# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview</td>
<td>3</td>
</tr>
<tr>
<td>Design &amp; Planning</td>
<td>4</td>
</tr>
<tr>
<td>Tools</td>
<td>6</td>
</tr>
<tr>
<td>Materials</td>
<td>8</td>
</tr>
<tr>
<td>Techniques</td>
<td>11</td>
</tr>
<tr>
<td>Shop Safety</td>
<td>14</td>
</tr>
<tr>
<td>Comfort &amp; Hygiene</td>
<td>15</td>
</tr>
<tr>
<td>Safety &amp; Self-Care</td>
<td>17</td>
</tr>
<tr>
<td>Travel &amp; Hotels</td>
<td>19</td>
</tr>
<tr>
<td>Repair</td>
<td>21</td>
</tr>
<tr>
<td>Performing in Costume</td>
<td>22</td>
</tr>
<tr>
<td>Photos and Video</td>
<td>23</td>
</tr>
<tr>
<td>Stage Events</td>
<td>25</td>
</tr>
<tr>
<td>Resources</td>
<td>26</td>
</tr>
</tbody>
</table>
  - Relevant Guides from Adafruit |      |
Overview

LIFE HACKS are simple hints for life’s small nuisances.

- Don’t use aluminum foil when storing meatloaf!
- Razors can last 2–3 times longer simply by storing edge up!
- Got eggshell fragments in the mixing bowl? Scoop them out easily using one of the shell halves, not your fingers!

This guide is about COSPLAY HACKS. Yeah, cosplay — dressing up as characters for conventions and social gatherings, parades, movie openings and Halloween — because this too has its small nuisances!

This Adafruit guide is not about electronics and code. There’s a bit of that, because computers touch everything these days, but the guide examines the broader topic with or without any particular tech.

What follows are over 100 hacks for cosplayers, ranging from “Level 1 basics” to “Wait, what?”

This guide can serve as a template for a fast-paced convention panel! Feel free to trim some items or whole sections and substitute your own favorite hacks as suits the event’s focus and participants’ specialties.
Acknowledgements

THANK YOU to the following folks for contributing hacks, participating in convention panels, and allowing use of their photos in this guide:

- Laura Mercer (@Kazulcosplay on Twitter)
- @Komickrazi Studios
- Lance Ikegawa
- @chardane
- @braxus

And of course, the authors of several Adafruit Learning System guides from which images were borrowed!

Adafruit projects on this page: [Halo Energy Sword](https://adafruit.it/10Pd), [Princess Peach LED Crown](https://adafruit.it/10Pe), [Raspberry Pi Pipboy 3000](https://adafruit.it/10Pf), [BioShock little sister syringe](https://adafruit.it/10PA)

Design & Planning

- If a precise replica is a design goal, work only from primary sources—photos of the original costume or hero prop, or in-game screen shots. Relying on just any ol’ Google image results will mix in a ton of concept and fan art, stunt props, plausible but inaccurate AI fakes and so forth. But...

Accuracy isn’t everything. Sweating the details is a fun way to connect with other super fans...but to the layperson, even halfway is perfect. The **80/20 rule** in action! Both approaches are valid, do it however you enjoy.

LEFT: random Halloween masks on-hand, little resemblance to these characters...but paired with the right clothes, glasses, props...all of Monsterpalooza instantly recognized Teen Wolf and his dad! Photo: @braxus
Designing with CAD, or sculpting in miniature first? Metric units are easier to scale up versus feet, inches and fractions.

- Add hidden pockets or make a themed bag matching your costume to hold essentials. Or...

- Smartphones are indispensable, but can throw off a look. This Sheikah Slate, a faithful prop for Charlyn’s Zelda cosplay, conceals an iPhone inside! Here’s a build log.

  There’s a saying in art and design, “If you can’t hide it, make it obvious.”

