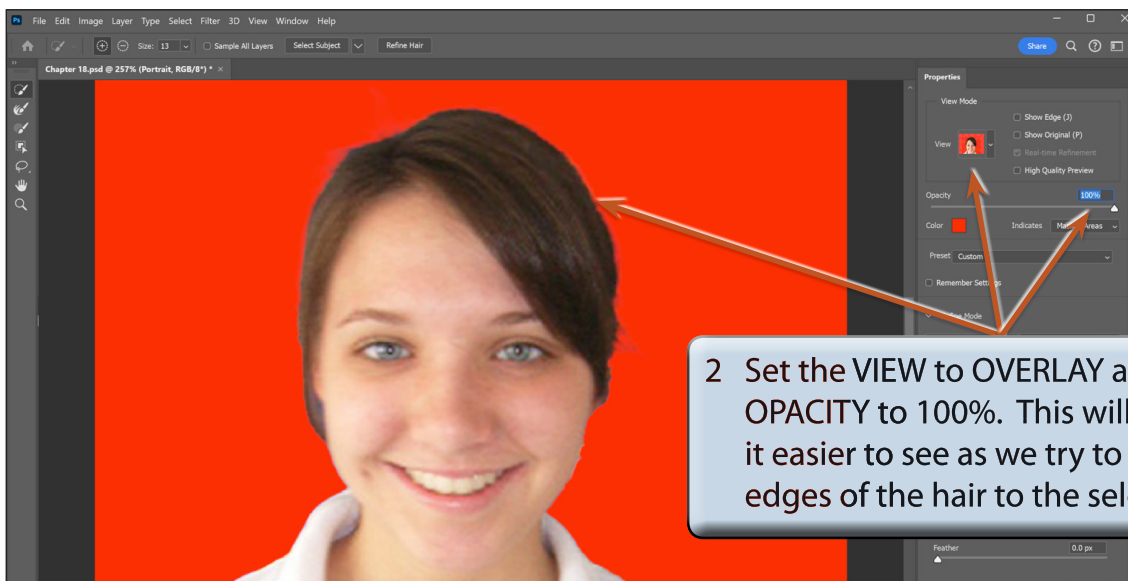
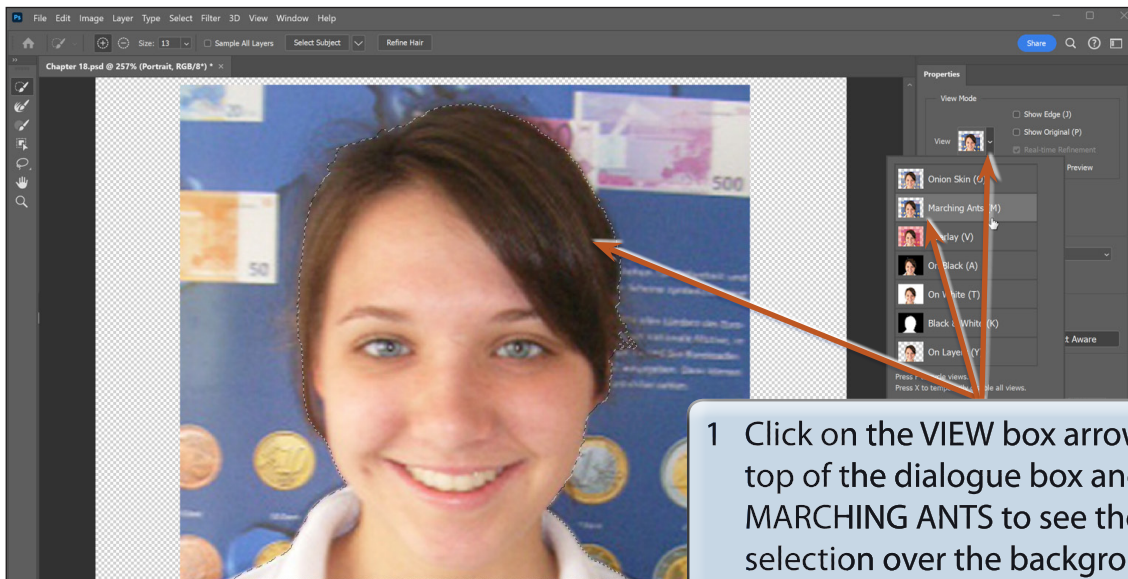


3 Click on the SELECT SUBJECT icon in the OPTIONS BAR and the program will create a quick selection of the girl.

**NOTE:** It may be difficult to see the selection, but the selection does not need to be accurate at this stage.

## B Refining the Selection

The difficult to select areas such as the hair can be refined.



**NOTE:** The program does a fairly good job of selecting the subject over a detailed background, but some refinement is needed to improve the selection.



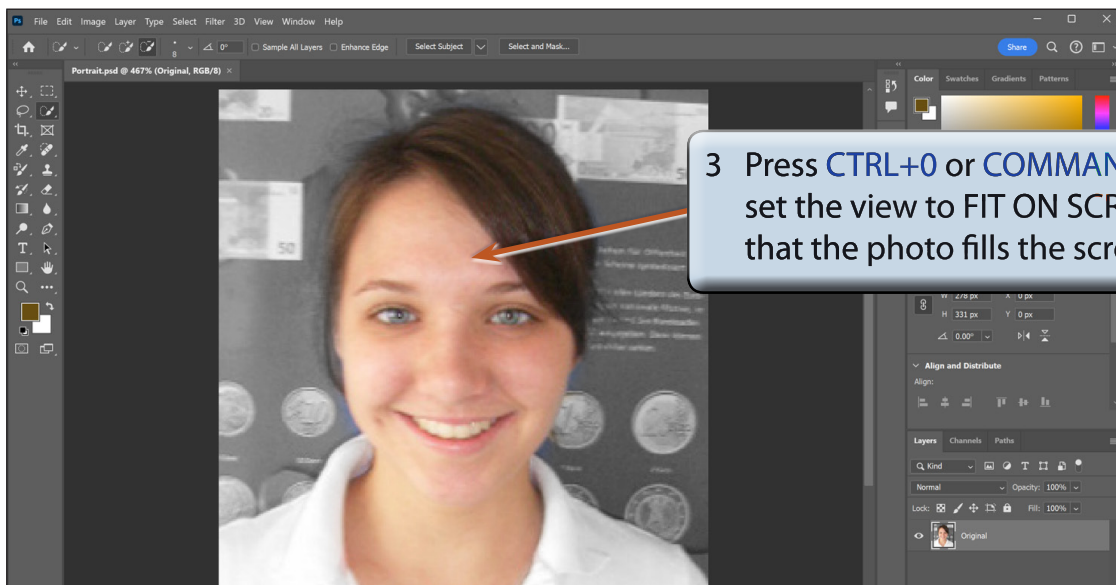
## Advanced Layer Uses

Photoshop provides a number of tools to help improve the appearance of faces in photographs. Selecting skin tones and adjusting them can create satisfactory improvements to a photo, but when more accurate improvements are required, advanced layer uses can be applied. In this chapter layers will be used to improve the skin tone of a face, highlight facial features and change the eye colour.

### Loading the Image

- 1 Load Photoshop or close the current file and select OPEN from the WELCOME screen or FILE menu.
- 2 Access the PS SUPPORT FILES, open the CHAPTER 19 folder and open the file:

Portrait

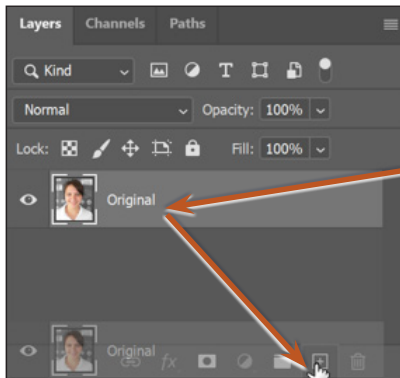


- 4 Look closely at the image. The camera has made the skin a little shiny and uneven in places. The background has been set to black and white so that it doesn't distract from the girl.
- 5 Use SAVE AS from the FILE menu to save the image in your STORAGE folder as a PHOTOSHOP file under the file name:

Enhanced Portrait

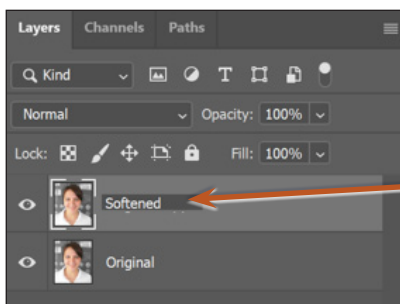
## Duplicating the Layer

A duplicate of the layer containing the image can be created so that major changes can be made to the copy without affecting the original image.



1 Move the pointer over the ORIGINAL layer label in the LAYERS panel and drag the label over the CREATE A NEW LAYER icon at the bottom of the panel.

2 A copy of the layer should be produced.

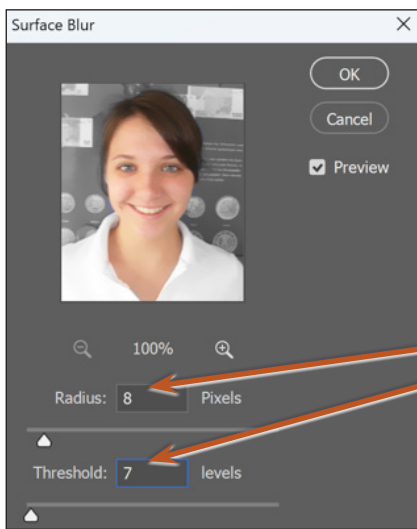


3 Change the name of the new layer to SOFTENED and press `<enter>` or `<return>`.

## Blurring the Image

The duplicated layer will be blurred to give the skin a softer more even look. After this we will sharpen sections of the image such as the eyes, hair and teeth.

- 1 The SOFTENED layer should be selected.
- 2 Display the FILTER menu at the top of the screen, highlight BLUR and select SURFACE BLUR.



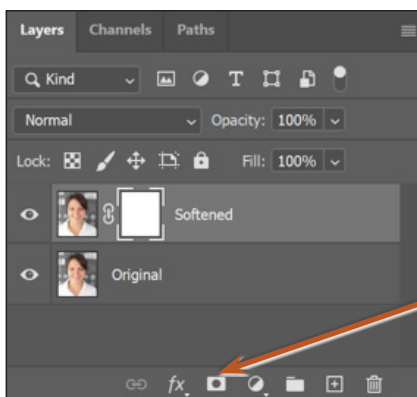
3 Set the RADIUS box to 8 pixels and the THRESHOLD to 7 levels.

**NOTE:** The PREVIEW frame can be used to scroll around the picture. With the mouse depressed the original image is displayed. When you release the mouse button the effect of the blur is shown.

4 Select OK and the tone of the skin should look softer and more even.

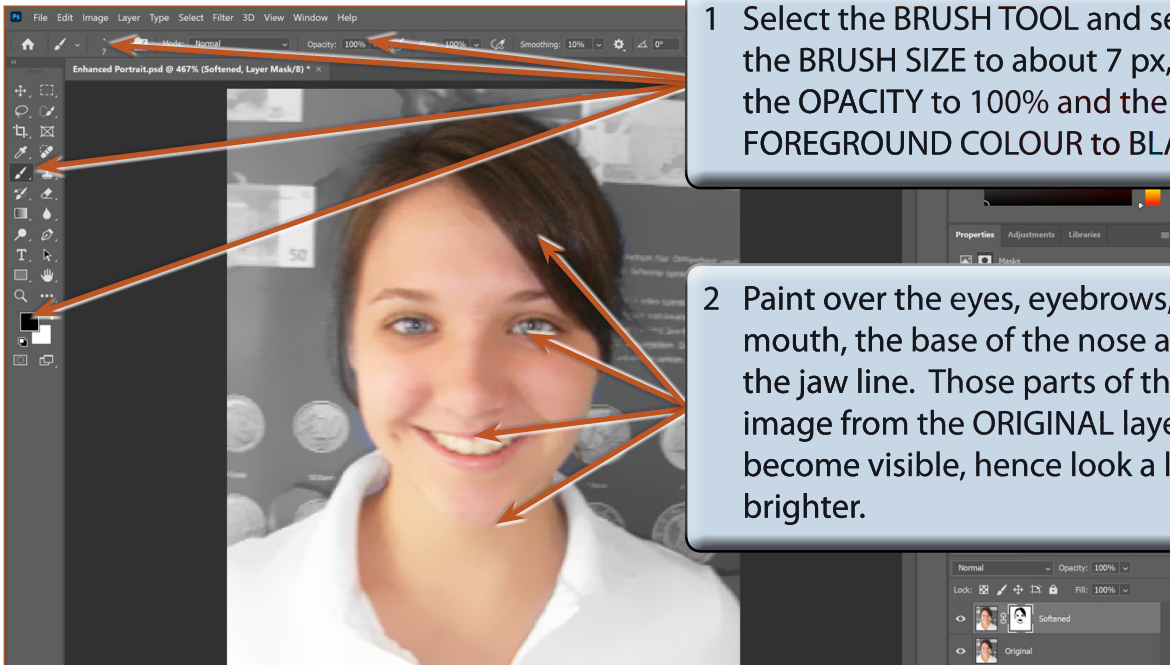
## Adding a Mask to the Layer

Parts of the face such as the eyes don't need to be blurred so a mask can now be added to the duplicate layer. By doing this we can paint on the mask to display the original eyes, but leave the skin blurred.



Click on the LAYER MASK icon at the base of the LAYERS panel to add a mask to the SOFTENED layer.

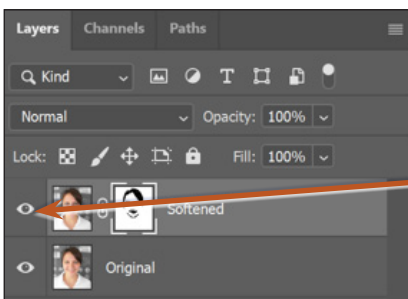
## Sharpening the Important Features



1 Select the BRUSH TOOL and set the BRUSH SIZE to about 7 px, the OPACITY to 100% and the FOREGROUND COLOUR to BLACK.

2 Paint over the eyes, eyebrows, hair, mouth, the base of the nose and the jaw line. Those parts of the image from the ORIGINAL layer will become visible, hence look a little brighter.

- NOTE:**
- i By blurring the image we have set the skin tones to look more consistent and then sharpened the important parts of the image. The effect will be subtle.
  - ii When using masks, white hides the layer below, black shows the layer below. So if you want to ease any of the black selection, set the FOREGROUND COLOUR to WHITE and paint over the required areas.



3 Turn off the view of the SOFTENED layer to see the original image then turn the view back on.

# Generative Fill

Generative Fill uses AI techniques to allow you to quickly and professionally alter images. You can replace backgrounds or remove backgrounds and objects, adjust clothing or hair colour, or even create images from scratch.

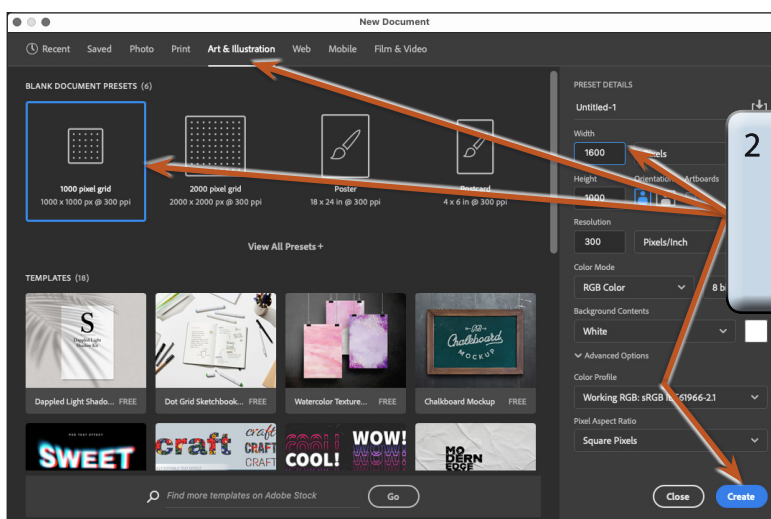
## Creating an Image

A good way to understand the power of Generative Fill techniques is to create a scene from scratch. A scene similar to the following image will be created in a few steps.

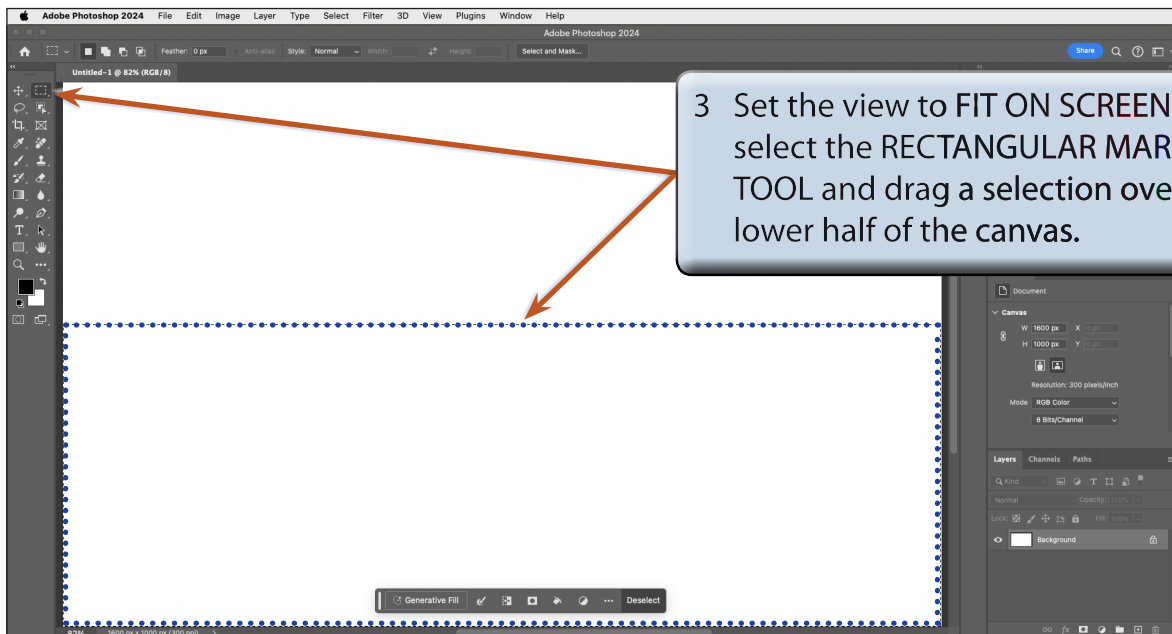


### A Creating a Grassy Field

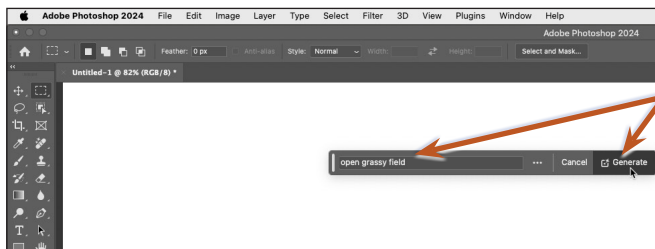
- 1 Load Photoshop or close the current file then select NEW FILE from the WELCOME screen or NEW from the FILE menu.



