

Metal Recycling Class



Presented by:
Recycling Is Like Magic!

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

1 H 1.008 Hydrogen																	2 He 4.0026 Helium	
3 Li 6.941 Lithium	4 Be 9.0122 Beryllium																	10 Ne 20.1898 Neon
11 Na 22.98977 Sodium	12 Mg 24.304 Magnesium																	18 Ar 39.948 Argon
19 K 39.0983 Potassium	20 Ca 40.078 Calcium	21 Sc 44.95591 Scandium	22 Ti 47.88 Titanium	23 V 50.9415 Vanadium	24 Cr 51.9961 Chromium	25 Mn 54.938044 Manganese	26 Fe 55.845 Iron	27 Co 58.933194 Cobalt	28 Ni 58.6934 Nickel	29 Cu 63.546 Copper	30 Zn 65.38 Zinc	31 Ga 69.723 Gallium	32 Ge 72.630 Germanium	33 As 74.9216 Arsenic	34 Se 78.9718 Selenium	35 Br 79.904 Bromine	36 Kr 83.798 Krypton	
37 Rb 85.4678 Rubidium	38 Sr 87.62 Strontium	39 Y 88.90618 Yttrium	40 Zr 91.224 Zirconium	41 Nb 92.90638 Niobium	42 Mo 95.94 Molybdenum	43 Tc 98 Technetium	44 Ru 101.07 Ruthenium	45 Rh 102.90550 Rhodium	46 Pd 106.42 Palladium	47 Ag 107.8682 Silver	48 Cd 112.411 Cadmium	49 In 114.818 Indium	50 Sn 118.710 Tin	51 Sb 121.757 Antimony	52 Te 127.60 Tellurium	53 I 126.90447 Iodine	54 Xe 131.29 Xenon	
55 Cs 132.90545196 Cesium	56 Ba 137.327 Barium	57 La 138.90487 Lanthanum	58 Ce 140.12 Cerium	59 Pr 140.90766 Praseodymium	60 Nd 144.242 Neodymium	61 Pm 144.91288 Promethium	62 Sm 150.36 Samarium	63 Eu 151.964 Europium	64 Gd 157.25 Gadolinium	65 Tb 158.92535 Terbium	66 Dy 162.50031 Dysprosium	67 Ho 164.93033 Holmium	68 Er 167.2593 Erbium	69 Tm 168.93048 Thulium	70 Yb 173.05448 Ytterbium	71 Lu 174.96706 Lutetium		
87 Fr 223 Francium	88 Ra 226 Radium	89 Ac 227 Actinium	90 Th 232.03772 Thorium	91 Pa 231.036888 Protactinium	92 U 238.02891 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		

