

\$1 LASER Pointer Turned Cell Phone Macro Lens Hack

What is a “hack” anyway?

A hack is the trick of utilizing something, potentially by taking it apart, for a purpose for which it was not originally designed. Examples include using a rubber band to help loosen a stripped screw, using cola to clean windows, and taking apart a laser pointer to recover the lens inside for use as a cell phone macro lens!



Figure 1

What you will need (Figure 1):

- Keychain laser pointer (available at Family Dollar for only \$1)
- Hole punch
- Tape
- Business card or index card
- Needle nose pliers (optional but recommended)



Figure 2

Step-By-Step

- 1) Unscrew the tip of the laser pointer. (Figure 2)
- 2) Unscrew the black plug. You may need pliers to unscrew this part. (Figure 3) **NOTE:** Be careful as the parts below the black plug are spring loaded and may go flying if you aren't paying attention!
- 3) Remove the clear, plastic lens from the laser pointer. (Figure 4) **NOTE:** It may be stuck, in which case you simply need to poke at it with a pen to center it. Again, be careful that it might go flying!
- 4) Place a roll of tape near one corner of a business card or index card. (Figure 5)
- 5) Flatten the tape roll down (or you could just use double stick tape if you have it) and punch a hole through the tape and business card. (Figure 6)
- 6) Place the plastic lens over the punched hole. The lens should be just bigger than the hole so the tape will hold it in place. (Figure 7)



Figure 3

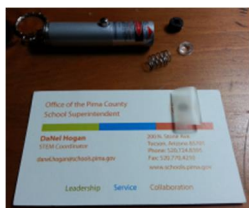


Figure 5

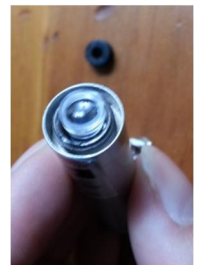


Figure 4



Figure 6

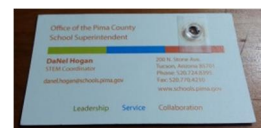


Figure 7

See the next page for directions on how to use the lens with a phone or iPad/tablet, as well as a few hints to get amazing images like the sample photos shown!

\$1 Macro Lens Use and Tips for Capturing Great Images



Figure 1



Figure 2

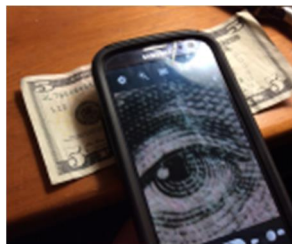


Figure 3



Figure 4



Figure 5

On the left, you can see how the lens can be used with a device that has a case around it. (Figure 1) Flip the lens inward so it touches the face of the camera on the device. (Figure 2) Flip the device over and turn on the camera mode. Center the lens on the camera and then push in on the lens so the tape around it holds it in place. You may need to secure the business card, once the lens is centered, using another piece of tape. Finally, find something interesting to photograph up close, like a five dollar bill. In Figure 3, you can see the phone focused on the eye of Abraham Lincoln. The macro lens has a very specific focal point, so you will have to adjust the distance from the object you are photographing until it comes into focus.

Figures 4 and 5 show how you can use the lens with a device not housed in a case. In this situation, it is an iPad. You again want to put the device on camera mode and center the lens over the camera before securing it with another piece of tape. Notice how Figure 6 again shows the eye of Lincoln and Figure 7 shows the eye when you zoom in. Yes, you can still use the zoom on your device's camera to get even closer!

Figures 8 and 9 show how you can build a holder to keep the lens safe and at the ready either in your wallet or desk drawer.

Have fun! The images below show some wild flowers with a photo taken using a cell phone camera and then subsequent images taken with the same cell phone using the macro lens to take a closer look!

Adapted from: <http://www.artfido.com/blog/40-clever-life-hacks-to-simplify-your-world/>

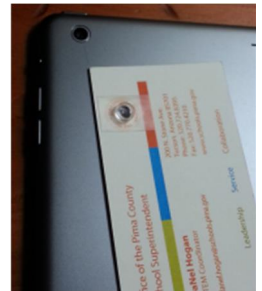


Figure 4

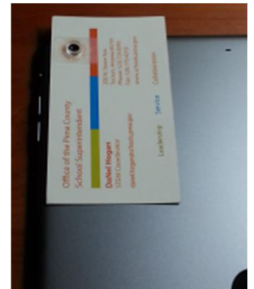


Figure 5

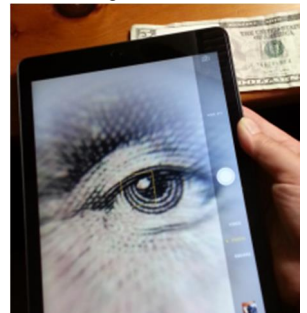


Figure 6

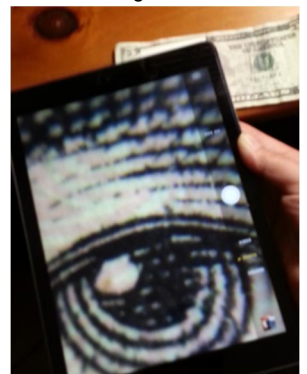


Figure 7

