



# RECYCLING

in Portland, Oregon

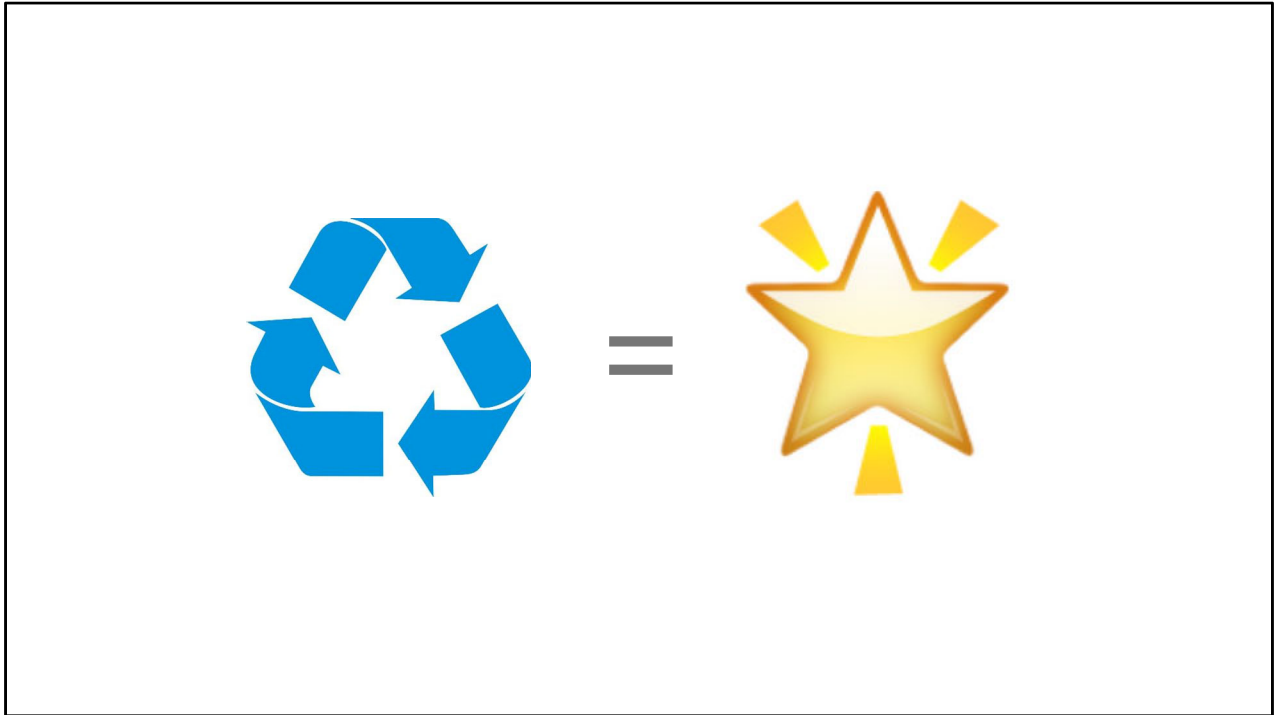
What can be recycled & why?

Hi I'm Genevieve Joplin and I'm a Master Recycler, class # 31. I love how passionate about recycling people in Portland are, and hope to share a little more in- depth information with you to help with "recycling right". My goal for this presentation is that you learn something new; that either a what or a why question is answered for you.

Let me start with one of them:

the rules at home and at work are the same regarding recycling in terms of what goes in the blue bin, and this is true of the Metro region: Multnomah County, Washington County and Clackamas County all follow the same guidelines.

While this presentation focuses on the items in the blue bins, there is additional information on other materials that can be recycled separately, but not in the blue bin.



So to start us off, recycling is one of the easiest, most feel good environmental actions you can take: it's so tangible: you hold something in your hand, and put it in the recycling container and you feel good.

recycling aluminum **saves 95% of the energy** required to make the same amount of aluminum from its virgin source



And you should feel good! Recycling saves natural resources and energy:

Recycling a (steel) soup can saves at least 75% of the energy it would take to create a new (steel) soup can from raw materials.