- If you’re not a cosplayer yourself but got roped into helping — perhaps sewing, 3D modeling or fabrication skills — a thing to understand is we really do love sweating the details, and often it’s the journey more than the finished thing that sparks joy. Don’t hesitate to show off the methodology or detective work you put in to get accurate dimensions, colors or shapes. We love that stuff!

- If incorporating electronics in a costume or prop — please, for the love of everything — do not use a solderless breadboard in the finished item! Lovely for prototyping but it will fall apart at the worst opportunity. Reliable connections are soldered. A breadboard project can be moved directly 1:1 to a Perma-Proto board for a more robust build.

Adafruit projects on this page: Overwatch Prop Gun: Lucio's Blaster.
Tools

Recurring themes you’ll come to recognize in this section...

- **Splurge a little** on your tools. You don’t have to go overboard, even a modest indulgence pays dividends. Good tools last years or a lifetime, and are a pleasure to use!
- **Maintain** those tools to maximize their life.
- Use each tool for its *intended task(s) only*.
- But do **use** them. The only thing sadder than a poorly-maintained tool is a pristine one still in the box because its owner fears that first scuff. A well-loved tool is a beautiful thing!

- **Fabric scissors are only for cutting fabric** (and people who use them to cut paper). **Treat yourself to nice ones**, and then a **sharpener** to make them last.
- But also keep around some **junky dollar store utility scissors** for **dirty tasks** like cutting adhesive-backed Velcro®.

- “**Don’t buy the cheapest bike in the shop**” — this is a metaphor about sewing machines and other tools. The “cheapest bike” is designed to hit a price point, that’s it. All other factors—durability, repairability, fitness for the task—are secondary. A cheap sewing machine easily breaks, and repair can exceed the original cost. Going up just a step or two gets a vastly better tool!

  “But I made [item] using [bottom-of-barrel tool]!” Sure, happens all the time. Understand the difference between succeeding because of one’s tools and success despite the tools. Time is precious!

- Seems like every town has that one garage entrepreneur restoring and selling **older sewing machines**. Check Craigslist. Vintage machines—properly tuned up
—are a delight! So they lack 100 computer-controlled stitches, but they cover the basics and are rugged, metal beasts that will sew through anything.

- **Sewing clips** (aka Wonder Clips) are a quick and less painful stand-in for straight pins...easily holds multiple layers of fabric.
- **Binder clips** (office supplies) are cheap and can work as sewing clips in a pinch, but risks scratching the sewing machine bed.

**Sergers** (aka overlock machines) are rarely (if ever) threaded left-to-right, and will perform poorly if so done. Correct order for threading is buried in the manual somewhere. Find it and label it right on the machine!

- **Never** use your soldering iron for burning or melting holes in things, or texturing EVA foam. Get a separate wood-burning tool for these tasks...or, if you've upgraded your soldering setup and have an old junker iron, use that, and don't ever try to solder with it again. Exactly like the good scissors / bad scissors rule above.

- **Silver Sharpie markers**—great for craft foam and dark materials—should be stored **point down** for longest life.

- Use a **headlamp** (like for hiking) when hand sewing, especially dark thread on dark material.

- **If it sounds too good to be true**... “Eliminate the hassle of sewing!”, “An easy alternative to soldering!” Snake oil “alternative” products usually do a poor job. If they worked, they’d be how things get done, not alternatives.

Adafruit projects on this page: [Talking Computer from Star Trek](https://adafru.it/10PB), [3D Printed Star Trek Communicator](https://adafru.it/10PC), [Build your own Borg](https://adafru.it/10PD), [Circuit Playground Combadge](https://adafru.it/10PE).
Materials

- **Dollar stores** and **thrift stores** (secondhand shops) are a goldmine! Costume jewelry, mixing cups and sticks, costume shoes, werewolf flannels, toy props and Nerf weapons just needing a nice paint job...
Give thrift store clothes the **sniff test** before buying. Sometimes items get donated because the cat got mad, and that smell never washes out.

