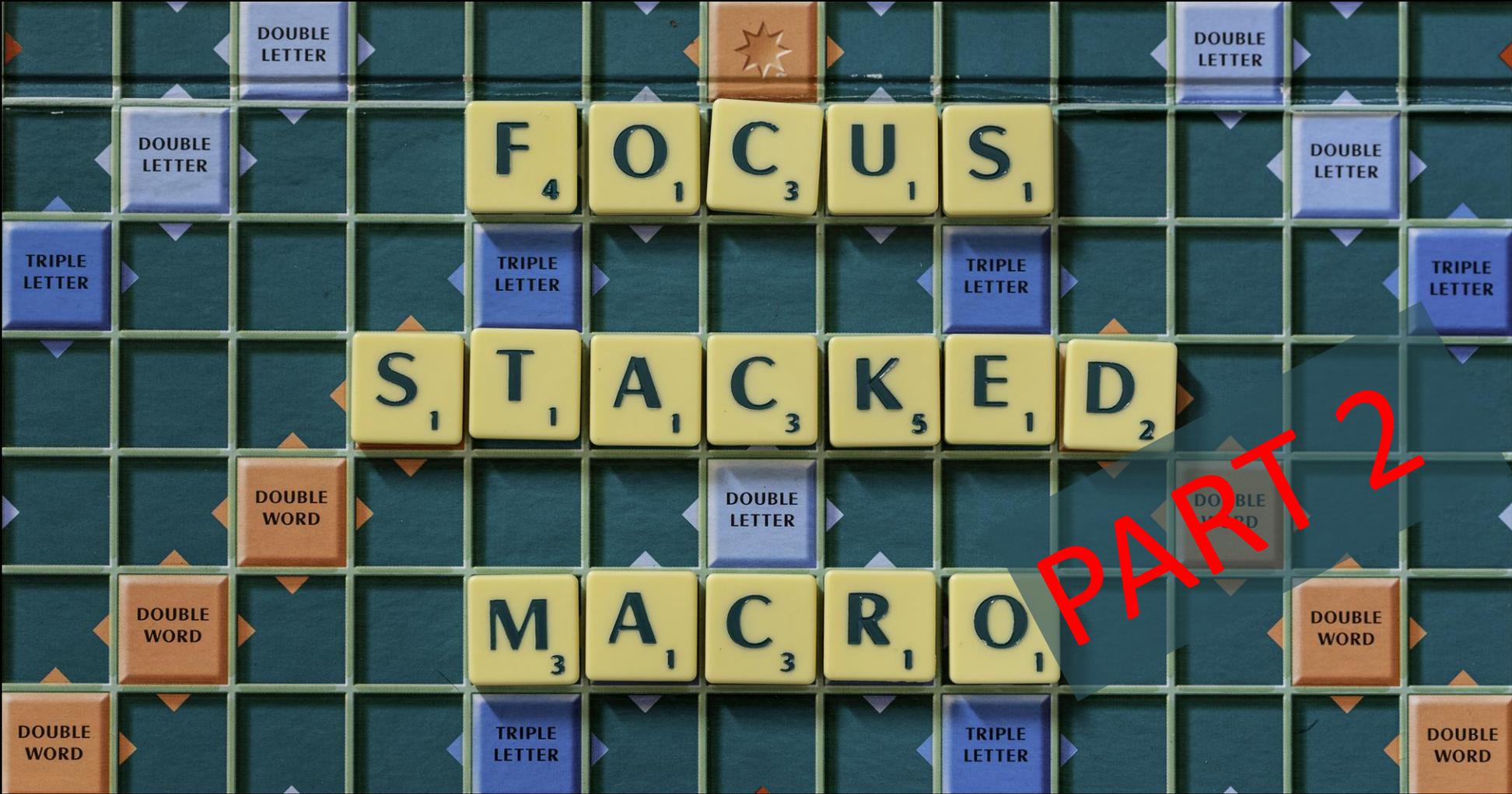


A1 CAMERA CLUB



FOCUS STACKED MACRO PART 2

Overview

- What is focus stacked macro
- Focus stacking software
- Focus stacking in Lightroom and Photoshop
- Video demos (video links):
 - Affinity Photo
 - Helicon Focus

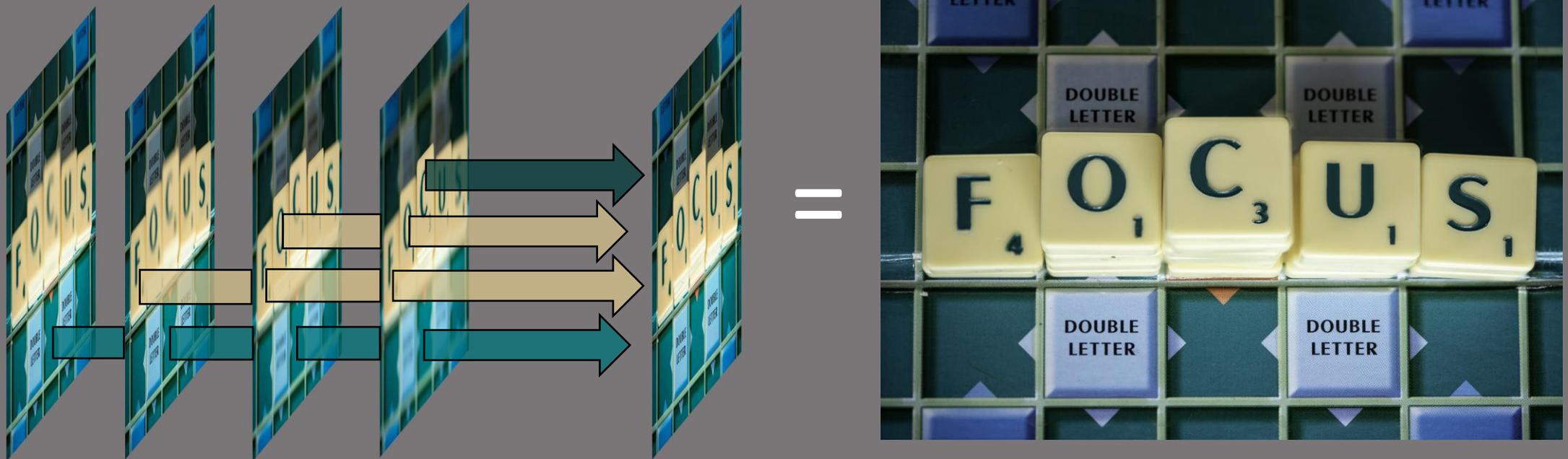
WHAT IS FOCUS STACKED MACRO?

Taking a number of images using different focus distances to cover the full front to back distance of the subject,



WHAT IS FOCUS STACKED MACRO?

and, using software to combine a those images to create a single sharp image.