Source: <http://www.wm.com/thinkgreen/what-can-i-recycle.jsp>

**Aluminum. Recycling of aluminum cans saves 95% of the energy required to make the same amount of aluminum from its virgin source.**

Source: [http://bgm.stanford.edu/pssi\\_faq\\_benefits](http://bgm.stanford.edu/pssi_faq_benefits)

Reduces logging, mining, oil dependence

Trees saved - By recycling paper, residents in the Metro region saved 8.2 million trees from being harvested – which is equivalent to the number of trees in eight Forest Parks.

- Recycling one ton of glass saves the equivalent of 10 gallons of oil.
- Used glass melts at a lower temperature than raw materials, reducing the demand for energy and lowering production costs.

Improves air and water quality

Air quality is improved by recycling. Recycling 437,000 tons of paper reduces air emissions equivalent to that produced by 200,238 cars driving one year. The benefit of reduced air emissions due to recycling in the U.S. is equivalent to taking 24 million cars off the road for one year.

Water savings - In 2003, paper recycling efforts in the Metro region saved more than one billion gallons of water that would have been discharged as effluent into the environment. The environmental benefit for recycling all U.S. paper would be 114 billion gallons of water per year.

## Recycling creates jobs

⑩ US recycling jobs in 2008 – 800,000

• US Recycling recovery rate in 2008 – 33%

• If the recycling rate grows to 75%, then it would create an estimated 1,500,000 jobs in the US.

• Source - BlueGreen Alliance, SEIU (Service Employees International Union), the Natural Resources Defense Council, Teamsters, *Recycling Works!*, and the Global Alliance for Incinerator Alternatives.

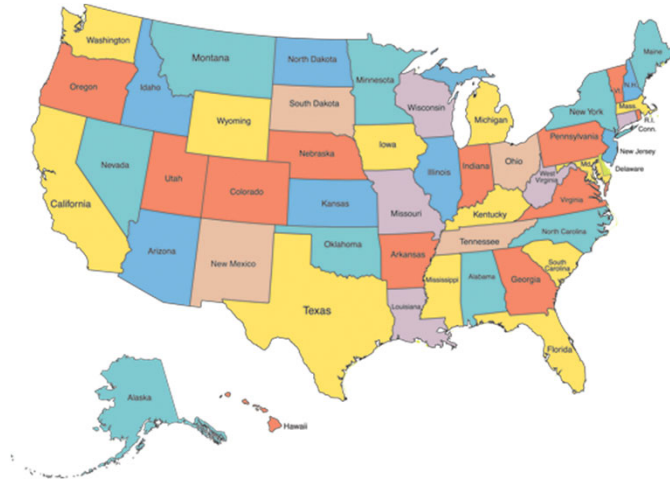


But recycling can also be confusing.

How many of you have walked up to the waste bins holding something you need to get rid of and stood there trying to figure out which container it should go in?

(Ever seen someone put something in the wrong container? Did you take it out after they left? Did you say something?)

Recycling is different everywhere




Part of the reason recycling is confusing is because it differs from state to state and city to city.

In our region, government, hauling companies, material sorting facilities, and end market producers meet regularly to make decisions and manage for the recycling system.

It is a hyper-local system, and important that decision making does not happen in a vacuum.

myth:

labeled  = goes in the blue bin

reality:

always follow local guidelines



Which leads me to a common, and very understandable, myth about recycling: That any item with a recycling symbol on it should go in your recycling bin.

There is no regulation on labeling something "recyclable". A material may *technically* be recyclable but not *realistically* recyclable. Which is why you should always follow Portland's recycling guidelines.

Again, the hard work of figuring out if something is recyclable is easy, look to the list.



Why can **some things** be recycled and **not others**?

As I mentioned in our region, all the people within the recycling industry that come together to decide what can be recycled – the **businesses** who pick up the recycling from your work/home; the **companies** that sort the recycling back into paper, plastic and metal, and then sell it to **manufacturers**; and the educators, like local **governments**, who teach people what should (and should not) be recycled in their blue recycling bins.

And they use two main deciding factors for why some things can be recycled and not others:



## Is there a strong, steady market to buy the recycled materials?



=

cheaper to make virgin plastic than to recycle some types of plastic



First, Is there a market for it?

