

Metal Recycling Class



The 3 R's of Recycling

- **Reduce** consumption
- **Reuse** when possible
- **Recycle** if it can't be repaired



What is scrap metal?

- Anything made of metal that is broken and cannot be repaired.

When you find scrap metal:

- Bring it to a scrapyard
- Earn money recycling metal
- Never throw metal in the garbage!
- Scrapyards have really cool machines like this material handler!



Periodic Table of Elements

ELLIE PRESENTS:
THE PERIODIC
TABLE OF ELEMENTS!!

PERIODIC TABLE

Atomic Number: 58
Symbol: Ce
Atomic Mass: 140.116
Name: Cerium

1 H 1.008 Hydrogen	2 He 4.0026 Helium																
3 Li 6.941 Lithium	4 Be 9.0122 Beryllium																
11 Na 22.990 Sodium	12 Mg 24.305 Magnesium																
19 K 39.098 Potassium	20 Ca 40.078 Calcium	21 Sc 44.956 Scandium	22 Ti 47.88 Titanium	23 V 50.942 Vanadium	24 Cr 51.996 Chromium	25 Mn 54.938 Manganese	26 Fe 55.845 Iron	27 Co 58.933 Cobalt	28 Ni 58.693 Nickel	29 Cu 63.546 Copper	30 Zn 65.38 Zinc	31 Ga 69.723 Gallium	32 Ge 72.63 Germanium	33 As 74.922 Arsenic	34 Se 78.96 Selenium	35 Br 79.904 Bromine	36 Kr 83.798 Krypton
37 Rb 85.468 Rubidium	38 Sr 87.62 Strontium	39 Y 88.906 Yttrium	40 Zr 91.224 Zirconium	41 Nb 92.906 Niobium	42 Mo 95.94 Molybdenum	43 Tc 98 Technetium	44 Ru 101.07 Ruthenium	45 Rh 101.07 Rhodium	46 Pd 106.32 Palladium	47 Ag 107.86 Silver	48 Cd 112.41 Cadmium	49 In 114.81 Indium	50 Sn 117.71 Tin	51 Sb 121.76 Antimony	52 Te 127.6 Tellurium	53 I 126.905 Iodine	54 Xe 131.29 Xenon
55 Cs 132.905 Cesium	56 Ba 137.33 Barium	57 La 138.905 Lanthanum	58 Ce 140.116 Cerium	59 Pr 140.908 Praseodymium	60 Nd 144.24 Neodymium	61 Pm 145 Promethium	62 Sm 150.36 Samarium	63 Eu 151.96 Europium	64 Gd 157.25 Gadolinium	65 Tb 158.93 Terbium	66 Dy 162.50 Dysprosium	67 Ho 164.93 Holmium	68 Er 167.26 Erbium	69 Tm 168.93 Thulium	70 Yb 173.05 Ytterbium	71 Lu 174.967 Lutetium	
87 Fr 223 Francium	88 Ra 226 Radium	89 Ac 227 Actinium	90 Th 232.038 Thorium	91 Pa 231.036 Protactinium	92 U 238.029 Uranium	93 Np 237 Neptunium	94 Pu 244 Plutonium	95 Am 243 Americium	96 Cm 247 Curium	97 Bk 247 Berkelium	98 Cf 251 Californium	99 Es 252 Einsteinium	100 Fm 257 Fermium	101 Md 288 Mendelevium	102 No 289 Nobelium	103 Lr 260 Lawrencium	

Lanthanide Series

Actinide Series



Ellie & Gallium the Unicorn

Safety Equipment

Metal can be dangerous, please wear the following:

- Gloves
- Hard hat
- Ear plugs
- Safety glasses
- Steel toe boots
- Reflective vest



Ferrous

- Heavy metal that sticks to a magnet
- Contains Iron (FE)
- Rust occurs when iron is exposed to moisture
- Try searching for ferrous metal with a magnet



Lexi and Ellie

Cast Iron

Cast iron is always in a shape and it sticks to a magnet, try finding:

- Storm drains & manhole covers
- BBQ grills
- Skillets

Other items made of cast iron:

- Drainage pipes

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FE



Mr. Ferrous Magglio loves to BBQ

Steel

Steel is strong metal that rusts, try finding:

- Fence
- Flag pole
- Swingset
- School bus



Non-Ferrous

- Lightweight metal that doesn't stick to a magnet and does not rust.
- Really strong and flexible.
- More valuable than ferrous metals.



