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# Electronic Equipment from Your Home... Don't Just Throw it Away

Electronic equipment is used by almost everyone. Advances in technology result in newer equipment continually becoming available for home use. Whether you are looking at computers, monitors, fax machines and copiers, television sets, stereo/audio equipment, cell phones, personal digital assistants (PDAs), or game consoles, there always seems to be a newer or better model with new features.



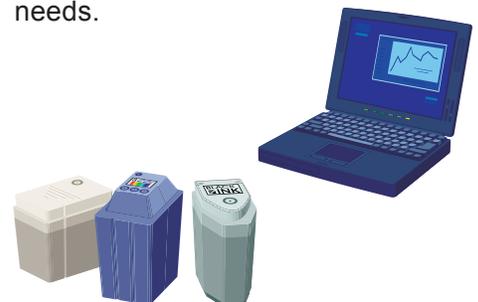
Electronic waste, or e-waste, is one of the fastest growing sources of waste in the United States. E-waste often has hazardous or toxic components that pollute the environment if they are improperly managed. Some of these components, such as heavy metals, are also valuable materials that can be extracted, recycled and reused to make new equipment. As our old electronic equipment becomes outdated, it is important that we think carefully about reusing and recycling materials, instead of just throwing equipment in landfills.

## What to do with your old electronic equipment

If your old electronic equipment no longer meets your needs, you have a number of options.

### 1. Extend the life of your existing electronics through repair, upgrade or tune-up.

Some electronics can be upgraded or may perform better through a simple tune-up. Check with a local electronics or computer store to see if your electronics can be configured to more appropriately fit your needs. You can often improve the performance of computers through file maintenance and removing unnecessary software. You may also be able to extend the life of your electronic equipment by updating the components yourself or asking a retailer to install new components. Upgrades to existing electronic equipment can add years of use. In the case of computers, even if an older model is not able to handle the newest technology, it still may be perfectly adequate for searching the Internet, word processing, using spreadsheets or otherwise meeting a student's needs.



## Hazardous or toxic materials in electronic equipment

**Batteries** - cadmium, lead, lithium, mercury, nickel

**Casing/cables/wiring** - antimony trioxide\*, beryllium, chromium, cobalt, nickel, polybrominated flame retardants (PFRs)\*, polyvinyl chloride (PVC)

### Display devices:

**Cathode ray tube (CRT)** - antimony trioxide\*, arsenic, barium, cadmium, lead, nickel, zinc

**Liquid crystal display (LCD)** - mercury in fluorescent lamp

**Other displays**, including light emitting diodes - arsenic

### Peripherals:

**Photocopier printer drums** - cadmium, chromium, selenium

**Printer inks, toners** - cadmium

**Printed circuit boards** - antimony trioxide\*, beryllium, cadmium, chromium, lead, mercury, nickel, PFRs\*, selenium, zinc

**Integrated electronic components** (Semiconductors, switches, condensers, controls, rectifiers, solder, transformers, etc.) - beryllium, cadmium, lead in solder, mercury, PFRs\*, selenium

\* - flame retardants

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## Sustainable electronics

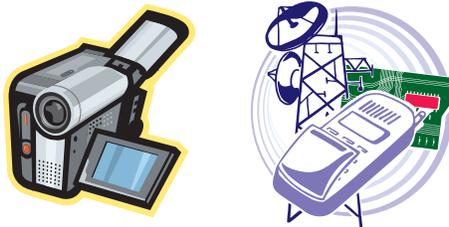
When it is time to purchase a new electronic device, the choices we make can affect the environment. Some manufacturers consider the impact their products have on the environment and actually make their products so that they are easier to recycle, more energy efficient and, when disposed of, less harmful to the environment. Here are some examples.

- The EPEAT ([www.epeat.net](http://www.epeat.net)) program identifies desktop computers, notebooks and monitors that are designed to be more environmentally friendly.
- Energy Star ([www.energystar.gov](http://www.energystar.gov)) products are more energy efficient than other similar products.

## 2. Give the electronics to someone who can use it

There may be other people who can use your old equipment or collectors looking for replacement parts. When you are finished with your old electronic equipment check to see if friends, family or others want it. Several not-for-profit organizations make used computers and cell phones available to those in need. In some cases you may be able to sell your equipment. As a starting point, check out these sites.

- Community lists, like Craig's list ([geo.craigslist.org/iso/us/oh](http://geo.craigslist.org/iso/us/oh)).
- Internet auction sites, like E-Bay.
- Charitable groups (Computer and Electronic Non-Profit and Charity Refurbishers at [www.epa.state.oh.us/ocapp/recycle.html](http://www.epa.state.oh.us/ocapp/recycle.html)) may pick up your used electronics at no cost.



## 3. Recycle the electronics

If you can not find anyone who is interested in using your old electronic equipment, it is time to recycle it. Most electronics are accepted for recycling including batteries, cell phones, computers, lamps and printer cartridges. These three resources may help you find a recycler.

- "Plug into e-Cycling" ([www.epa.gov/epaoswer/osw/conserve/plugin/index.htm](http://www.epa.gov/epaoswer/osw/conserve/plugin/index.htm)) - a partnership between U.S. EPA, consumer electronics manufacturers and retailers offering consumers opportunities to donate or recycle their used electronics.
- Earth911.org ([www.earth911.org](http://www.earth911.org)) - sponsored by U.S. EPA and participating organizations lets you search for electronic waste recyclers that service your zip code.

Businesses have different requirements for recycling or disposing of computers and other electronic equipment. For more information, Ohio EPA's fact sheet, "Computer and Electronic Waste Guidance," is available at [www.epa.state.oh.us/dhwm/pdf/Electronic\\_Equipment\\_Guidance.pdf](http://www.epa.state.oh.us/dhwm/pdf/Electronic_Equipment_Guidance.pdf).

- Ohio EPA maintains a list of "Computer and Electronic Component Recyclers" at [www.epa.state.oh.us/ocapp/recycle.html](http://www.epa.state.oh.us/ocapp/recycle.html).

## 4. Properly dispose of electronic wastes

Electronics contain many materials that are hazardous to the environment when they are disposed. If you cannot give away or recycle your electronic equipment, Ohio EPA recommends using community hazardous waste collection days or retailer electronic waste collection programs. Ohio EPA maintains a list of local electronic waste and household hazardous waste collection programs at [www.epa.state.oh.us/dsiwm/pages/recycpro.html](http://www.epa.state.oh.us/dsiwm/pages/recycpro.html). Also check with local businesses to determine if they are Plug into e-Cycling partners and/or have any collection programs that suit your needs.

## Where can I get more information?

If you have any questions on managing your household electronic waste, contact the Office of Compliance Assistance and Pollution Prevention at (800) 329-7518 or by e-mail at [p2mail@epa.state.oh.us](mailto:p2mail@epa.state.oh.us). Also see Ohio EPA's electronic waste Web page, [www.epa.state.oh.us/ocapp/p2/mercury\\_pbt/e-waste.html](http://www.epa.state.oh.us/ocapp/p2/mercury_pbt/e-waste.html).