Recycling is an industry, so it has to make economic sense.

For example, when oil is cheap, it's more financially viable for companies to use it to make plastic products than it is for them to use recycled plastic.

It would be way too confusing to change what was allowed in recycling every time the market changes, so Portland allows only the items that have a strong, steady market. ( maybe make a mental note about the plastic products in this image. They will show up again in a later slide.)

Can it easily be sorted?



Second, can the material easily be sorted?

In Portland, **paper, cardboard, metal, and plastic bottles and tubs can all go in one bin.** This makes it easier for people to recycle which leads to higher levels of recycling. Glass is collected separately, as it has special automated sorting, due to its hazardous nature. But once all those comingled items get to the sorting facility, they will be separated out into their end market materials. So essentially, back into separate paper, cardboard, metal and plastic bales, that will be used in manufacturing new materials.

Sorting is done here in Oregon, in big warehouses where **both machines and people work to remove items that aren't recyclable and sort out the rest by material type.**

Some things don't work well in the sorting system: like small lids and caps - or **plastic bags**, which get tangled up in the cogs of the sorting machines and shut down the whole sorting system.

\*If possible, show this short video: <https://vimeo.com/159995475>

## Sorting materials at the MRF



Materials Recovery Facility

## How **clean** do recyclables need to be?

Recyclables should be **empty, clean** and **dry**

Rinse food out and shake dry. (Food and water mess up the paper.)

But you don't need to scrub them sparkling clean.

Before I dig into the specific materials, I want to revisit a concept I mentioned earlier: Recycling Right. (don't skewer me on the grammar!) We have seen serious contamination issues happen in recent studies and I want to emphasize that recycling right is as important as recycling, so I have a few key standards to keep in mind when recycling. **Empty clean and dry.**

"Recycling right"

We're often asked how clean recyclables need to be.

The short answer is, pretty clean, but it doesn't have to be spotless.

Try to clean most of the food out, especially gloppy, oily foods that could spill onto other clean items.

Some things are "allowable contaminants" which I will get into in a few slides...

## What can be recycled in Portland?



\*It's the same at work and home.

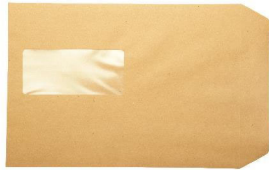
And here is a common misunderstanding: IT'S THE SAME AT WORK AND HOME!

You may not have great signage at work, but the same sorting is done in 3 containers: **mixed or comingled/glass separate/garbage**

Get free posters for your workplace at:

<https://www.portlandoregon.gov/sustainabilityatwork/65573>

# paper



OK: staples, tape  
paper clips  
plastic window



OK: magazines  
phone books  
spiral note books

It's ok to put paper in recycling that has staples, paper clips, plastic windows, or spiral binding (metal or plastic). These things will get filtered out at the paper mill (though they will go in the trash at that point). Even the sticky residue on Post-it notes and envelopes are ok.

During the pulping process these items bubble to the top and can be skimmed off, but are then thrown away as garbage.

+++++

[Could show Saving Little Pieces, 3:00 minute mark through 4:28:

<https://youtu.be/pMUuxPOgqTk>]

# cardboard



If the cardboard is waxed (pizza box, take-out food containers, etc.) it should go in the trash\*.

(\*Pizza boxes are allowed in your home green compost cart – but not in recycling, and not in your work compost, which is food only).



# cartons



Cartons and Tetrapack containers are allowed– they are picked out of recycling in the sorting process to be sent to a recycling facility that’s designed to process them in a way that separates out the paper from the foil and plastic or wax. They also hold their shape so are unlikely to flatted and get shuffled in with paper and plain cardboard (where they’d be sent to a paper mill that’s not equipped to process them).

Freezer boxes and to-go packaging have paper that is injected with chemical “wet strength” which renders the paper unusable. These tend to be “end of the line” paper products, so they’re not worth going to the extra hassle to separate the paper from the wax/plastic to try to recycle.

# TRASH \*Take away = throw away



Frozen food containers and take out containers are NOT recyclable.

