How to Take Awesome Photos

You don't need a lot of expensive equipment to...

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INTRODUCTION

You don't need a lot of expensive equipment to shoot amazing guide photos—just proper technique and a little practice. The photos in this guide were taken with a **Canon PowerShot SX120 IS** (a basic point-and-shoot camera) and a pair of inexpensive 10" clamp lights from the local hardware store. Follow along to start taking guide photos like the pros.

Step 1 — Set Up Your Workspace
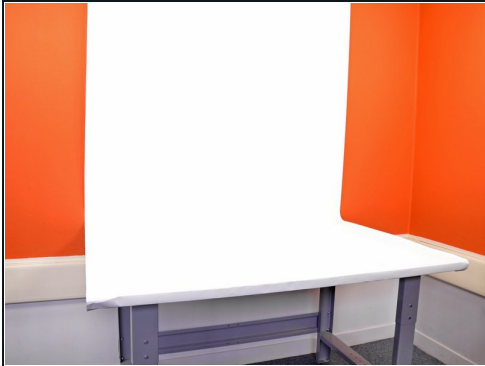
- **Find a clutter-free table or flat workspace.**
  - ⓘ Try to minimize ambient light. A table by a window can have varying light conditions throughout the day, resulting in inconsistent photos and, if you are a vampire, possible death.

- **Use a clean white background.** Inexpensive matte poster board or butcher paper works best. Avoid using bedsheets.

- **Use two lamps**, one on each side.

- **Use LED "daylight" bulbs**, or bulbs in the 5000-5500K color temperature range, for a clean white light. Avoid household incandescent bulbs, which cast an ugly orange glow over your photos.

- **Use a tripod.** For crisp, clear shots, you need to keep the camera rock steady.

- **Don't use flash!** Flash is the enemy.

- **Use the highest resolution setting.** We love large photos!

- **Shoot in 4:3.** Most point-and-shoot cameras use a 4:3 aspect ratio automatically, while DSLRs shoot in 3:2.
  - It may be tempting, but don't rotate the camera to take portrait shots. For layout consistency, we require all photos to have a landscape 4:3 aspect ratio.

  - You can always crop your photos to 4:3 later, but it will save you a little time if you capture your images in 4:3 to begin with.

- **Shoot in aperture priority mode, and boost the exposure compensation.** Auto mode does a decent enough job, but your light background will likely cause your photos to come out a bit dark. For best results, use aperture mode (usually denoted by an **A** or **Av**) and set the exposure compensation to around +1.

Step 3

- **Use a delay timer or remote.** Believe it or not, just having your shaky hands on the camera can introduce a little blurriness into the shot. Set your camera to a short (1 or 2 second) delay, using the self-timer setting, so that you can remove your hands completely after pressing the shutter button.

- **Connect to a laptop or live monitor.** Checking your shots at full size will help you correct issues early, before they become a problem. Use a camera cable, or take a few shots and then pop the memory card into your computer.

Step 4 — Take Some Test Shots

- You're ready to start shooting! Photos, that is.

- Take a couple photos and pull them up on your computer screen to see how they look. Common issues include:
  - **Harsh shadows**—Too much light from a single source will create harsh shadows and make details harder to see. Reposition your lights or add more lights to minimize shadows.

  - **Glare**—Bright lights sometimes create a spotlight effect, especially on screens and shiny surfaces. Reposition your lights and/or angle the device to eliminate glare.

- Another common issue is **white balance**, which tells your camera what true white is in your photo.

- Sometimes the auto white balance doesn't work properly. If your "whites" don't look white, try a manual setting.
  - For daylight bulbs, use your camera's "daylight" or "fluorescent" white balance setting. If you *must* use incandescent bulbs, set the white balance to "incandescent" or "tungsten" (sometimes called "indoor"). This will help remove the orange hue from your photos.

  - Some cameras have a custom white balance feature, allowing you to define "white" by taking a shot of your nice white background.

- ⓘ It's also possible to correct white balance after the fact, using photo editing software such as Photoshop—but it's much more time-intensive than setting up the camera correctly.

