PROJECT – METAL ROSE

***Adapted from Michael Holbrook's adaptation of Jared Birt's YouTube video** (like, share, subscribe)*

In this activity you will build an awesome Metal Rose.

The Preparation...

READ THESE INSTRUCTIONS THOROUGHLY BEFORE YOU BEGIN!

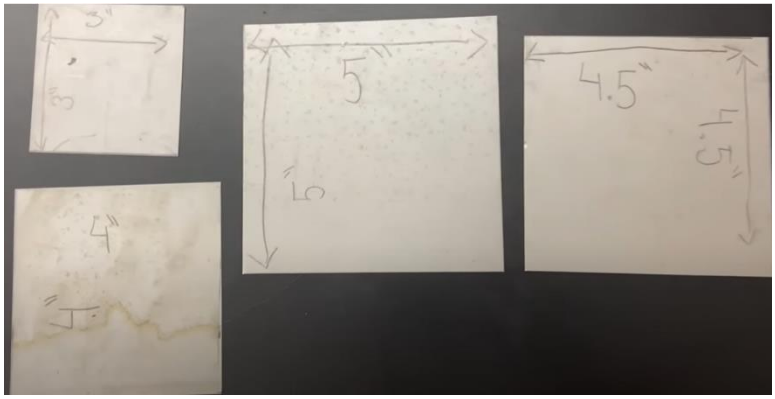
"HOW TO" Video

For this activity you will need the following:

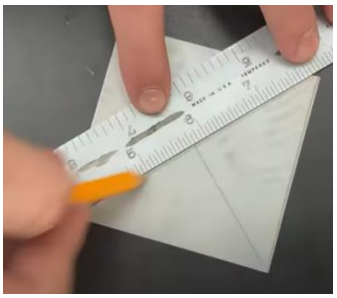
Cut FIVE pieces of square sheet metal 16ga (0.063") or thinner:

1 – 5" x 5"
1 – 4.5" x 4.5"
1 – 4" x 4"
2 – 3" x 3"

12" of 3/16" round rod



Find Center and Drill Stem Holes



Use a ruler to make an X on each of your pieces

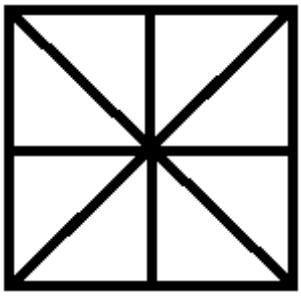
X's corner-to-corner ALWAYS finds center

Use a ruler to draw the square into a square of squares

"Yo, dawg, we heard you like squares, so we drew squares on your square so you could have square squares…."

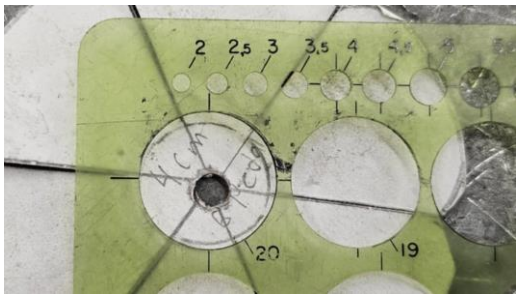
Center punch the middle and drill a 3/16" hole on ALL squares – this is for the Flower Stem made from 3/16 steel rod

LINES: Step 1

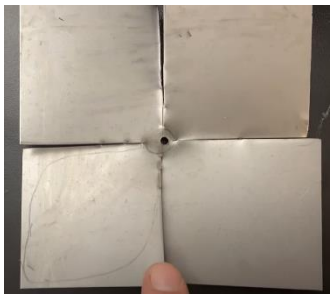


Step 2

Draw a circle around the center hole that is at least 3/4" diameter (20mm diameter) around the drilled hole.

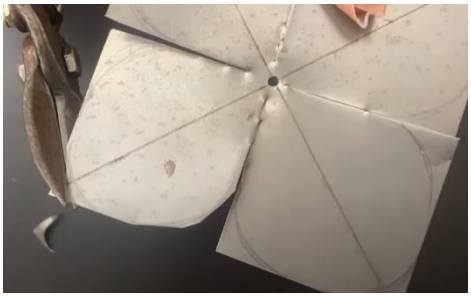


You can use a circle template, a piece of 3/4" round metal, a 9/16" socket, a dime, or whatever is close



Cut in from the sides (NOT the corners) following your lines but DO NOT cut into the 3/4" circle. If you cut into the circle your piece will fall apart

Draw and Cut your Petal Shapes



Use a pencil or marker to draw on your petal shapes on 4 of the pieces

Make ONE of the 3x3 squares with SKINNY leaves for the bottom of the Rose.

Cut out your shapes and file/smooth all sharp edges

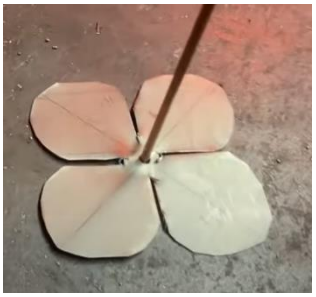
I WILL NOT MARK IT IF IT CUTS MY BABY-SOFT FINGERS!