FOCUS STACKING SOFTWARE

- Photoshop/Lightroom From £9.98 per month for the photography plan, 7 day free trial
- Affinity Photo £47.99 for a lifetime licence , 30 day free trial
- Helicon From £24 for a one year licence , 30 day free trial
- Zerene Stacker From \$89 (+ taxes) for lifetime licence, 30 day free trial
- ON1 photo raw 2022 From £93.89, 14 day free trial
- Picolay Free

FOCUS STACKING IN LIGHTROOM AND PHOTOSHOP (1)

1. Start by importing images into Lightroom in the normal way
2. Process lens correction, light, dark, saturation, contrast and , if necessary, white balance adjustments to first image
3. Copy adjustments* to the other images that are to be focus stacked and preview each one to make sure that exposure, highlights and shadows are consistent *highlight images, right click on adjusted image and select “Develop Settings/Sync Settings”
4. In library mode select all of the images to be focus stacked and use the “Edit in/Open as layers in photoshop” options to export the images (with Lightroom adjustments) to Photoshop

FOCUS STACKING IN LIGHTROOM AND PHOTOSHOP (2)

5. In Photoshop the images will be loaded in sequence as separate layers
6. Select all layers and use the “Edit/Auto-Align layers” option
7. With all layers still selected use the “Auto-Blend layers/Stack images” option.
8. This will create a focus stacked merged image at the top of the layer list

FOCUS STACKING IN LIGHTROOM AND PHOTOSHOP (3)

9. Examine the merged image and identify any artifacts that need correction
10. In the layers panel select all layers hold down the “Alt” key and click on the  symbol next to one of the layers to make all layers invisible
11. Now click on the  symbol next to the top image layer to make it visible.
12. Examine this layer, select the layer mask and using a white brush paint in any areas you want to reveal and using a black brush paint out any areas you do not want to reveal

FOCUS STACKING IN LIGHTROOM AND PHOTOSHOP (4)

13. Move down to the next layer, make it visible and repeat the above process on each layer until you have finished all layers
14. If you are happy with the final image you can delete the original merged layer and then combine all layers into one image using the “Layer/Flatten Image” options.
15. You can now process final edits such as cloning to correct stacking defects, sharpening and cropping

The following slides show screen shots supporting the instructions above

highlight images, right click on adjusted image and select "Develop Settings/Sync Settings"



- Set as Reference Photo
- Lock to Second Window
- Show in Explorer
- Go to Folder in Library
- Go to Collection
- Edit In
- Photo Merge
- Enhance... Ctrl+Alt+I
- Set Flag
- Set Rating
- Set Color Label
- Add Shortcut Keyword
- Remove from Target Collection
- Stacking
- Create Virtual Copies
- Develop Settings**
- Metadata Presets
- Rotate Left (CCW)
- Rotate Right (CW)
- Metadata
- Export
- Email Photos...
- Remove from Collection
- View Options

- Reset
- Update to Current Process Version
- Proof
- Copy Settings...
- Paste Settings
- Paste Settings from Previous
- Sync Settings...** Ctrl+Shift+S
- Auto White Balance Ctrl+Shift+U
- Auto Settings Ctrl+U
- Convert to Black & White



Histogram

ISO 100 90 mm f / 3.8 1/8 sec

Original Photo

Transform

Basic

Treatment: **Color** | Black & White

Profile: Adobe Color

WB: As Shot

Temp: 5100

Tint: +8

Tone Auto

Exposure: 0.00

Contrast: 0

Highlights: 0

Shadows: 0

Whites: +37

Blacks: -19

Presence

Texture: 0

Clarity: +19

Dehaze: 0

Vibrance: 0

Saturation: 0

Sync... **Reset**

Filter: Filters Off

Use "Edit in/Open as layers in photoshop" to export the images to Photoshop

Lrc Adobe Lightroom Classic Anthony Stringer

▼ Navigator FIT 100% 400%

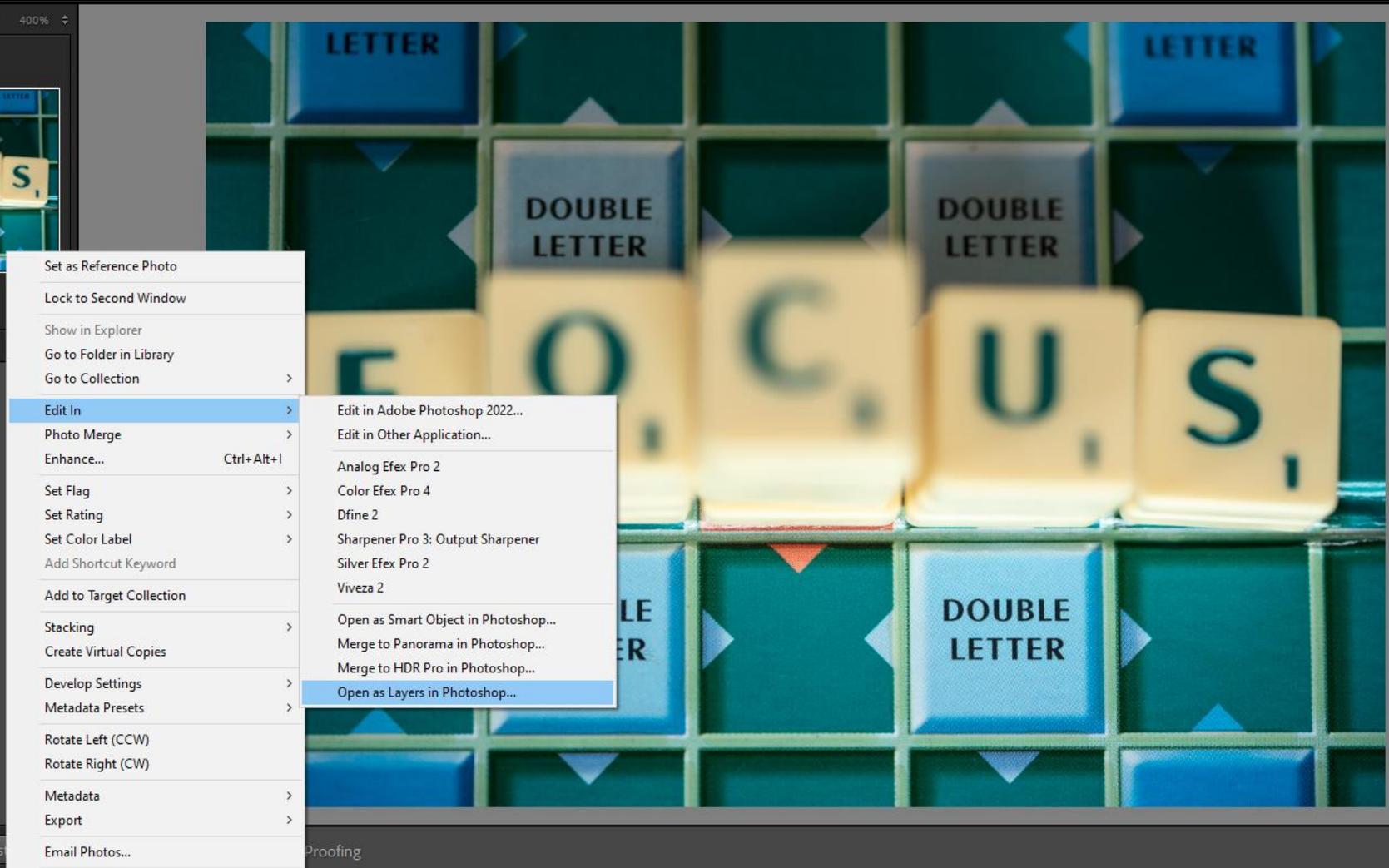


▼ Presets

- ▶ Portraits: Deep Skin
- ▶ Portraits: Medium Skin
- ▶ Portraits: Light Skin
- ▶ Auto-: Retro
- ▼ Style: Black & White
 - ☐ BW01
 - ☐ BW02
 - ☐ BW03
 - ☐ BW04
 - ☐ BW05
 - ☐ BW06
 - ☐ BW07
 - ☐ BW08
 - ☐ BW09
 - ☐ BW10
 - ☐ BW11
 - ☐ BW12
- ▶ Style: Cinematic
- ▶ Style: Cinematic II
- ▶ Style: Futuristic
- ▶ Style: Vintage