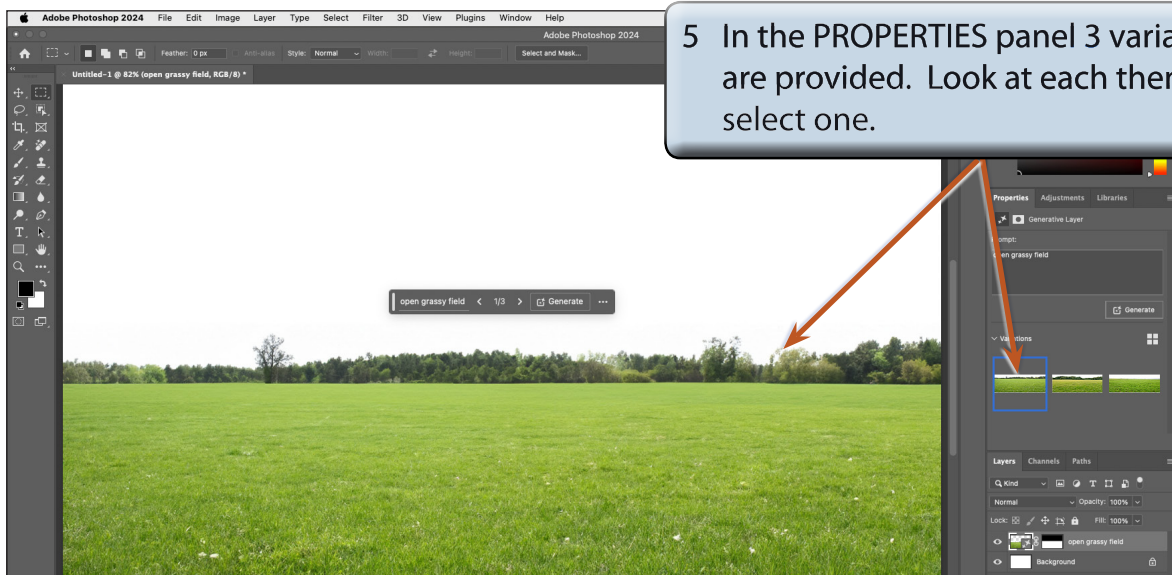
- 2 Open the ART & ILLUSTRATION category, select the first option, change the WIDTH to 1600 pixels and select CREATE.



3 Set the view to FIT ON SCREEN then select the RECTANGULAR MARQUEE TOOL and drag a selection over the lower half of the canvas.

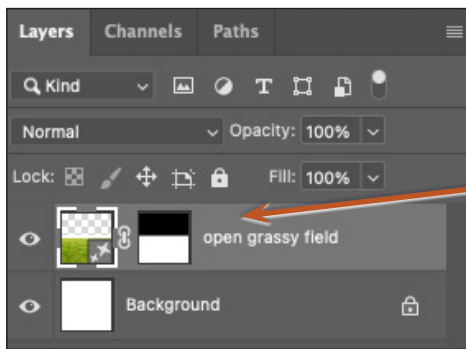


4 Click in the GENERATIVE FILL box in the CONTEXTUAL TASK BAR, enter: open grassy field and click on the GENERATE button.



5 In the PROPERTIES panel 3 variations are provided. Look at each then select one.

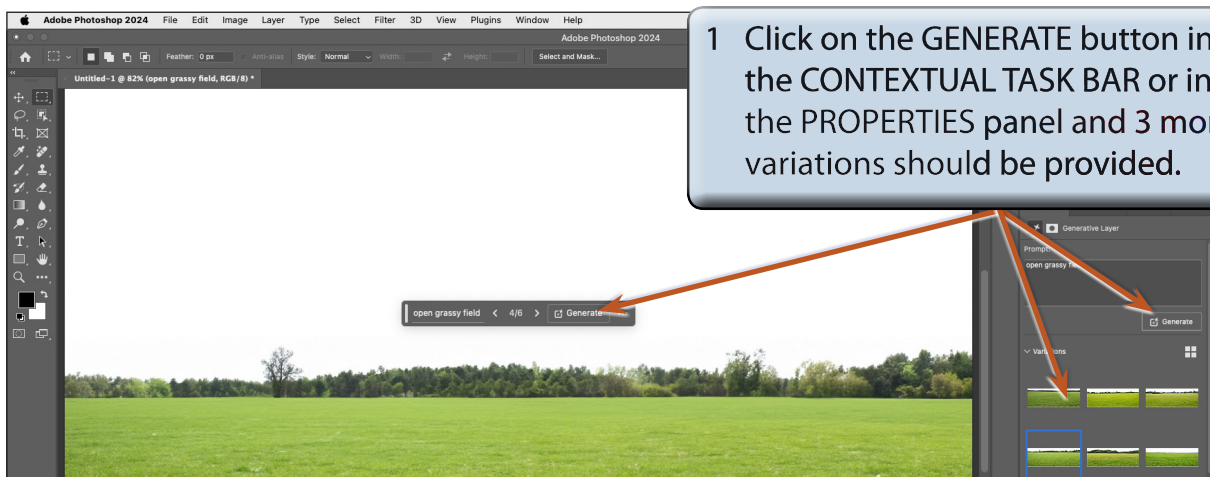




- 6 A layer is created in the LAYERS panel that contains the open grassy field.

## B Generating More Variations

If the 3 variations that Photoshop provides are not suitable, you can generate more.



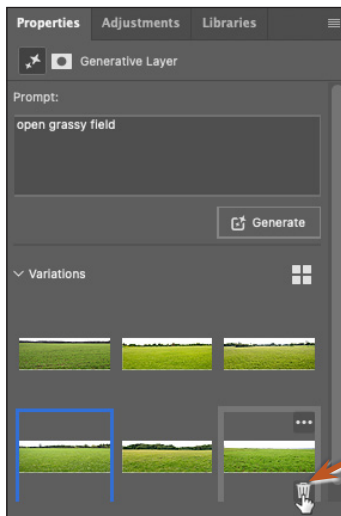
- 1 Click on the GENERATE button in the CONTEXTUAL TASK BAR or in the PROPERTIES panel and 3 more variations should be provided.

- 2 Look at the 3 new variations and select the one you like the best from the 6 variations.

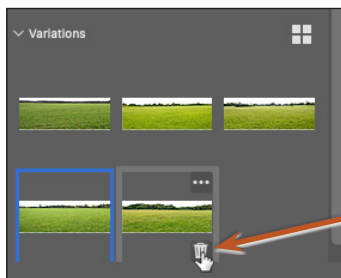
**NOTE: You can generate more variations if the provided ones do not suit your needs.**

## C Deleting Variations

It is good practice to delete the variations once they have been rejected.

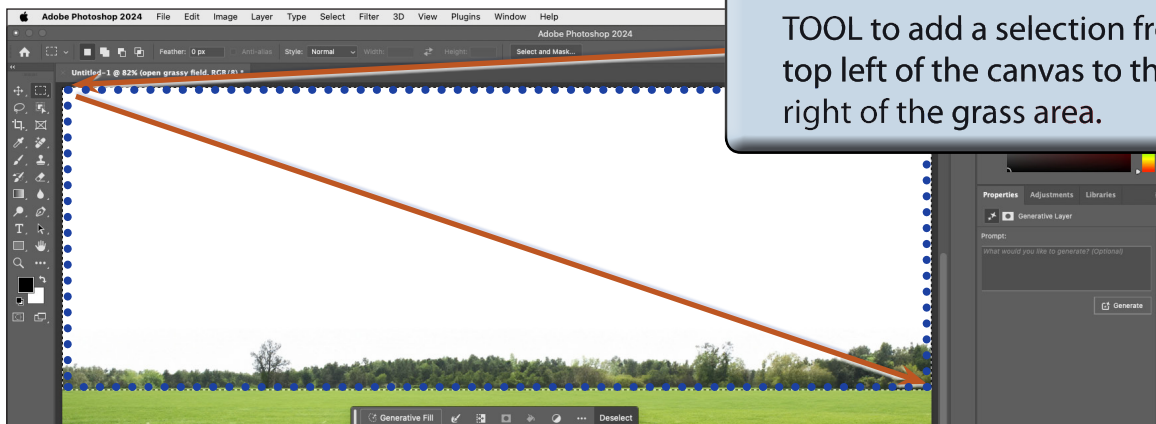


1 In the PROPERTIES panel hover over an unwanted variation and click on its TRASH CAN icon.



2 Delete the other unwanted variations.

## D Adding a Different Sky to the Scene



1 Use the RECTANGULAR MARQUEE TOOL to add a selection from the top left of the canvas to the top right of the grass area.



# Applying Filters

Photoshop provides a range of filters can be applied to selections within photos or to entire photos to enhance the visual effect, or to perform common editing effects. These tasks would be very time consuming if they were to be done manually. In this chapter you will use Blur Filters, Noise Filters, Sharpen Filters and Partial Blur Filters.

## Loading the Sample Photo

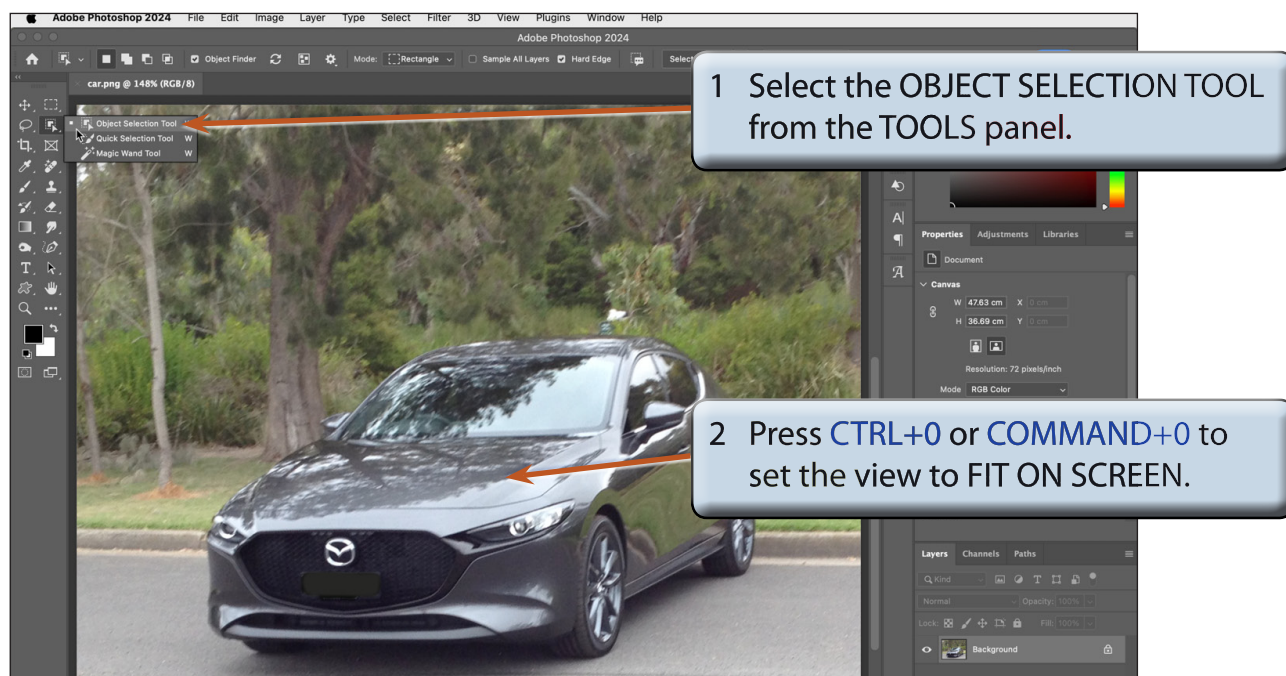
A photo of a car will be used to apply filters on a selected area.

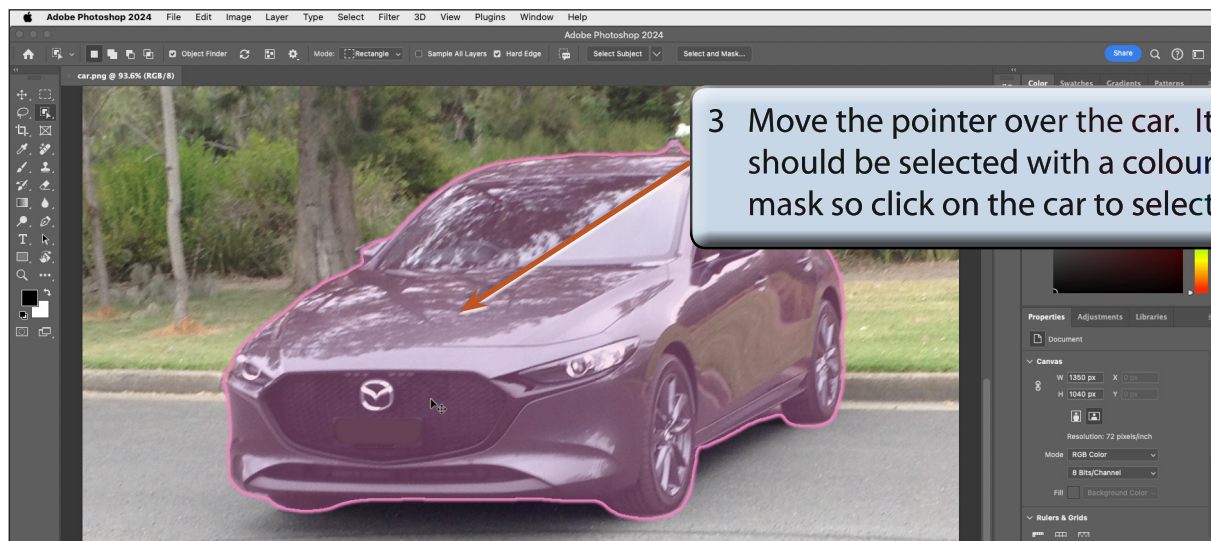
- 1 Load Photoshop or close the current file.
- 2 Select OPEN from the WELCOME screen or FILE menu.
- 3 Access the PS SUPPORT FILES, open the CHAPTER 21 folder and load the CAR file.

## Selecting the Background

Blurring Filters will be applied to the background, so just it will need to be selected. To do this the car is first selected then removed from the selection.

### A Selecting the Car



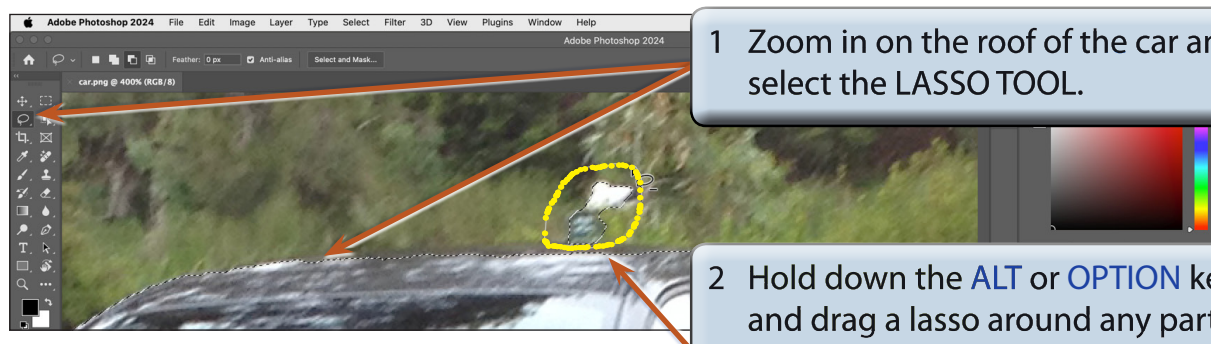


3 Move the pointer over the car. It should be selected with a coloured mask so click on the car to select it.

- NOTE:**
- i You can also click on **SELECT SUBJECT** in the **OPTIONS BAR** and the program will select the car.
  - ii If you have a few similar items in a photo, you can set the **MODE** to **LASSO** or **RECTANGLE** and drag a selection around the subject to be selected.

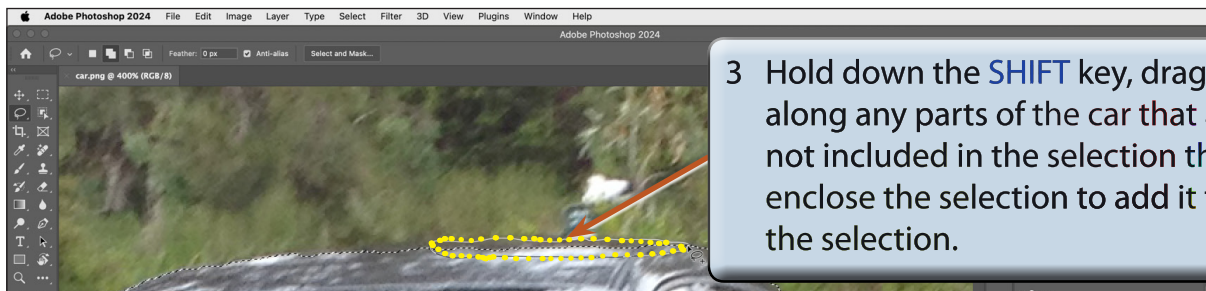
## B Refining the Selection

The program does a reasonable job of selecting the car, but it does have problems near the rear of the car.



1 Zoom in on the roof of the car and select the **LASSO TOOL**.

2 Hold down the **ALT** or **OPTION** key and drag a lasso around any parts of the background that are included in the selection to remove them.



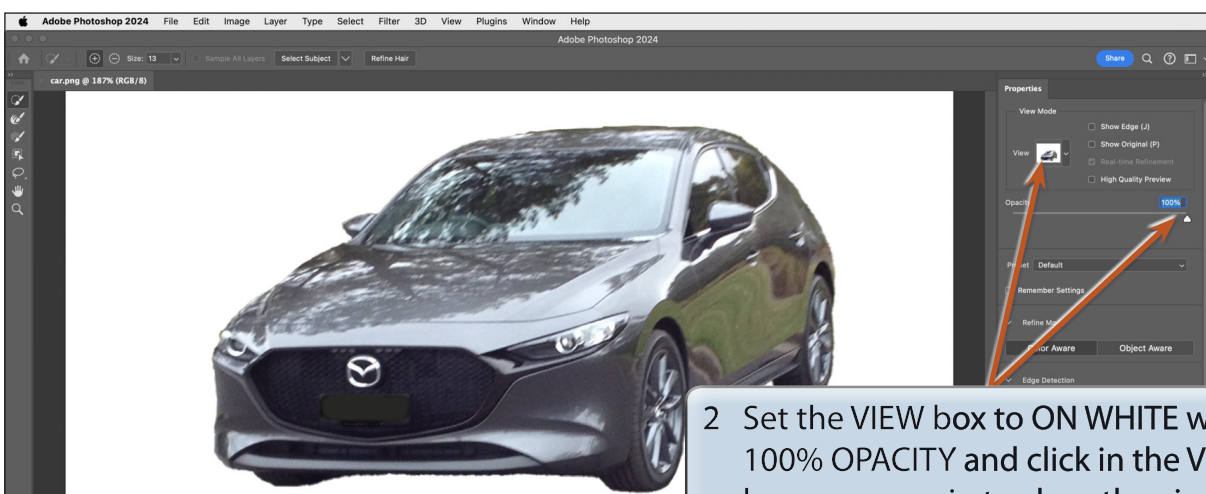
- 4 Scroll around the car using the **SHIFT** key to add any parts of the car to the selection and the **ALT** or **OPTION** key to remove any background from the selection.