Step 6

- **Before you proceed, clear a separate workspace** for disassembling your device. Working in the photo area will create a lot of unwanted clutter, complicating your photos—and any dirty parts will mar your white background.

- Only switch to your photo table when you're ready to set up a shot.

Step 7 — Practice Your Technique

- **Use your hands/tools in each shot** to demonstrate the action being performed.

- **Shoot in a first-person perspective.** Try to set up each shot so that it matches what your readers will see.
  - This **first** image isn't necessarily bad; the photo is well-lit, free of clutter, and the required action is clear—but the image is not from the reader's perspective.

  - The **second** image does all of that equally well, and also matches what the reader is likely to see.
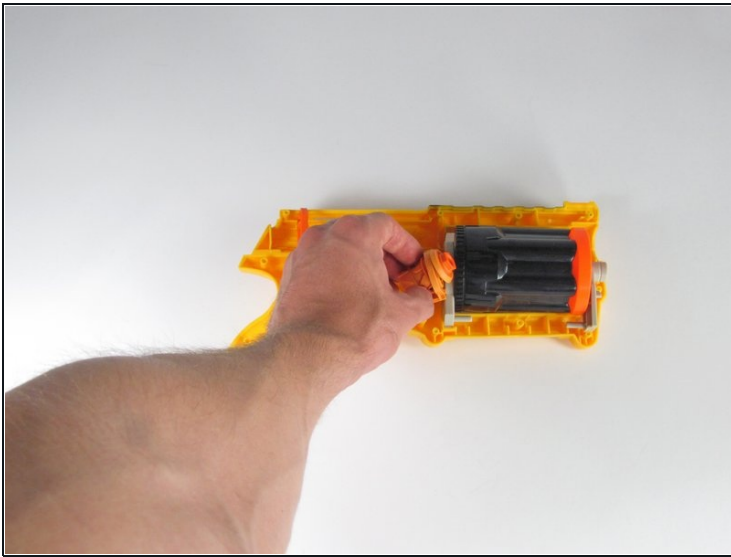
- **Fill up the frame with the subject.** In this photo, the subject is too far away, using up only a small part of the frame.

- Try not to let your arms or hands dominate the view. Work with your teammates to avoid taking shots like this one!

- If you're working alone, you can use the camera's delay timer to free up your hands.

Step 9 — Teamwork!

Image courtesy of Sauron
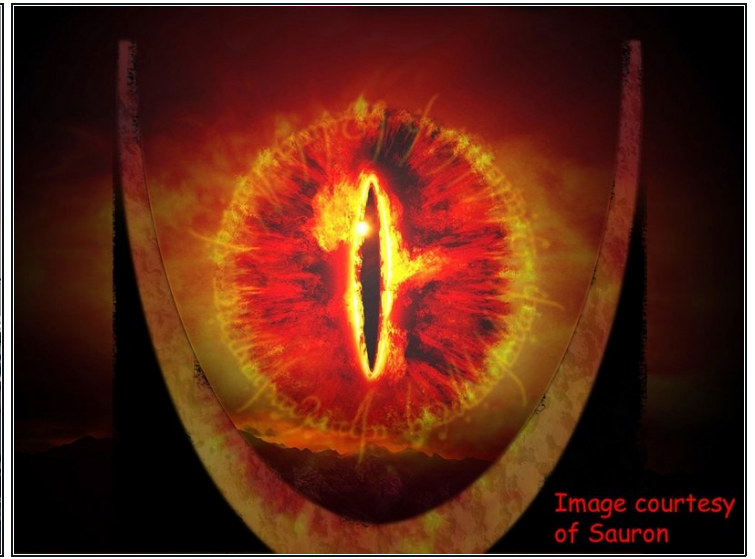
- Getting great guide photos is a group effort! Important roles include:
  - **Camera Operator**—Not for the faint of heart, this job requires patience, a little technical skill, and an eye for detail. Opposable thumbs are a plus.

