



# E-waste Collection



## WASTE REDUCTION AND RECYCLING

### Project Guide

# Waste Reduction & Recycling

## Generation Earth Program

Generation Earth is a Los Angeles County Public Works environmental education program presented by TreePeople. Our goal is to educate and empower teens in Los Angeles County to be an active part of the solution to environmental concerns in their community. We offer do-it-yourself environmental projects that help youth make a positive difference at school, at home and out in the world. Our programs are built to support the needs of teachers, students, schools and community youth groups.



## Generation Earth Project Guides

Generation Earth Project Guides are designed to assist students in the completion of an environmental project. These guides provide the instructions, tools and support materials needed to learn about the subject in order to complete the project that positively impacts the community.

## Waste in Los Angeles

Waste is a vital issue in Los Angeles County. Each of us generates an average of five pounds of waste per day. This may not sound like much, but when multiplied over a period of a year, the amount of waste each person creates is staggering.<sup>1</sup> Waste is generally transported to one of ten solid waste landfills around Los Angeles County. It costs money to dispose of it and valuable open space is used to create landfills to store waste.

## Electronic Waste

Electronic waste (E-waste) consists of electronic devices such as televisions, computers, cell phones and microwaves that have come to the end of their life, are broken or are simply discarded. E-waste is highly toxic to humans, plants, animals and has been known to contaminate water, air and soil. Proper disposal of E-waste includes keeping it out of landfills and responsible E-waste recycling. Schools can play a major part in creating awareness of proper disposal by hosting E-waste collection events.

## E-waste Collection Project Guide

This guide will help your group promote the proper disposal of E-waste and in the process, keep it out of landfills by hosting an E-waste collection event.

## How An E-Waste Collection Works

- A school team arranges a collection date and location with a licensed E-waste collector at least 30 days before the event.
- Members of the local community are invited to bring their electronic waste on the day of the collection event.
- Items can include computers, laptops, printers, MP3 players, cell phones, stereos, scanners, video game consoles, DVD players, televisions and more.
- Volunteers receive the E-waste and load them onto pallets and trucks provided by the E-waste collector.
- At the end of the event, the E-waste collector takes away the waste for responsible recycling.
- If enough materials were brought, the E-waste collector pays the school according to a predetermined pay-scale.

## The Steps

### 1. Did You Know?

This topic sheet provides information about E-waste including what it is, related laws and how it is managed. It can be used as an introduction to the topic to share with others and poses thoughtful questions for discussion.

### 2. Preparation Checklist and Timeline

A checklist is provided for planning and completing first steps. The timeline provides the tasks needed to complete and by when.

### 3. Promotion Plan

Guidelines are provided on how to promote the event in the community.

### 7. Evaluation

Complete the project by answering questions that serve to evaluate the process and offer next steps for potentially taking on additional waste reducing projects.

### 8. Resources

Resources are provided for curriculum and E-waste collectors.



# DID YOU KNOW?

**Toxic materials are used to make electronics and their components. They could pose risks to human health and the environment if handled improperly.**

*What materials might be toxic?*

Some examples include, CFL bulbs which contain mercury. The glass used in computer monitors contains about 6.5 pounds of lead, as well as mercury, cadmium and other poisonous metals.<sup>2</sup>

**Only 12.5% of electronic waste (E-waste) is currently recycled. It is the fastest growing municipal waste stream in America.<sup>3</sup>**

*What are the laws in California related to E-waste?*

In California, it is illegal to throw many types of electronic waste into the garbage. The Electronic Waste Recycling Act was signed into law on September 24, 2003 and amended in 2004. It established a new program for consumers to return, recycle and ensure the safe disposal of video display devices, such as televisions and computer monitors. As a result, consumers pay a fee that is included in the cost of new devices and used to pay qualified E-waste collectors and recyclers to manage E-waste.<sup>4</sup>

*How is E-waste managed?*

Unfortunately, much of the E-waste ends up in landfills. This is an issue because toxic chemicals found in E-waste often leach into the ground or may be released into the air, impacting the environment and local communities. In some cases, old electronics are reused, whether they are re-certified and resold or sent to developing countries for reuse, such as India and China, where E-waste scrap yards take care of the electronic waste.

**Most of the materials used to manufacture a cell phone can be recovered to make new products. Metals, plastics and rechargeable batteries from recycled cell phones are turned into new materials and products.**

*What are ways that different parts of a cell phone can be used?*

The metals in cell phones – gold, silver, platinum, palladium, copper, tin, and zinc – can be recycled and used by different industries such as jewelry, plating, electronics and automotive. The plastics can be recycled into plastic components for new electronic devices or other plastic products such as garden furniture, license plate frames and replacement automotive parts. The battery can be recycled into other rechargeable battery products.<sup>5</sup>

**Other solutions exist to reduce the amount of E-waste that poses risks to human health and the environment.**

*What are other ways to help reduce E-waste and its improper disposal?*

Support companies that make eco-friendly products and those that taking responsibility for the full life cycle of their electronics by taking back their products for re-use. Host an E-waste recycling event to educate and invite the community to participate in proper disposal.