“Too nice” garments can be **weathered** or **distressed** to look old and tattered…it’s fun! Belt sander, bleach, spray paint and so forth.

**Costume hacks have no gender**…it’s okay to look in The Other Department. If it fits and works as part of your outfit, it’s fair game. That “ladies” faux-fur vest could be part of a Viking getup. That “mens” motorcycle jacket looks good for a cyborg.

- Check if there’s a [Daiso Japan](https://adafru.it/10Oa) store near you. Have a friend hold your wallet...unless they’re a cosplayer too (now you’re both broke).

- **Buy all of the fabric for a project** from the **same bolt**. It might go out of stock...and if it returns, might come from a different dye lot that isn’t an exact match.

- **Check materials side-by-side** for visual consistency before buying. Even basic colors like white and black have subtle tints...two fabrics of the “same color” can actually clash!

- **Lycra®, spandex** and **elastane** are different names for the exact same thing. They’re not distinct materials.

  - Counterintuitively, fabric described as **“2-way stretch”** really stretches only one way: widthwise. **“4-way”** stretches width- and length-wise.

- If a costume requires **belts or straps** for armor, wings, a tail, etc., use the **widest** straps the costume can discreetly accommodate. Narrow straps dig in and are uncomfortable for extended wear.
• But flimsy wide straps can roll up and be just as uncomfortable. 2-inch scuba webbing is thick and roll-proof, if the costume design can accommodate it...and if your sewing machine is up to the task.

• Velcro® can be very strong on the shear axis, weak on the pull axis. Neodymium magnets are strong on the pull axis, weak on the shear axis. Each is better suited to different applications. One peels off, the other slides off.

• If using a store-bought “costume in a bag” for all or part of a cosplay (perfectly valid, everyone has a personal level of commitment), take a little time to spruce it up to fix that straight-from-package look. Iron out the creases (using a suitably low temperature; economy costumes are often molecule-thin polyester), distress with a bit of paint or sanding, or add embellishments with fabric glue. Just a little effort yields a big improvement!

• Similarly, whether purchased or made from a pattern, a little tailoring goes a long way! (I'm especially looking at you, Star Trek cosplayers.)

If it’s an off-the-rack shirt, maybe that means bringing up the cuffs or tapering the midriff. If made from a pattern...sure it’s no fun making the same thing two or three times...but a couple quick unfinished prototypes in muslin or dollar clearance fabric can help you really dial in the shape!
Covering up in a potato sack is unbecoming of the role. Regardless of your body type, a well-fitted garment exudes confidence!

- The threaded neck and cap from a plastic soda bottle can be used to build props that break down for storage and transport.

- Contact glues such as Barge and rubber cement should be joined when dry, not wet! Apply a thin layer to both surfaces, let dry, then press together. Hold is instant, there are no do-overs.

- Many specialty glues — Barge, E6000, etc. — spoil quickly once opened. Buy bulk packs of mini-tubes rather than one giant economy tube. It’s less economical per ounce, but more ounces get fully utilized.

- For two-part epoxy in a double-plunger dispenser: snip away the plastic piece that joins the two plungers for finer control over each side.

## Techniques

3D printing is a dumpster fire, but steadily improving. Get a head start learning the jargon and tools...some, like TinkerCAD (https://adafruit.it/10KB), are free.

- Alternate the gender of snaps along a seam...innie, outie, innie, outie...easier to align when closing a costume.
If airbrushing a smooth gradient from color “A” to “B,” introduce at least one additional and slightly off color “C” for a more vibrant transition. Two-tone just looks linear and flat somehow. This is true in digital printed gradients as well!

LEFT: 2-color (red, black) gradient vs 3-color (yellow, red, black). Bam! 3-color red-purple-black would also look good here.

• **Baking powder** or **spit** instantly sets **super glue**.

