



# The Use of Tools in Connection with Design and Technology Policy

Published March 2005, Reviewed October 2010

## 1. INTRODUCTION

The following tools are available and are potentially dangerous if not used properly: hacksaws, bench hooks, hand drills, vices, workbench, glue guns, tenon saws, large bladed saws.

## 2. LARGE BLADED SAWS

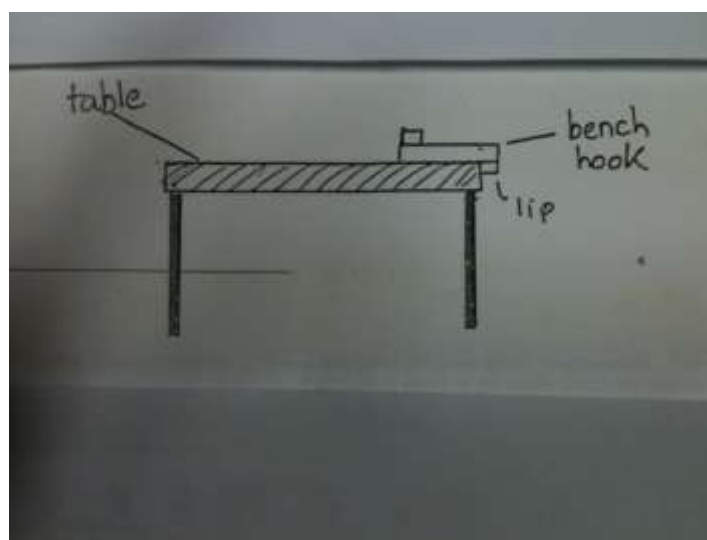
These were purchased for the rare occasions when large blocks of wood need to be cut. Unless very close supervision can be offered an adult should use these saws after the children have done the measuring.

## 3. HACKSAWS, BENCH HOOKS, HAND DRILLS, VICES, BLACK AND DECKER WORKMATE.

For each relevant unit children should have reminder lesson on how to use the tools, or indeed an introduction. Children should demonstrate that they have understood the instructions. If as teachers we have no record of the children's individual competence in the use of these tools, a refresher course is implemented.

## 4. BENCH HOOKS

These wooden blocks are two sided with a lip, which lodges the hook against the desk.



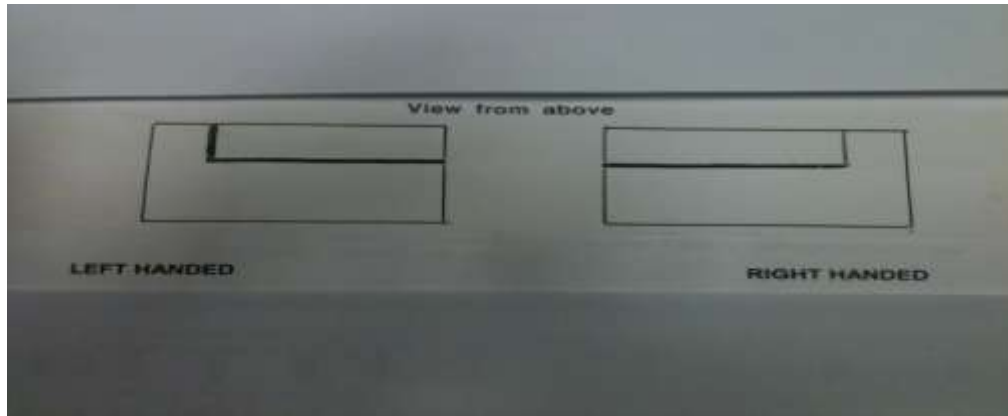
Children should try pushing against the bench hook with their non-sawing hand to demonstrate how secure they are.



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Children need to be aware that there is a left and right-hand side to the bench hook. One way up the gap occurs at the top left-hand corner, the other way it occurs at the top right-hand corner. This matches left or right-handedness.