# PREPARATION CHECKLIST AND TIMELINE

Use the resources provided to get organized, set a date and plan the event!

## Preparation Checklist

- Use the E-waste Collection Preparation Checklist on pages 6 and 7 to plan and complete the first steps.
- Work as a team to assign who will be responsible for completing these tasks.

## Timeline

- It takes one to two months to plan and produce an E-waste collection.
- Once a date is set, use the Timeline on pages 8 and 9 to complete the necessary tasks needed to ensure a successful event.

## Helpful Hint

Review the Preparation Checklist and Timeline ahead of time to understand what will be required.

# E-waste Collection Preparation Checklist

## Choose a Location

- Identify a large drivable area where cars can drive in and easily drop off items in a drive through style.
- Vacant school parking lots or student pick-up/drop-off curbs are perfect.

## Choose a Date

- Typical collection events take place on Saturdays from 9 a.m. - 3 p.m.
- Any month during the school year will work, but keep in mind weather conditions such as rainy or extreme heat days.
- If held on campus, check with school administrator to ensure the date is available.
- Avoid local holidays or religious observances.
- Note that E-waste disposal increases after the holidays in January and February and most E-waste collection organizations are booked for April and May events.

## Get Permission

- Choose a team to compile the information about the event and present.
- If held on campus, make sure permission is granted from the Principal. Clarify whether or not E-waste from your school site can be included in the drop off (any electronic waste on campus is the property of the school district and most schools have signed contracts with waste haulers).
- If held off campus, ensure location point-person can help promote the event and gives permission to use the parking lot, restrooms, garbage, recycling bins and dumpsters.

## Identify an E-waste Collector

- Ask Generation Earth for a list of reliable E-waste collectors.
- Only partner with E-waste collectors that are currently accredited through the State of California.
- Verify with the E-waste collector that 100% of your event's E-waste gets recycled rather than shipped to landfills.
- Confirm the selected E-waste collector has the date available for the event.
- Ask if E-waste collector provides a crew to carry and handle all of the E-waste to haul it away. **Students are not allowed to lift any E-waste or transfer it from cars to palettes.**
- Ask for the price matrix of donations and payment. Once the E-waste is dropped off, it becomes the property of the E-waste collector. Pay rates vary by year, the E-waste collector you choose and the type of E-waste collected. Some E-waste collectors require a minimum E-waste weight before payment is available.
- Find out if your E-waste collector will give you money for cell phones. If not, pull the cell phones at the event and recycle them with Planet Green ([planetgreenrecycle.com](http://planetgreenrecycle.com)). On average you can make about \$25 for a full box of cell phones (and ink cartridges).
- Make sure the E-waste collector chosen can provide a certificate of liability insurance document in case your school district requires one for the day of the event.
- Ask the E-waste collector if they can assist in outreach efforts by providing banners and helping with press releases.

## Secure Materials

- Create posters, banners and flyers to promote the event.
- Make signs to direct people to the E-waste drop-off area location when they are nearby and on the campus.
- Bring sunscreen, drinks and snacks for volunteers on the collection day.
- At least one table or several clipboards and pens for information sheets.

## Get Volunteers

- At least ten to fifteen students or volunteers are needed.
- Plan for more volunteers to ensure coverage if someone drops out or can't attend.

# E-waste Collection

It takes one to two months to plan and produce an E-waste collection event. Assign tasks and due dates once the date is set.

## One to Two Months Before the Event

- Identify and secure a location for the event.
  - Evaluate the desired site and ensure it is suitable.
- Find an E-waste collector to pick-up waste.
- Present the event plan to key stakeholders to obtain permission.
  - Investigate the need for volunteer safety waivers.
- Create a promotion plan (see pages 11 through 14).
- Assign tasks to promotional team members.
- Create social media plan. Consider what websites or event pages to post.
- Create signs and secure banners.
- Create paper flyers for distribution.
- Write an advertisement or press release and get permission to send out.
- Launch promotion plan.

## One Month Before the Event

- Recruit volunteers for the event.
- Solicit clubs or local nonprofits and invite them to have an outreach booth at the event.
- Display signs and banners.
- Create a map of the site and plan your set up to create optimal flow of traffic.
- Distribute and collect any necessary volunteer waivers.