• **Baby powder** (talc) and **super glue** makes a workable pastel, useful for building up structure and patching holes in **resin casts**.

• **Set hot glue quickly** using Dust-Off spray, holding the can upside-down to release liquid.

• **Remove hot glue** with a cotton swab dipped in **isopropyl alcohol**. This doesn’t dissolve the glue, it just peels off cleanly!

If your costume has **electronics** powered from a **USB power bank**, design a pocket to fit this with the port **opposite** the opening and cable doubled back to keep it from pulling out.

With the tight bend, check the cable for fraying after every outing...or better yet, get a right-angle USB cable for this.

• **Use a seam ripper’s** shorter, **ball-tipped point** to quickly “unzip” along a seam; the longer point is to pick individual threads. Maybe obvious for some...but most
sewing notions don’t include directions, and even experienced costumers sometimes don’t know the routine.

• With your scissors sharp and cutting in long strokes, you can **pivot** both the scissors and the work piece as you go to cut **smooth curves**. “Chop-chop” cutting looks like a kid’s art project or low-poly game graphics.

• There’s a strong tendency to want to machine sew everything...but learn some basic **hand-stitching** to mend your suit when away from home.

For complex or form-fitting costumes, a “duct tape dummy” of one’s body can be a vital aid. You can search for and find tutorials elsewhere...that’s beyond this guide...but here’s specifically the cosplay hack part...

Instead or in addition to EMT shears, a **safety carton opener** (such as Klever® Kutter) is more comfortable in tight spaces like the elbows, and less likely to nick skin elsewhere. If it still tugs uncomfortably on skin, a spritz of isopropyl alcohol helps it glide like butter!

Adafruit projects on this page: **Overwatch Prop Gun: Lucio’s Blaster** (https://adafru.it/MaK), **Electronic Demon Costume** (https://adafru.it/doO).
Shop Safety

- If you smell it, you are breathing it. **Wear a respirator**, or at least **work outside**!

- If you anticipate a lifelong passion for making—years of weird glues, working with fiberglass, or tons of sanding—I cannot overstate the value of a brand-name **full-face respirator** such as the **3M 6000 Series**. Do not be tempted by cheaper no-name alternatives...this one truly is an investment:

  Offered in three different sizes (6700, 6800, 6900 models) for best fit. Extremely durable, made from chemically inert silicone. Can be fully dismantled, washed and reassembled. Every single little piece can be individually ordered and replaced, and will be available probably forever. Mine's only needed new valves, still available after **20 years**.

**Filter cartridges** should be replaced **at least yearly**, more with heavy use. Get the correct type(s) for different materials — particulates, organic vapors, etc. Store in zip-lock bags when not in use.

- **Pets** are a fraction of your body mass and much more sensitive to chemical exposure. **Keep them away when working with paints and adhesives!**

- There's a persistent myth that fumes from lead-free solder are necessarily more toxic than from leaded solder. **This is incorrect.** (https://adafruit.it/10NA) **Two solders with the same flux (e.g. “rosin core”) will have similar safety profiles...**
except one has lead. If unsure, any branded solder will by law have a corresponding PDF safety data sheet (SDS, or MSDS) available for download.

- Teasing or belittling others for being conscientious of safety—using eye, ear or breathing protection, or favoring less hazardous materials—is a fantastic way to get kicked out of my workshop and never invited back. Drop the toxic bravado and focus on the work. Not a cosplay hack, just setting the bar.

### Comfort & Hygiene

Cosplay’s “dirty secret” is that some delicate outfits simply can’t be washed, or receive infrequent hand-washings with some repair afterward. There’s steps we can take both with costumes and our bodies to keep things fresher longer...

- **Fresh Again for Uniforms and Costumes** spray pre-treats a costume to stay fresher.

  A base layer of Under Armour® HeatGear or a Lycra dive skin (or anything in a nylon or polyester Lycra blend, not cotton blends) improves comfort, endurance and keeps costumes cleaner. This works even with “street clothes” costumes and uniforms.

