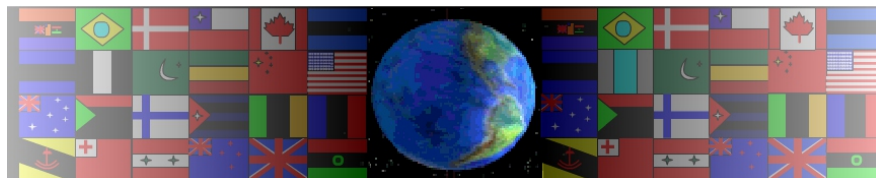


REVISION CARDS - ETCHING - METAL FINISHES - 8

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On behalf of The World Association of Technology Teachers

W.A.T.T.



World Association of Technology Teachers

This exercise can be printed and used by teachers and students. It is recommended that you view the website (www.technologystudent.com) before attempting the design sheet .

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ETCHING PROCESS TRADITIONAL METHOD

Traditionally, 'etching' is a process, whereby acid is used to slowly remove the unprotected surface of a metal such as copper.

A pattern is produced by applying a 'resist' substance to the surface of the copper. The resist can be beeswax or shellac. A sharp tool such as a scribe, is used to 'scratch' a pattern into the resist, removing it where acid is to 'eat into' the surface.

When the drawing / 'scratching' is complete, the copper is placed in a suitable acid, in a glass container. The acid slowly dissolves the surface of the exposed copper, producing the pattern. This can take hours.

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SAMPLE ETCHED PRODUCTS



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ETCHING COPPER USING A PCB TANK AND A VINYL CUTTER

A shape can be cut out of 'sticky back' vinyl, with a vinyl cutter and then 'stuck' to a piece of copper.

The copper is then immersed in a PCB etching tank, in a mixture of clear etchant.

The area covered with the vinyl is protected from the etchant, whilst at the same time the unprotected surface is etched.



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1. What is etching? Why is etching of metals popular? 5 marks

2. Describe the type of products that are enhanced by etching? 3 marks