## A Week Before the Event

- Coordinate with the location staff about entry time, getting keys for use of the restrooms, etc.
- Secure all supplies (see below).
- Create signs to direct cars.
- Continue promotion of event.
- Ensure all necessary volunteer forms are received.
- Assign shifts and responsibilities to volunteers.
  - Consider creating two hour shifts from 9 a.m. - 11 a.m., 11 a.m. - 1 p.m. and 1 p.m. - 3 p.m. with at least three students and one or two adults per shift.

## Event Day!

- Place directional signs.
- Count how many participants come to the E-waste collection. This can be achieved with a sign-in sheet, or assign a greeter volunteer to count the number of attendees when entering.
- Take photos and/or video.
- Assist in getting information sheets that need to be completed by each individual who drops off E-waste.
- Thank people for participating.

## Create A Community Event

An E-waste collection event can be a great platform to invite others to share what they do by providing outreach tables.

- Invite local nonprofits to share their materials.
- Invite other campus clubs to pass out information.
- Highlight or advertise other sustainability projects happening on campus.

## Supplies

- One or more tables
- Sign-in sheet
- Wires, clips, pins, or tape to hang signs
- Blank or printed paper to make directional signs
- Colored markers to make directional signs
- Sunscreen
- Pens
- First aid kit
- Snacks and drinks for volunteers

## After the Event

- Take down any signs, banners and flyers after your event. Return banners to your partnering E-waste collector.
- Take any leftover snacks or drinks home or donate to a local food shelter.
- Collect all items that were brought such as pens, tape and signs.
- Send thank you notes to E-Waste collector and location staff.
- Thank all organizations and stakeholders involved.
- Within two to four weeks, the E-waste collector should provide a report that lists the items collected in pounds and check for items collected. Make sure to tell the E-waste collector who the check should be addressed. Fund Account access varies from school to school, please check with your Principal for more information.
- Hold an informal event debriefing. Ask what went well and what you would change for next time. See page 15 for evaluation.
- Report diversion numbers to the school and selected community leaders. Promote the results and photos.
- Plan to celebrate your success with a party or fun activity!



# PROMOTION PLAN

Create a promotion plan for reaching the largest audience possible. **The success of the event is directly tied to how much advertising and outreach is done.** Expect a 10% participation rate for all outreach efforts.

Assign tasks and deadlines for the promotional campaign. Consider the following:

## Promotion team

- Flyer designer.
- Copywriter.
- Advertisement/press release writer.
- Social media manager.
- Flyer distributors.
- Phone/email outreach.

## Outreach in the community

- Who is your audience?
- Will some materials need to be in another language?

## What do you want to communicate?

- The reasons for the E-waste collection.
- Date, time and location (is a map needed?)
- Free for all participants.
- Items accepted.
- Any additional activities happening such as drives, etc.
- Instructions for how to get more information.

## How do you want to communicate?

- Create and send ads.
  - School PTA newsletter.
  - Local newspapers/newsletters.
  - Radio stations.
  - Neighborhood/City Councils.
  - Churches/Places of Worship.
  - Partners with the school or event space.

## Newsletter And Community Event Calendars

Find out:

- Who is in charge of the calendar listings for the newsletter.
- Preferred way to receive the information.
- If they can publish an article.
- The length, format and deadline.
- Who from your team will write the article and who needs to approve it.

- Ask the local utility company to send a flyer in the monthly bills to residents.
- Connect with your community television channel to advertise the event.
- Create and distribute flyers.
  - Place flyers in and around the school community at libraries, chamber of commerce, recreation centers, senior centers, privately owned markets, the mall or any local business.
  - Ask student volunteers to take home flyers to give to neighbors. Offer incentives such as extra credit or prizes.
  - See sample flyer on page 13.
- Social media.
  - Online blogs.
  - Facebook event.
  - Neighborhood websites.
  - Twitter.
  - Instagram.
  - Community event calendars.
- Word of Mouth.
  - Ask school administration for help.
  - Make classroom announcements.
  - City council meetings.
- Signs and banners.
  - Get banners or signs from the partnering E-waste collector and hang them outside the school or on busy cross streets.

## Flyers

- Create flyers that are appealing to your audience.
- Present information in a way that it is easily understandable.
- Information should be as concise as possible and include the important details (why, when, where, what, who).
- Include appropriate graphics and/or photos.
- See sample flyer.



# Alverno High School FREE E-WASTE COLLECTION EVENT

**Saturday, May 28, 2016**

**8:30 a.m. to 1:00 p.m.**

Alverno High School will be hosting a free e-waste collection event on campus on Saturday, May 28 along with the LA Conservation Corps. Please bring any of the items listed below to contribute to this drive! It's a great way to get rid of your e-waste and help Alverno at the same time!

