

## Displacement layers and blending

### Before you start working with multiple images:

1. Sketch or have a mental image of your end product. If you want to produce a composite image, shoot the required extra objects or select images from your library.
2. Inspect all the images you intend using and make sure they have the same bit depth (8 or 16), image resolution (ppi), size (dimensions) and colour space (see box below)
3. Open the image you plan to use as a background (composite image) {corrugated fence .jpg}, create a duplicate (image > duplicate). Open the duplicate, convert to greyscale (image > mode > greyscale), add gaussian blur (10 px) (filter > blur > gaussian, 10 px). Save as duplicate copy {e.g. copy.psd}
4. Open the image you wish to apply to edit {head.jpg}, then use magnetic lasso (L) or one of the other selection tools to select the required elements. Create a new layer with just this selection.
5. Copy (ctrl-A to select pixels, ctrl-C to copy) this layer and paste it (ctrl-V) into the composite image as a layer. The head should be visible over part of the fence but not shaped to it.
6. Resize, reposition and angle the head as desired (ctrl-T). Click enter when finished.
7. You are now ready to distort the head to match the fence. With the head layer selected, choose filter > distort > displace. Set displacement amount to about 10px for horizontal and vertical. Leave the other settings at the default. Click ok and you are asked for a displacement map file. Select the greyscale blurred duplicate copy psd file {corrugated fence blur copy.psd}.
8. See how the displacement changes the shape of the face. To achieve a fully blended result, duplicate the newly displaced layer twice (ctrl-J) and adjust the blend modes to suit - e.g. top layer (head copy 1) set blending mode to multiply @ 80% opacity and middle layer (head) to overlay mode @ 65% opacity. It should look like the file {displaced final.jpg}.
9. Tweak the appearance by changing the displacement amount or direction, or by altering highlights or shadows (curves), or by enlarging (select head layers, edit > transform) or by merging and applying another filter such as graphic pen, blend with multiply.

Blending modes can be a useful tool for merging objects across layers. Displacement filters are not commonly used but can be valuable when you want something like text or a tattoo to follow the contours of the underlying surface.

Three files are provided: corrugate fence.jpg, heads.jpg, displaced final.jpg

### Standardising images

To change bit size: image > mode > tick 8 or 16 bit

To change resolution and dimension: image > image size > tick all boxes, select bicubic sharper if smaller image, change resolution e.g. 300 to 72 ppi

To change colour space: edit > assign profile, select from drop down list. Can also use edit > convert to profile and select from drop down list

A close-up photograph of a row of white, textured, pointed objects, possibly surfboard fins, arranged in a line. The objects are illuminated from the side, creating strong highlights and deep shadows. Several small, dark, irregular marks or scratches are visible on the surface of the objects. A copyright notice is overlaid in the lower center of the image.

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A man with glasses, wearing a teal shirt with a white and yellow floral pattern, is speaking at a podium. He is gesturing with his right hand. A microphone is positioned in front of him. In the background, another man in a red and white floral shirt is visible, looking towards the speaker. A laptop is open on the podium in the foreground.

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