The paper fibers are mixed and/or coated with plastic – this is what prevents water from leaking through the paper (good for your coffee, good for preventing freezer burn), but it's really hard to separate out the paper again to reuse.

# TRASH



Paper towels, napkins and tissues are NOT recyclable. Once used these are contaminated – biohazard, food etc.

These are the end of the line for recycling. Each time paper gets recycled, the paper fibers get broken down and less strong. Napkins and paper are the end of the line for paper recycling. Typically paper can be recycled 7 times before the paper fibers break down.

**Which is also why it makes sense to buy napkins and paper towels made from recycled paper. If you don't you're wasting high quality virgin paper fibers that won't get recycled.**

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[Could show Saving Little Pieces, 4:30 – 5:55 minute mark:

<https://youtu.be/pMUuxPOgqTk>

# metal

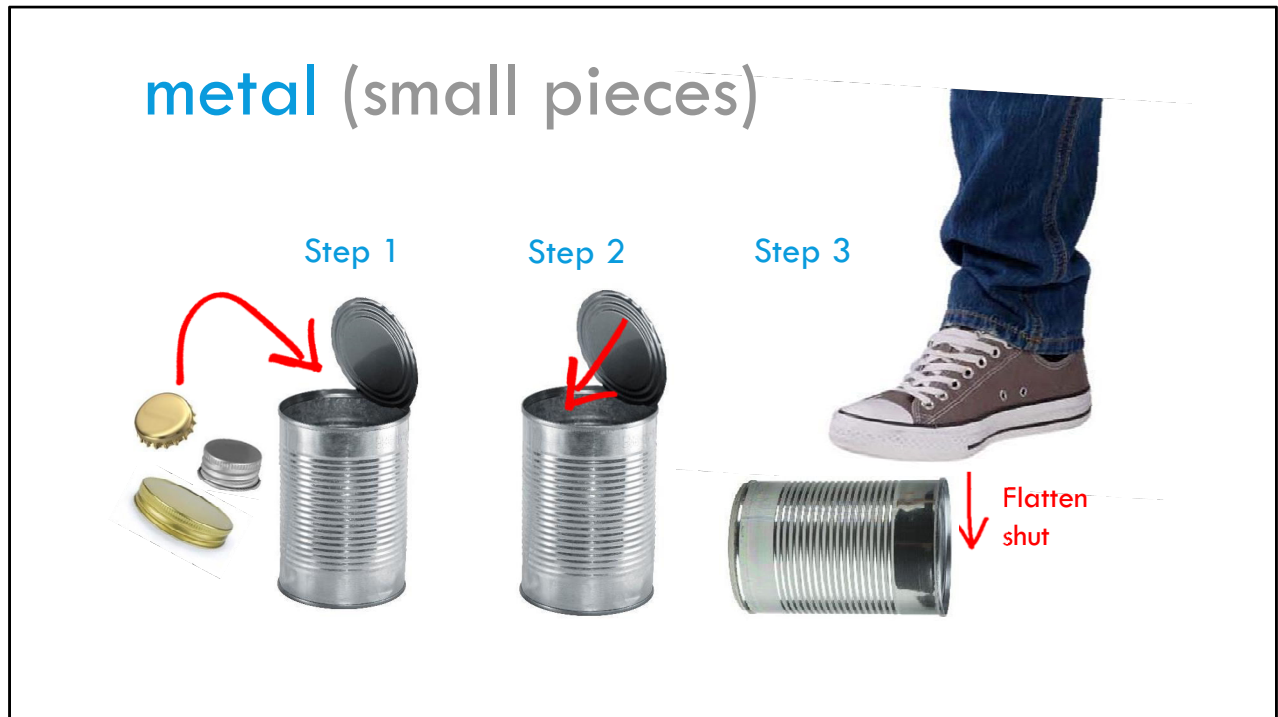


\*paper wrapper ok

Metal is one of the most important thing to recycle in terms of how much energy and resources are saved by recycling rather than creating metal (steel, aluminum) from scratch.

Keep a tiny portion of the lid attached, so the whole thing makes it along the conveyer belts; or put small metal pieces into the container and crimp it closed. Paper wrappers can stay on.

