

3.095: RHEA VEDRO (MFA in fine jewelry but also sheet steel/bigger objects)

- 2/3:
- mostly non-ferrous (do not contain significant amt. of iron)
 - start w/ copper, nickel, brass

BRING: Sketchbook,
Silhouette (2x2),
protective amulet

RULES:

BLIND CONTOUR drawing exercise:

- no shorts: tank tops & midriff must be covered
- no synthetics (polyester, acrylic, nylon, spandex)
- wear clothes you're fine w/ getting dirty
- close-toed shoes
- one continuous stroke
- draw what you see in front of you

SETUP: bench pin & jeweler's saw

GAUGE: thickness of the material

- higher gauge = thinner (more foil); lower = thicker
- jewelry: 10-20 gauge, maybe 8 for wire

SAWBLADE: usually for sheetwork

- generally want "2 teeth" to span across thickness of what you're cutting
- cuts on the downstroke
- 1) find non serrated part & stick into top of wingnut as much as possible
- 2) move bottom section down until blade right above back of wingnut
- 3) loosen bottom wingnut & put blade on top. lean in & tighten wingnut. now, it's tightened
- 4) pluck non serrated part - if it's high-pitched enough: congrats! you did it ☺
- wax non serrated part of blade
- hold sawblade like baby bird in dominant hand; non-dom hand holds the metal
- cut in the V of the benchpin w/ metal resting on both Vs

today: 2/5: PATINA: apply color to metal

AMULET: protective object (could be jewelry, on a doorway, two-sided, spiritual/imaginary, imbued w/ power)

IMAGE TRANSFER: (onto metal)

- use sponge to clean metal
- tracing paper + carbon transfer paper + tape
- can use acetone transfer as well

SETUP: 14-16 gauge

- brass (yellow), aluminum (silver/blue), copper (brown), nickel (silver)
- circles are super difficult to cut! easy to press
- nickel is harder than copper
- copper is gummier (softer) - could be difficult
- steel will dull your blade but straight line

SHEER: cutting straight edges

- guide @ 90°
- align sharpie edge @ bottom sheer edge
- pull sheer handle towards you, done

DEFORMING METAL:

- roll metal & dry material through a roller - easier when metal is larger
- hammer: on steel surface (in toolbox), smaller hammer = looks more like grains of sand

STAMPS: letter, texture, number

- do NOT use hammer used for deforming - use a beat up hammer
- side w/ written text (i.e. 1/8 inch) is side facing you
- stabilize w/ pinky finger
- one tap.

DRILL HOLES:

- use drill bit & stabilize w/ pinky → do NOT drill until this step is done (small dent where drill will go)
- put wax or 3 in 1 oil on drill bit
- use hand as clamp
- sweep metal filings after (they hurt!)

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amulet presentation:

- give references of photos pulled from internet
- background on why you chose the object
- show the process

CUTTING NEGATIVE SPACE (saw inside → out):

- drill holes in all negative spaces
- as you insert saw blade, put it through hole in piece
- always try to minimize weight of what you're cutting

FILING: (jeweler's files) (on bench pin)

FILE → SAND → POLISH

- all different types of grit (0 = coarser, higher = finer teeth)
- never use these on steel or aluminum
- handle on file (use it) - might need to screw in
- use index finger to support file
- designed for forward filing, 45° angle (unidirectional)
- turns metal into a brighter material
- can start w/ coarser file if have big gunk to remove
- ring files: half curved; rifler files: has an edge in it;
- try to make longest motion you can

SANDING

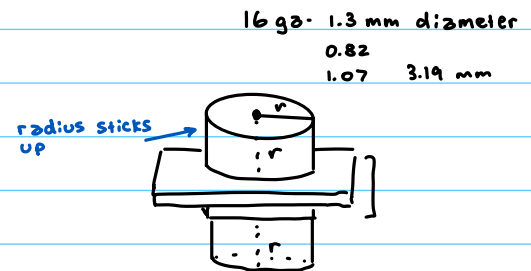
- various grits (80, 120, 180, 220, ..., 2000) written on back
 - 80 grit = roughest
- we'll mostly be in ~220 range
- best practice: circular/round, overlapping marks
- cut or rip a small piece for your piece
- flat surface
- thumb holds metal, dominant hand sands
 - should make metal look dull & even out
- start @ ~320 and get it up to ~500 (don't jump more than 100 @ a time)