**NOTE:** The selection of the car will not need to be exact in this case as the blur filter will hide some of the selection.

## C Using Select and Mask

The selection of the car can be refined further in the SELECT AND MASK dialogue box.

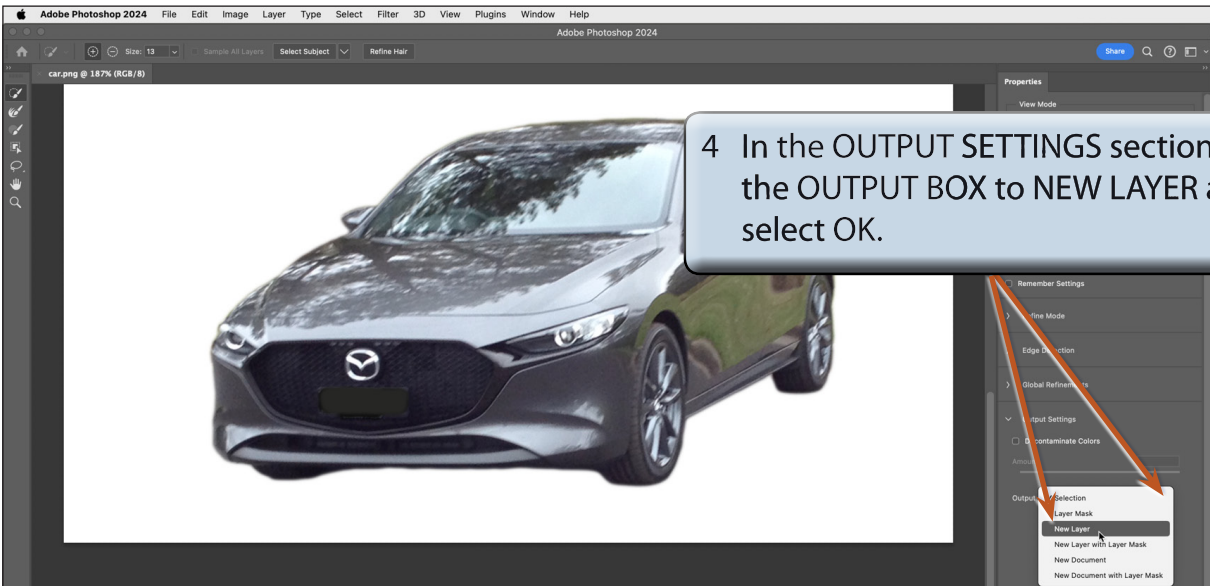
- 1 Click on the SELECT AND MASK button in the OPTIONS BAR or display the SELECT menu and select SELECT AND MASK.



3 In the GLOBAL REFINEMENT section of the PROPERTIES panel set the FEATHER to about 2.5 px, the SHIFT EDGE to about +10% and adjust the SMOOTH and CONTRAST to refine the selection further.

The screenshot shows the Adobe Photoshop 2024 interface. A car image is selected on the canvas. The 'Properties' panel on the right is open to the 'Global Refinement' section. Four orange arrows point to the 'Smooth' (set to 7), 'Feather' (set to 2.5 px), 'Contrast' (set to 20%), and 'Shift Edge' (set to +10%) sliders. The 'Output Settings' section is partially visible at the bottom of the panel.

4 In the OUTPUT SETTINGS section set the OUTPUT BOX to NEW LAYER and select OK.

The screenshot shows the same Photoshop interface. The 'Output Settings' section of the 'Properties' panel is now expanded. An orange arrow points to the 'Output' dropdown menu, which is open and showing options: 'Selection', 'Layer Mask', 'New Layer', 'New Layer with Layer Mask', 'New Document', and 'New Document with Layer Mask'. The 'New Layer' option is highlighted.

**NOTE: Setting the OUTPUT to NEW LAYER will place just the car in its own layer.**



# Sky Replacement and Neural Filters

Adobe Photoshop is gradually adding powerful intelligent filters that analyse photos and perform tasks on them that are very difficult to do manually. Some examples of these include automatically replacing skies, changing facial expressions and colourising old black and white photos.

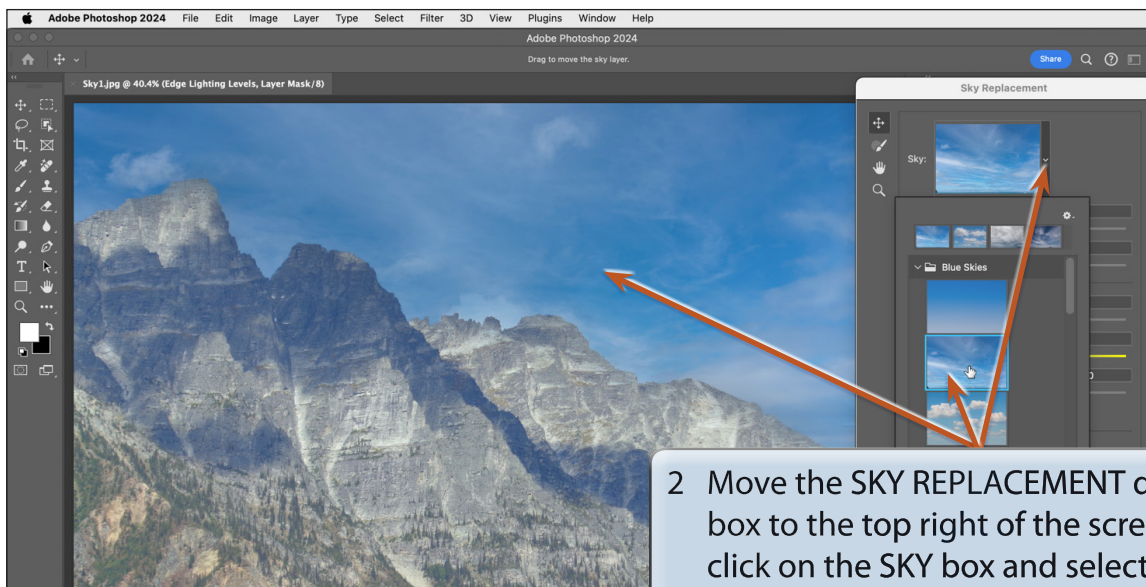
## Sky Replacement

### A Loading the Sample Photo

- 1 Load Photoshop or close the current files then click on the OPEN icon in the WELCOME screen or display the FILE menu and select OPEN.
- 2 Access the CHAPTER 22 folder of the PS SUPPORT FILES and open the SKY1 image.
- 3 Press **CTRL+0** or **COMMAND+0** to set the view to FIT ON SCREEN.

### B Replacing the Sky

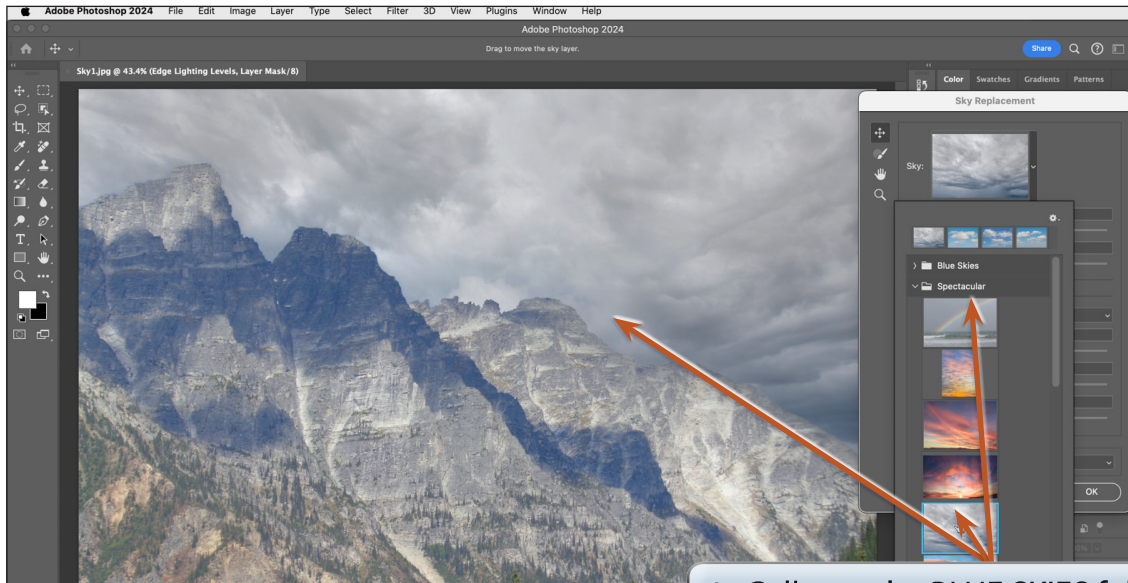
- 1 Display the EDIT menu and select SKY REPLACEMENT.



- 2 Move the SKY REPLACEMENT dialogue box to the top right of the screen then click on the SKY box and select a sky from the BLUE SKIES folder to replace the current sky.

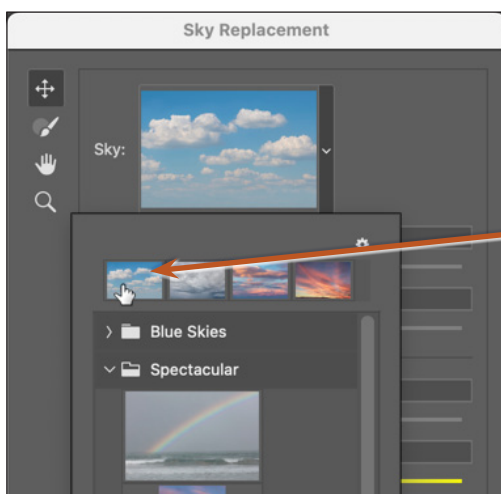
**NOTE: The first sky selection might be slow as the program analyses the photo. Any subsequent sky selections should be quicker.**

3 Try some other blue skies.



4 Collapse the BLUE SKIES folder, expand the SPECTACULAR folder and try some of those skies.

5 Try some of the other SPECTACULAR and SUNSET options.

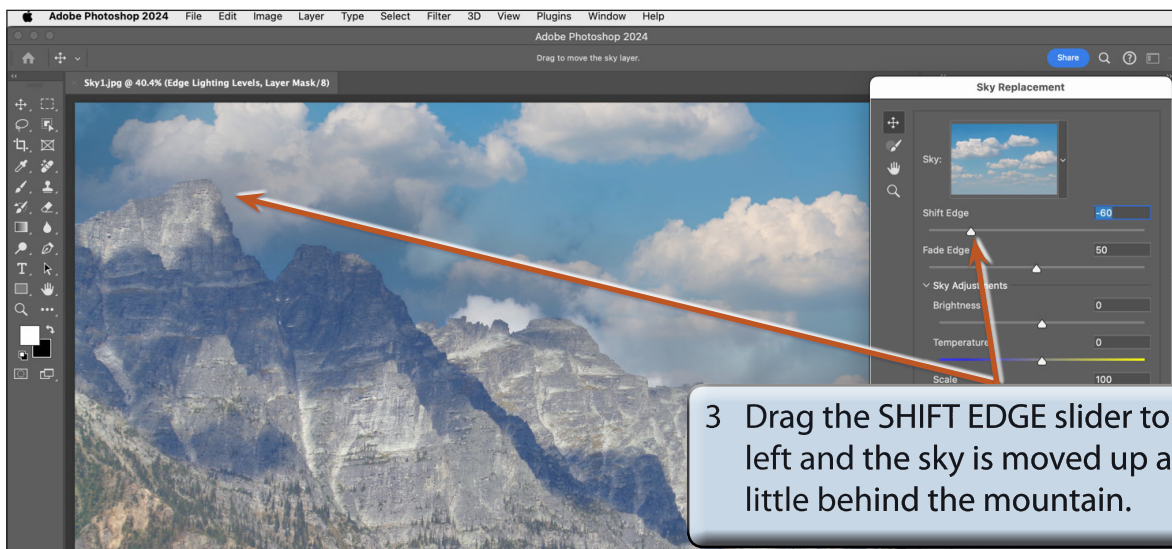
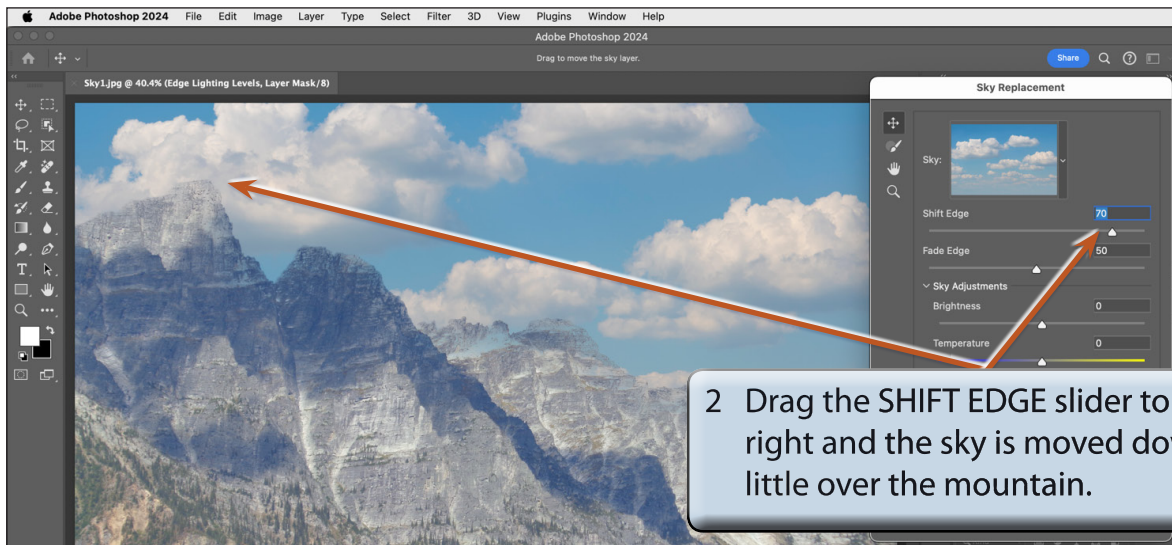


6 Select a BLUE SKY that you like. Previously selected skies are provided at the top of the skies folders.

## C Adjusting the Sky Position

You can adjust how close the sky is to its content and how it fades into that content.

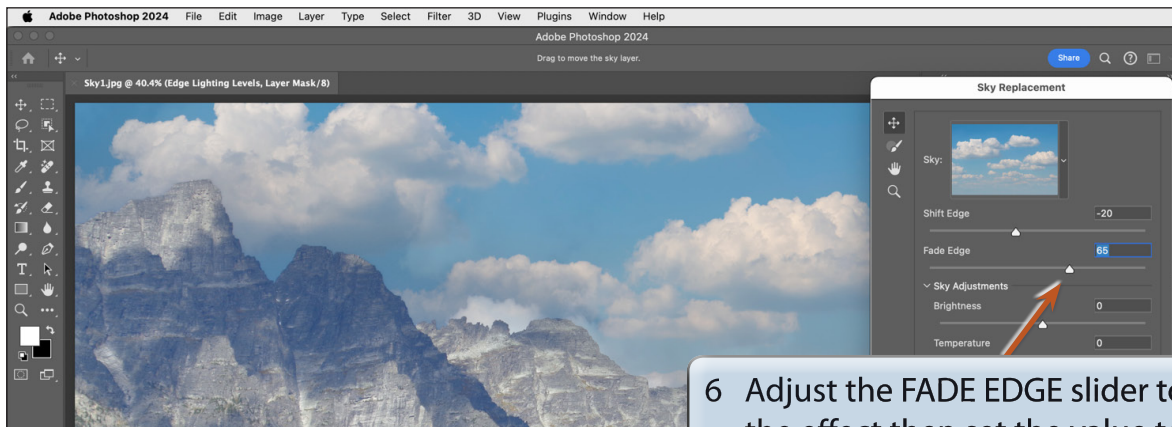
- 1 Click on the SKY box arrow to close the sky samples.



- 4 Set the SHIFT EDGE to about -20.

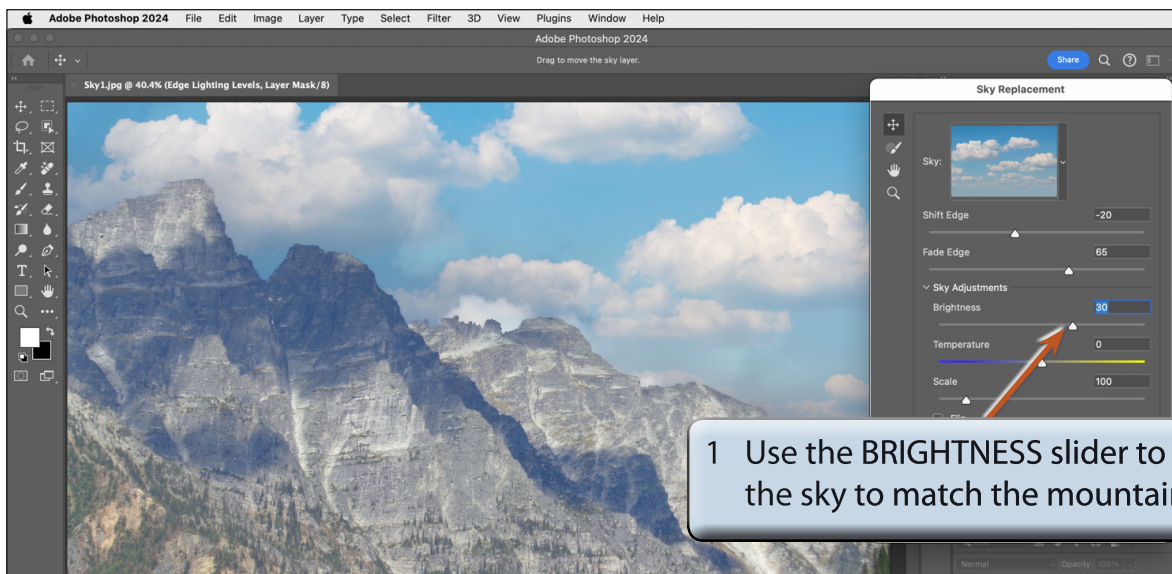


- 5 The FADE EDGE controls how sharp the transition is between the edge of the sky and the content. A low figure means a sharp transition whereas a high figure produces a more blurred transition.



## D Adjusting the Sky Properties

The brightness, temperature and scale of the sky can be adjusted.