## metal (small pieces)



Small metal piece will get lost in the shuffle if you put them into recycling loose. Instead, collect them in a soup can (store it under your sink or at your desk at work), then when it gets  $\frac{1}{2}$  full, squash the top of the can closed – with your bare hands! (or step on it...that's actually easier) Magnets help capture the metal containers.

# metal



Empty, paint dried  
No lid



Empty, nozzle ok  
No lid

Other metal items include metal paint containers (less than one inch of dried paint), and spray containers.

If there is paint leftover, Paint Care program will take it back to the paint retailer and it likely will be part of the MetroPaint recycling program.

# metal (toxic)

Completely empty  
= ok to recycle

Not empty  
= take to hazardous waste\*

(\*503-234-3000 to find drop-offs)



\*\*Spray cans that held chemicals are ok if empty. If not empty, take to hazardous waste.

**\*\*If it says “flammable” that’s still ok, but if it says “poisonous” then even if it’s empty, it should go to hazardous waste.**



# plastic

ignore the  
numbers



[Show Saving Little Pieces, 5:58 – 8:06 minute mark: <https://youtu.be/pMUuxPOgqTk>]

## Plastics

In Portland, it's all about the shape: bottle, tub, bucket, jug. These items hold their shape throughout the sorting process, unlike a takeout clamshell container or flimsy cup.

The numbers are basically there to communicate the chemical makeup of the plastic substrate, so that they get to the appropriate end market.

# plastic



bottle



tub



bucket



jug

No lids please, as these will get mistaken as 2D material (like flat cardboard) and sent to a paper facility. Also a small lid will fall through the cracks on the conveyer belt. A jug with a small cap could potentially become a projectile if crushed during the sorting process. (another reason why staff wear hardhats!)

# plastic (bottles)

Any plastic  
with a neck



Any plastic container with a “neck” is recyclable.

# plastic (tubs)

6oz  
or larger



Any plastic container shaped like a tub is recyclable.

# TRASH

Any plastic NOT shaped like a **bottle, tub, bucket** or **jug**



All of these items are single use and are garbage. Plastic bags can be recycled separately along with bread bags, shrink wrap, dry cleaning bags and other clean, dry film plastic, but these must be brought to appropriate retailers: <https://www.trex.com/recycling/recycling-programs/>

# TRASH



\*To reiterate: plastic bags should never go in mixed recycling – they jam up the machinery in the sorting facilities, like you see here, and the whole facility has to shut down while employees climb in to cut them out.

You can still recycle plastic bags at some grocery stores, however. For more information on a location near you, call Metro's Recycling Information Center at 503-234-3000.

# TRASH

Any plastic labeled **compostable** or **biodegradable** or **made from plants**.



Any plastic that's labeled "compostable" or "biodegradable" should NEVER be put in recycling.

It will contaminate the plastic recycling, because it's made to break down quickly – which is the opposite of what you want when you're making new products out of recycled plastics.

# glass



[Show Saving Little Pieces, SKIP TO 9:58 – 11:54 minute mark:

<https://youtu.be/pMUuxPOggTk>]

Glass is always collected separately, as it is a health risk to workers who could be injured by broken glass.

Glass used to package **food and drinks** can be recycled (always keep glass separate from the rest of recycling.)

\*no need to sort by color, optical sorting equipment does this fast and effectively.

E-Cullet on N. Columbia Boulevard is a great processing facility.

Biggest contaminant in glass bottles? Sliced fruit wedges, lemons, limes, so squeeze to get the juice, but no rinds please!



# TRASH



Glassware (tempered glass) and ceramics are NOT recyclable and should go in the trash or donated if they are in good condition.

If you have a broken bottle, be cautious and sweep up, put into a paper bag, and throw away to avoid injury.

## Other items of note (toxics)

Batteries  
Compact Fluorescent lightbulbs  
Tube fluorescent lightbulbs  
Poisons  
Fertilizers

= take to hazardous waste\*

(\*503-234-3000 to find drop-offs)



There are some items that don't belong in your recycling or your garbage, such as these, and require special attention to keep you, haulers and line workers safe.

\*\*Spray cans that held chemicals are ok if empty. If not empty, take to hazardous waste.