STEEL WOOL:

- great way to polish non-ferrous / ferrous metals
- 0000 = finest, 3 = rough
 - we want to be in double-aught range @ the start, then triple-aught, then a bit of 0000
- dispose AS SOON as done (it's SUPER FLAMEABLE) & don't mix it up
- if you want further polishing: get to 0000
- wax after done (prevent fast oxidation)

2/12 RIVETS:

- wire gauge = diameter of wire
- drill bit must match wire gauge exactly to get perfect rivet
- straighten wire & get rid of burr @ end
- deburr: use a 2x diameter drill bit, flip metal to side w/ burr (backside), spin drill bit & push down
- moveable rivets: width of wire a little smaller



STRAIGHTENING WIRE:

- mallet made of rawhide (gets better as you use it)
- hold wire & spin while hammering, wire ~10° off of anvil
 - hold hammer around mid-end of shaft
- work-hardening the rivet (don't want it to bend easily);

CUT WIRE:

- place jig in V of benchpin
- mark cuts (r out of both ends) & adjust jig end to sharpie line; tighten set screw
- hold onto handle & put pressure on it & saw!
- get rid of burrs using sandpaper

HAMMER RIVET IN:

- start w/ rivet protruding through one side, all metal on a metal block
- lightly tap small hammer on rivet
- stabilize, slide, flip, & push down (now, have wire on both sides); lightly tap
- rivet should start to round off
- flip, push down, light taps, repeat around ~4 cycles
- rivets should ideally be even heights on both ends & soft

NEXT RIVETS (stabilize):

- line up drill, go through holes, deburr, then can slide through rivet
- spin piece before hammering so that previous rivets don't get dinged up again
 - there are also workarounds if you have many rivets

FLEX SHAFT:

- up to 15000 RPM
- put the metal arm in the holder; use allen wrench to loosen & tighten set screw
- get foot pedal from drawer & attach
- many attachments for sanding, grinding, filing
- have to help make mouthpiece tight & use chuck key to tighten
- have a fine enough grit or else polishing will just highlight the scratches on metal
- can make your own using mandrel & slide sandpaper into it - wrap clockwise

POLISHING: after the 4 aught steel wool polish, if you want it shinier...

- blue silicone wheels for edges (some are knife-edge, flat edge, etc)
- not replacement for file - shines things up
- white rouge: get some polish from the can, will bring out textures
- red rouge: finer, final polish, slowly spin while dipping into red can,
- polish before connecting pieces

(before patina)

CLEAN THE METAL:

- wash metal. if water tries to clump up & stay, not clean enough (should slide right off)
- Dawn soap to scrub metal w/ green sponge - PUSH hard
- can use compressed air hose to dry material off

PATINA:

- setup: hot plate, water (almost boiling but not), gloves, liver of sulfur (KEEP DRY)
- liver of sulfur is stinky but will dye non-ferrous metals (darkening agent)
- can apply w/ stick, paintbrush, etc, but often easier to apply then take off
- pea-sized piece for ~300 mL
- lasts for ~10 min
- put in water & use stir stick. have it dissolve all the way
- acts pretty fast - rinse in water after done & pat dry
- if want to preserve indentations: can sand/steel wool after patina

ENGRAVING: carving away material

- earliest materials were carved into stone/clay & made into beads/rings
- cylinder seals were originally worn as beads, then rings, then stamps

ETCHING: chemical process

- earliest: Carnelian beads in 2005 BC
- Renaissance: acid-etched armor

prework:

- cut metal to +5cm on all sides compared to piece
- scrub metal w/ dish soap + green sponge or 400 sandpaper
- use denatured alcohol & clean both sides of metal

HEAT TRANSFER

- place metal on upright hot iron (careful!)
- watch until it begins to oxidize
 - drip a trickle of water & see how fast it evaporates
- use tweezers, put your blue matte face down, use spoon & TAP (don't smear)
 - put a white paper over it & rub spoon & smooth (start in middle) → ~5 mins
- after: ink should look clearer, pull up corner & make sure blue is sticking
- carefully take off of iron & quickly put into cold water to shock the piece.
 - then, blue should peel off easily!