  - **Lighting Operator**—Requires attentiveness and near immunity to heat. Must be trusted to wield the power of blinding light responsibly; anyone who owns a laser pointer should be instantly disqualified.

  - **Hand Model**—Someone to hold parts and tools completely still from awkward, sometimes precariously balanced positions. If any of your friends are gymnasts or Twister champions, this job is for them. Barring that, look for someone with clean fingernails, who doesn't write phone numbers on their hands.

 - **Note Taker**—A master scribe, whose **eye** sees all.

Step 10
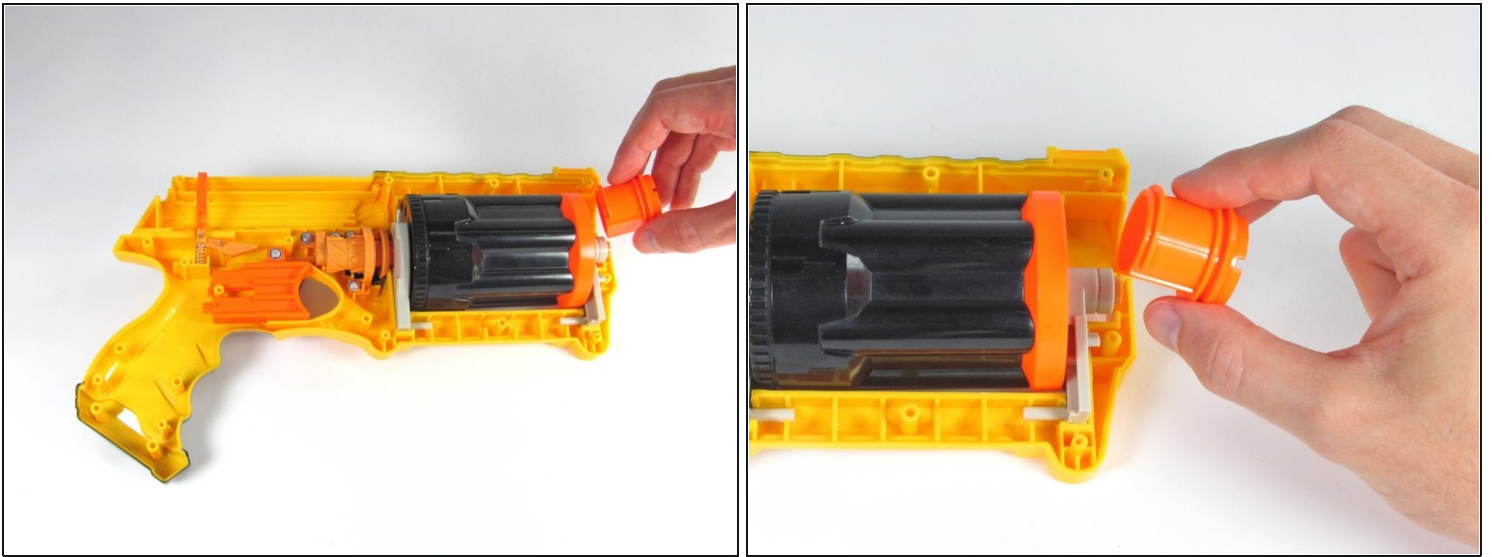
- **Keep the action in the center.** Draw attention to the required procedure by centering it in the frame.
  - ⓘ It's okay to show a little less of the device in order to center the action; just be sure that it is clear what part of the device you are working on.

- **Keep the subject in focus.** It's easy to accidentally focus on your hand instead of the device you're working on.

ⓘ On many point-and-shoot cameras, you can lock the focus by holding the shutter button halfway down. Set up your shot, lock the focus, and *then* move your hand into position. To complete the shot, press the shutter button the rest of the way down.

⚠️ **If *none* of your photo is in focus**, it's often due to too much movement from the camera or the device. Remember to use a tripod and delay timer to keep the camera steady, hold your hands still, and try again. Adding plenty of light will also allow for a faster shutter speed, which helps reduce or eliminate blurriness.