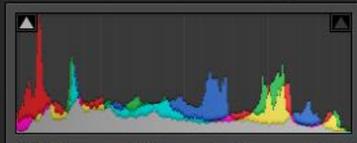
Copy... Paste

1 2 3 4 Previous Images

- Set as Reference Photo
- Lock to Second Window
- Show in Explorer
- Go to Folder in Library
- Go to Collection
- Edit In**
 - Edit in Adobe Photoshop 2022...
 - Edit in Other Application...
 - Analog Efex Pro 2
 - Color Efex Pro 4
 - Dfine 2
 - Sharpener Pro 3: Output Sharpener
 - Silver Efex Pro 2
 - Viveza 2
 - Open as Smart Object in Photoshop...
 - Merge to Panorama in Photoshop...
 - Merge to HDR Pro in Photoshop...
 - Open as Layers in Photoshop...**
- Enhance... Ctrl+Alt+I
- Set Flag
- Set Rating
- Set Color Label
- Add Shortcut Keyword
- Add to Target Collection
- Stacking
- Create Virtual Copies
- Develop Settings
- Metadata Presets
- Rotate Left (CCW)
- Rotate Right (CW)
- Metadata
- Export
- Email Photos...
- Remove Photos...
- View Options

Histogram



ISO 100 90 mm f / 3.8 1/8 sec

☐ Original Photo

Profile: Adobe Color

WB: As Shot

Temp: \$100

Tint: +8

Tone: Auto

Exposure: 0.00

Contrast: 0

Highlights: 0

Shadows: 0

Whites: +37

Blacks: -19

Presence

Texture: 0

Clarity: +19

Dehaze: 0

Vibrance: 0

Saturation: 0

Tone Curve

HSL / Color

Color Grading

Sync... Reset

Filter: Filters Off

In Photoshop select all layers and use the “Edit/Auto-Align layers” option



- Undo Delete Layer Ctrl+Z
- Redo Shift+Ctrl+Z
- Toggle Last State Alt+Ctrl+Z
- Fade... Shift+Ctrl+F
- Cut Ctrl+X
- Copy Ctrl+C
- Copy Merged Shift+Ctrl+C
- Paste Ctrl+V
- Paste Special
- Clear
- Search Ctrl+F
- Check Spelling...
- Find and Replace Text...
- Fill... Shift+F5
- Stroke...
- Content-Aware Fill...
- Content-Aware Scale Alt+Shift+Ctrl+C
- Puppet Warp
- Perspective Warp
- Free Transform Ctrl+T
- Transform
- Auto-Align Layers...**
- Auto-Blend Layers...
- Sky Replacement...
- Define Brush Preset...
- Define Pattern...
- Define Custom Shape...
- Purge
- Adobe PDF Presets...
- Presets
- Remote Connections...
- Color Settings... Shift+Ctrl+K
- Assign Profile...
- Convert to Profile...
- Keyboard Shortcuts... Alt+Shift+Ctrl+K
- Menus... Alt+Shift+Ctrl+M
- Toolbar...
- Preferences