ETCHING BATH:

- fill air bubbles w/ sharpie
 - trace sides of metal w/ sharpie
 - put black shelf sticky paper on back of metal & get out air bubbles
 - put foam (slightly smaller than your metal) on the back & double-sided tape it on (acts as floatie)
- for BATH: use ferric chloride 40%
- put in bath & let it float, shake every so often
 - put tape w/ name & time started on edge of bucket
 - draw symbol corresponding to symbol on metal
 - to TEST: use sandering pick & test depth of etch (see if it catches on tip)
 - to NEUTRALIZE: lots of baking soda (a base) or else would continue to etch

AFTER ETCHING:

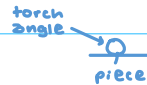
- saw metal to make plates more interesting
- remove all burrs, or else will come out as texture when print pressing

3/12 TORCH SAUDERING:

- acetylene tanks
- dangers: tank not closed properly, handle still up, no eyeglasses, hair COMPLETELY out of face, no loose clothing

[STEPS]

- ① pre, flammable scan, wall exhaust on
 - put exhaust near you after turning on
 - no steel wool, paper towels, etc.
 - bring only your metal piece
- ② uncoil hose, bring up to bench, confirm handle
 - tank regulatory valves should BOTH be 0.
 - untangle hose, put on table
- ③ main valve 1/4 turn CCW = open
 - turn main valve 1/4 & right regulator should tick up (indicate amt. of gas in tank)
- ④ set PSI 5-10 (7 average) w/ regulator dial
 - spin left dial 410 for larger tips/projects
 - left dial red #'s indicates PSI
 - hold torch w/ non-dominant hand (left)
- ⑤ put in TIP, adjust angle
 - mostly use size 1 & 2 (bigger # = bigger radius)
 - push tip in, position where you want it, then screw in
 - want to have torch balanced on hand & just wrap around
 - wire goes on outside of your hand (put hand under hose & find fulcrum spot)
- ⑥ light w/ striker
 - flint & steel
 - push over & down (w/ non-dom, hold torch w/ right)
 - open valve, listen for small 'sss' sound, should go away after lighting.
 - to CLOSE: turn torch valve to the right.



SHUT DOWN: (@ end of the day)

- turn off valve
- unstrew, pull, and take tip off
- quarter turn main valve to right (use some force)
- angle hose towards vent, turn valve, remaining gas should flow out; regulator dials will say 0 again
- turn regulatory valves to the left 3x for safety (for next person)

PRINTMAKING:

- add ink & 3-5% of mixing compound (modify consistency slightly)
- use roller & make ink even & smooth
- add ink using roller onto plate
- using wiping fabric, wipe @ plate & remove excess paint (also use newspress to wipe excess)

prepping print paper:

- thicker paper soaking in water ~1 hr → dry off (put b/t towel & rolling pin)
 - dampness opens up fibers of paper (dry paper more rigid)

print roller:

- felt & stiff board between rollers, lift felt layer up (will put plate under felt layer)
- put plate w/ ink on, with print paper on top (& protective print paper between)
- rotate the big wheel & crank plate through
- lift felt layer & reveal print!
- adjust & manipulate afterwards.

clean plates:

- clean plate w/ water, soap, scrub brushes

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general ring steps:

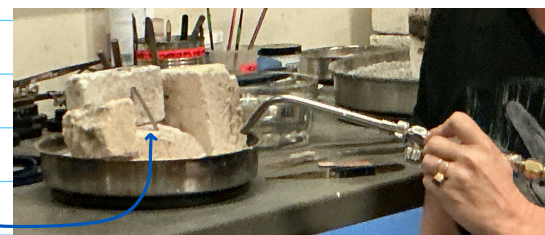
- create watermelon-shaped tube from ring material
- seam ends together (butt seam: just touch) w/ solder
- use tools to form ring into perfect circle

ANNEALING: softening metal

- work-hardening metal makes it more brittle & rigid (must anneal to loosen)
- ring blank sizing chart: has different ring sizes & associated diameter/circum.
- preferred gauges: 18, 20 (real life: 18 & 16 more comfy), 20 to practice bending
- textures through: stamping, hammering, sawing, etc
 - CAREFUL: metal stretches w/ hammering, so take into account when choosing width (cut less)

TORCH ANNEALING:

- materials: larger-tip
- set up metal propped against
- copper more pure than nickel/brass



setup

metal:	color when anneal:	how to cool:
brass	plum red	air cool or quench dull red
copper	dark red-plum	quench
nickel	dull red	air cool
sterling silver	dull red	quench from black
fine silver	cherry red	air cool, then quench

SILVER \$\$ per troy ounce

today: $\frac{\$78.07}{\text{troy oz}} \cdot \frac{1 \text{ troy oz}}{31.103 \text{ g}} = \$2.51/\text{oz}$
 i got 3.6 oz → \$9.04

AFTER ANNEALING: clean up

- will have oxidation: get rid of w/ pickle pots (on low)
 - don't leave overnight though or else corrode/eats away
 - ~5 mins
- metal after annealing is much more malleable
- careful don't mix copper & steel: creates copper battery (copper plates- moves onto your plate- harder to clean)
 - that's why only use copper/bamboo tools here

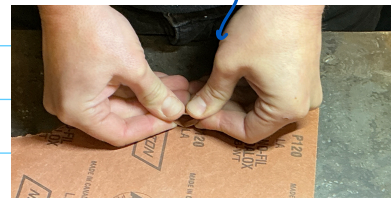
RING SIZING:

- depending on how large your wire/band width is, use diff. band sizes
- when freezing, finger size decreases; when hot, finger increases
- have a little bit of grip, but not super difficult to get off
- ring mandrel: slide ring onto tool & see where the center of your ring lands (the #, corresponds to size)
 - A ← middle*
- use sheer & cut the correct size dimensions (cut a little more & file down)
- mark out the halfway & quarters
- bend metal @ center & create smile ☺ shape. keep going until you get to a O teardrop shape, *push!*
- push ends together against hard surface to make watermelon O shape

Contenti RING BLANK SIZING CHART

To determine your ring blank length, find the desired ring size in the far left column, then read across to the appropriate material thickness.
 * Add 0.5 mm to the length of the blank if the width of your material is greater than 4 mm.