\*\*If it says "flammable" that's still ok, but if it says "poisonous" then even if it's empty, it should go to hazardous waste.

What if **I don't know** if it's recyclable?

When in doubt, **throw it out.**

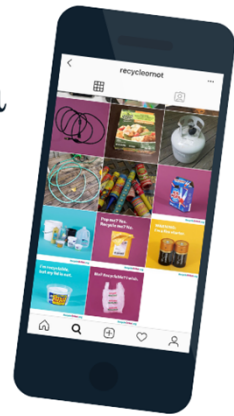
Or **find out!**

Q) Can I recycle this?

A) Call **503-234-3000** or go to  
**RecycleOrNot.org**

Or send a photo to **@recycleornot**

Instagram

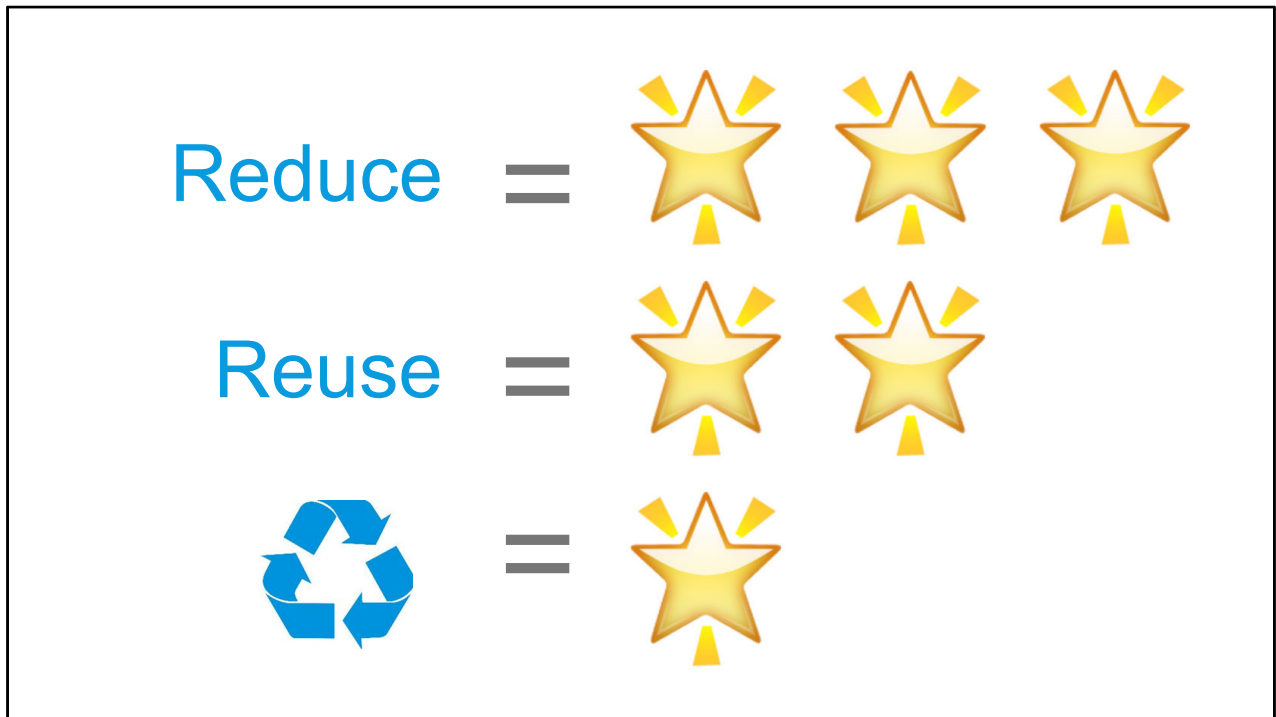


And the second is, if you have any questions about what can be recycled, call Metro's Recycling Information Center Hotline or look up the item on their website:  
<http://www.oregonmetro.gov/tools-living/garbage-and-recycling/find-a-recycler>

There's also a new resource from Metro: The RecycleOrNot.org site and Instagram account. These show the most confusing items and tell you what to do with them.

It's also available in Spanish at ReciclarONo.org and ReciclarONo on Instagram.