Step 12
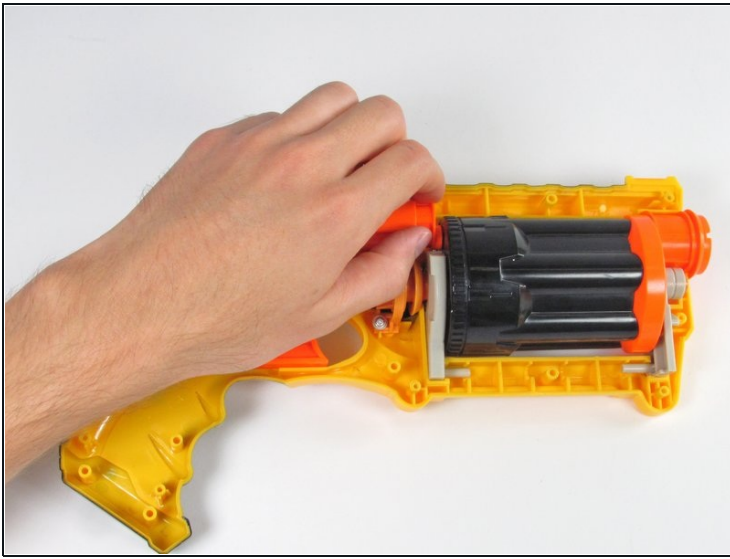
- **Take multiple shots for each step.** Try different angles and positions, and use the one that best conveys what the reader needs to do.

- It's easy to block the action with your hands. Switch hands or change positions in order to give your readers a better look at what's going on.

Step 13
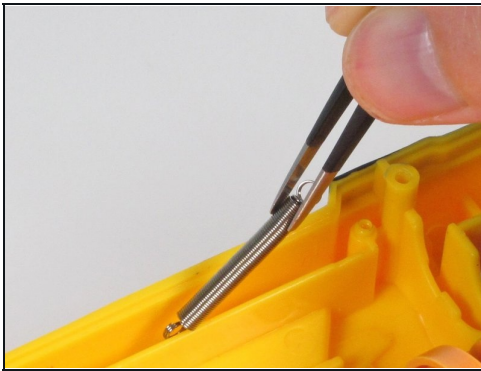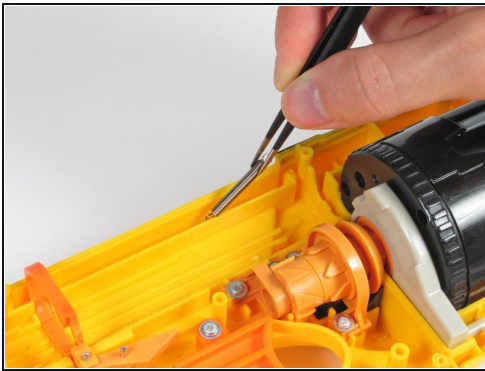
- **Zoom in to get detailed shots** of actions, especially when performing smaller or more intricate tasks.

  ⚠ If you zoom in too far, your readers may lose track of what they're looking at. Try to leave enough reference points in the photo so that readers can orient themselves.

  - In this example, the black "bullet" chamber is a good reference point. Without it, the action is still clear, but the *location* is not.

- For very close shots, your camera may have trouble focusing. Switch to **Macro** mode (usually denoted by a flower icon) for extreme close-ups.

Step 14

- **Don't use metal prying tools** in your guides except as a last resort.

- The nylon spudger and plastic opening tools included in your toolkit are ESD-safe and are less likely to cause cosmetic damage.

- Only instruct your readers to use a metal spudger when safer tools aren't up to the task. Never use a screwdriver to pry open your device.

Step 15

- **For complex actions, use multiple photos in sequence.** You can create a "stop-motion" or "flip-book" effect, using up to three photos in one step.

Step 16

- **Avoid "Ta-Da!" photos.** When writing instructions, it's important to be concise. A photo of a disassembled device doesn't convey any action or procedure.
- ⓘ Layout shots like this are often used on teardowns. Teardowns provide a fun first look at a device's hardware, but they are not intended to be used as instructions.