

CLOSE UP PRESENTATION SPEAKING NOTES

Tips to get best results in close up photography:

- Use manual focus as auto focus can have a difficult time discerning when close up
- Handholding can be effective but requires practice.
- Tripod should be used for any focus stacking or where there is difficulty holding steady.
- With tripod work, use a cable release and mirror lock up. If you do not have mirror lock up, a time delay for 2 seconds can be used.
- Make sure your camera diopter is adjusted for the eye you use looking through the viewfinder. If you wear progressive lenses, make sure you set the diopter for the eyeglass lens area you look through.
- Do not put your camera on the tripod with the centre pole extended as stability would be compromised.
- Take care in setting up your equipment to take a picture as shake is emphasized when doing close up work
- The closer you are to your subject, the shallower depth of field. The further your subject is from the background, the more blurred your background will be.

Helpful Equipment for Macro

- Tripod with an adjustable arm that will go parallel to ground
- Cable release
- Macro Lenses
 - To be true macro, the lens will have a 1:1 ratio which captures the subject in the same size on the sensor at its minimum focusing length.
- 40 - 60mm (Nikon 40mm has 6.4 – 7.3 in minimum focusing distance) / Pros: least expensive (\$330+) / starting point for aspiring macro photographers / Cons: Being so close blocks light / shadows difficult to overcome / lack of working space in front of lens causes difficulties using flash or diffusers / insects skitterish when approached this closely
- 90-105mm (Nikon 105mm has 12" minimum focus distance) / Pros: Room to work around light & shadow issues / Cons: Working distance can be too close when photographing shy subjects / Cost midrange for Nikon at \$1180
- 150mm (Irix is new on market has 13" minimum focus distance) / Pros: Inexpensive ((\$595 US) – 200 mm has 18" minimum focus distance / Good for skitterish creatures / Cons: Can be unreliable / purchase from reputable dealer
- 180-200mm (Nikon 200mm has 19.2" minimum focus distance / Pros: Excellent for skitterish creatures / great reach for less accessible subjects / Cons: Expensive (Nikon 200mm is \$2350)
- There are numerous macro lenses at varying prices. Do your research. Remember that you often get what you pay for.
- Trusty 50mm 1.4mm or 2.8mm lens (and other lenses) can be adapted for close up photography / Pro: Very inexpensive (Nikon 2.8mm is \$250) A few other lenses can be adapted with close up accessories
- Close up filters magnify and screw into the front of your lens / Most common are single element close-up lenses / Pros: Inexpensive (\$135 depending on filter size) / Minimal impact on light / They can be stacked (These are +1, +2, and +4 for a total of +7/ Cons: Sharpness impacted most on poor quality filters
- Double element closeup filter is produced by Canon / \$200 US for a 77mm thread. Step up rings can be used.
- Raynox DCR magnifies (150 magnifies 1.5 times / 250 2.5 times) / Pros: Inexpensive-Raynox 250 at Henry's is \$99 / Easy to take on and off - spring clip attaches to front of lens / Clarity as good as extension tube / not quite as good as dedicated macro
- Kenko extension tubes come in a set of 3: 36mm, 20mm, and 12mm about \$124 US. They sit between the camera and the lens, moving the lens further away from the body, thereby increasing magnification and work well with most macros (and the trusty 50mm lens) / less effective with telephoto or long lenses. There is some light loss but no glass so clarity is not affected. Check compatibility with your lens before purchasing
- A macro rail is useful for moving the focus in small increments. The Cameron Mag Slider Macro Rail is an inexpensive one at \$99 Cdn from Henry's.

Water Refraction Demo

The following equipment was used for this table top demo:

- Magnifier with Three Handles (online \$16 and up)
- Bottle with fine spray (dollar store)
- Litra Torch 2 (<https://www.litra.com>products>litratorch-2-0>) \$90 US with hot shoe adapter. An off camera flash or a flashlight may be used.
- Table protector and towel to absorb water
- CD jackets to adjust height of light source
- Seed heads (small) or leaf, etc. Some leaves (ie succulents) have a surface that will retain the water. Others are smooth and the water will simply run off.
- Tripod with or without focus rail. Hand held will take practice. Set up as in focus stacking.

The process:

- Use a stem protector (from florist) or a piece of heavy paper to keep the stem from being destroyed. Many items other than flowers can be used. However, it should be large enough to provide a good backdrop for the seedhead.
- Arrange the flower and the seedhead in a visually pleasing way.
- Set the light up to shine on the flower.
- Mist the seed head (protect the flower with a piece of plastic). LOTS of water is needed so take your time and spray lots.
- Best to use an extension tube to get really close to the seedhead with the water drops.
- Take numerous pictures to stack in post processing.
- This is the set up from above where the light is shining onto the flower from the side. A similar set up can be done outdoors if you have the subjects all lined up and the sun is near your right (or left) shoulder.



Resources and Inspiration

I have found the following photographers to be inspirational in macro photography.

Don Komarechka www.donkom.ca

Don has his second book about to be released, *The Universe at Our Feet*, in which he shares a tremendous variety of macro techniques—snowflakes to infrared diamond chips to creative water drop refraction. It is a Kickstarter which exceeded all expectations of support at the beginning which led to him increase the content and using higher quality paper, pictures, etc. You can preorder at this link <https://www.kickstarter.com/projects/donkom/macro-photography>

Mike Moats www.tinylandscapes.com

Mike has an active site on Facebook and posts inspirational images, etc. almost daily. He has a macro photoclub online at \$79 US for a lifetime membership. Search Mike Moats Tiny Landscapes Macro Photo Club.