US Ring Size	Metric Ring Size	Diameter (mm)	Circum. (mm)	Material Thickness											
				10 ga. 2.6 mm	2.4 mm	2.2 mm	2.1 mm	2.0 mm	1.8 mm	1.6 mm	1.4 mm	1.3 mm	1.2 mm	18 ga. 1.0 mm	21 ga. 0.8 mm
1	39.0	12.4	39.0	47.1	46.5	45.9	45.6	45.2	44.6	44.0	43.4	43.0	42.7	42.1	41.5
1 1/2	40.2	12.8	40.2	48.4	47.8	47.1	46.8	46.5	45.9	45.2	44.6	44.3	44.0	43.4	42.7
2	41.5	13.2	41.5	49.6	49.0	48.4	48.1	47.8	47.1	46.5	45.9	45.6	45.2	44.6	44.0
2 1/2	42.7	13.6	42.7	50.9	50.3	49.6	49.3	49.0	48.4	47.8	47.1	46.8	46.5	45.9	45.2
3	44.0	14.0	44.0	52.2	51.5	50.9	50.6	50.3	49.6	49.0	48.4	48.1	47.8	47.1	46.5
3 1/2	45.2	14.4	45.2	53.4	52.8	52.2	51.8	51.5	50.9	50.3	49.6	49.3	49.0	48.4	47.8
4	46.5	14.8	46.5	54.7	54.0	53.4	53.1	52.8	52.2	51.5	50.9	50.6	50.3	49.6	49.0
4 1/2	47.8	15.2	47.8	55.9	55.3	54.7	54.3	54.0	53.4	52.8	52.2	51.8	51.5	50.9	50.3
5	49.0	15.6	49.0	57.2	56.5	55.9	55.6	55.3	54.7	54.0	53.4	53.1	52.8	52.2	51.5
5 1/2	50.3	16.0	50.3	58.4	57.8	57.2	56.9	56.5	55.9	55.3	54.7	54.3	54.0	53.4	52.8
6	51.5	16.4	51.5	59.7	59.1	58.4	58.1	57.8	57.2	56.5	55.9	55.6	55.3	54.7	54.0
6 1/2	52.8	16.8	52.8	60.9	60.3	59.7	59.4	59.1	58.4	57.8	57.2	56.9	56.5	55.9	55.3
7	54.0	17.2	54.0	62.2	61.6	60.9	60.6	60.3	59.7	59.1	58.4	58.1	57.8	57.2	56.5
7 1/2	55.3	17.6	55.3	63.5	62.8	62.2	61.9	61.6	60.9	60.3	59.7	59.4	59.1	58.4	57.8
8	56.5	18.0	56.5	64.7	64.1	63.5	63.1	62.8	62.2	61.6	60.9	60.6	60.3	59.7	59.1
8 1/2	57.8	18.4	57.8	66.0	65.3	64.7	64.4	64.1	63.5	62.8	62.2	61.9	61.6	60.9	60.3
9	59.1	18.8	59.1	67.2	66.6	66.0	65.7	65.3	64.7	64.1	63.5	63.1	62.8	62.2	61.6
9 1/2	60.3	19.2	60.3	68.5	67.9	67.2	66.9	66.6	66.0	65.3	64.7	64.4	64.1	63.5	62.8
10	61.6	19.6	61.6	69.7	69.1	68.5	68.2	67.9	67.2	66.6	66.0	65.7	65.3	64.7	64.1
10 1/2	62.8	20.0	62.8	71.0	70.4	69.7	69.4	69.1	68.5	67.9	67.2	66.9	66.6	66.0	65.3
11	64.1	20.4	64.1	72.3	71.6	71.0	70.7	70.4	69.7	69.1	68.5	68.2	67.9	67.2	66.6
11 1/2	65.3	20.8	65.3	73.5	72.9	72.3	71.9	71.6	71.0	70.4	69.7	69.4	69.1	68.5	67.9
12	66.6	21.2	66.6	74.8	74.1	73.5	73.2	72.9	72.3	71.6	71.0	70.7	70.4	69.7	69.1
12 1/2	67.9	21.6	67.9	76.0	75.4	74.8	74.5	74.1	73.5	72.9	72.3	71.9	71.6	71.0	70.4
13	69.1	22.0	69.1	77.3	76.7	76.0	75.7	75.4	74.8	74.1	73.5	73.2	72.9	72.3	71.6
13 1/2	71.3	22.7	71.3	79.5	78.9	78.2	77.9	77.6	77.0	76.3	75.7	75.4	75.1	74.5	73.8
14	72.6	23.1	72.6	80.7	80.1	79.5	79.2	78.9	78.2	77.6	77.0	76.7	76.3	75.7	75.1



add 0.5mm to > 4mm length

- my ring dims:
- 4.5 size
 - 50.2 mm (actual 50.3 - play w/ hammer)
 - 0.2 - 0.5 mm width (play around)

IDEAS:

- include gem/extruding
- Wax
- Silver?
- Etch vessel plates?
- Wire ring (flatten, jig, stamp, sand, anneal, pickle, bend)

4/2 ring project:

- 3 rings (1 sized to your finger, others can be anything)
- any material, any width
- 1 must include texture

vessel project:

- sauder
- container w/ bands & lids

final project:


