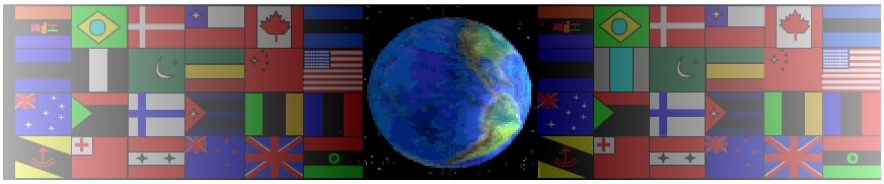
REVISION CARDS - SOLDERING

On behalf of The World Association of Technology Teachers

W.A.T.T.

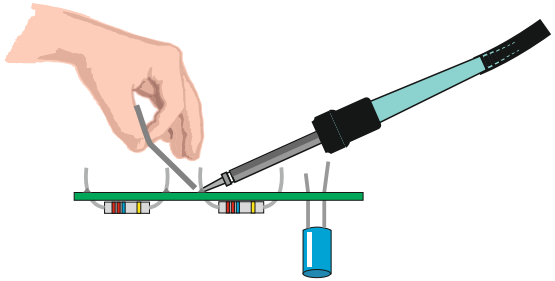


World Association of Technology Teachers

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 .

REVISION CARDS - SOLDERING

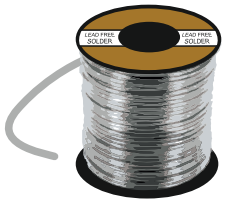
BASIC SOLDERING



Stage one: Clean the track side of the PCB with wire wool or a PCB eraser.
Stage two: Position the components, checking they are in the right position and the correct way round.
Stage three: Clean the tip of the 'hot' soldering iron, by wiping it on a damp foam pad.
Stage four: Heat both the component and the copper track and then apply the solder.

WHAT IS SOLDER?

LEAD FREE SYMBOL



ROLL OF SOLDER

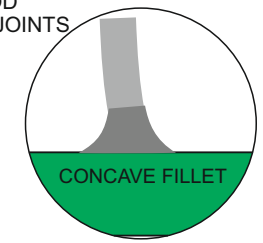
Electronic components are metallurgically joined to the copper tracks of a PCB, using solder. Solder is an alloy of tin and lead (63% tin and 37% lead).

Lead is toxic. Consequently, lead free solder is popular. The lead has been removed and replaced with other metals. However, these solders work at higher temperatures.

GOOD AND BAD JOINTS

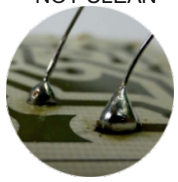
Good soldering produces a 'concave' solder joint. The soldering iron must be at the right temperature, applied to the track and 'wire' for the right amount of time, with a 'small' amount of solder applied.

GOOD SOLDER JOINTS

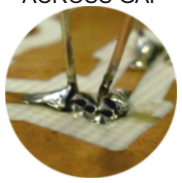


TOO MUCH SOLDER APPLIED

PCB TRACKS NOT CLEAN



SOLDER JUMPS ACROSS GAP



1. Describe soldering components to a PCB , in four simple stages. *4 marks*

2. What is solder? Why is lead free solder popular? *3 marks*