Cell Phone Photography 101
An Introduction to Using Your Phone’s Camera
Text and Photos by Chris Goforth
Overview

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Introduction to Photography
Introduction to Photography

- Photography is essentially painting with light
- Cameras consist of a lens, a piece of glass or plastic, that focuses the light in an area onto the back of the camera, and a sensor or film that captures the light to make the image
Introduction to Photography

- By adjusting the amount of light that enters the camera, you can control what the final image looks like. With a point and shoot camera or an SLR/DSLR, you can usually adjust the aperture (controls how much of the frame is in focus), the shutter speed (controls how long the film or sensor absorbs light), and the ISO (controls the crispness of the image). You have a lot of control over what the final image looks like.
Introduction to Photography

• Cell phone cameras rarely give you much control over your settings and simply choose the settings that best suit the light levels when you click the shutter release/button.

• You need to explore the limitations of your camera to take best advantage of what it can do!
Limitations of Cell Phone Cameras
Limitations of Cell Phone Cameras

- Itty bitty sensors!
  - Need lots of light
  - Shaky hands or moving subjects are a problem

The shark is blurry because there was low light and it was swimming
Limitations of Cell Phone Cameras

• Itty bitty sensors!
  • Need lots of light
  • Shaky hands or moving subjects are a problem
• No optical zoom (aka, zooming in by moving the lens)…
Limitations of Cell Phone Cameras

Holly Tree

Zoomed in with camera (dark!)

Zoomed in by walking closer (better!)
Limitations of Cell Phone Cameras

• Itty bitty sensors!
  • Need lots of light
  • Shaky hands or moving subjects are a problem
• No optical zoom
• Shutter lag (time between pushing the shutter release and when the photo is actually taken) can be terrible

This was supposed to be a photo of a bee on a flower…
Limitations of Cell Phone Cameras

• Itty bitty sensors!
  • Need lots of light
  • Shaky hands or moving subjects are a problem

• No optical zoom

• Shutter lag can be terrible

• Flashes on smartphones are generally atrocious...
Limitations of Cell Phone Cameras

No flash

Flash
Limitations of Cell Phone Cameras

• Very little depth of field

Cell phone photo – notice that the legs pointing toward the back are blurry due to the low depth of field.

DSLR photo – notice that the legs pointing toward the back are in focus. The depth of field is greater.
Limitations of Cell Phone Cameras

- Very little depth of field
- Very little control over the settings of your camera
  - Expect some motion blur, grainy photos in low light, and other less than desirable conditions
Limitations of Cell Phone Cameras

• Very little depth of field
• Very little control over the settings of your camera
  • Expect some motion blur, grainy photos in low light, and other less than desirable conditions
• Details may be lost in less than perfect lighting
Limitations of Cell Phone Cameras

The light from the sun is so bright that all the details of the landscape are lost.
Limitations of Cell Phone Cameras

• Can’t get very close to your subject
  • However… (We’ll talk about how to take phone macro photos in a bit!)
Tips for Taking Great Cell Phone Photos
Tips for Taking Great Cell Phone Photos

• Zoom with your feet, **not** your camera
• Maximize the light on the subject
• Hold your phone VERY still
  • Brace your arms
  • Use a tripod
• Fill the frame and isolate the subject (applies to all photography!)
Tips for Taking Great Cell Phone Photos

• Remember your depth of field!
  • Make sure the parts you want to have in focus are actually in focus
• Add attachments (more about this in a moment)
• Use photo editing apps to improve imperfect photos
• Practice makes perfect!
Cell Phone Photography Attachments
Cell Phone Photography Attachments

- **Macro Lenses**
  - Photojojo (works with all phone brands), Olloclip, Squidcam, Easy Macro, Others!
- **Fisheye lenses**
- **Telephoto lenses**
- **Polarizers**
- **Lens filters**

Adding attachment lenses can expand what you can do with a cell phone camera!

Taken with a Photojojo macro lens
Photography Apps
Photography Apps — A Few Suggestions

Taking Photos
• Your phone’s camera app
• Camera+
• Instagram
• Hisptamatic
• Camera Aweoms
• MANY others!

Editing Photos
• Camera+ (recently new and improved!)
• Snapseed
• Photogene2
• Many others!
Sharing Your Photos
Sharing Your Photos

- **Online:**
  - Flickr
  - Picasa
  - Google+
  - Deviant Art
  - Pinterest

- **Apps:**
  - Facebook
  - Instagram
  - Hipstamatic
  - All of the products in the “Online” category
Sharing Your Photos

• Citizen Science Projects
  • iNaturalist
  • Project Noah
  • Leafsnap
  • Rephoto
  • eBird
  • Lost Ladybug Project
Practice Shooting!
Practice Makes Perfect!

The best way for you to learn the limitations of your cell phone camera and improve your cell phone photography is to practice! Take photos in lots of different lighting conditions. Play around with apps and attachments. See just how close you can get to something before it becomes blurry and try out different methods for keeping your camera as still as possible. There is a lot of variation in cell phone cameras, and while the tips I’ve provided here apply to most phone cameras, the more you practice, the better you’ll become. So get out there and practice! It’s the only sure fire way you’ll see improvement in your photography.
Sources

• Many cell phone camera attachments are available at photojojo.com, endless others at Amazon.com. Olloclips are available at Apple stores.

• Search for apps in your phone’s app store area
  • Some are free, others have a small fee
  • Read reviews before you buy! The people who write reviews have often played around with the app enough to know what they’re talking about. Also, be wary of any paid app that has no reviews. It doesn’t necessarily mean it’s a bad photo app, but there are a lot of scams out there too!

• Contact Chris for links to any of the things you’ve seen here! thedragonflywoman.com/contact