Aluminum

Aluminum is silver/gray, try finding:

- A soda can

Other items made of aluminum:

- Airplane
- Ipads
- Bicycles



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AL

Every time you recycle a can, a unicorn smiles!

Brass

Brass is yellow, try finding:

- Saxophone
- Drum Cymbals
- Lamps

Other items made of brass:

- Door knobs
- Locks & Keys

29
CU

+

30
ZN



Copper

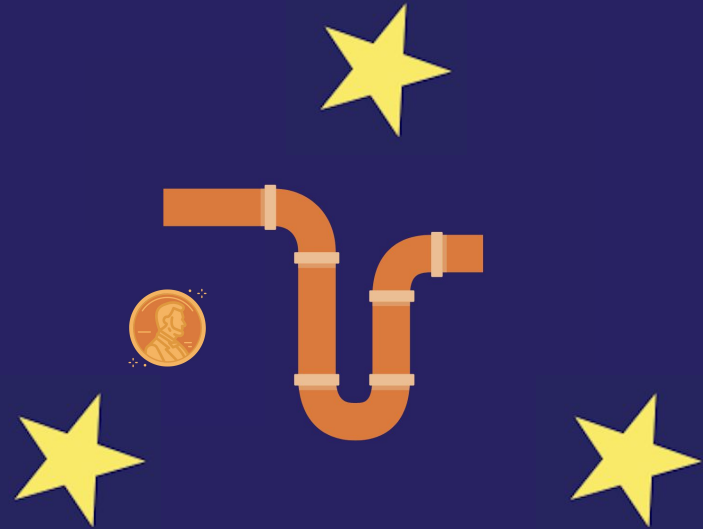
Copper is orange, try finding:

- Pipes under the sink
- Pennies

Uses:

- Plumbing
- Electricity

29
CU



Lead

Lead is dark gray, try finding:

- Wheel weights on a car
- Fishing weights in your Dad's tackle box
- Did you know that scuba divers wear lead to help them sink to the bottom of the ocean?

82
PB



Lead weight belt

Stainless Steel

Stainless Steel is shiny, try finding:

- Refrigerator
- Stove
- Forks, spoons and knives
- Pots & pans

28
NI

+

24
CR

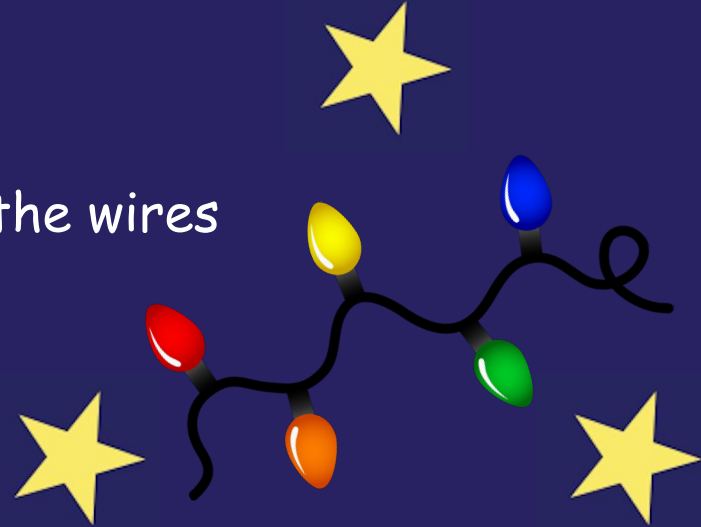


Wires & Cords

Wires & cords have copper inside, try finding:

- Ipad charger
- TV cord
- Christmas lights

Electricity is conducted by copper inside the wires and cords.



Christmas lights

Zinc

Zinc is light gray metal, try finding:

- Toy cars
- Boat parts

Zinc is used to prevent corrosion from saltwater.



Speed boat

30
ZN

Quiz

1. What color is copper?
2. What metal is an airplane made of?
3. What musical instrument is made of brass?
4. What metal is inside a phone charger?
5. What is the periodic element for Zinc?



Mr. Ferrous Magglio

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1 MILLION CANS

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