**Materials Accepted:**

Computers and monitors, all types of cellphones, MP3 players and GPS systems, LCD monitors and televisions, and CRT televisions and monitors.

**Materials Not Accepted:**

We cannot accept household appliances including refrigerators, washer/dryers, microwaves, stoves, ovens, or batteries.



## Sample Press Release

FOR IMMEDIATE RELEASE

Contact: Karla Ramos, LA Conservation Corps  
(XXX) XXX-XXXX  
lacorps.org/

Contact: James Wise, Advisor, Imagine Green Eco Club  
(XXX) XXX-XXXX  
imaginegreenecoclub.com

### **Imagine Green for the Community of Burbank**

Electronic Waste can be properly disposed of in the eyes of 7th graders at Luther Burbank Middle School. Luther Burbank Middle School's Imagine Green Eco Club and eWaste Center team up to do their part.

Burbank, CA, Saturday, January 30, 2016. Luther Burbank Middle School's Imagine Green Eco Club and eWaste Center Inc. will be holding an E-waste collection and recycling event at Luther Burbank Middle School, (address here) from 9 a.m. to 3 p.m. Consumers can help prevent toxic chemicals and hazardous materials from entering our landfills by bringing in their old televisions and outdated computers to be properly disposed of.

The refuse from discarded electronic products, also known as E-waste, often ends up in landfills or incinerators. This means toxic chemicals like lead, cadmium and mercury that are commonly used in these products can contaminate the land, air and water. Luther Burbank Middle School's Imagine Green Eco Club and eWaste Center is dedicated to disposing of these products in a safe and ethical manner.

Imagine Green Eco Club is made of Luther Burbank Middle School students who volunteer their time to green their campus and surrounding community.

LA Conservation Corps provide at-risk young adults and school-aged youth with opportunities for success through job skills training, education and work experience with an emphasis on conservation and service projects that benefit the community.

For more information regarding this event, please contact Karla Ramos at LA Conservation Corps at (XXX) XXX-XXXX or Imagine Green Eco Club advisor James Wise at (XXX) XXX-XXXX.

###

# EVALUATION

Once the E-waste collection event is complete, answer the following questions to evaluate the event.

## QUESTIONS

1. What were the most successful parts of the project?
2. What were the least successful?
3. What might we do differently next time?
4. Was the audience interested in possibly having another E-waste collection event in the future?
5. How much E-waste was collected? How many participants came?

## What's Next?

### Another Project Toolkit

Are you interested in another project toolkit? Consider:

- Textile Recycling Event
- Community Swap
- Food Rescue Projects

## Share!

Generation Earth would love photos and/or videos of the project!

- Send them to [generationearth@treepeople.org](mailto:generationearth@treepeople.org).

# RESOURCES

## CURRICULUM SUPPORT AND MATERIALS

- Invite a representative from Generation Earth or your partner E-waste company to speak to your group and/or faculty.
  - Make sure everyone knows what E-waste is and how to dispose of it properly.
- TreeHugger infographic on E-waste: [www.treehugger.com/what-is-e-waste-and-why-is-it-a-problem-5186270](http://www.treehugger.com/what-is-e-waste-and-why-is-it-a-problem-5186270)
- The secret life of smart phone: [www.epa.gov/recycle/secret-life-smart-phone](http://www.epa.gov/recycle/secret-life-smart-phone)

## E-WASTE COLLECTORS

- Local facilities that accept electronic waste for recycling. [calrecycle.ca.gov/electronics/recovery/approved](http://calrecycle.ca.gov/electronics/recovery/approved)
- Planet Green Recycle, for small electronics and small ink cartridge ongoing recycling collections: [planetgreenrecycle.com](http://planetgreenrecycle.com) (818) 725-2596
- CFL Bulb Recycling information: [dpw.lacounty.gov/epd/hhw/uwaste\\_disposal\\_CFLs.cfm](http://dpw.lacounty.gov/epd/hhw/uwaste_disposal_CFLs.cfm)

## REFERENCES

1. [dpw.lacounty.gov/epd/rethinkla/recycle/recycle-what-is.aspx](http://dpw.lacounty.gov/epd/rethinkla/recycle/recycle-what-is.aspx)
2. [securis.com/e-waste-recycling-faqs/](http://securis.com/e-waste-recycling-faqs/)
3. [dosomething.org/us/facts/11-facts-about-e-waste](http://dosomething.org/us/facts/11-facts-about-e-waste)
4. [dtsc.ca.gov/e-waste-more-information/](http://dtsc.ca.gov/e-waste-more-information/)
5. [pacebutler.com/blog/how-recycling-cell-phones-can-be-utilized-in-making-new-products/](http://pacebutler.com/blog/how-recycling-cell-phones-can-be-utilized-in-making-new-products/)