What I like about calling the RIC is that they are open on Saturday mornings, so if you are doing a garage clean out, or have unusual items like a mattress or an old appliance, they are around to help find a place to donate or recycle it.



So on that topic of donating old items, how many of you have heard or seen “reduce, reuse, recycle” somewhere?

Recycling is a great thing to do for the environment, but it’s even better to reduce and reuse first. This is a hierarchy in order of importance, if you didn’t realize it!

Reduce = Do I need this?

Reuse = Have I used this 'til it's absolutely worn out?



= Can I recycle this when it can't be used again?

1. Reduce the amount of "stuff" you consume first
2. Then Reuse the stuff you have
3. And finally, when you can't get any more use out of it, then recycle it.

So I'm going to run through some common ways we can all reduce and reuse.

# reduce

avoid buying things you don't need



**FREE Gift**  
with purchase



Do you really need it?

# reduce

avoid giving away things  
people don't need



If you've ever gone to a Goodwill store, there are examples of these everywhere.



reduce

avoid  
**single use**  
packaging and one  
time use items



Some folks like to call this “REFUSE”

refuse

say no to things  
you don't need



# reuse

Use re-usable items instead

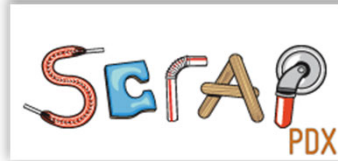


## reuse

buy, sell or donate used items



**REBUILDING  
CENTER**



There are TONS of place in Portland where you can buy, sell or donate used items.

How many of you have heard of Rebuilding Center (or Habitat for Humanity's ReStore)?

SCRAP? They're filled with craft supplies, and are a great place to donate or buy knitting, sewing, painting, etc. supplies (they also do great kids craft parties).

FREE GEEK? You can donate your old home or work computers, phones and ipads for recycling and reuse. They teach tons of great classes on repairing and using computers and get computers to people who otherwise couldn't afford them. Lots of businesses donate their old computers to FREE GEEK, including the city of Portland.

# borrow



You can borrow books, music, movies, tools, kitchenware and more at various Portland area lending libraries.

Find them at <http://www.resourcefulpdx.com/>

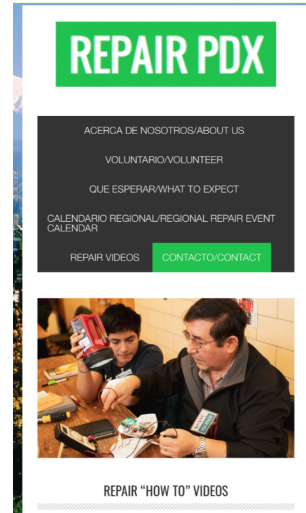
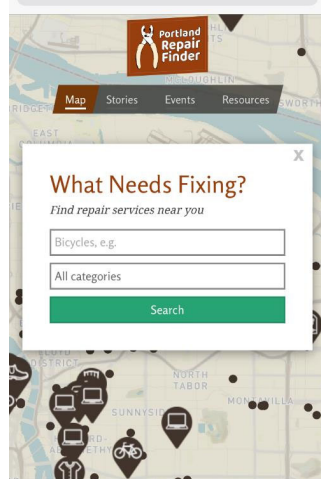
\*Library of Things is at the libraries in Hillsboro, Beaverton and Clackamas (not Multnomah County) as of 7/2019)



<http://www.resourcefulpdx.com/map/>

# repair

fix usable items



Portland Repair finder: an industry to support computer s, shoes,

Repair PDX: hosts Repair Cafés, community volunteer “fixers” offer repair support to community members needing help, with small electronics, bikes, clothing, jewelry, and such.

questions?



# Remember to “Recycle Right”

- clean
- empty
- dry
- on the list



It's as important to recycle right as it is to recycle; containers need to be clean and empty, and on the list!

# THANK YOU

for reducing, reusing & recycling!

[www.PortlandOregon.gov/SustainabilityAtWork](http://www.PortlandOregon.gov/SustainabilityAtWork)

[SustainabilityAtWork@PortlandOregon.gov](mailto:SustainabilityAtWork@PortlandOregon.gov)



Sustainability at Work