Color Swatches Gradients Patterns

Adjustments Properties

Add an adjustment

Layers Channels Paths

Kind Opacity: 100%

Lock: Fill: 100%

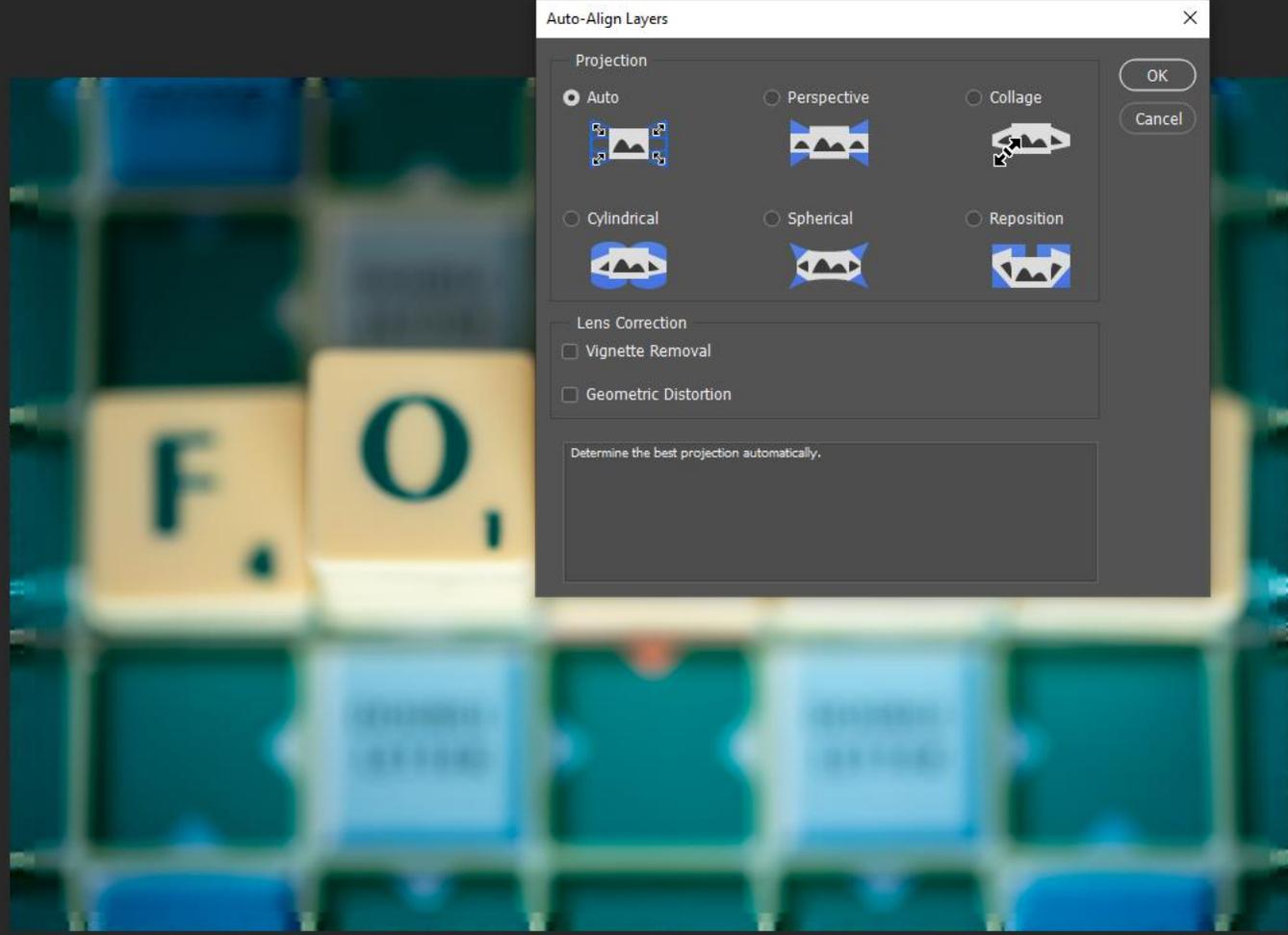
DSC_6620.NEF

DSC_6621.NEF

DSC_6622.NEF

DSC_6623.NEF

In Photoshop select all layers and use the "Edit/Auto-Align layers" option



Color Swatches Gradients Patterns

Adjustments Properties

Add an adjustment

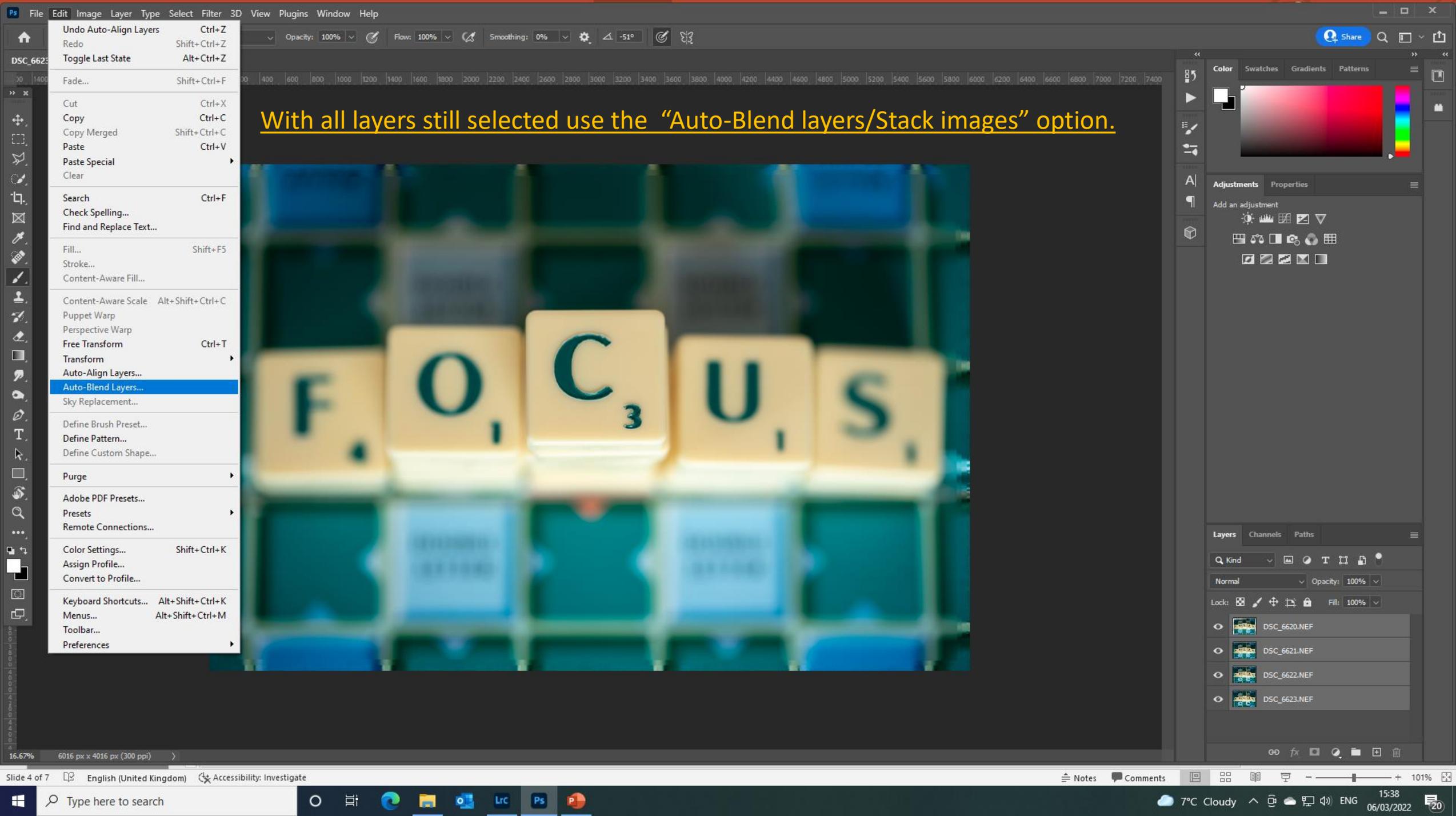
Layers Channels Paths

Kind

Normal Opacity: 100%

Lock: Fill: 100%

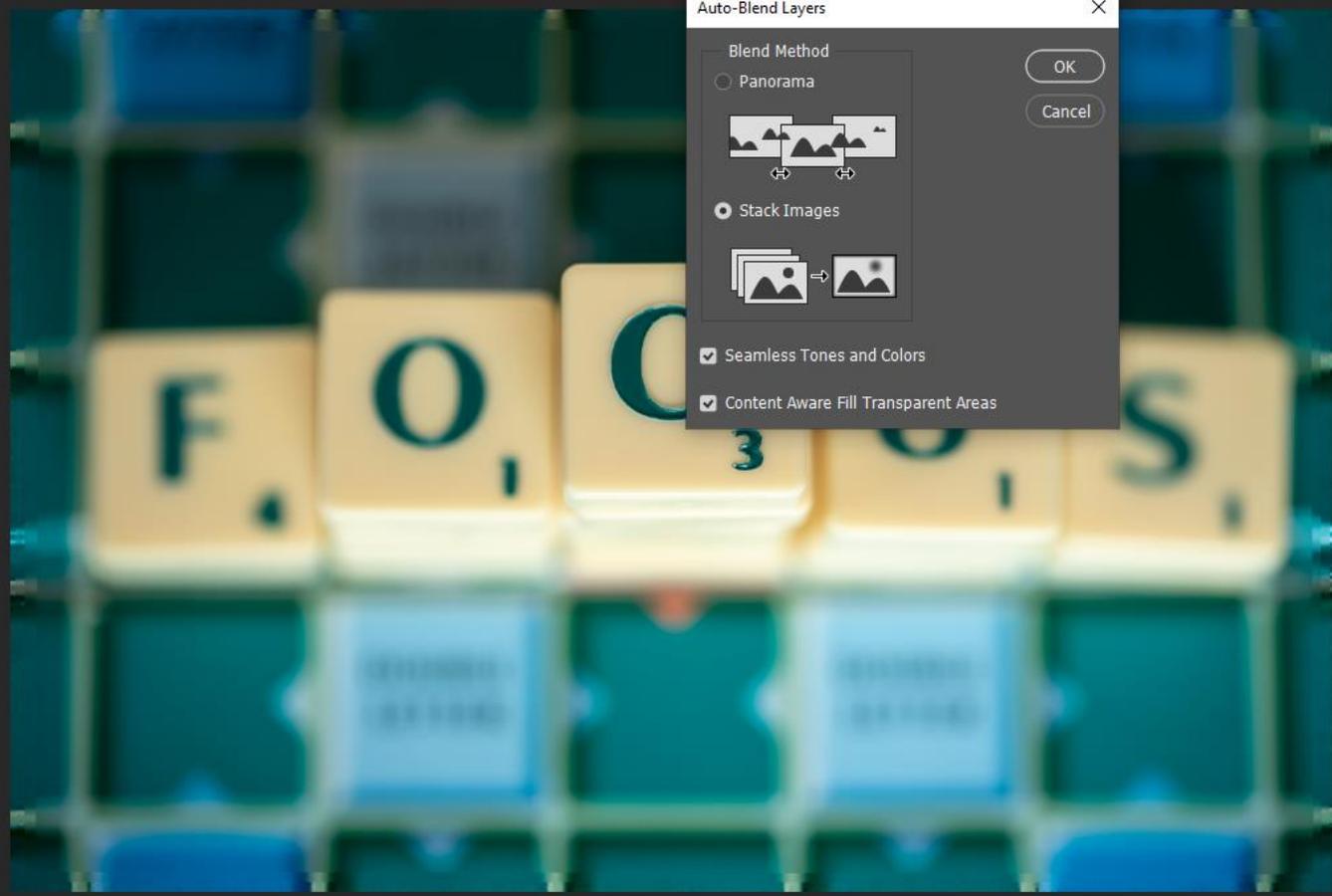
- DSC_6620.NEF
- DSC_6621.NEF
- DSC_6622.NEF
- DSC_6623.NEF



With all layers still selected use the “Auto-Blend layers/Stack images” option.



With all layers still selected use the “Auto-Blend layers/Stack images” option.



Color Swatches Gradients Patterns