  Seems counterintuitive, it’s an extra layer. But perspiration is a feedback loop; because synthetic fabrics wick, perspiration works more effectively and you sweat less.

  LEFT: wicking base layer, product image from Raven Fightwear.

- **Wash** Under Armour / dive skins / etc. **before first use**. They’re often heavily dyed and will stain costumes and skin if used straight from the package.
• A couple sets will get you through a convention weekend…but if you’ve only got one, washing in a hotel sink with shampoo can suffice. Rinse, roll up in a towel, wring gently, then hang up to dry overnight (or even faster, with a fan).

• Allow 48 hours for aromatic foods like garlic to flush out of your system before costuming; eat a bit bland. The top 3 foods affecting sweat odor (and thus costume freshness) are sulfur-rich plants (garlic, onions, curry), alcohol and red meat.

Not meat- or booze-shaming here, it’s just biology. You don’t have to abstain completely, just dial it back for a couple days before (and then during) a big cosplay weekend to help keep things pleasant.

Tangent: a frequent complaint of keto dieting is wicked B.O. Consider pausing it a week before a con, allowing body chemistry to normalize, then resume after the event. Small setback, but this won’t completely undo all progress. Bonus, social dining is easier when not a picky eater.

• If you’re prolific with perspiration in certain areas (e.g. armpits) and are concerned about visibly soaking through, place absorbent feminine pads in those spots. It’s okay, even for dudes. Really.

• The number one key to keeping costumes fresh is to get them dry ASAP! If you have a hotel room at a convention, that means fans...
  ◦ A blower or floor dryer fan moves the most air for its size and cost, but are loud. Not for light sleepers.
  ◦ Vornado® fans are quietest for their size and airflow, but can be costly to purchase new. Keep an eye out at garage sales and thrift stores. Model 293 is especially large and rugged.
  ◦ Always take a few seconds to wind up the power cord before transporting fans and power strips. They inevitably end up atop a huge stack of luggage and you will trip over dangling cords, every time.

• Diversey End Bac® II—a hospital-grade disinfectant spray—is the gold standard for costume hygiene. It’s the treatment that sweaty Hollywood creature suits get! Spray down the inside of a costume after disrobing, allow at least 30 seconds for it to work, then get air blowing over it. But...
• Certain **generic disinfectant sprays** from Target, Walmart and others have the **exact active ingredients in similar ratios**, usually much cheaper! Check the can for:
  - n-Alkyl dimethyl benzyl ammonium chloride 0.072%
  - n-Alkyl ethylbenzyl ammonium chloride 0.072%
  - Ethanol 53.088%
  - Other: 46.768%

• If you don’t have fancy disinfectant spray, **70% isopropyl alcohol** in a spray bottle handles the worst of it. Not the higher concentrations...70% is actually the **optimal ratio** for disinfecting!

• With any disinfectant or cleaner, **avoid** painted areas of a costume, hot glue, and certain plastics. Ideally, **test** costume materials and chemicals for compatibility during the planning & building stage.

• Make sure any nylon **belts, straps and buckles** also get a good spraying, as these can really hold a bouquet.

Oh no! Despite your best efforts, costume funk has crossed the line. Try...

**Double down** on the disinfectant spray...or even bleach if the costume allows. Add a cup or two of **white vinegar** to the wash.

Turn costume inside-out, hang or lay outside in **full sun**...over several days if necessary. UV light has disinfecting properties!

If a costume’s still unpleasant after all that...it’s probably **mildew** and the suit is **trash**. Never let a costume sit around wet!

“Genius is one percent inspiration and 99 percent perspiration.”

— Thomas Edison, cosplaying as a Wookiee

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**Safety & Self-Care**

As silly and asinine as cosplay may seem, it does require some underlying sense of seriousness. High-energy cosplay has elements of endurance sports like cycling or running, and—with large, heavy costumes—specific dangers as with diving or mountaineering. I've personally seen some of these “silly and asinine” costume
outings end in ambulance rides. It’s not all solemn business, but please do take care of your body’s needs while out having fun...