- requirements: different types of sauder
- can be anything

THE RING:

- hand reflexology chart: endless studies that ppl believe diff. fingers represent diff. lifelines/astronomy/etc.
 - ppl believe you should wear diff. stones/gems on diff. fingers
- Egypt, Iran (turquoise), Indonesia (ruby & gold), India (gold, stone, emerald)
- rings that are also bracelets, etc
- archer's ring (India, Sudan): protect finger of archers
- mourning ring (England, U.S.): often clip & braid hair of a lost one & put within jewelry
- gimmel ring, aka twin ring: 2-part interlaced ring (often used for wedding rings)
- multi-fingered ring: spans multiple fingers

SOLDERING:

- silver solder: hard = pure silver (~75%), medium = zinc inside, easy = more zinc inside (~68% silver)
- using lower temperature-melting solder in succession so you don't melt away previous solders
- don't remove flange & excess solder until done w/ ALL soldering
- how to bend wire solder:

easy: 

medium: 

hard: 

IT:  ← won't be used in class (much higher melting temp), but good for fusing glass, etc.

- sheet solder: mark w/ letter (E, M, H)
- other solders: paste solder
- unlike welding, solder will not fill a gap
- to fill a joint, need: fit, cleanliness, heat
 - must scrub over/in the ring joint
 - must bring WHOLE PIECE up to temperature to solder, not just the joint
- soldering temp. is lower than annealing
- generally 1's tip for ring & medium solder

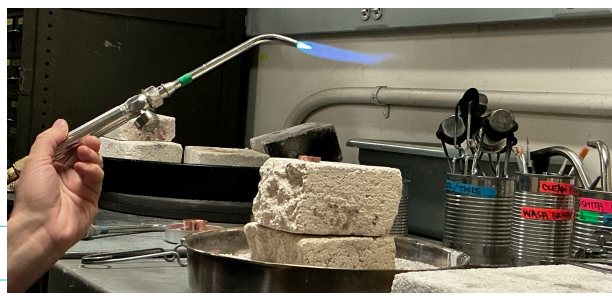
FLUX:

- types: ron's purple, powdered borax (for casting), prip's flux, handy flux (dehydrates, mix DI water in)

ANTI-FLUX: doesn't let solder flow (more protection on top of solder heat levels) — dirty seams selectively

SOLDER DEMO:

- paint flux around the seam & place upright on fire brick
- use fine-tip tweezers & pick up a solder chip & flux it a little bit
- place little chip of solder on fire brick & place ring on top
- gently paint piece w/ fire (never stay still)
- once flux turns clear, place flame directly over joint & let solder flow up & fill joint ("osmosis")
- hold pick tool in dominant hand & adjust chips as needed



* if uneven, joint-side up & put chips evenly along joint

PICK SOLDERING: (generally for wire jewelry)

- before: Flatten wire, tube-cut jig for dimensions, anneal / pickle pot & watermelon shape all the same
- use shim to elevate metal ("spacer")
- put chips on a separate fire brick & melt them together into a ball
- preheat ring & get flux to turn clear
- switch attention to chips. as they melt & ball, use pick to pick it up.
- put ball on top of ring, heat ring, then place heat directly \perp facing heat, solder will spread across joint



ROUNDING: use forming stake / mandrel currently: ring is watermelon-shaped

- if already textured: use paper over ring to protect when hammering
- put onto mandrel, flip 180° , repeat
- rawhead mallet (the more you use them, the better they get)
- use seam as placeholder (when full circle, flip 180°) repeat 2-3x
- hit @ most round, widest part of mandrel
- can start on a smaller mandrel (bezel mandrel)

SANDING:

- rough grit sandpaper (80, 120, etc)
- make ring sides aligned (joint)
- apply pressure evenly (quarter turn every so often)
- after, can put ring back on mandrel & add texture

clean look: SUPER PICKLE POT: more hydrogen peroxide (50% hydrogen peroxide, 50% pickle)