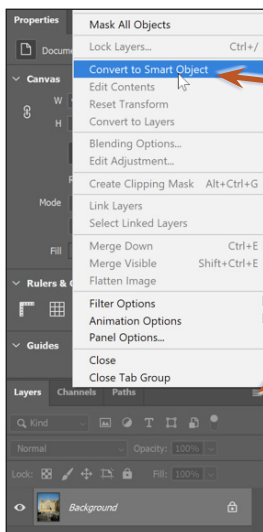
# The Camera Raw Filter

Many digital cameras provide a RAW file type that removes any compression or colour limitations from the photo. So CAMERA RAW is a minimally processed format. This allows for greater accuracy in the image and easier editing without destructing the original image.

Adobe Photoshop provides a CAMERA RAW FILTER that allows images not taken in the camera raw format to use the greater artistic control and flexibility of the RAW format. To illustrate this, a JPG image will be adjusted using the CAMERA RAW FILTER.

## Opening the Camera Raw Filter

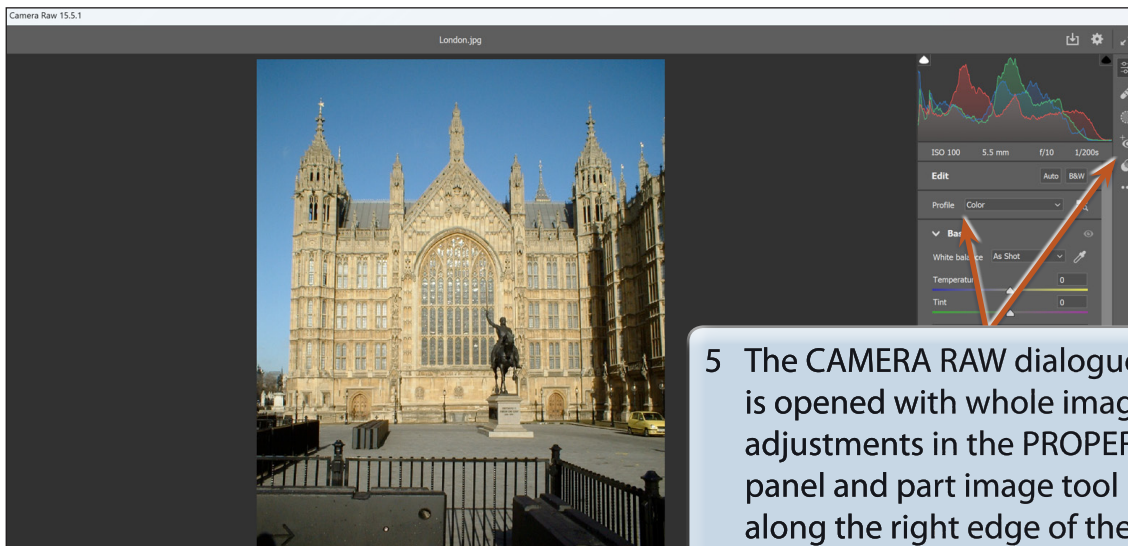
- 1 Load Photoshop or close the current files then click on the OPEN icon in the WELCOME screen or display the FILE menu and select OPEN.
- 2 Access the CHAPTER 23 folder of the PS SUPPORT FILES and open the LONDON image.



- 3 In the LAYERS panel click on its MENU icon and select CONVERT TO SMART OBJECT.

**NOTE:** Converting a layer to a SMART OBJECT means that any changes that you make to the photo will be non-destructive. You can also use the FILTER menu - CONVERT TO SMART FILTER to set the layer to a smart object.

- 4 Display the FILTER menu and select CAMERA RAW FILTER.

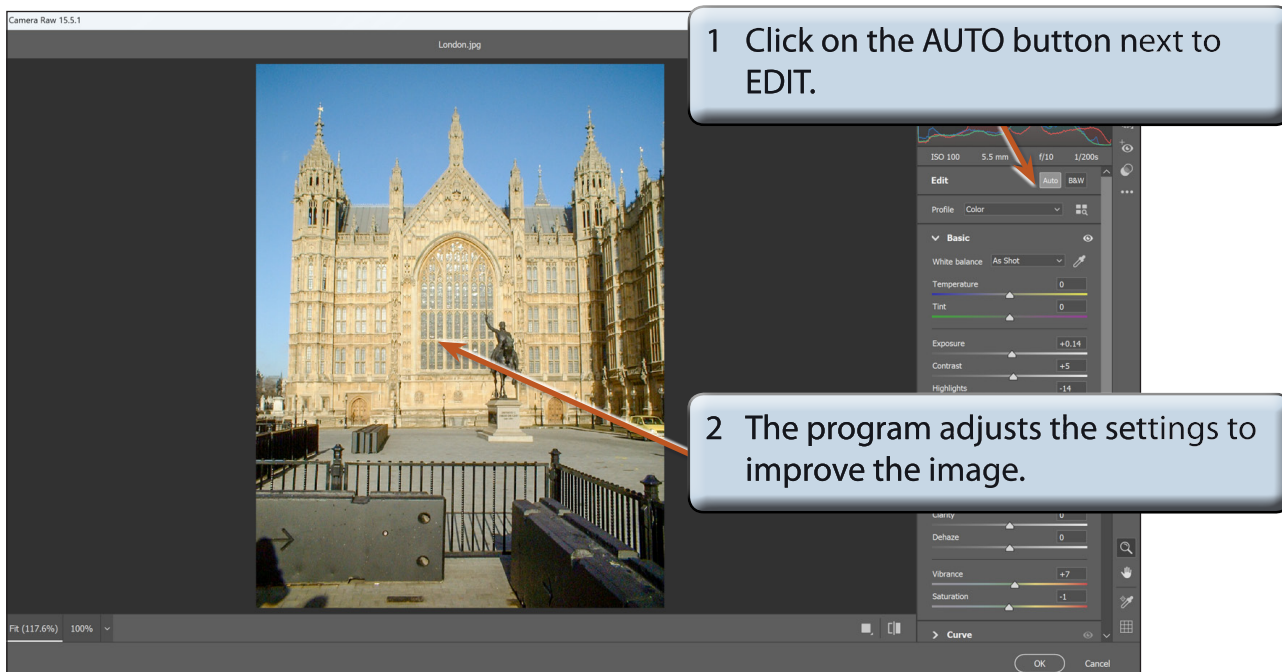


## Adjusting the Whole Image

The tools in the PROPERTIES panel can be used to adjust the whole image.

### A The Auto Adjustment

There is an AUTO setting where the program automatically adjusts the image.



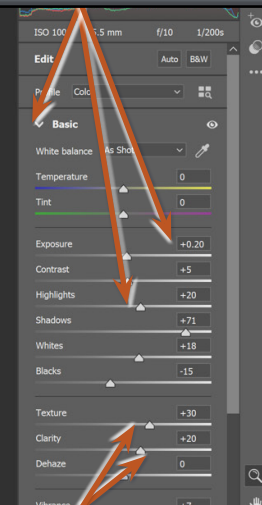
**NOTE: The AUTO button can be turned off to return to the original settings.**

## B Manual Adjustments

The AUTO setting has done a good job of adjusting the image, but often you want to add some manual adjustments.



1 In the BASIC folder try setting the EXPOSURE slider to +0.20 and the HIGHLIGHTS to +20%.

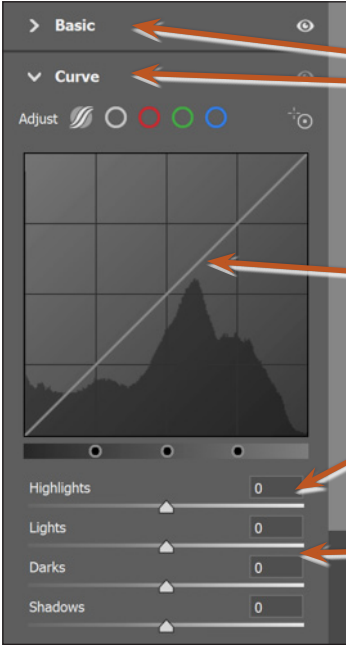


2 Set the TEXTURE to +30% and the CLARITY to +20% to see the effect they have on the photo.

3 Try some of the other adjustments and select AUTO if the changes are not satisfactory.

## C The Curve Settings

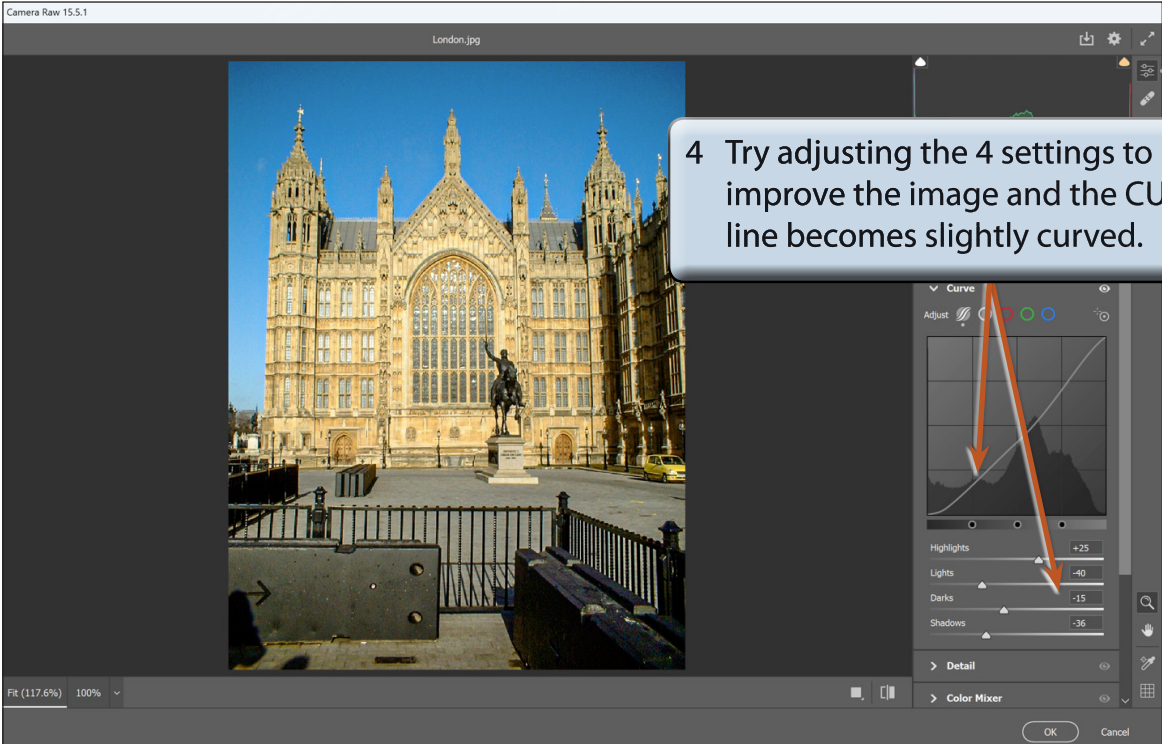
The CURVE folder can be used to fine tune the tone of the image.



1 Collapse the BASIC folder in the PROPERTIES pane and expand the CURVE folder.

2 The CURVE values should be set to 0, which sets the CURVE line to a diagonal line.

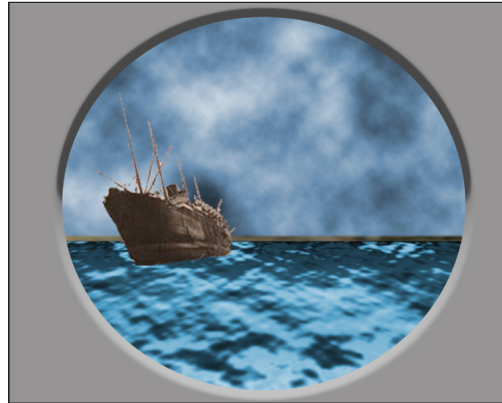
3 The HIGHLIGHTS control the lightest sections of the image, LIGHTS control the lighter sections, DARKS control the darker sections and SHADOWS control the darkest sections.



4 Try adjusting the 4 settings to improve the image and the CURVE line becomes slightly curved.

## Applying Artistic Filters

You can use the filters that Photoshop provides to create artistic sketches. To illustrate this the following sketch of a shipwreck viewed through the port hole of another ship will be created.



## Starting a New Document

- 1 Load Photoshop or close the current files and select NEW FILE from the WELCOME screen or select NEW from the FILE menu.

The screenshot shows the 'New Document' dialog box in Photoshop. The 'Art & Illustration' category is selected. The '1000 pixel grid' preset is highlighted. The 'Preset Details' panel on the right shows the following settings: Width: 1000, Height: 800, Resolution: 300, Color Mode: RGB Color, Background Contents: White, Working RGB: sRGB IEC619-66-21, Pixel Aspect Ratio: Square Pixels. The 'Create' button is visible at the bottom right.

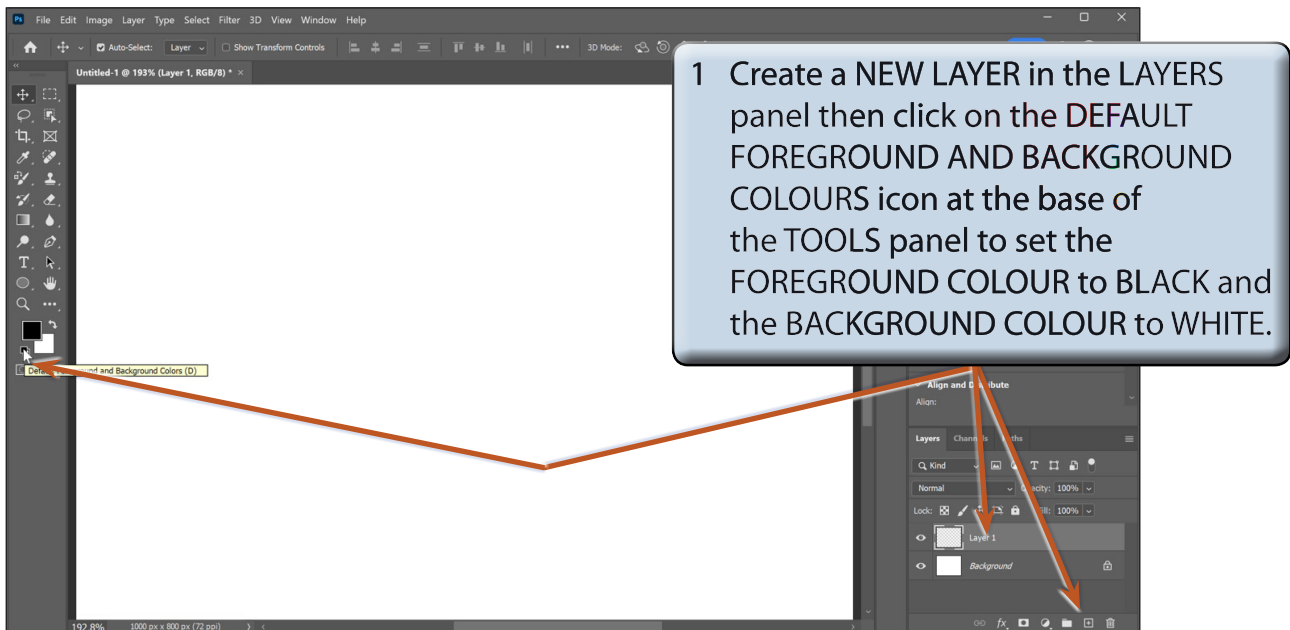
- 2 Click on ART & ILLUSTRATION category and select the first (default) PRESET.
- 3 Leave the WIDTH at 1000 pixels, set the HEIGHT to 800 pixels, the BACKGROUND CONTENTS should be WHITE and select CREATE.

- 4 Set the view to FIT ON SCREEN (**CTRL+0** or **COMMAND+0**).

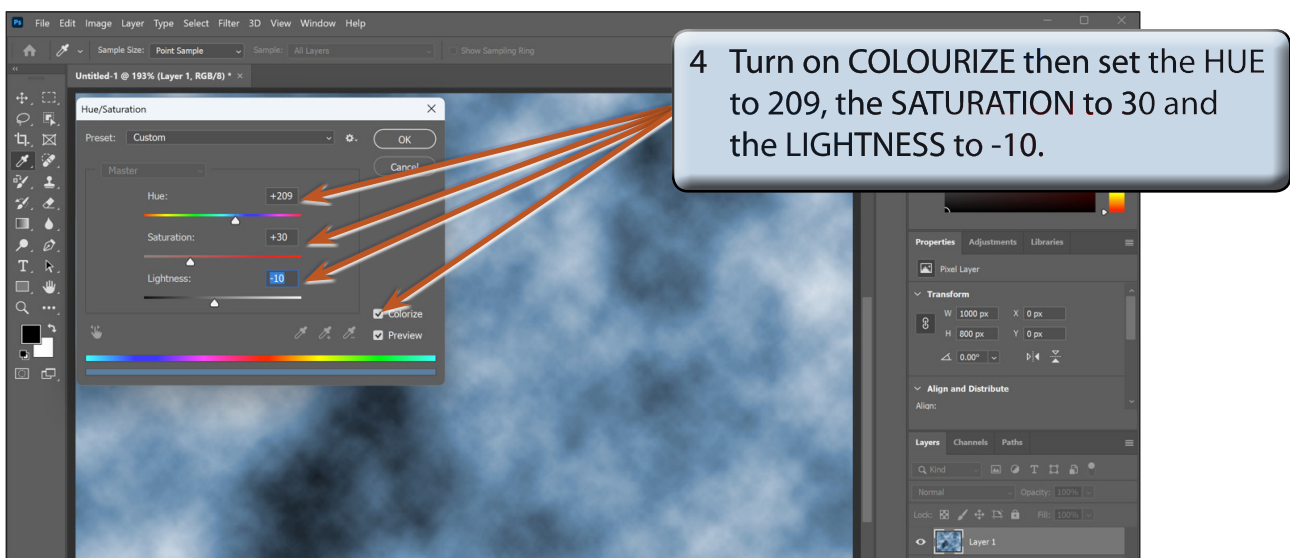


## Setting the Background

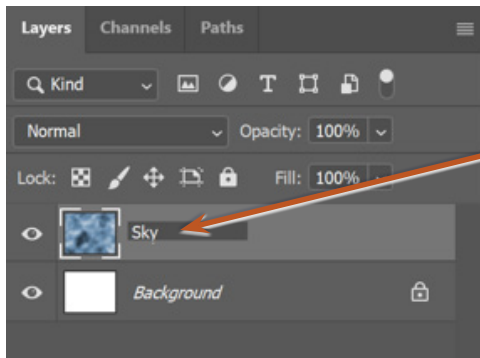
The CLOUDS filter will be used to create the sky.



- 2 Display the FILTER menu, highlight RENDER and select CLOUDS to fill the layer with black and white clouds.
- 3 The clouds can be coloured to make them look more natural. Display the IMAGE menu, highlight ADJUSTMENTS and select HUE/SATURATION.