- Live by the “6-2-1 rule” for self-care at conventions: each day get at least 6 hours sleep, 2 square meals and 1 shower. These are minimums!

- Always do a site walkaround before costuming, even in familiar venues. Scope out hazards and safe spots. Know where there’s water, first aid, and if there’s a cosplay repair station.

With bulky suits with limited vision and mobility, a costume handler can be your eyes and ears. Handlers should...

Stay focused. No texting, gaming or photography. If the cosplayer want pictures or video, bring an extra person specifically for that task.

Anticipate and avoid bad situations (trip hazards, fragile merchandise, etc.). Reacting to a problem is too late!

But you probably know that already.

The hack here is...

Move to a new position every 15 seconds, a technique professional bodyguards use to stay sharp and see every angle. Use phone or watch interval timer apps.

Take good care of your handlers, they actually have the harder job! Buy a meal, help with gas or expenses.

- Hydrate or diedrate! Dilute Gatorade with water, 1:1 mix or even less. Full strength is too sweet and can upset your gut. Vomiting is rarely in character.
CLIF SHOT or GU energy gel are small glucose packets that provide a short burst of energy if you “crash” while performing. Cyclists and runners swear by this stuff!

A bit sticky, so eat with care around costumes, and discard packet in a bag or trash can immediately.

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Travel & Hotels

- **Take inventory** at least twice before leaving home. Visualize yourself suiting up, and actually touch each item as you go, to verify it's present. The saddest thing in the world is leaving some vital costume piece behind!

- If it's a long road trip to an event, cover costumes and materials with a **white sheet** or moving pad. Hot cars can melt cosplay materials like Worbla.

- **Smash-and-grab** crime is on the rise. If parking and leaving a beloved costume **unattended** for any length of time...
  
  ◦ **Do not** leave costumes in Pelican cases or Rubbermaid Action Packers... or, if you must, then take the lid off, or even spread costume parts around the car trunk and re-pack it later. Similar cases are used for hauling A/V gear or power tools, and a thief’s **not stopping to take inventory**. Five seconds. They smash, they grab, they size it up later, elsewhere...and dump.
  
  ◦ Apple **AirTags** are about $25 each and can help locate lost items. They will not prevent theft, but might help recovery. Add a hidden pocket for one.

- In addition from lost item recovery (above), **AirTags** can be used as a positional **beacon** for meeting up with friends (tag locations can be shared with trusted people) for costumes that are too unwieldy for phone use.
IKEA FRAKTA shopping bags (19 gallon, large) are a great size for cosplay day trips. Durable, folds up in your convention bag, inexpensive ($1.50 at IKEA, $5 on eBay). STORSTOMMA is a more durable version, $4 at IKEA, in festive pride colors.

- If there's potable water, don't haul a bunch of bottled water or Gatorade to an event. Use a refillable bottle and electrolyte tablets or Gatorade powder.

- Soda bottle preforms (“baby soda bottles”) are waterproof and indestructible. Ideal for one con-worth of Gatorade powder, vitamins, or a tiny sewing kit.

- For outdoor events, bring plastic bags for packing your costume footwear. If... when...you step in something, this keeps it from sullying other parts of the costume. Bring some spares for drinks and snacks, too!

- “Visit” a location beforehand with Google Maps; know where vital shops and supplies are.
- Hotels and convention centers have floor plans online; scope out discreet break areas, restrooms and water fountain locations ahead of time.

- Over-the-door hooks take little space and provide extra costume-hanging spots in hotel rooms. Never, never use the fire sprinkler head!

- If your cosplay involves make-up, bring your own washcloths instead of trashing the hotel’s. Pick something other than white, as that’s most hotels’ standard towel color and housekeeping might haul it off with the laundry.