Adjustments Properties

Add an adjustment

Layers Channels Paths

Kind

Normal Opacity: 100%

Lock: Fill: 100%

- DSC_6620.NEF
- DSC_6621.NEF
- DSC_6622.NEF
- DSC_6623.NEF

This will create a focus stacked merged image at the top of the layer list. Examine the merged image and identify any artifacts that need correction



Color Swatches Gradients Patterns

Adjustments Properties

Add an adjustment

Layers Channels Paths

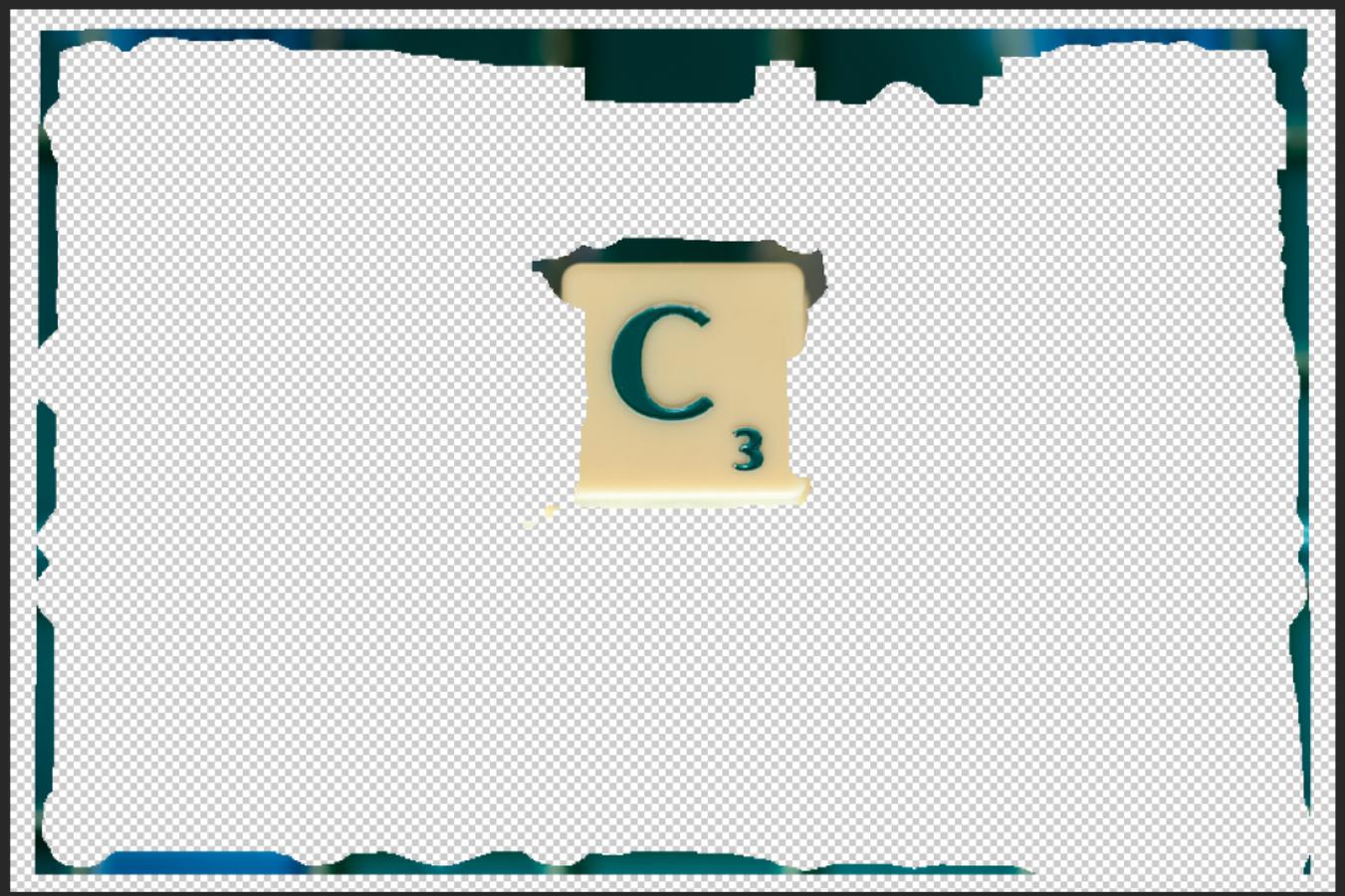
Kind

Normal Opacity: 100%

Lock: Fill: 100%

- DSC_6620.NEF (merged)
- DSC_6620.NEF
- DSC_6621.NEF
- DSC_6622.NEF
- DSC_6623.NEF

In the layers panel select all layers hold down the “Alt” key and click on the  symbol next to one of the layers to make all layers invisible. Now click on the  symbol next to the top image layer to make it visible.