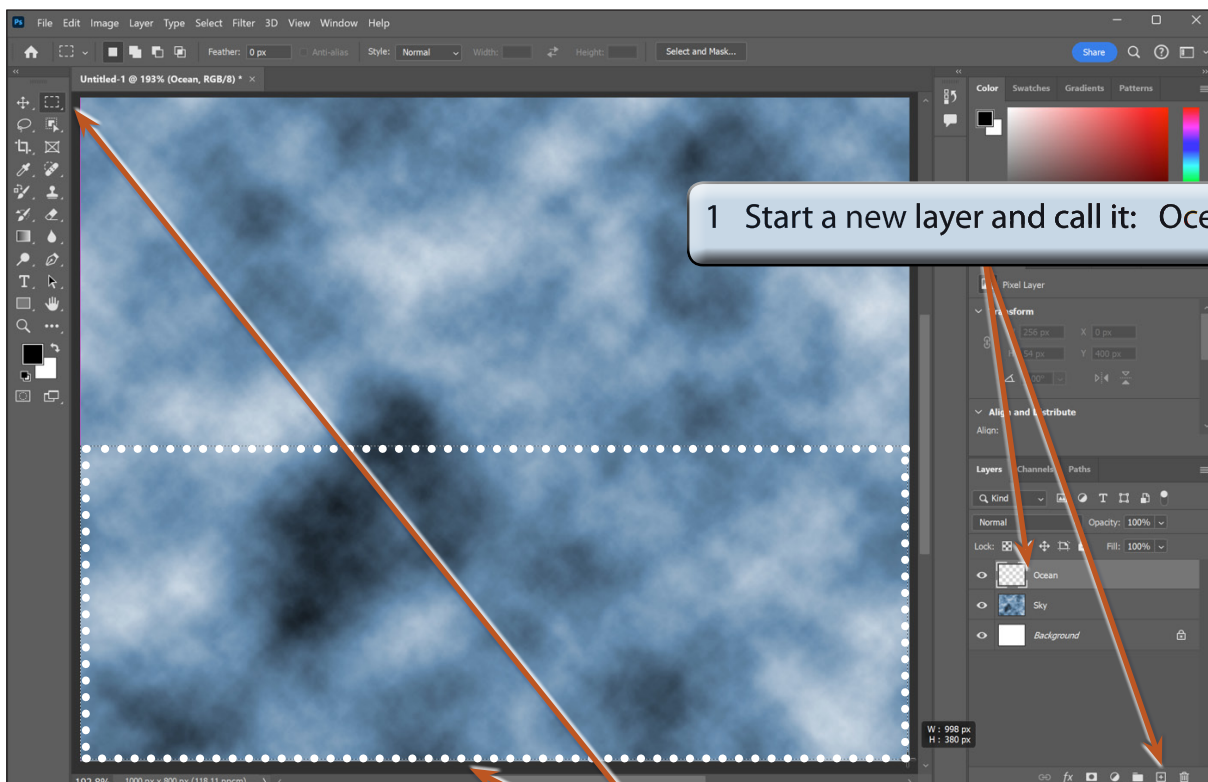
- 5 Select OK to colourise the clouds.



- 6 Rename the layer: Sky

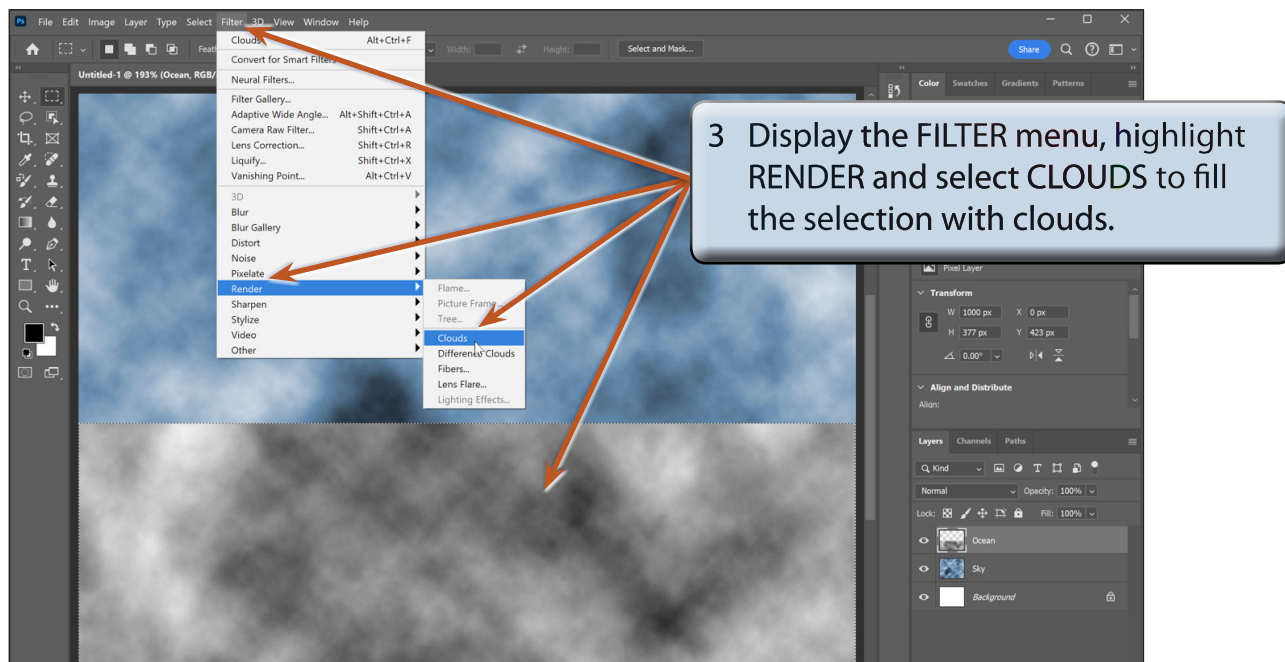
## Creating the Ocean

The ocean can be created by combining the CLOUDS and BAS RELIEF filters.

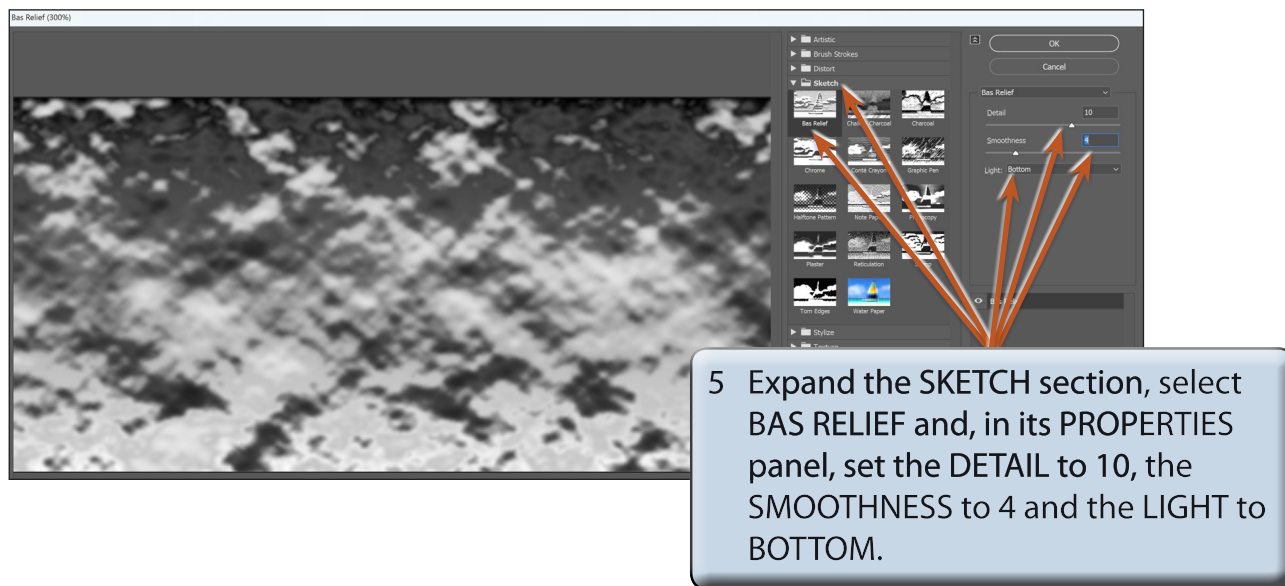


- 1 Start a new layer and call it: Ocean

- 2 Select the RECTANGULAR MARQUEE TOOL and drag a frame around the lower half of the sky.



4 Display the FILTER menu again and select FILTER GALLERY.



6 Select OK to set the filter.

7 The colour of the ocean needs to be adjusted. Display the IMAGE menu, highlight ADJUSTMENTS and select HUE/SATURATION.

# Working With Perspective

Photos are 2-dimensional images usually of 3-dimensional objects or scenes. When a photo is taken with a camera there is often some perspective errors due to horizontal or vertical camera tilt. Photoshop provides a range of tools that try to repair these errors whilst retaining the perspective of the image.

## Straightening an Image

When you simply want to straighten an image, the RULER TOOL can be used. The RULER TOOL measures the angle of tilt in a photo.

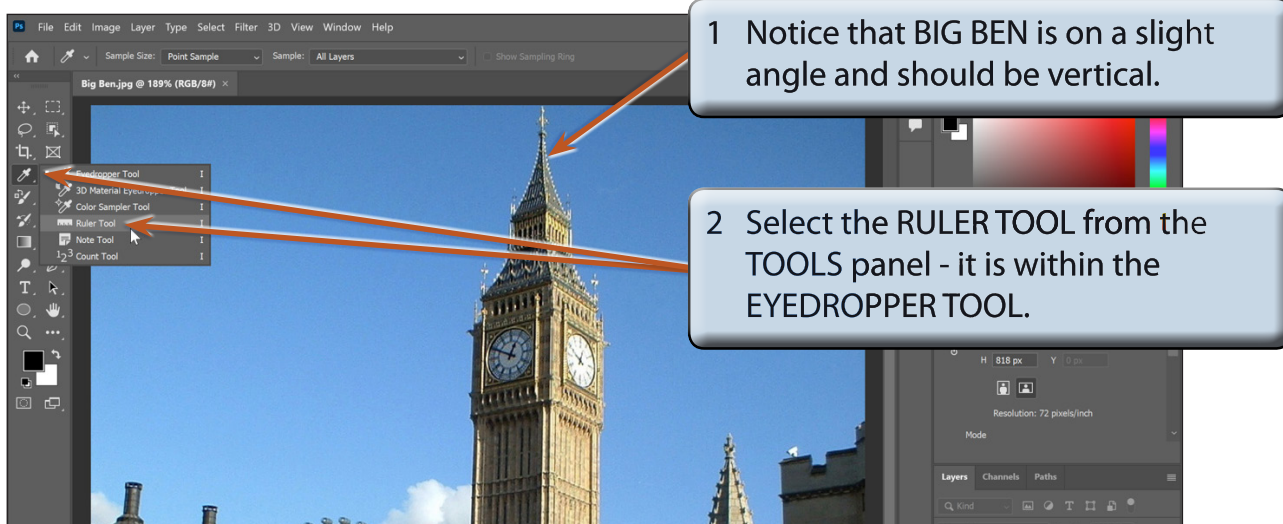
### A Loading the Sample Photo

- 1 Load Photoshop or close the current file and select OPEN from the WELCOME screen or FILE menu.
- 2 Access the PS SUPPORT FILES, open the CHAPTER 25 folder and open the file:

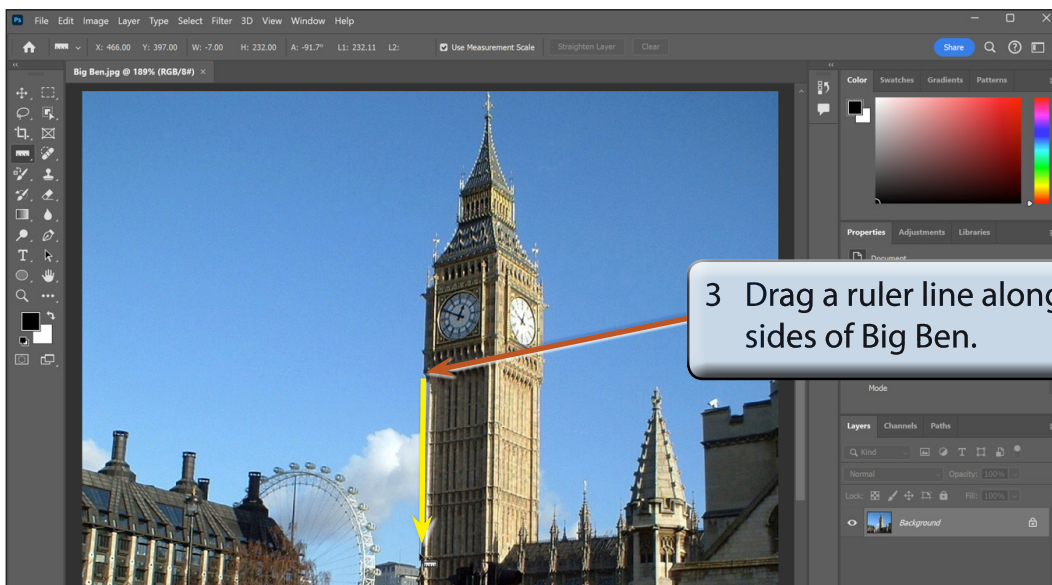
Big Ben

- 3 Press **CTRL+0** or **COMMAND+0** to set the view to FIT ON SCREEN.

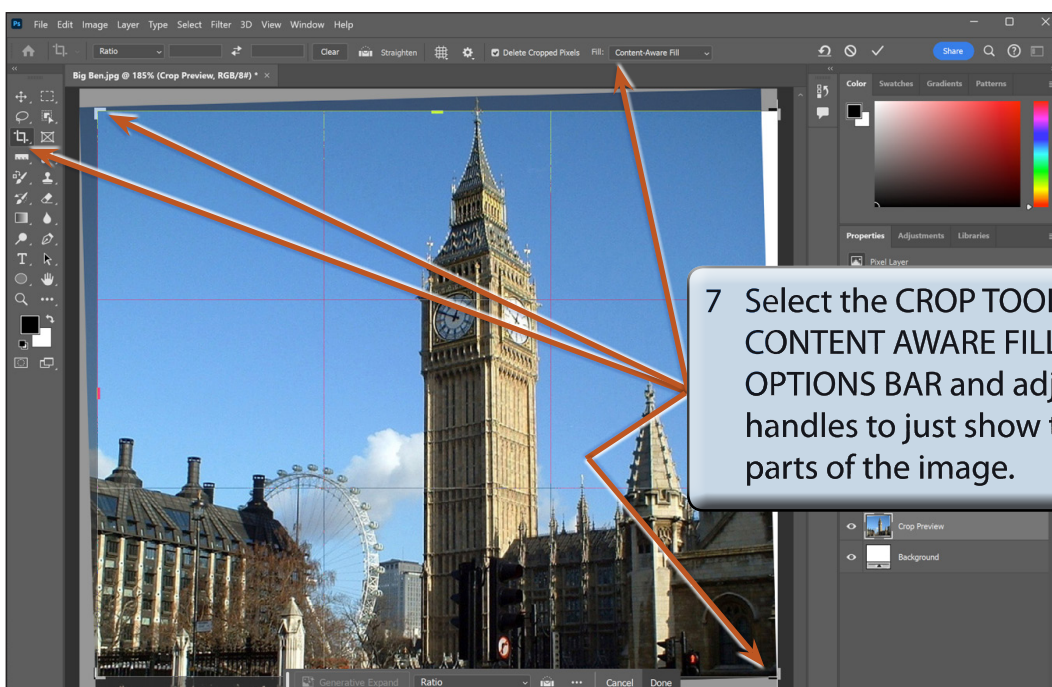
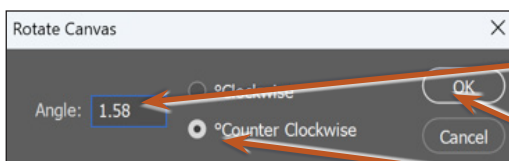
### B Applying the Ruler Tool







4 Display the IMAGE menu, highlight IMAGE ROTATION and select ARBITRARY.



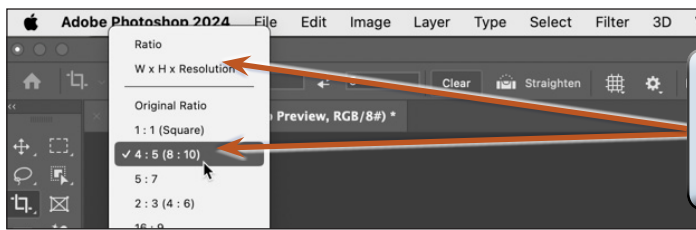


**NOTE:** You can use the handles to adjust the crop frame so that just specific parts of the image are selected.

- 8 Double click inside the crop frame to complete the crop, then select the MOVE TOOL to turn the crop 'handles' off.

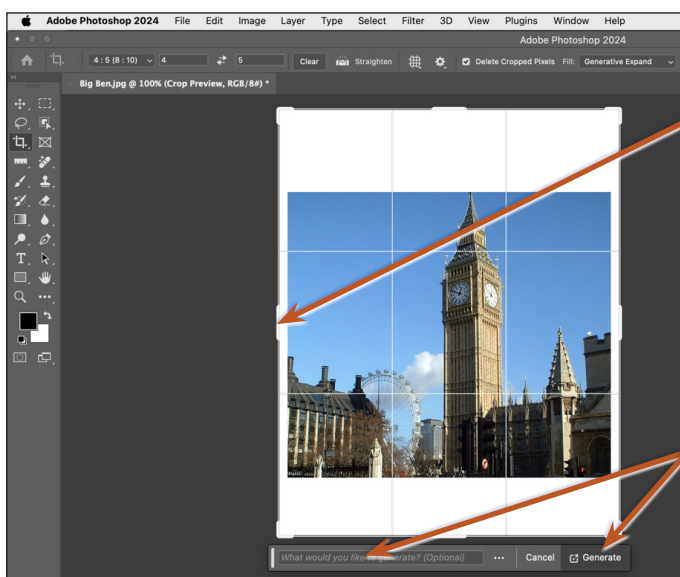
## C Generative Expand

Sometimes when you crop an image, a significant part of that image may be removed. The GENERATIVE EXPAND option fills areas around an image with content. It works in a similar way to GENERATIVE FILL.