- If overnighting at a “badge con” (as opposed to “wristband con”) and have gaffer’s or sports tape in your repair kit (you should!), securely tape your RFID room key card to the back of your convention badge. One less item to carry!
A compact, minimal repair kit — small enough for your con bag — might contain:

- A handful of assorted safety pins. A good handler will always have these right on their person!
- Several feet of gaffers tape. Not duct tape. Don’t need the whole roll, just a few feet wrapped around a straw or pencil nub.
- Assorted zip ties.
- Straight and curved sewing needles, and 1–3 small spools of thread: black, white and neutral gray. Not a perfect match, but for quick repairs, these will blend at any reasonable distance, can replace later.
- Pocket multi-tool (e.g. Leatherman)
- One each black and silver permanent Sharpie markers.

Each costume might then have it’s own small auxiliary repair kit containing:

- Specific colors of thread and Sharpie pens for touch-ups.
- Specific spare parts, buttons, etc.

A more thorough repair kit for one’s base of operations (hotel room, car) might have:

- More of everything in the minimal kit (e.g. the rest of the tape roll).
- Hot glue gun and glue sticks.
- Cyanoacrylate “super” glue.
- 5-minute epoxy, toothpicks.
- A minimal electronics kit if your costume needs it; iron, solder, wire, tape.

Several people can share one repair kit. Be a good sport and take care of these items, keep them organized and clean, and replenish any contents after an event. Verify items like glues and markers are fresh and working.
Performing in Costume

Good performing adds more to a costume than any high-tech material or special effect. Best of all, it costs and weighs nothing!

But…

- Staying too in-character can sometimes make others uncomfortable. Know when to drop it; if you like, use a hushed voice to answer questions. Eye contact is a good indicator whether someone is engaged or put off!

- Get a helper or record yourself in costume to get a feel for your movement. Practice posing to see how you look to others when interacting or in photos.

- Read the “Twelve Principles of Animation” on Wikipedia — many are rooted in classic theatre and apply even to the most human of characters, just framed in the enjoyable context of cartoons.

- Don’t just stand there! Breathe, look around, scratch yourself! Think about the idle animations in video games, and be like that.
  - If nothing else, even just a distinct walk and a couple of standing poses can make the difference between wearing a costume and being the character.
Adafruit projects on this page: Xenomorph Halloween Candy Bucket (https://adafruit.it/10Qb).

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Photos and Video

For Photographers:

- Recording video or photos around a convention: call out “video!” or “stills!” so your subject can perform or pose accordingly. It’s not always clear now with phones and DSLR cameras.

- **Respect cosplayers’ downtime.** Sure it’s “public space,” but nobody wants to be photographed when they’re a hot mess. Thank you! If you simply must have that slice-of-life con lunch photo, consider staging it.

- If tasked with pictures of a specific costumer around an event, spend at least half your time **ahead of them.** There’s no frustration quite like peeling off a
complicated suit and then finding out it’s all pictures of your back side. That said...do try to work in some other angles! Reaction shots are nice to see.

- Allow cosplayers a couple of their own poses before requesting your own. When directing poses, respect the performer and character’s bounds, no spicy “off-limits” situations.

For Cosplayers:

Look off-camera in some photos, gesture a bit, tell a story without any words! Some eye contact is good, but in every photo it starts to resemble a school yearbook.

Image: @Komickrazi

- Do not stop in doorways, at ends of escalators or in high-traffic areas. If someone wants a photo, lead them to a better location.

Photos/selfies while in costume with gloved hands:

Most cell phones have voice commands for opening the camera app and snapping photos. The volume buttons on most phones (and some wired earbuds) work as a shutter control. The Back Tap feature on newer iPhones can be configured to open the Camera app, even when locked.

“Selfie sticks” often bundle a separate Bluetooth trigger, useful even without the stick (which are often banned in crowded event spaces).

