

## Project 8: Working with Metal

This project introduces you to working with metal.

As a dimension of materiality, metals offer new ways to work with polymer clay by creating an interesting contrast in the combination and they play off each other beautifully. Metal can also provide structural strength which will allow you to make your pieces lighter and thinner.

The chosen metal for this project is aluminium. It is affordable, easy to find and comes in thin sheets that can be cut with scissors.

Of course, there are many metals and think of this project as the first of a new exploratory journey with other metals.



# Project 8: Working with Metal

## 1 Preparing the structural sheet

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The model pieces for this project have a sheet of metal sandwiched between two layers of clay of the same dimensions. This adds strength so the other two layers of clay can be very thin.

This is the 'structural sheet' that you will use in when you make your course pendant.

You can see the metal showing between the gaps on the surface of the pendants.

As aluminium is shiny and cannot be oxidised, this project shows how to patinate (darken) the metal without using chemicals. Please note that the aluminium is NOT aluminium cooking foil.

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**a** Cut a sheet of aluminium that is slightly bigger than your pendant

Use a cheap pair of scissors to cut into the aluminium (the metal may not be kind to the scissors). The size of the cut metal needs to cover the entire surface of your pendant plus a few additional millimetres all around.

Place the cut sheet on a hard surface and roll a metal dowel or roller over it to flatten it. This will flatten undulations you might have created with the scissors or pre-embossed designs.



**b** Wearing a mask, scratch the surface of your aluminium sheet

Using a wet 500 grit abrasive, rub the sheet of metal in one direction, then at right angles to the marks you've made. Wet the abrasive first to contain the dust. When you are done, run the sheet under the tap and wipe it dry.

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## Project 8: Working with Metal

### 1 Preparing the structural sheet / continued

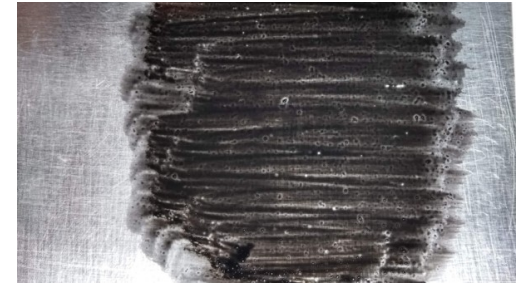
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**c** Cover the metal with ink

(I use Posca markers as they are pigment-rich with results that are consistent and hard-wearing.)

Press the (Posca) marker hard enough to allow the ink to flow into the scratches you've made.

You only need to cover the area that will show in your pendant.



Applying Posca ink

**d** Brush over the ink with a flat brush  
Cure and buff

Before the ink dries, brush over it with a flat brush. You can work the brush to create streaks when it is still wet. The Posca ink can be diluted with water for a less intense darkening.

If you don't like the result, you can always sand off the surface and start again.

Cure the sheet in a hot oven for a few minutes at the temperature you use to cure your polymer pieces.

Buff your cured sheet with tissue paper. Your structural piece is now ready for assembly.



Aluminium sheet with streaks

### 2 Making focal elements with metal

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As you can see on the model pendants (image on Page 1), each piece has both of the two focal elements involving metal:

- a "bridge" connecting the two veneers of polymer clay, and which is punched whereby you go right through the metal and
- a sub-layer for the graphic dot veneer which is embossed whereby you only indent the metal surface.

To make these focal elements, you need to prepare a sheet of metal like you did in Step 1. You then use punching and embossing tools before you cut the elements to size.

Make your marks first then cut to size. Punching a small piece of metal is more likely to crunch up or deform when punched or embossed, than a larger piece.

**a** You will need punching and embossing tools; they may be the same tool depending on how much force you apply

Before you go buy special tools check that you don't have suitable tools at home: ball stylus tools, lino cut tools, knitting needles, small cutters, patisserie nozzles, and check the tool box for awls, screwdrivers, and other implements.

These simple tools can meet your needs. If you enjoy punching metal, you can look further afield and get special metal or leather punches.



Embossing and punching tools

## Project 8: Working with Metal

### 2 Making focal elements with metal / continued

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- b** Prepare a sheet by following Step 1
- Mark it where you want to punch
- Place the sheet on a plank of soft wood, prepared face down
- Make marks

Use a fine felt marker to mark your sheet where you want to punch-through or emboss.

Put your metal, sanded face down, on a surface that can take an impression such as soft wood or a small stack of card-stock cards.

You can use a hammer on your tools or press on them with your hands. Play with your various tools, punch right through the sheet, or simply emboss the metal.

If you use a punch and hammer, make sure the punch is perpendicular to the metal surface.

Hit gently to start (to make a first dent).

Practise before making your final focal elements.

Punched-through marks must be smoothed out by sanding. If you plan to sand your marks, you might want to darken your metal after sanding.



Sheet of metal, prepared side down, on a plank of wood

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Making marks

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## Project 8: Working with Metal

### 2 Making focal elements with metal / continued

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- c** Flatten down the sheet by rolling it with a metal dowel or a roller



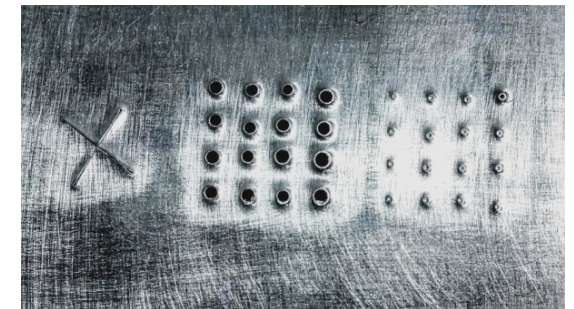
Rolling the sheet to flatten it

- d** Sand with 500 grit if necessary  
Darken with ink if necessary

If you have punched right through the metal, sand and smooth the punch-outs.

If you have simply embossed the metal, buff the surface with a very soft grit or tissue paper to highlight the marks.

If your sanding has exposed the aluminium, darken it as explained in Steps 1.c and 1.d.



After sanding and darkening