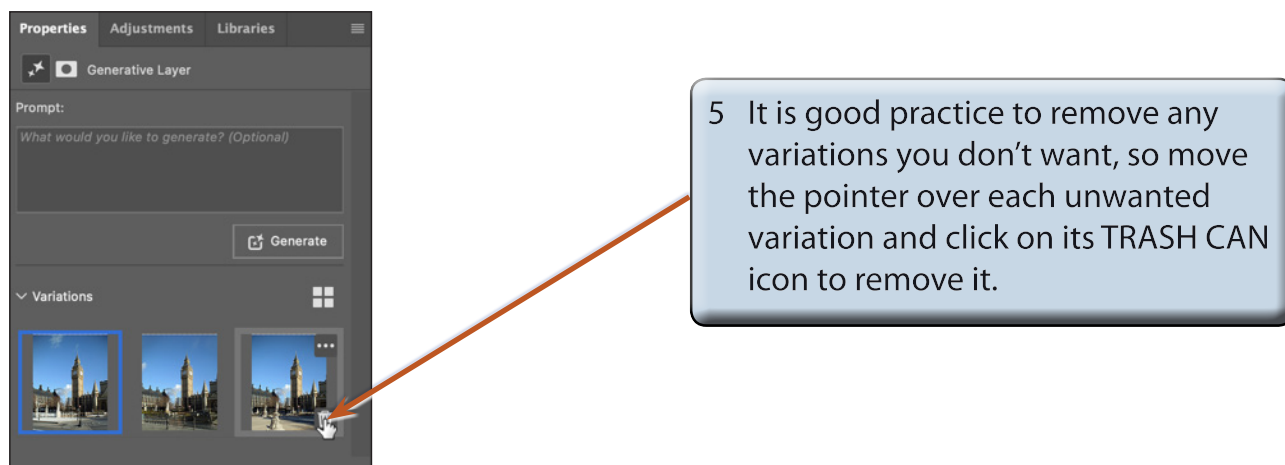
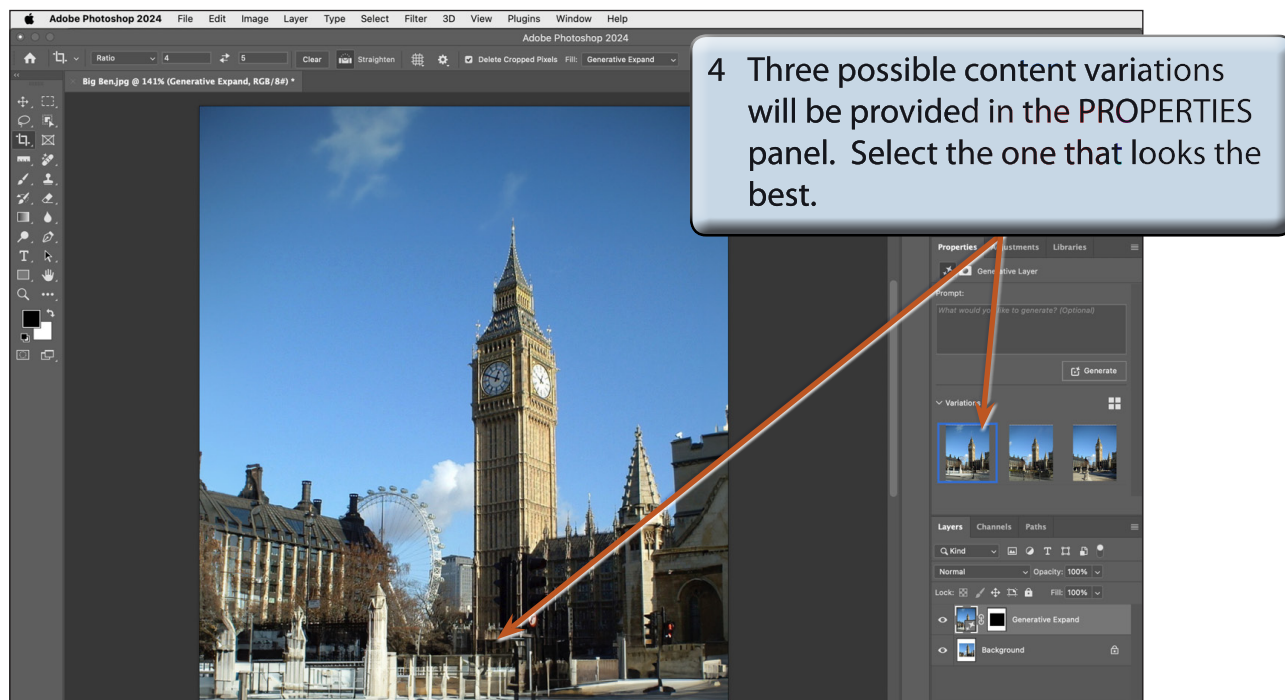
- 1 Select the CROP TOOL and, in the OPTIONS BAR, select the 4:5 from the RATIO box.

**NOTE:** This will set the crop frame so that when it is expanded it will be restricted to a ratio of 4 units across for every 5 units down.



- 2 Reduce the view so that you can see the whole image and some of the canvas area then drag a crop handle to set the frame to be outside the image.

- 3 In the CONTEXTUAL TASK BAR click in the GENERATIVE EXPAND box, leave it blank and click on GENERATE.



**NOTE: As with GENERATIVE FILL, you can click in the GENERATIVE EXPAND box and suggest fill content if the program does not provide suitable content with the GENERATIVE EXPAND box left blank.**

- 6 Select the MOVE TOOL to turn off the crop 'handles' and save the image in your STORAGE folder if you wish to.

## Face-Aware Liquify Filter

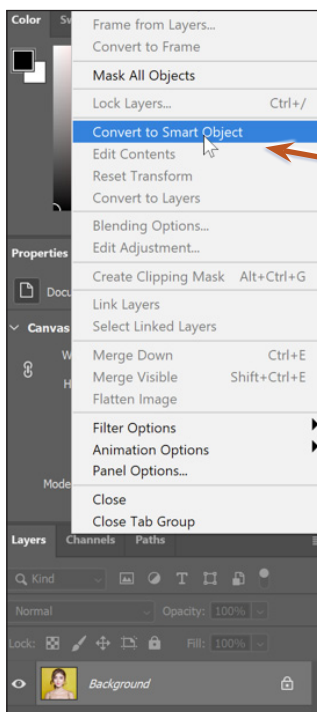
You used the LIQUIFY filter in an earlier chapter to distort and manipulate images. The LIQUIFY filter also has a face aware tool that can be used to adjust facial features. It is similar to the Facial Expressions Neural Filter, but it allows you to alter facial features in a more subtle way.

### Opening a Face Image

A photo of a face from Pixabay (pexels.com) has been prepared for you.

- 1 Load Photoshop or close the current file and select OPEN from the WELCOME screen or FILE menu.
- 2 Access the PS SUPPORT FILES, open the CHAPTER 26 folder and open the file:  

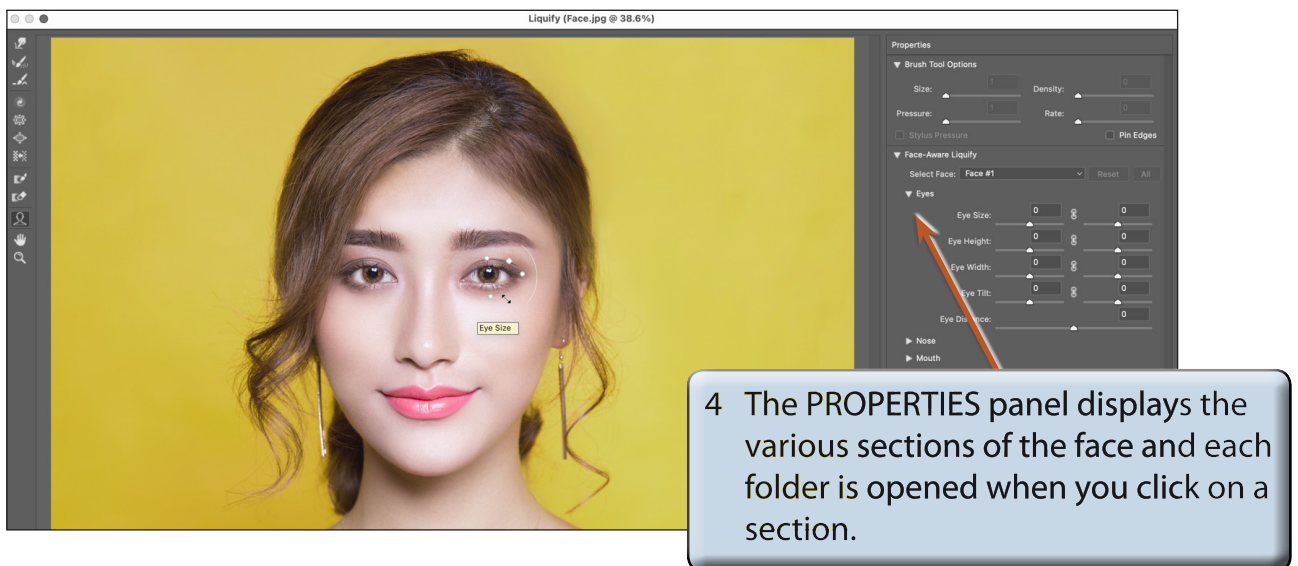
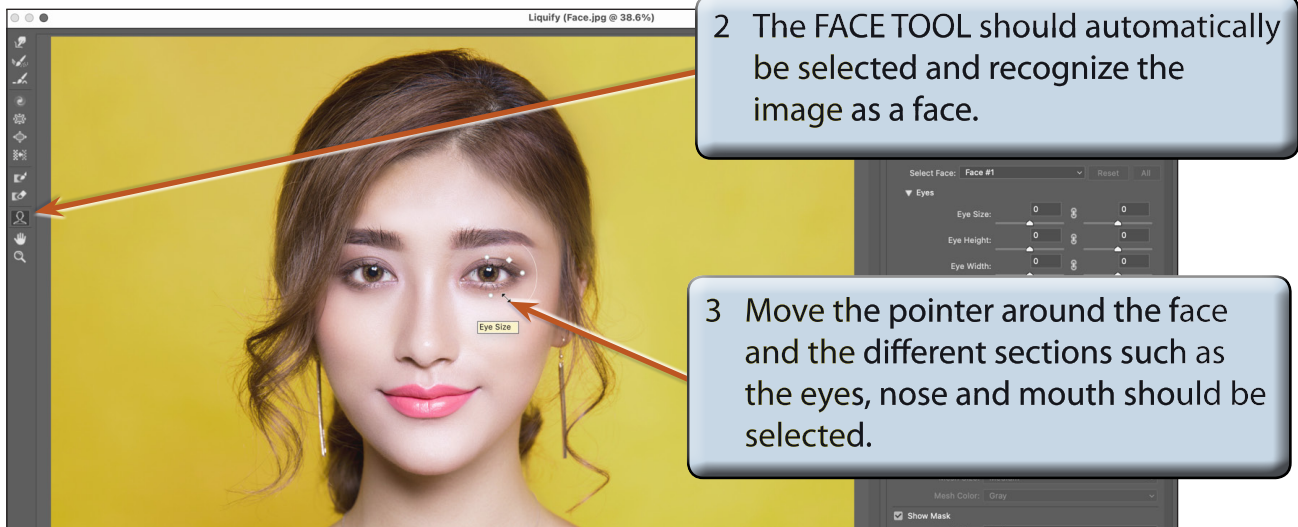
Face
- 3 Press **CTRL+0** or **COMMAND+0** to set the view to FIT ON SCREEN.



- 4 Click on the LAYERS MENU icon and select CONVERT TO SMART OBJECT so the filter changes can be edited at any time.

## Opening the Liquify Filter

- 1 Display the FILTER menu select LIQUIFY.



- NOTE:**
- i You can use the handles to adjust a section of the face or you can move the sliders in the PROPERTIES panel.
  - ii Best results are achieved with this filter if small adjustments are made.

# Using Artboards and Frames

Artboards allow you to have different versions of a design in the one document. For example, you can create one design for viewing on a desktop computer, another for a tablet and a third for a mobile phone all in the one document. This saves the need to have several individual files. It also allows you to experiment with different versions of a design side-by-side in the one document.

Frames allow partitions to be created within the one document and content to be placed within those partitions. You could then create Artboards of that document to create different versions of it.

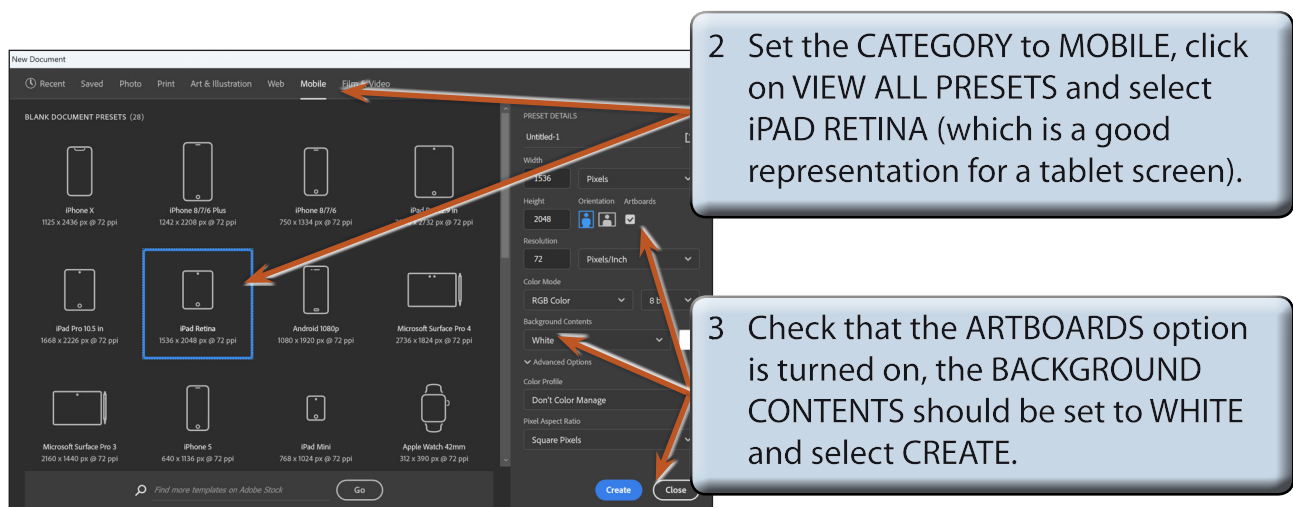
To illustrate the use of Artboards and Frames, advertisements for a hair salon will be created for viewing on different sized screens.

## Creating an Artboard File

When Artboards are going to be used you need to indicate this when the file is started. Photoshop provides a range of standard canvas sizes based on the current devices available. In this case, Artboards will be created for tablets and mobile phones.

### A Setting the Artboard Size

- 1 Load Photoshop or close the current files and select NEW FILE from the WELCOME screen or select NEW from the FILE menu.

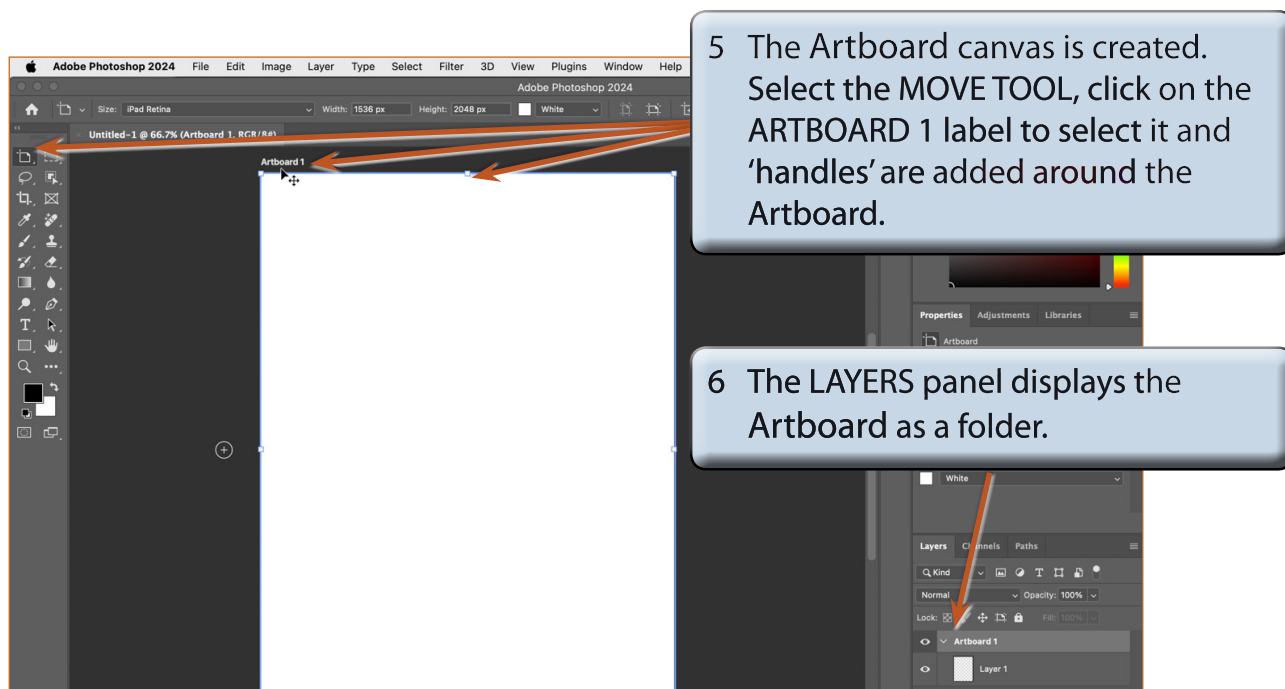


The screenshot shows the 'New Document' dialog box in Photoshop. The 'Mobile' category is selected, and the 'iPad Retina' preset is highlighted with a blue box. The 'Preset Details' panel on the right shows the dimensions (1536 x 2048 pixels) and resolution (72 ppi) for the selected preset. The 'Background Contents' dropdown is set to 'White', and the 'Artboards' checkbox is checked. Arrows point from the annotations to these specific settings.

- 2 Set the CATEGORY to MOBILE, click on VIEW ALL PRESETS and select iPad RETINA (which is a good representation for a tablet screen).
- 3 Check that the ARTBOARDS option is turned on, the BACKGROUND CONTENTS should be set to WHITE and select CREATE.

- 4 Check that the screen is set to the ESSENTIALS workspace.

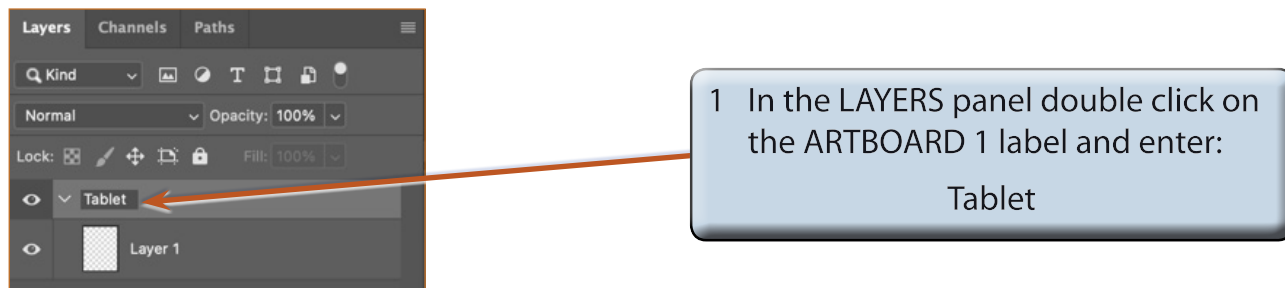




- NOTE:**
- i The Layers for each Artboard are displayed within each ARTBOARD folder in the LAYERS panel.
  - ii The + symbols around the Artboard canvas are used to create new a Artboard or to duplicate a current Artboard.