Adafruit projects on this page: MONSTER M4SK Toon Hat (https://adafruit.it/FMA).
Stage Events

Costume competitions and variety shows are the highlight of many conventions...

- Add “karaoke” to music search terms to find an instrumental version of a song where you can add dialogue or your own alternate lyrics.
- Practice your routine with all participants repeatedly so they know their parts and cues.
- Request the stage layout ahead of time so you know the available space for movement, and information on backstage setup for your mobility and vision needs. Well-run cons know, they make this available on their web site.
- Use the full stage, and move to the front so everyone can see you. But not too close...accidents happen all the time.
- Take your time. Seems like forever, but time moves faster on stage.
- But not too much time. 60 seconds is good for a single costume presentation, 90 for a small group.
- If you have no act prepared, do a simple “X” walk...back corner to opposite front corner, across front of stage, front corner to opposite back corner, stopping for 10 second poses at each point.
- Move BIGGER! Get the attention of that person in the far back.

- Stage fright: the trick is to be shameless. “Picture the audience in their underwear” is tired, old school. No...picture yourself in your underwear and just go all out!

- Be friendly and professional, even when things run poorly. Do not “social media rage” about other contestants or the judges.

- Host or MC:
  - Never say “hope I’m pronouncing this right...” (or worse, “sorry if I’m butchering this...”). Take a moment to meet each participant, ask and repeat back their name, and add notes in your own handwriting, whatever phonetic spelling you require to say it correctly.

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Rather than announcing a costume as “worn by [name],” say “performed” or “presented” by. Costuming is not a passive act!

- Costume contests are incredibly subjective, can seem almost random sometimes. Don’t be too emotionally invested in any particular outcome. The best part of the experience truly is the camaraderie with other costumers!

Resources

A curated list of sources for particularly weird things. Not paid placements, just some obscure and/or trusted standbys.

**Stan Winston School of Character Arts** ([https://adafru.it/10KC](https://adafru.it/10KC)) — Streaming video, DVDs and online courses relevant to costume-makers.

**Reynolds Advanced Materials** ([https://adafru.it/10KD](https://adafru.it/10KD)) — resins, silicones, sculpting materials and more, with several retail locations around the U.S.

**WAWAK** ([https://adafru.it/10NF](https://adafru.it/10NF)) — sewing supplies. Request a free printed catalog and make it your bathroom reader. You will discover tools and things you never knew existed.

**Strapworks** ([https://adafru.it/10KE](https://adafru.it/10KE)) — nylon webbing, scuba webbing, buckles, Velcro® and more.

**TAP Plastics** ([https://adafru.it/10KF](https://adafru.it/10KF)) and **ePlastics** ([https://adafru.it/10La](https://adafru.it/10La)) — resins, acrylic domes and sheets, Delrin rods, sheets. Delrin (acetal plastic) can be heat-formed and is amazing for wing, tail and tentacle armatures.

**K&J Magnetics** ([https://adafru.it/fGR](https://adafru.it/fGR)) — all sizes and shapes of neodymium (rare earth) magnets.
Hairymann’s Closet (https://adafru.it/10Lb) — online retail for National Fiber Technology (https://adafru.it/10Lc), synthetic fur that stretches and breathes. This is specialized, pricey stuff sold by the square foot, not the yard...best for small accents. Watch for closeout sales a couple times a year!

EZCooldown (https://adafru.it/10Ld) — phase-change cooling vest can be worn under warm and bulky suits. Pricey, but will last many years through multiple costumes.

Relevant Guides from Adafruit

Originally was going to link to a few project tutorials here, not realizing just how many cosplay-tangent guides we now have! Kiss your weekend goodbye, because here are search results for Cosplay (https://adafru.it/10NB), Costume (https://adafru.it/10NC) and Halloween (https://adafru.it/10ND) (each opens in new window, and some guides will appear in multiple searches).