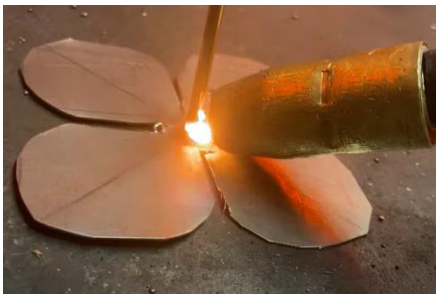
Grab one the not-skinny leaf 3x3" pieces for the next step

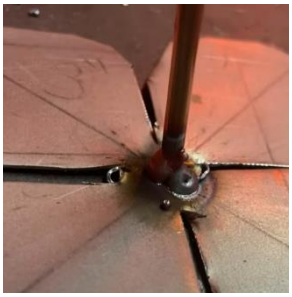
Assembly

Put the 3/16" stem into the hole of the 3x3 (smallest) 4-shape piece.

Hold the stem vertical and tack weld it from the back (stem side) with the MIG welder (pull the trigger for "one-thousand-one" then release)

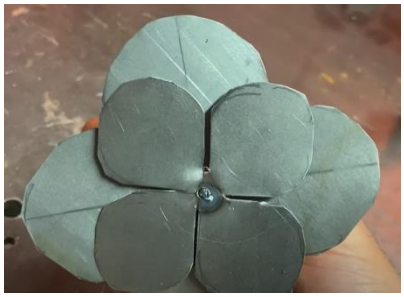




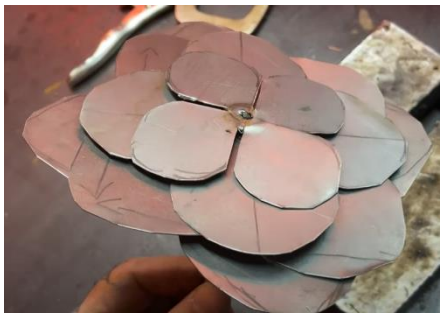


Slide on the 4x4" piece down the stem next, and splay it (means "Offset" in a *rotational* way) so it is NOT aligned with the previous one.

Tack weld to the stem on the back (stem side) again.



Continue to splay the 4.5x4.5 and the 5x5 pieces and tack weld until you have 4 pieces welded to the stem. They don't have to be perfect, but they SHOULD NOT be all aligned the same.



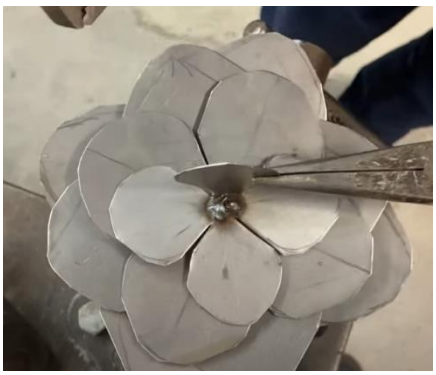
To lock it all together, tack weld the TOP right to the stem (one or two seconds on the trigger)

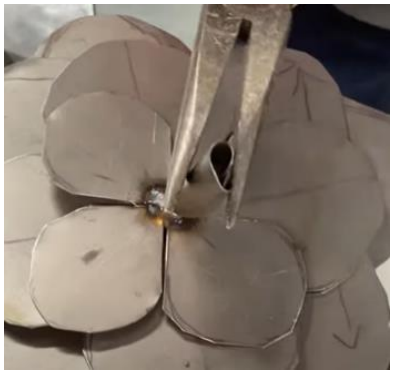
Bending the Rose Petals

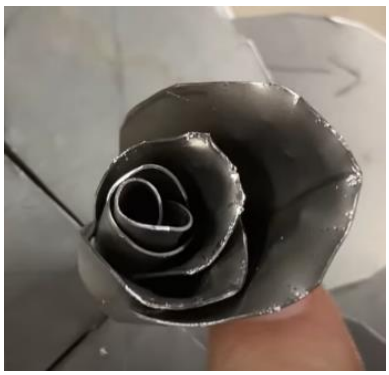
Hold the stem in the vice as low as you can to prevent bending the stem

Start with needle nose pliers for the bending and bend and rolling ONE petal at a time.

Each petal should "wrap" around the previous one as you work outwards



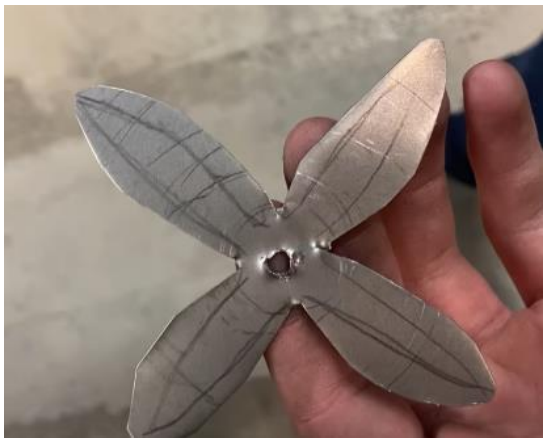




There are a variety of tools that you may need to use to bend certain shapes. Continue working outwards with each petal

Bend the edges of the petals downwards to give them extra visual awesomeness

Weld on the skinny base piece and shape it with nice curves on the petal edges



Create some more leaves to add to the stem

Consider making a few roses each a slightly different size and welding them to a base to make a nice bouquet