

# Student Worksheet

## *Resist-ance is Useful*

### Safety

Wear safety glasses, protective gloves, and lab coats. Developer and dissolved resist may cause mild skin and eye irritation. Spills should be wiped up with plenty of water. Etching for longer than 10 seconds will overheat discs. Use tweezers to pick up heated discs.

### Introduction

#### Part 3: Etch-Your-Sketch

##### Challenge #1

Make your own coin or pendant with a unique design!

*Tips:*

- Make two black-and-white designs either on the computer or paper (maximum 30 mm in diameter).
- Print out the designs or photocopy onto transparency (you may need to adjust your design to get deep blacks first).
- Etch your designs into both sides of a blank metal disc using your choice of either AC or DC etch, using the previous instructions.
- Take photos of your finished disc for display.

##### Challenge #2

Design a coin that uses more than one layer of photoresist paper in the process.

*Rules:*

- At least 2 lines must overlap well or one design must be centered within the other.

##### Challenge #3

Make the reverse image using the same stencil.

#### Materials

- unexposed photoresist sheet
- printable transparency
- timer
- UV exposing unit
- developing tray
- developing solution
- Etch-O-Matic etching unit
- 30 mm metal disc
- electrolyte solution
- DC etching adapter
- grounding plate
- rinsing water
- paper towels