- will start to turn blue
- if leave in too long (>10 min), will start to etch into crystalline structure
- helps w/ cleaning the rings

my vessel:



inch
 $2\pi r \approx 5.0265 = W$ ← walls
 $1.5 = H$
18 gauge → 0.04 in thick

cyl rad = 0.804 vs. 1
 $2\pi r = 5.052$

l:d rad = 0.808
 $2\pi r = 5.0768$
l:d height = 2/8 inch

clean look: BLUE WHEEL: flex shaft

- barrel shape blue wheel: polish & remove excess solder
- surface area of blue wheel should be > surface area of ring

rid of the inner edge

- inner edge: come @ an angle & smooth out edge
- can also use files & knock edge off (forward stroke)

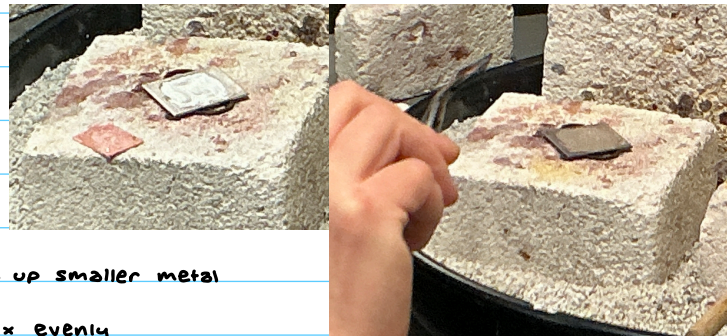
FEED SOLDERING:

PREWORK

- sand sides/edges affected up to 220 grit
- make sure plate is 1/2 cm excess on all sides
- cut 2-3 pieces of solder wire, scrape w/ 400 sandpaper, use locking tweezers, flux them
- flux entire top of clean plate & bottom band of ring
- paint yellow ochre on seam of ring (already soldered)
- even heat, touch base few times to see if it's ready to melt
- touch down & spin plate all around, solder!
- let rest 3-4 min then quench (immediate quench may cause warping)

SWEAT SOLDER:

- put larger piece on a small metal riser
- flux the smaller piece
- hard solder (if lots of bending & shaping after)
- put fluxed solder chip on smaller piece
- light torch; have pick in dominant hand & warm up smaller metal
- solder balls up; use pick to help spread flux evenly
- put solder side onto larger piece
- when bigger metal heats up, put pressure on pieces using pick
- after quench: can usually see line of solder



BINDING WIRE: (generally for larger seams)

- objective: create a bridge (to hold) and keep seams together
 - bridge (handle) is slightly thicker wire than holders
 - use pliers to squeeze wire 90° to tighten ('zig zags')
 - use wire cutters to get rid of excess ends; make sure nothing interferes w/ bottom
 - paint seam w/ yellow ochre
 - after solder: wait 60s, quench, use pliers to peel off
- * DONT put binding wire in pickle (copper plating)

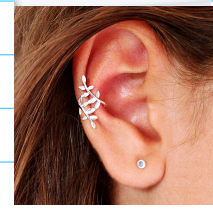
CUTTING THE FLANGE:

- saw @ angle & spin piece
- want ~1/2 mm sticking out (to file off) - orbit your piece
- use file (lower # = rougher, higher # = smoother) → orientation: with the circle, a little @ a time then rotate
- after: flex shaft tools to polish / knock off solder

IDEA 3: NECKLACE/EARRING CHARMS

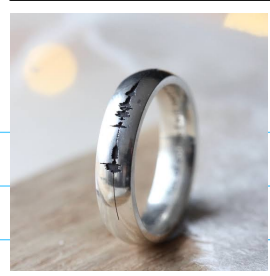


- could play w/ 3D charms
- can also look into earrings or ear cuffs



- COMPLICATIONS:**
- for earrings: adding the back wire 0
 - charms will be tiny!

