

Total time:  
2 - 3 hours



## Difficulty Level:

Very challenging

## Skill Points:

- Learning focus stacking
- Discovering how to create a focus stacked image
- Creating a focus stacked photograph

## EQUIPMENT: - Tripod

- DSLR, mirrorless, or hybrid camera w/ focus stacking feature if possible
- Lens w/ manual focus capability
- Software w/ layering capability

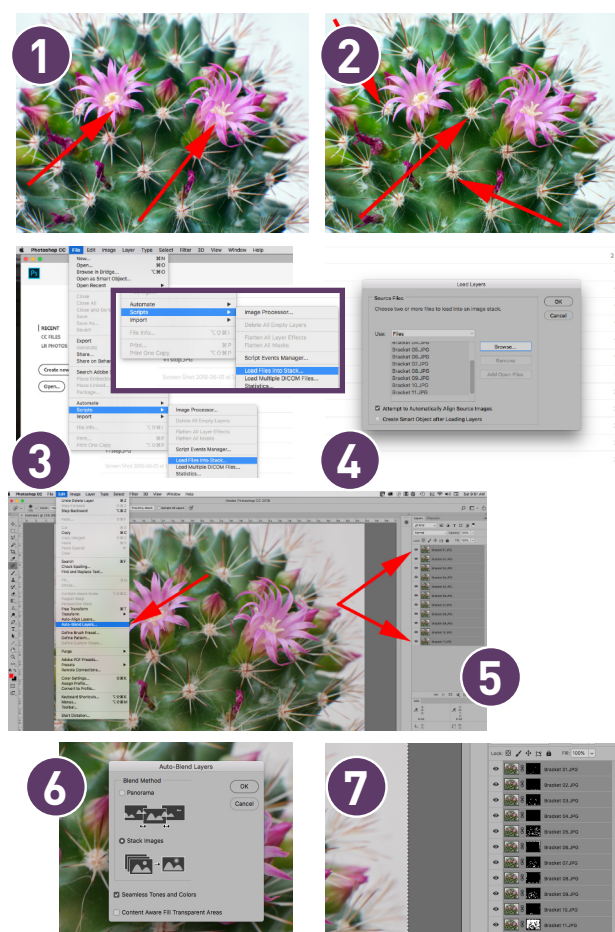
# FUN WITH FOCUS STACKING



Focus stacking is the photographer's dream come true.

It allows us to cheat the physics of optics, and thus create a depth of field window that simply was not possible before digital photography. Some cameras have a "Focus Stacking" feature built into them, which makes the in-camera portion of this technique a snap.

**KEY LESSON:** If your camera does not have the built-in feature for focus stacking, use manual focus. Always use either Manual Shooting Mode or Aperture Priority mode. Do not change the f/stop throughout the process. A tripod is essential. Place the lens critical focus onto the **nearest point within your scene** - where you want the DOF window to begin. For each successive shot, move the focus barrel 1/8th of a turn toward infinity. We recommend creating between 5 – 25 shots. **NOTE: The term stacking, in Lightroom, is not the same function.**



## STEP-BY-STEP

- 1- The camera settings for this single shot image were: 150mm lens with an extension tube, 1/100<sup>th</sup> of a second shutter speed, f/11, ISO 1600, Aperture Priority, Pattern metering mode. Critical focus was placed where the red arrows are pointing. DOF was less than .5 inch (1.25 cm).
- 2- Focus stacking extended the DOF window down to the body of the cactus. 11 photos were created. For each shot, the lens was focused 1/8<sup>th</sup> of a turn closer to infinity.
- 3- We are using Photoshop. Any full-featured layer-based editing program should have this feature. Select **File>Scripts>Load Files into Stack**. You can also manually load separate image files into a single image file stack using the layers palette.
- 4- Using **Browse** navigate to your files and select them. For this photo we created 11 frames. Select **Attempt to Automatically Align Source Images**. Even when using a tripod, there may be movement between frames.
- 5- Select all of your layers. Select **Edit>Auto-Blend Layers**.
- 6- Choose **Stack Images**, and select **Seamless Tones and Colors**. Click OK.
- 7- Photoshop automatically examines each layer, and then selects the sharpest area within that image. It then masks out the remainder of the picture, in each layer, and blends them together. Flatten your image, and save.



## ACTION ASSIGNMENT!

- 1- Organize a photo shoot similar in content to the example photo.
  - Follow the shooting and editing guidelines listed above.
  - If there was camera movement, you may see some ghosting along the edges of your blended focus stack. Leave a little extra room when shooting, and crop the ghosting in post-production.
  - If you're unsure about creating and working with stacks, watch the "Exposure Blending Bonus Video".

## HOW DID YOU DO?

- Did you create a focus-stacked image with very little ghosting? If not, practice keeping the camera still.
- Were you able to successfully load and execute a blended focus-stacked image? If not, try again.

READY! SET! GO! **ACTION CARDS - STRETCH GOALS: FOCUS STACKING**