## B Renaming the Artboard

Artboards are given default names, Artboard 1, Artboard 2, etc, but it is usually better to rename them so that you know what each contains.



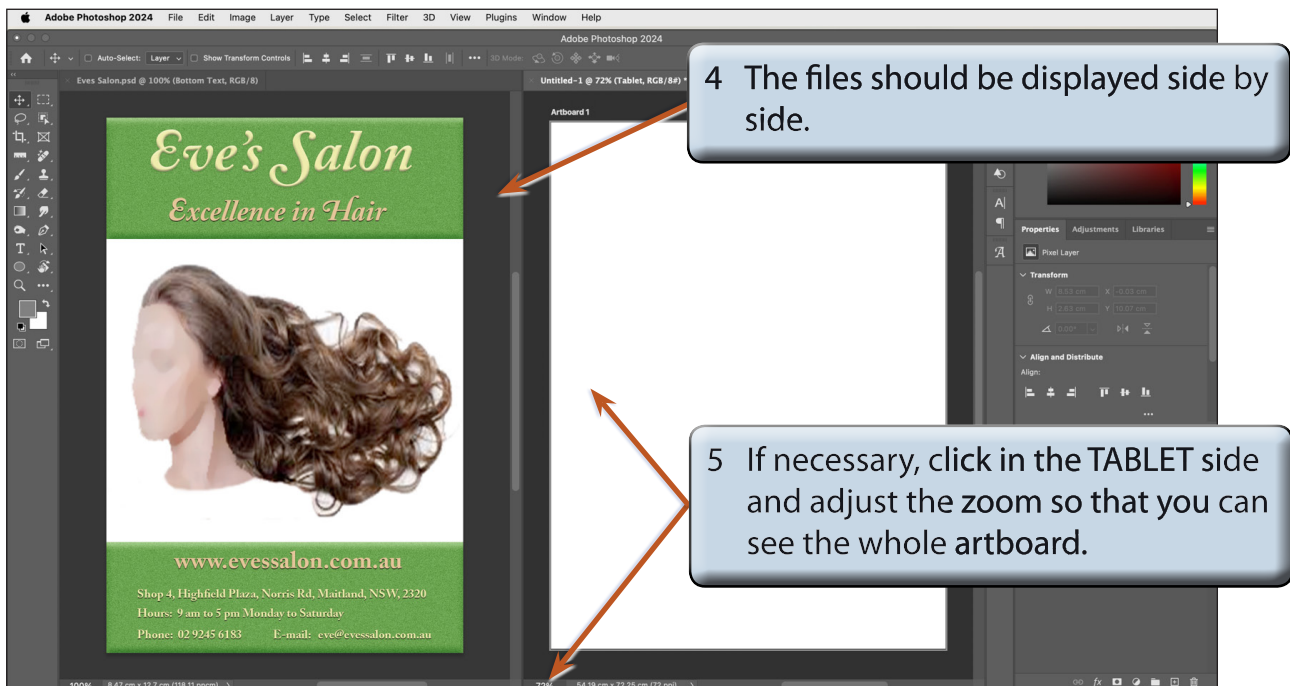
- 2 Press <enter> or <return> to set the label.

## Adding Content to Artboards

Content can be added to Artboards in the same way that you add content to any Photoshop canvas, but to save time, a sample advert has been prepared for you. Its content will be added to the first Artboard before the other Artboards are created.

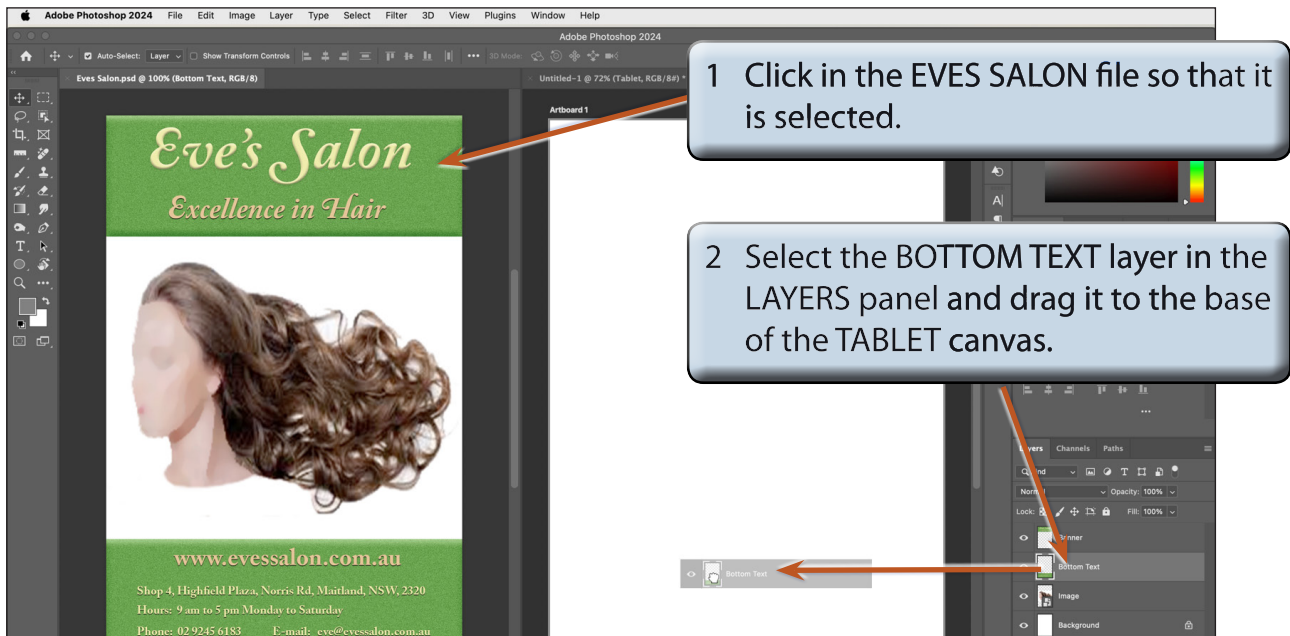
### A Opening the Sample File

- 1 Display the FILE menu and select OPEN.
- 2 Access the PS SUPPORT FILES, open the CHAPTER 27 folder and open the file:  
Eves Salon
- 3 Display the WINDOW menu, highlight ARRANGE and select 2-UP VERTICAL.

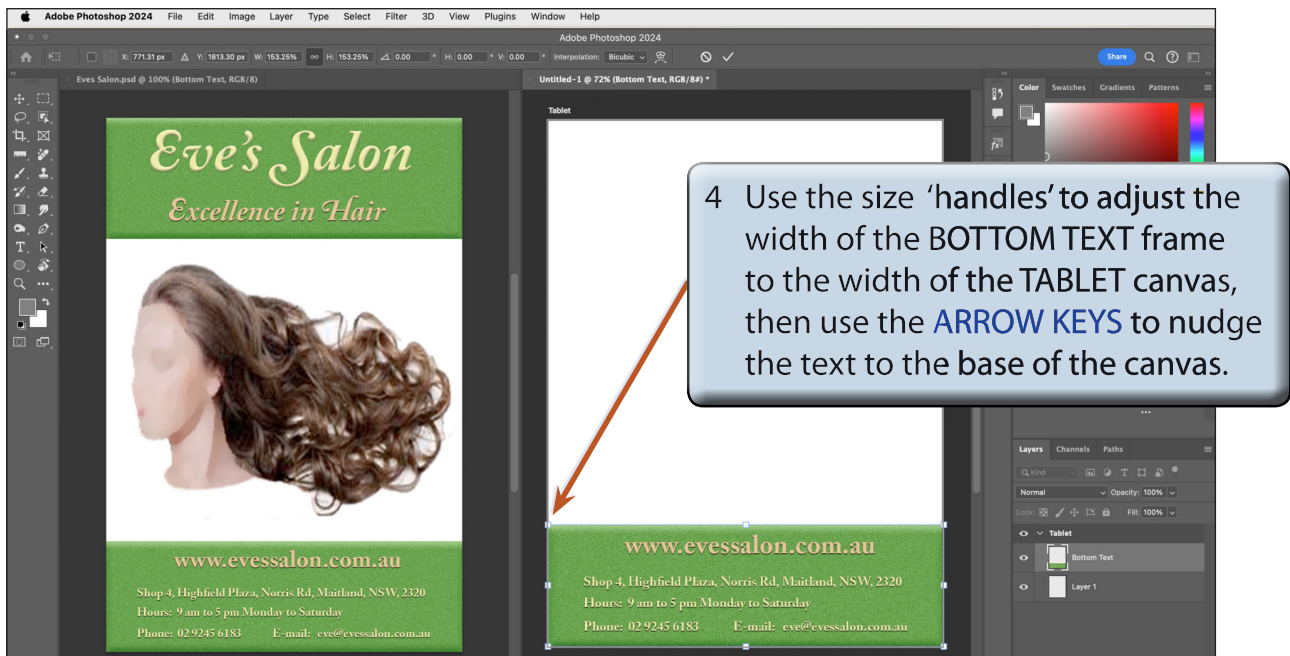


**NOTE:** There are three layers in the EVES SALON file that will be placed in the TABLET Artboard: a BANNER, some BOTTOM TEXT and an IMAGE.

## B Inserting the Content into the Artboard



- 3 Press **CTRL+T** or **COMMAND+T** to display the FREE TRANSFORM frame around the BOTTOM TEXT frame.



- 5 Press **<enter>** or **<return>** to complete the transformation.

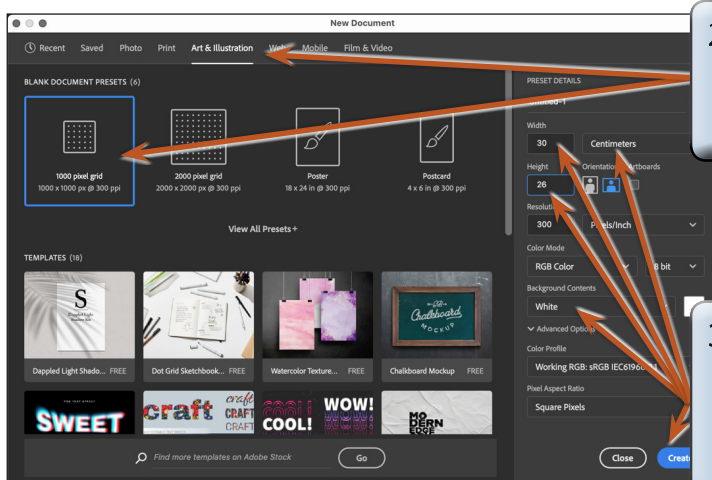
## Creating Accurate Shapes

Photoshop provides the tools to create accurate shapes. Let's say that you have been contracted by a software producer, ArtSoft, to produce an image of the box for their recently released graphics program, Splosh Strokes, so that it can be placed on their web site. The following image will be produced:



## Starting a New Document

- 1 Load Photoshop or close the current files and select NEW FILE from the WELCOME screen or select NEW from the FILE menu.



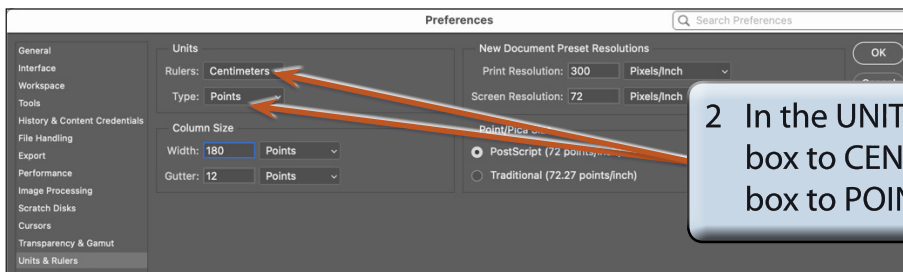
- 2 Set the CATEGORY to ART & ILLUSTRATION and select the first preset.

- 3 Set the UNITS to CENTIMETRES, the WIDTH to 30 the HEIGHT to 26, the BACKGROUND CONTENTS to WHITE and select CREATE.

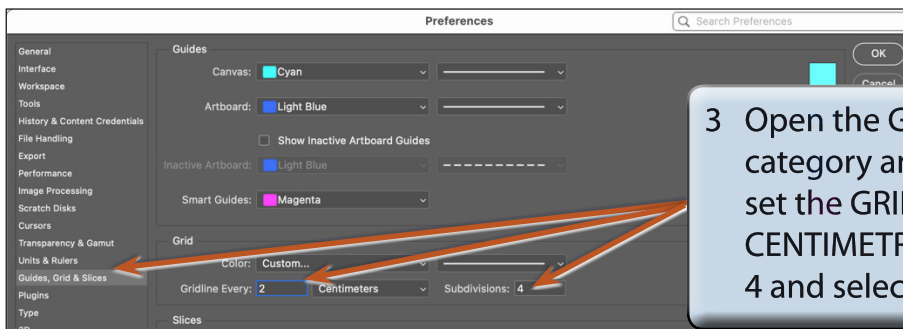
## Setting the Ruler and Grid Units

You will be using RULERS and a GRID to accurately create the box, so the settings need to be checked.

- 1 On the Windows system display the EDIT menu, highlight PREFERENCES and select UNITS & RULERS. On the Macintosh system display the PHOTOSHOP menu, highlight SETTINGS and select UNITS & RULERS.



- 2 In the UNITS frame set the RULERS box to CENTIMETRES and the TYPE box to POINTS.



- 3 Open the GUIDES, GRID & SLICES category and, in the GRID frame, set the GRIDLINE EVERY box to 2 CENTIMETRES, the SUBDIVISIONS to 4 and select OK.

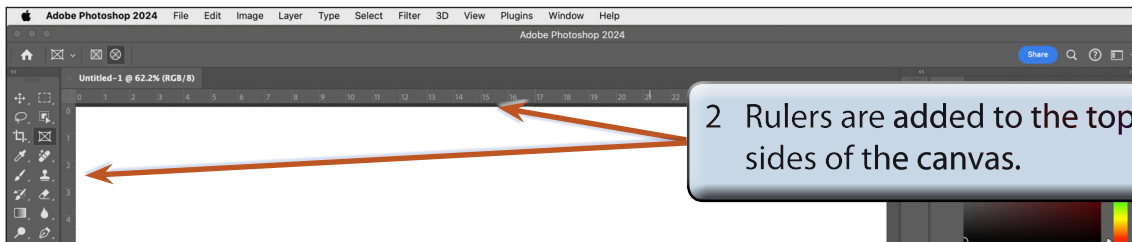
**NOTE:** You can also use the GUIDES, GRID & SLICES section to set the colour of the grid and guide lines.

- 4 Set the screen view to FIT ON SCREEN.



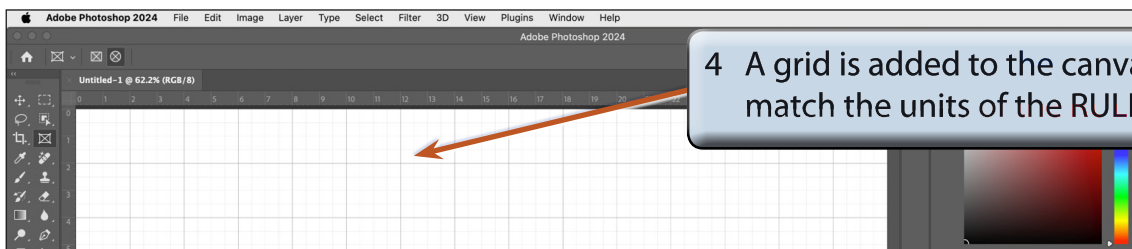
## Turning on the Rulers and Grid

- 1 Display the VIEW menu and select RULERS.



- 2 Rulers are added to the top and left sides of the canvas.

- 3 Display the VIEW menu again, highlight SHOW and select GRID.

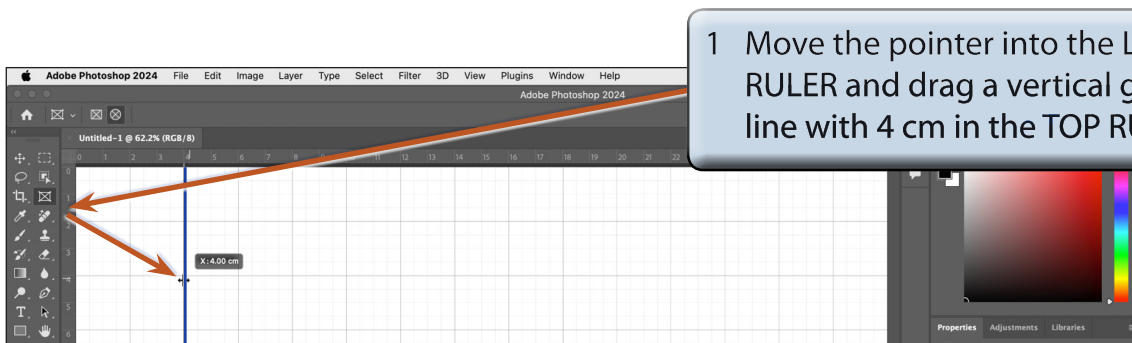


- 4 A grid is added to the canvas to match the units of the RULERS.