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

Lanthanide Series: La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu

Actinide Series: Ac, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lr



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

26
FE

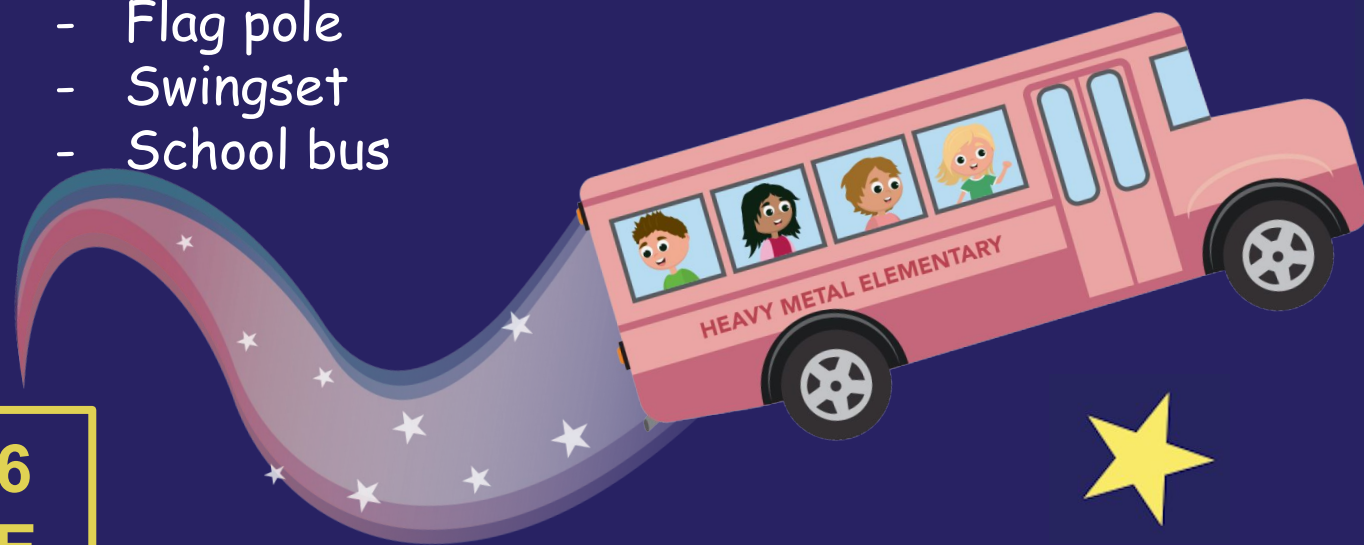


Mr. Ferrous Magglio loves to BBQ

Steel

Steel is strong metal that rusts, try finding:

- Fence
- Flag pole
- Swingset
- School bus



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FE

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

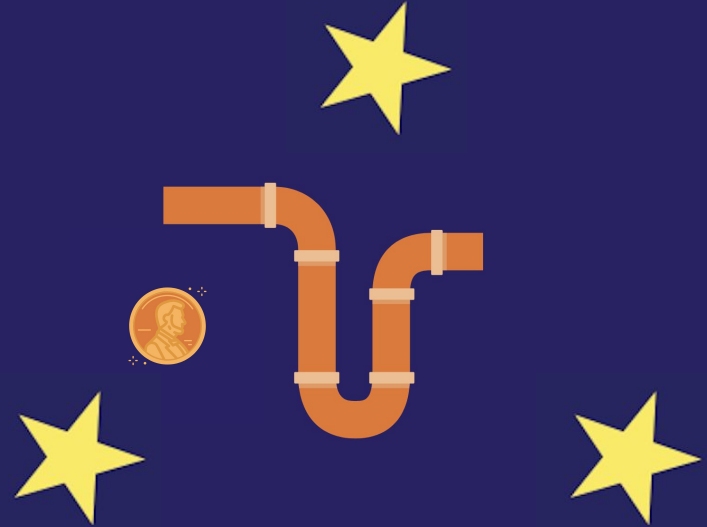
Copper is orange, try finding:

- 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?



Lead weight belt

Stainless Steel

Stainless Steel is shiny, try finding:

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

28
NI

+

24
CR

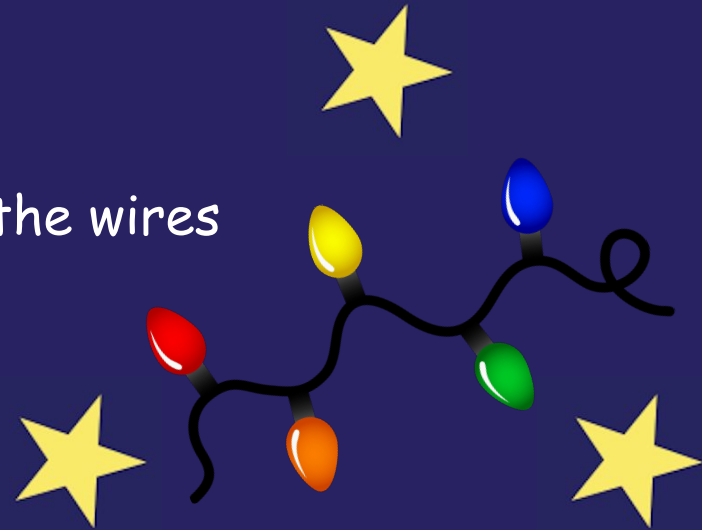


Wires & Cords

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

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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

Answers

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



Mr. Ferrous Magglio

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1 MILLION CANS

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to the Scrapyard!

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