Color Swatches Gradients Patterns

Adjustments Properties

Add an adjustment

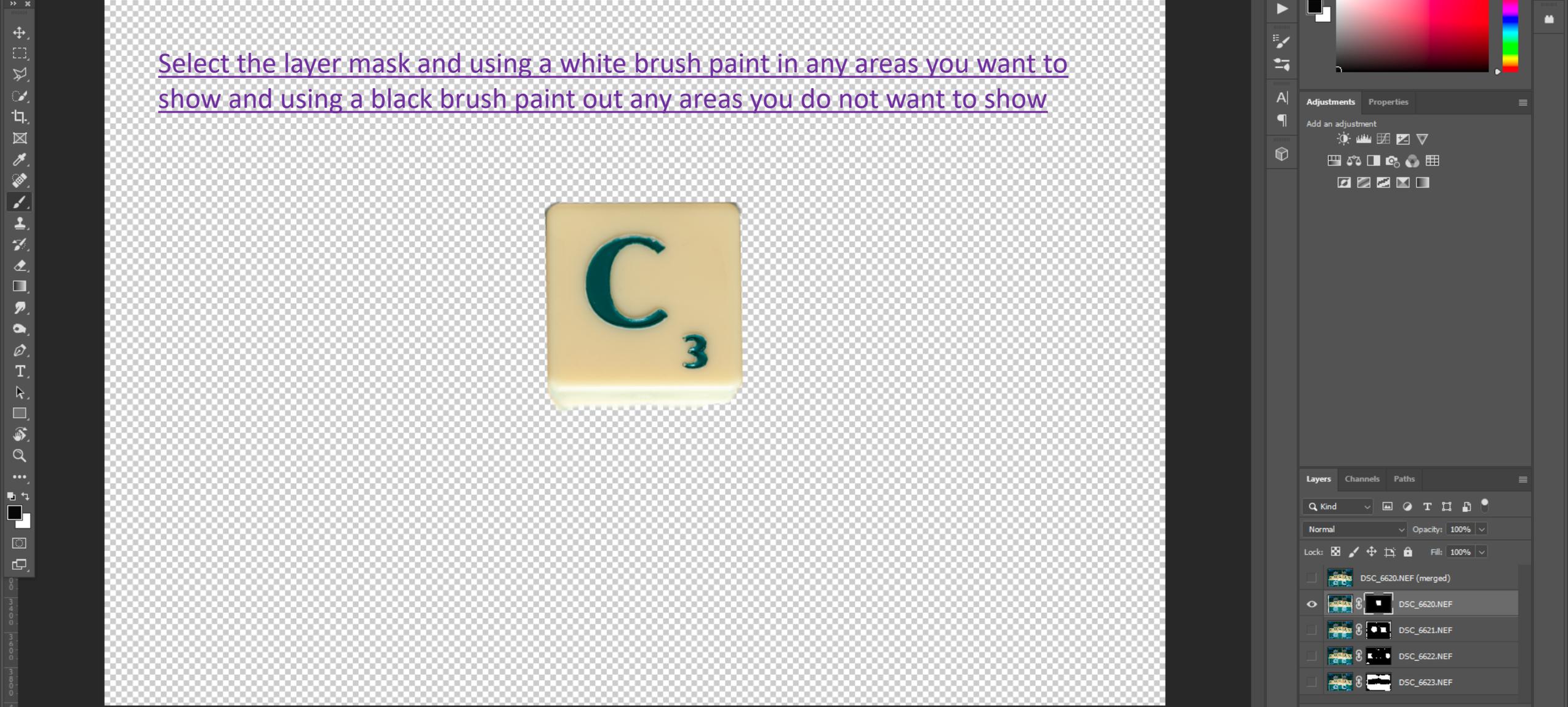
Layers Channels Paths

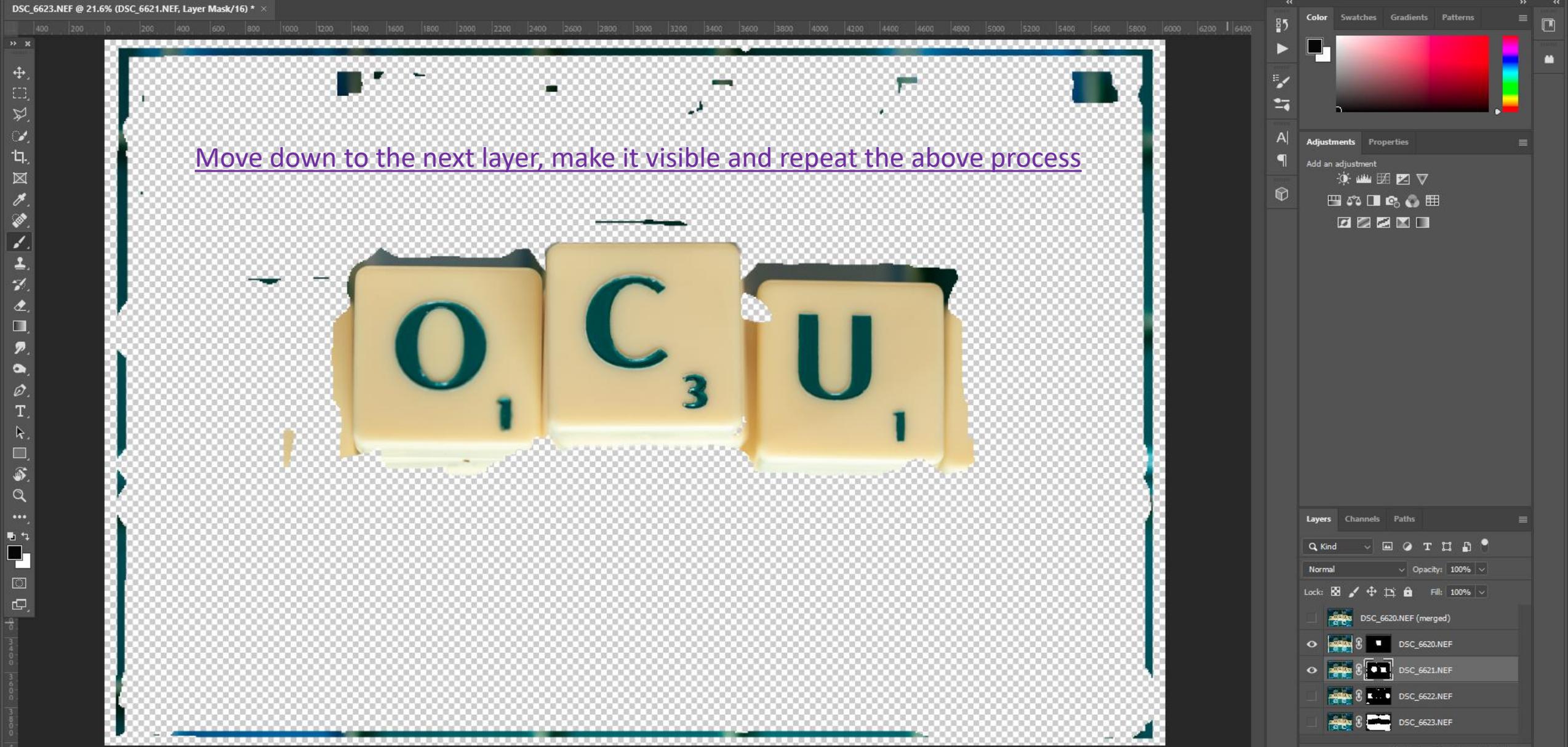
Kind

Normal Opacity: 100%

Lock: Fill: 100%

- DSC_6620.NEF (merged)
-  DSC_6620.NEF
-  DSC_6621.NEF
-  DSC_6622.NEF
-  DSC_6623.NEF





Color Swatches Gradients Patterns

Adjustments Properties

Add an adjustment

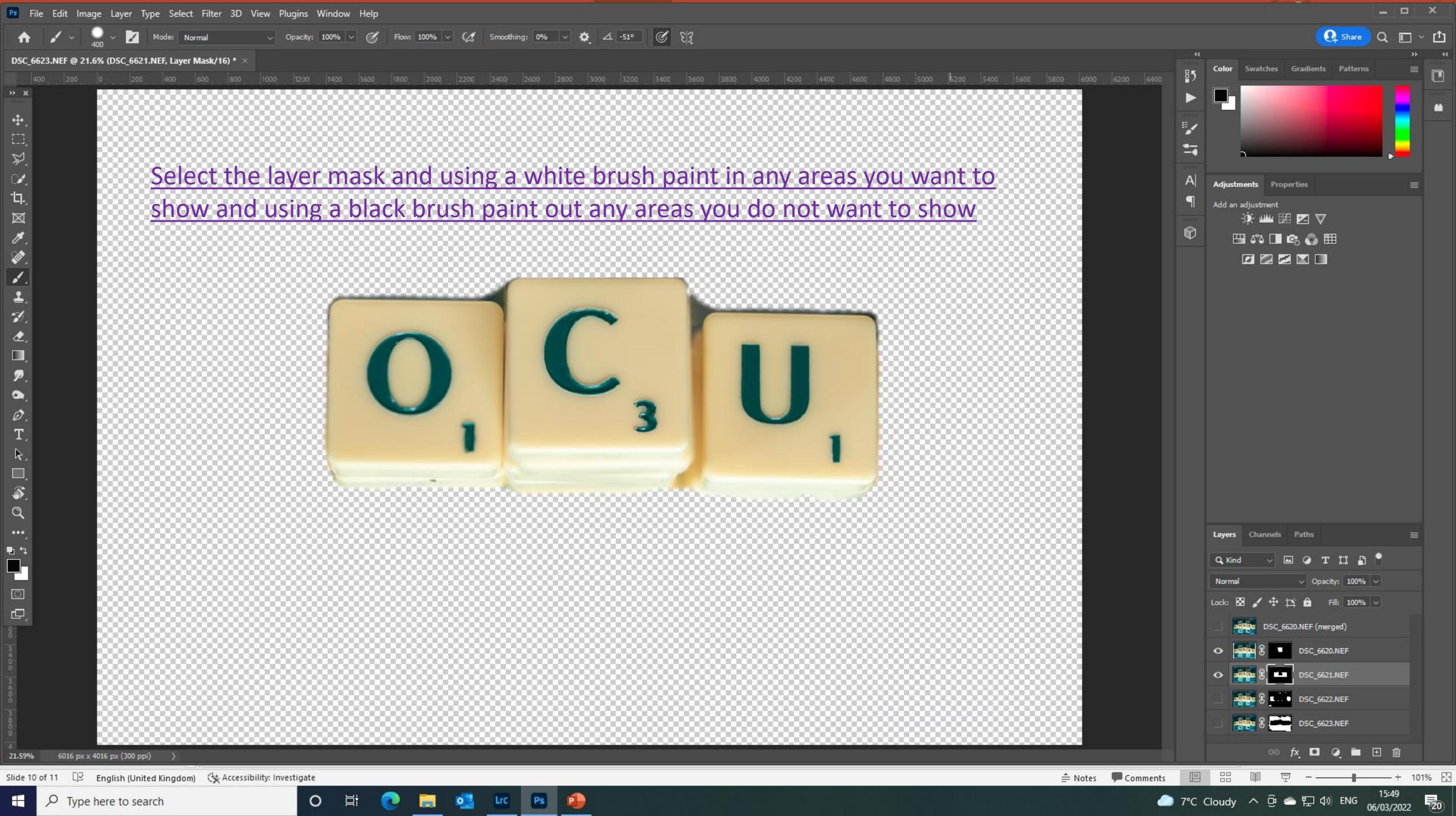
Layers Channels Paths

Kind

Normal Opacity: 100%

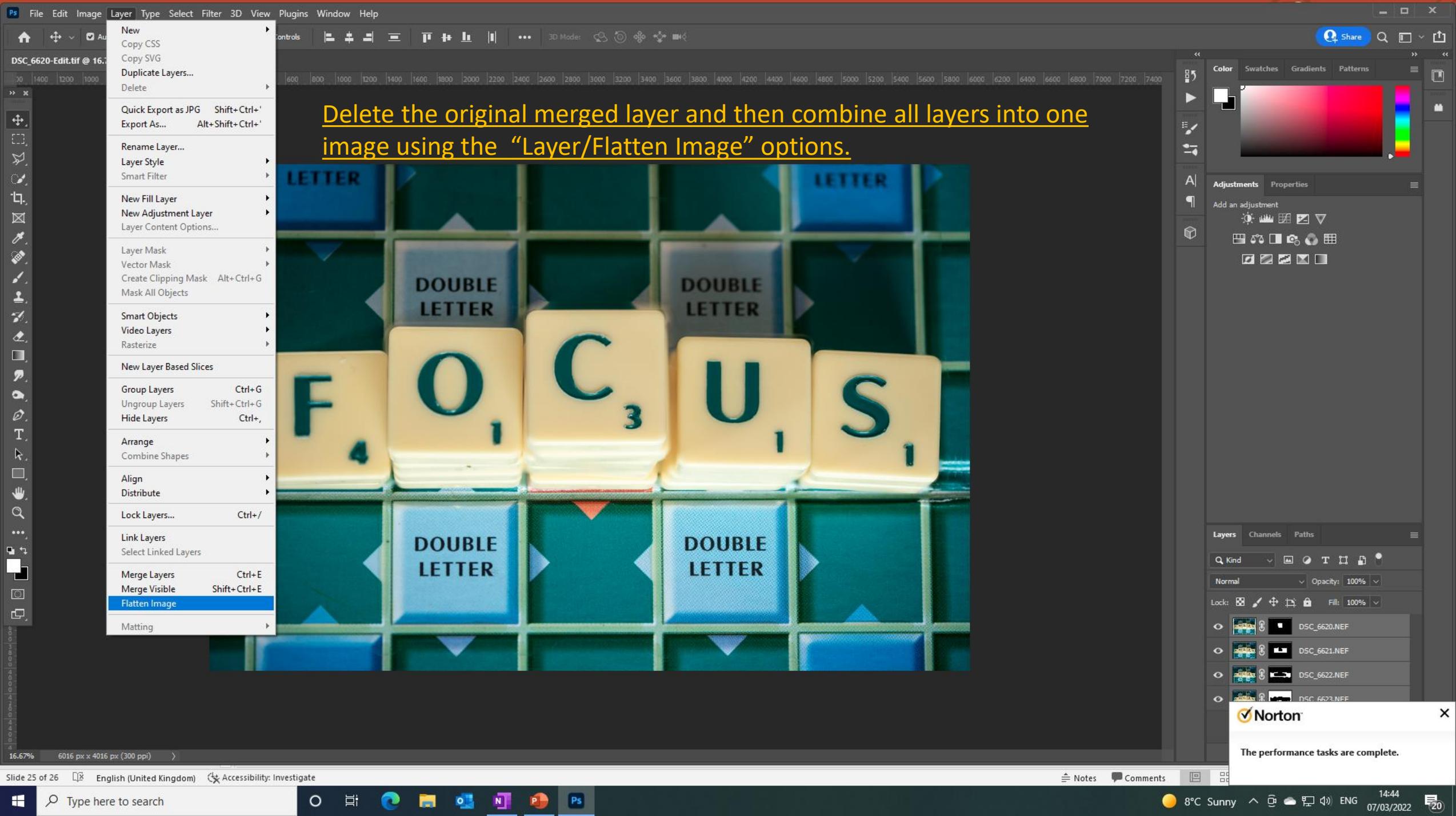
Lock: Fill: 100%

- DSC_6620.NEF (merged)
- DSC_6620.NEF
- DSC_6621.NEF
- DSC_6622.NEF
- DSC_6623.NEF