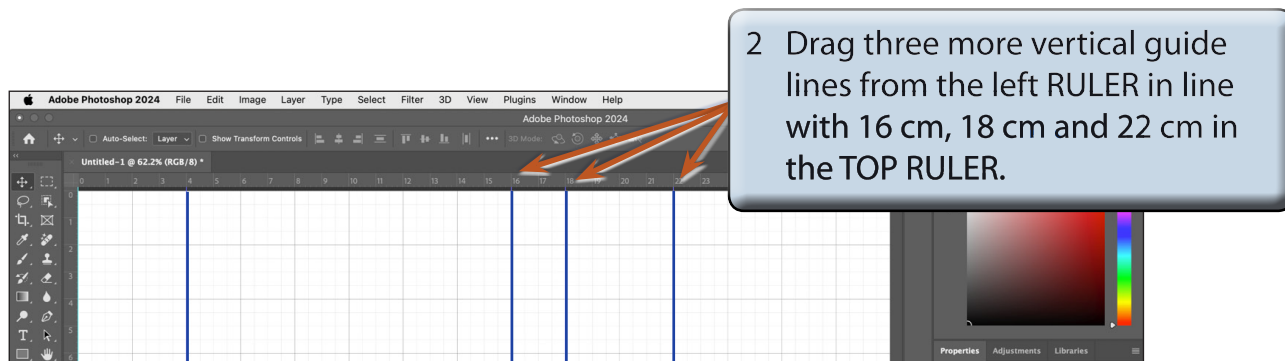
**NOTE: You can RIGHT+CLICK or CONTROL+CLICK on the RULERS to quickly change their units**

## Setting Guide Lines

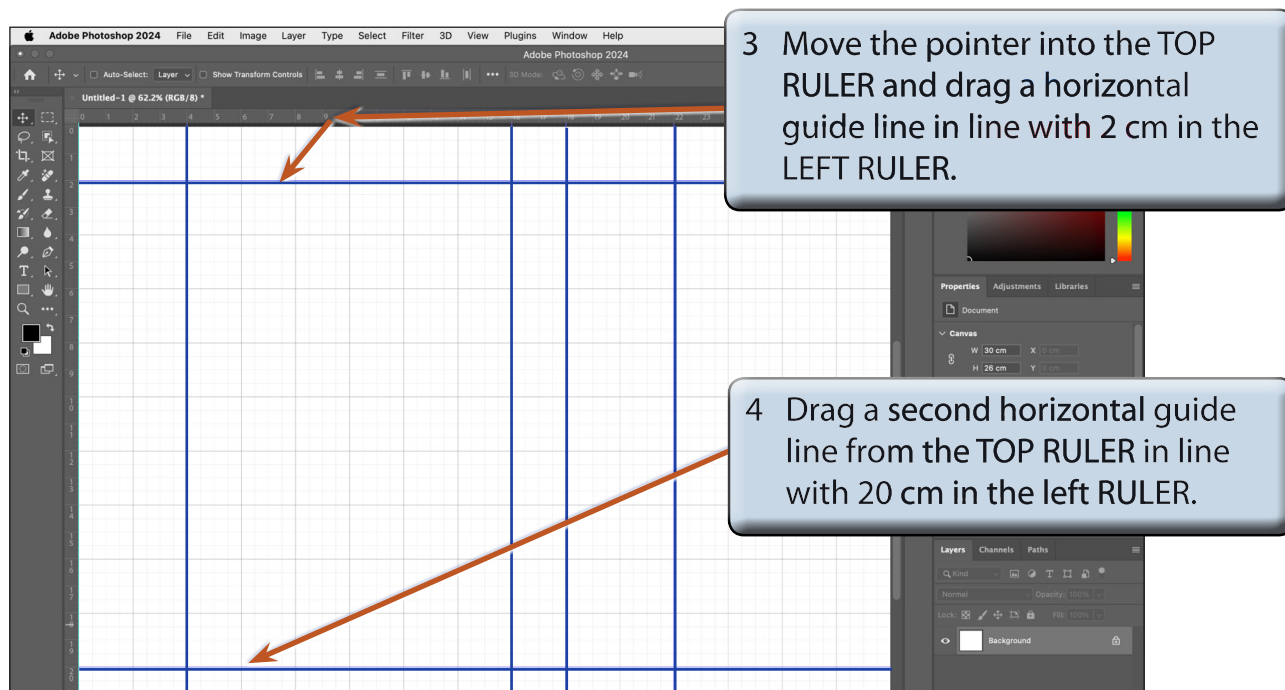
You can add guide lines to the canvas to help you layout a sketch. In this case guide lines will be needed for the front and side of the box.



- 1 Move the pointer into the LEFT RULER and drag a vertical guide in line with 4 cm in the TOP RULER.



**NOTE:** You can move guide lines to new positions by selecting the **MOVE TOOL**, moving the pointer over the guide line until it changes to parallel lines with arrows and dragging the guide line to a new position. Dragging a guide line back to its **RULER** removes the guide line from the screen.

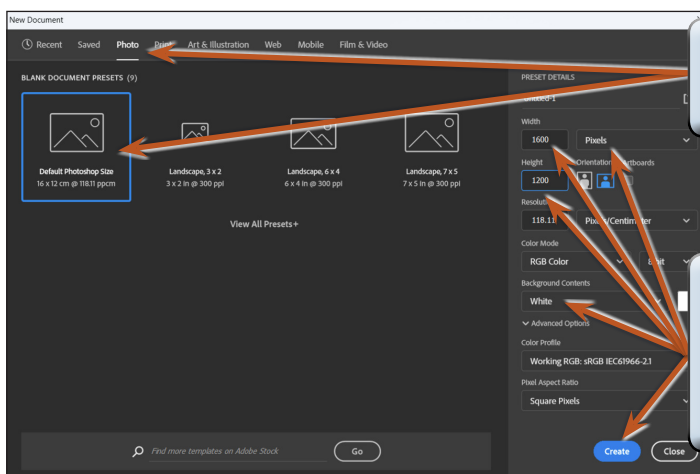


# The Curvature Pen Tool

The CURVATURE PEN TOOL is basically a simplified PEN TOOL for those people who find the PEN TOOL difficult or annoying. The use of the PEN TOOL will be covered in Module 3. The CURVATURE PEN TOOL is not quite as powerful as the PEN TOOL, but it does allow you to create detailed drawings or accurate selections.

## Starting a New Document

- 1 Load Photoshop or close the current files and select NEW FILE from the WELCOME screen or select NEW from the FILE menu.



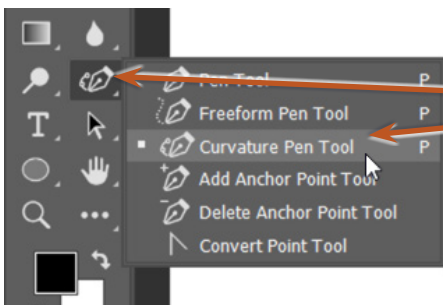
- 2 Set the CATEGORY to PHOTO and select the first preset.

- 3 Set the WIDTH to 1600 px, the HEIGHT to 1200 px, the BACKGROUND CONTENTS to WHITE and select CREATE.

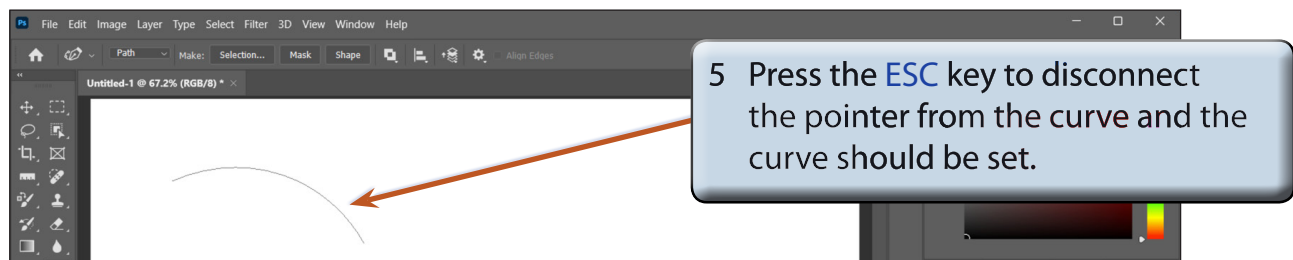
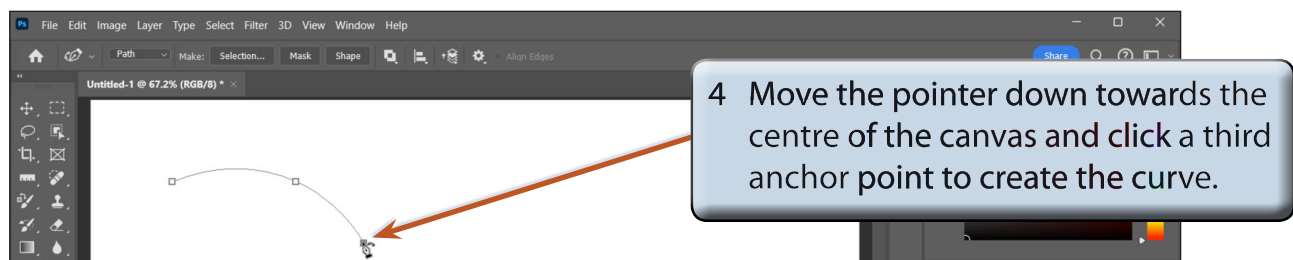
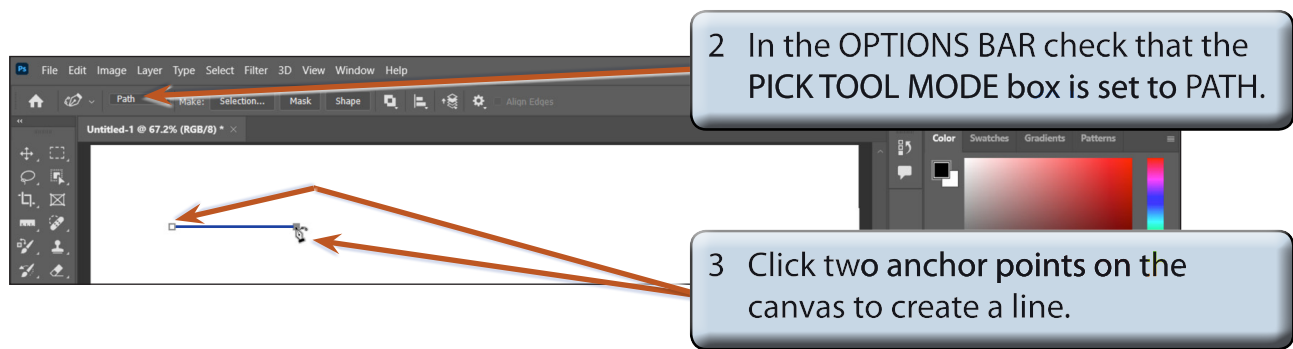
- 4 Set the view to FIT ON SCREEN.

## Drawing Simple Curves

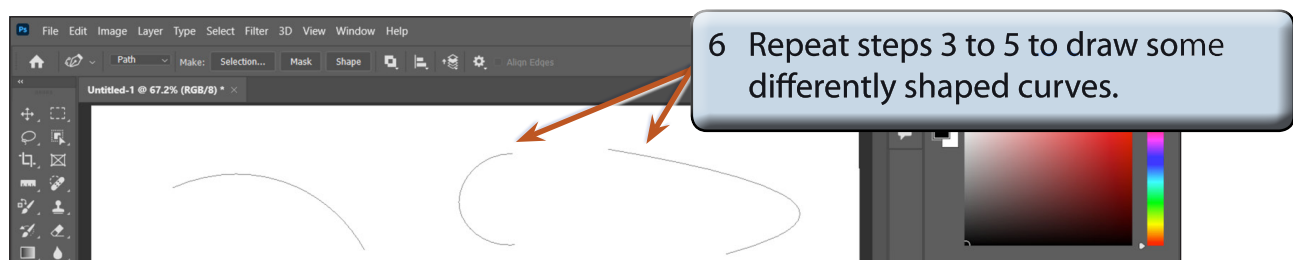
As the name suggests the CURVATURE PEN TOOL is used to create curves, but it can also be used to create straight paths. You click 3 anchor points to create the curve.



- 1 Select the CURVATURE PEN TOOL from the TOOLS panel. It is within the PEN TOOL.



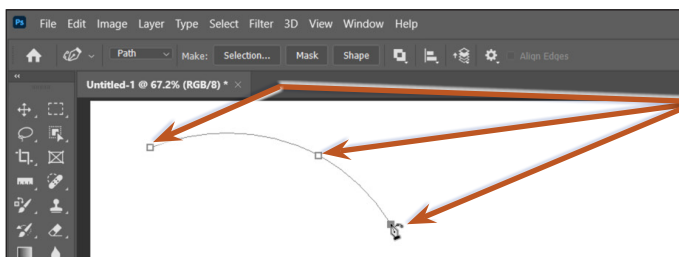
**NOTE:** You click the second anchor point part of the way along where you want the curve to finish then click a third anchor point at the end to create the curve.



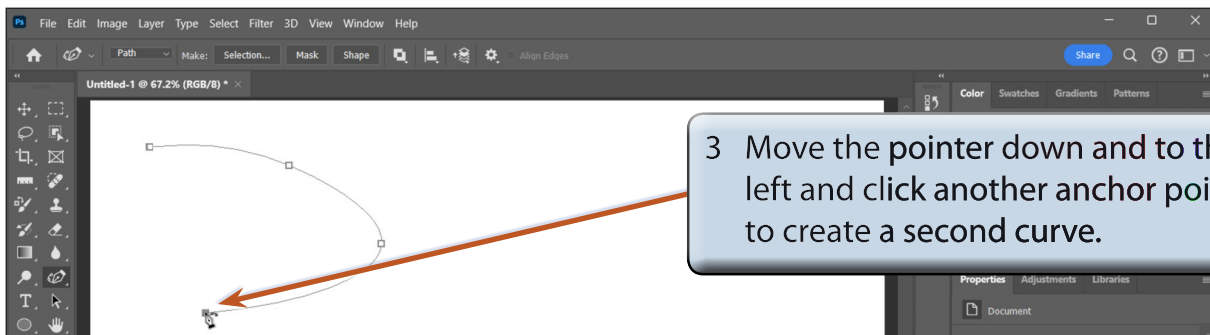
## Combining Curves into Shapes

You are not limited to one curve. You can continue clicking anchor points to create shapes. To illustrate this, a rough oval shape will be drawn.

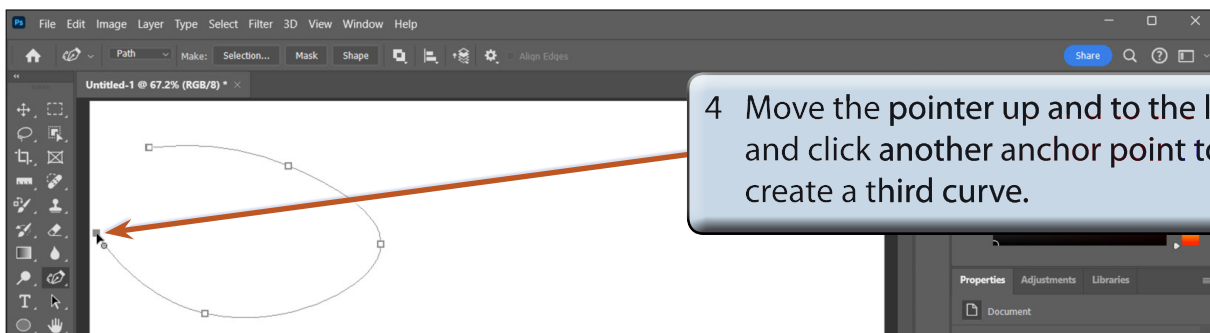
- 1 Press **CTRL+Z** or **COMMAND+Z** until all the curves are undone.



- 2 Click a start anchor point near the left of the canvas, a second anchor point to the right of it then click a third anchor point down and to the right of the second anchor point to create a curve.

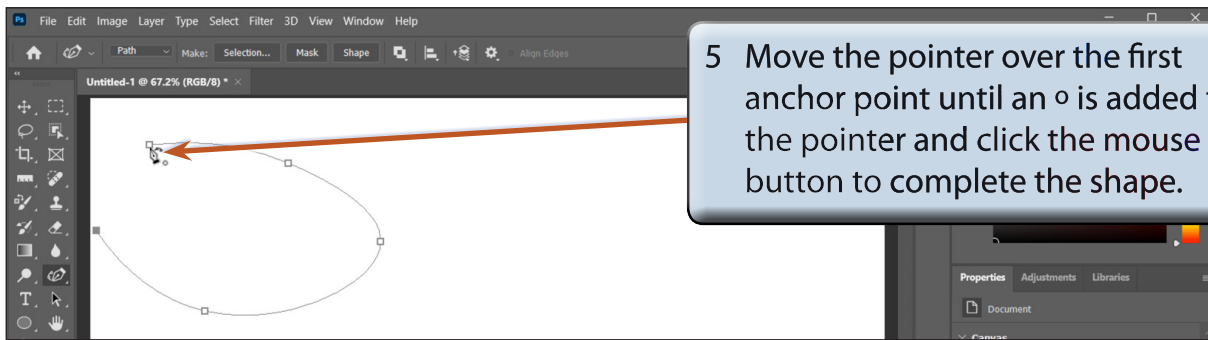


- 3 Move the pointer down and to the left and click another anchor point to create a second curve.



- 4 Move the pointer up and to the left and click another anchor point to create a third curve.

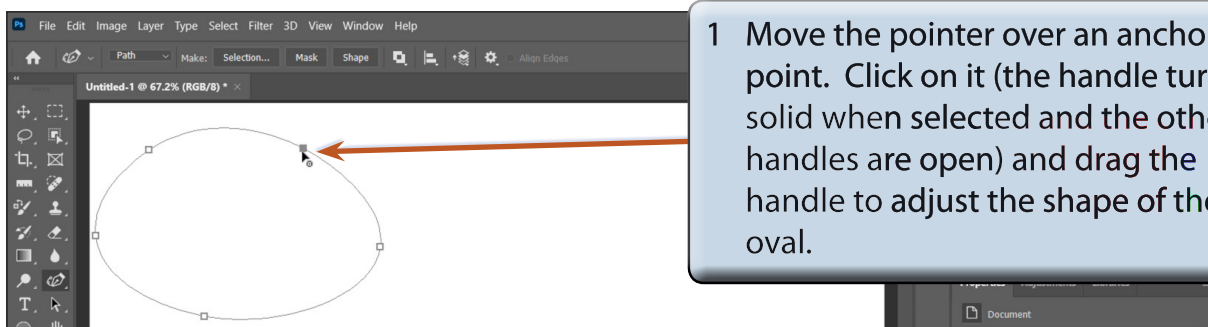




5 Move the pointer over the first anchor point until an  $\circ$  is added to the pointer and click the mouse button to complete the shape.

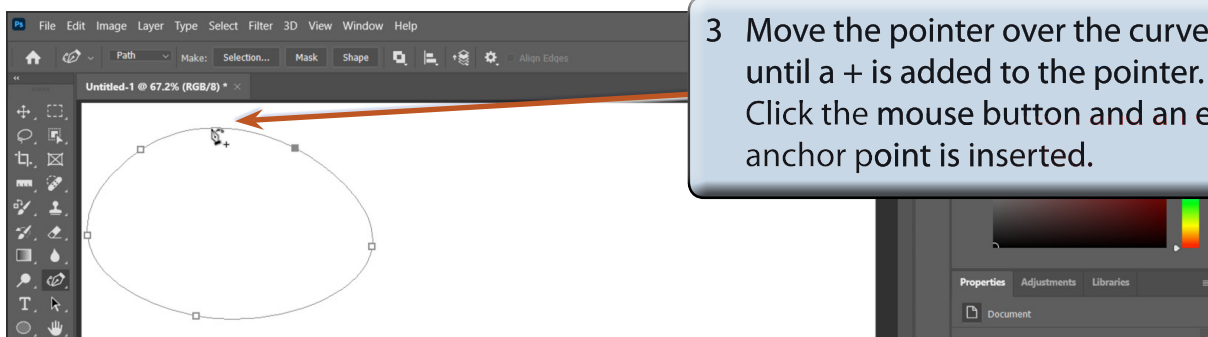
## Editing Curves

Shapes produced using the CURVATURE PEN TOOL are live and anchor point positions can be altered or new anchor points added to the curve.



1 Move the pointer over an anchor point. Click on it (the handle turns solid when selected and the other handles are open) and drag the handle to adjust the shape of the oval.

2 Adding extra anchor points can help refine the shape.



3 Move the pointer over the curve until a + is added to the pointer. Click the mouse button and an extra anchor point is inserted.