IDEA 2: SPOTIFY RING



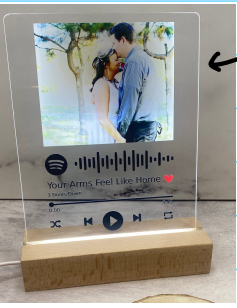
- etching spotify code onto metal
- want to make multiple of various songs
- metal to use TBD

MATERIAL:

- silver sheet

COMPLICATIONS:

- etching on silver (must go to different location/schedule additional time w/ Rhea)



← could play around with etching onto large sheet and adding onto that

IDEA 1: MUSIC RING



i own this & wear regularly!

- silver band/wire with wire treble clef on top
- depending on difficulty of making treble clef, might make a chain around band of ring
- also maybe making a note / other symbol not set on treble clef



MATERIAL:

- silver wire/sheet

COMPLICATIONS:

- bending music symbol
- sweat soldering wire symbol onto other wire/band (very fine points of contact)



BLG Jewels

Work Plan:

4/30:

- finalize what i'm doing ; (talk to rhea)
- measure silver bands & wire, calculate cost
- start cut/bend metal for ♪, ♪, texas, butterfly

5/5 (+ open hrs):

- continue cutting
- start sweat soldering, engraving, forming
- figure out how to polish
- cut holes

5/7:

- finalize polish
- take pics ;

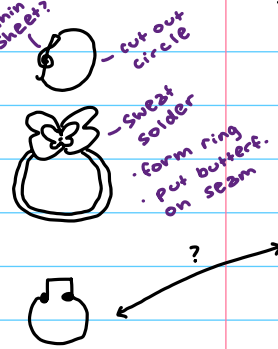


COST:

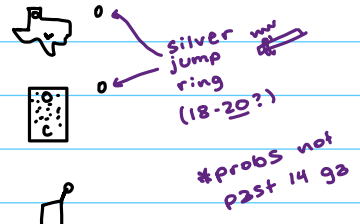
SILVER \$\$ per troy ounce
 today: $\frac{\$78.07}{31.103 \text{ g}} = \$2.51/02$ (4/21)
 → 4 cross rings: i got 3.6 oz → \$9.04
 $\frac{\$72.77}{31.103 \text{ g}} = \$2.34/1g$ (4/30)
 → final project sheet: 9.0 g → \$21.06
 → final project wire: 2.9 g → \$6.79
 $\frac{\$73.44}{31.103 \text{ g}} = \$2.37/1g$ today: troy oz
 → treble clef part 2: 1.7 g → \$4.02

LEE'S PIECE: 12 gauge
 $\frac{\$3.2 \text{ g}}{31.103 \text{ g}} \cdot \frac{\$72.77}{1 \text{ troy oz}} = \144.66

RINGS plan:

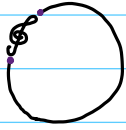


CHARMS plan:



★ = complete @ same time

TREBLE CLEF RING:



materials (silver):

- 18 gauge wire: 70 mm length
- 14 gauge wire: 50.3 mm length

process:

- form metal wire to ring
- form clef
- cut out negative of ring metal
- solder insert ring into negative
- ★ • polish

BUTTERFLY RING:



materials:

- 16 gauge wire: 50.3 mm length
- 20 gauge sheet: 10x10 mm
- 24 gauge sheet: 10x10 mm

process:

- cut out 2 butterflies, 24 ga smaller
- add texture
- bend wings
- inlay (sweat solder) butterflies
- sweat solder ring band seam + butterflies
- ★ • polish

TEXAS CHARM:



materials:

- 20 gauge sheet: 15x15 mm
- 18 gauge wire: jump ring

process:

- trace texas (transfer paper)
- texture?
- drill 18 ga hole, tiny heart
- cut out texas & tiny heart
- create jump ring
- polish

'C' CHARM:



materials:

- 20 gauge sheet: 15x10 mm
- 18 gauge wire: jump ring

process:

- hammer texture sheet
- indent 'c'
- drill hole 18 ga
- file chamfer edges
- create jump ring
- polish

THURS (last day) to do:

- cut treble clef ring
- solder treble clef on
- create C dog tag w/ texture & drill hole
- cut & solder jump rings
- attach jump rings
- polish!