Select the layer mask and using a white brush paint in any areas you want to show and using a black brush paint out any areas you do not want to show



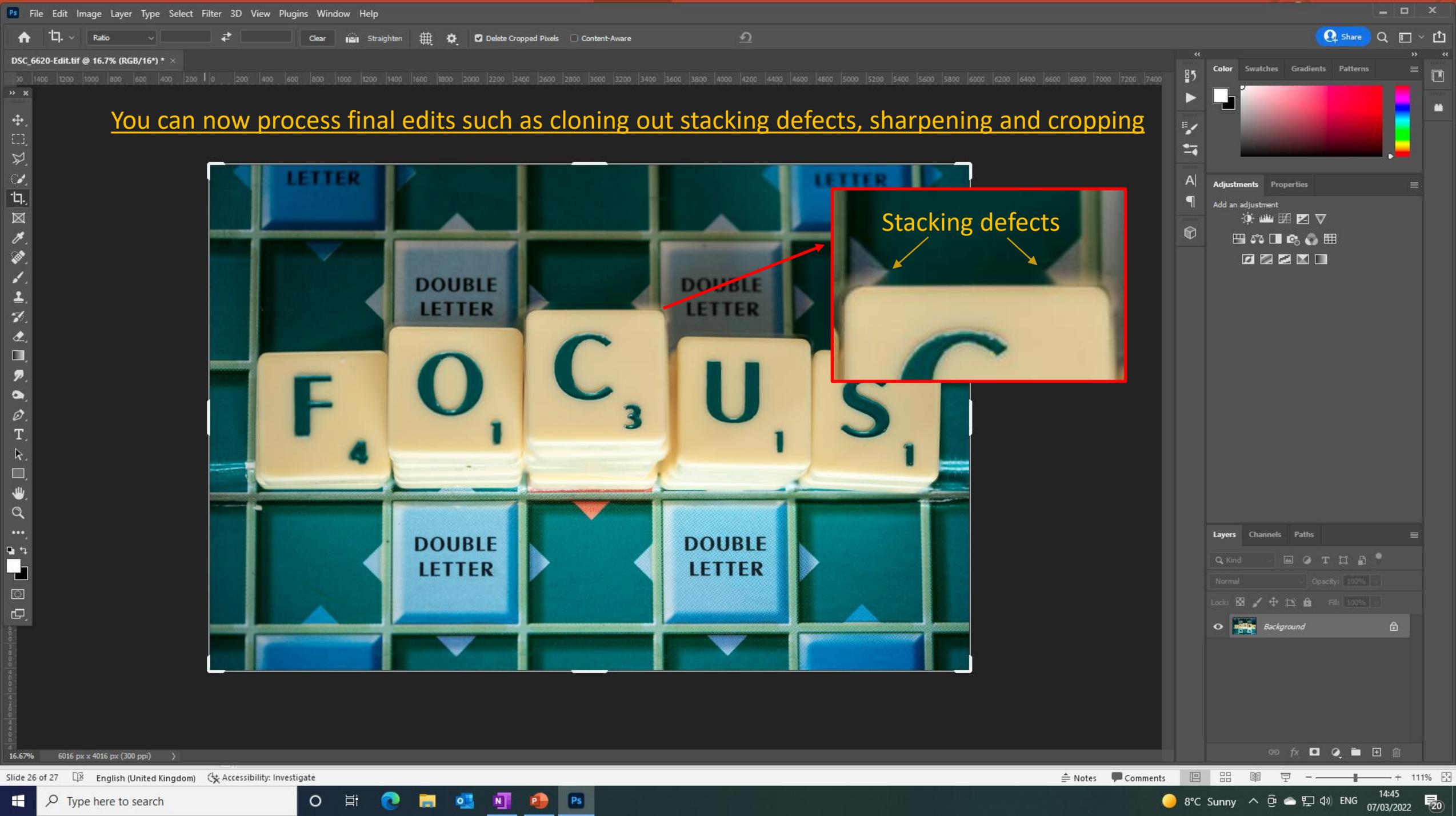


Delete the original merged layer and then combine all layers into one image using the “Layer/Flatten Image” options.

- New
- Copy CSS
- Copy SVG
- Duplicate Layers...
- Delete
- Quick Export as JPG Shift+Ctrl+'
- Export As... Alt+Shift+Ctrl+'
- Rename Layer...
- Layer Style
- Smart Filter
- New Fill Layer
- New Adjustment Layer
- Layer Content Options...
- Layer Mask
- Vector Mask
- Create Clipping Mask Alt+Ctrl+G
- Mask All Objects
- Smart Objects
- Video Layers
- Rasterize
- New Layer Based Slices
- Group Layers Ctrl+G
- Ungroup Layers Shift+Ctrl+G
- Hide Layers Ctrl+,
- Arrange
- Combine Shapes
- Align
- Distribute
- Lock Layers... Ctrl+/,
- Link Layers
- Select Linked Layers
- Merge Layers Ctrl+E
- Merge Visible Shift+Ctrl+E
- Flatten Image**
- Matting

Norton X

The performance tasks are complete.



You can now process final edits such as cloning out stacking defects, sharpening and cropping



VIDEO DEMOS

3 minute 10 second video demonstrating Affinity Photo:

<https://affinity.serif.com/en-us/tutorials/photo/desktop/video/295557891/>

2 minute 14 second video demonstrating Helicon Focus

<https://www.youtube.com/watch?v=p8JQlIYyVwM>