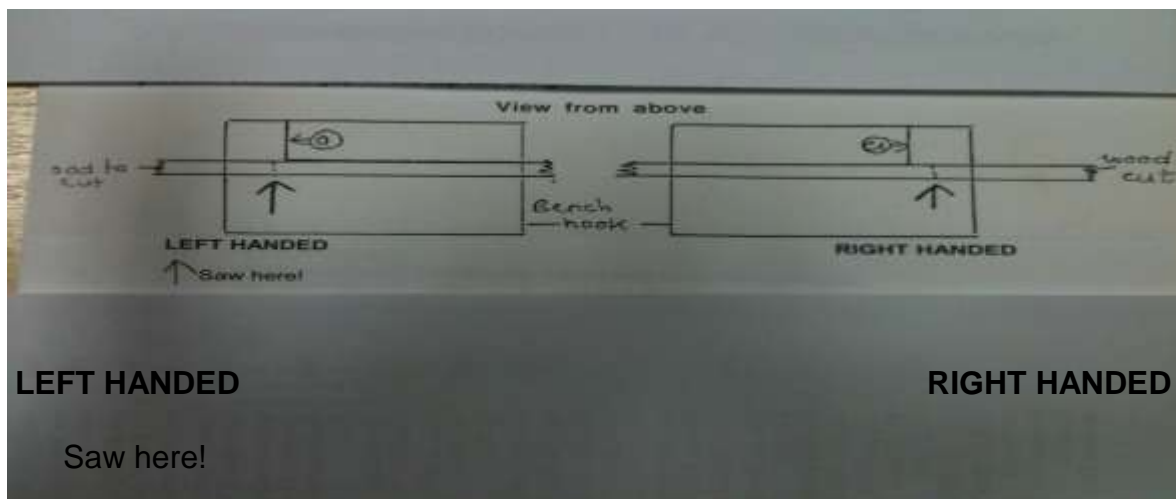


LEFT HANDED

RIGHT HANDED

## 5. HACKSAWS

These may be used but only with a bench hook underneath. The wood to be sawn should protrude over the gap in the top left or right-hand corner as shown.



LEFT HANDED

RIGHT HANDED

Saw here!

Ideally rest the saw along the edge marked a to guide it back and forth.

### **REMEMBER!**

When a piece of wood is sawn off there is a piece left over which is unwanted. The unwanted piece goes in the woodbin. For cutting wood at an angle it can be placed on a specially designed bench hook which has a plastic jointer attached. The wood can be put in through a number of gaps enabling different angles to be cut.



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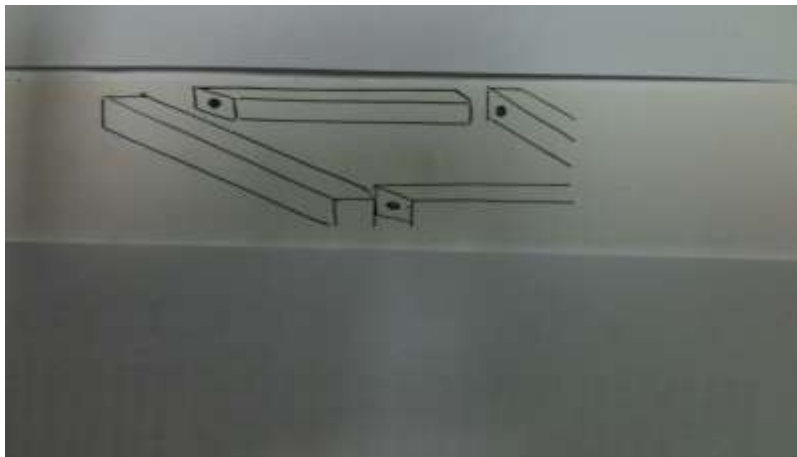
## 6. HAND DRILLS

Most junior children soon get the hang of using the vice and drill once they have realised that pressure is required as well as turning the handle. Pressure should be applied from above at a right angle to the wood, otherwise the drill bit may slip or snap. Large shapes can be supported in the workmate. Fragile shapes may need to be rested on a bench hook or other thick plank of wood, but if this looks unstable, drill the hole for the child.

## 7. GLUE GUNS

No child should be forced to use a hot glue gun if they are fearful of it. To ensure safety the following steps should be followed. (Note low temperature glue guns are safe following these guidelines)

- 1) Wood to be glued should be placed flat (on the plan if this is appropriate) and the points of connection marked with pen dots.



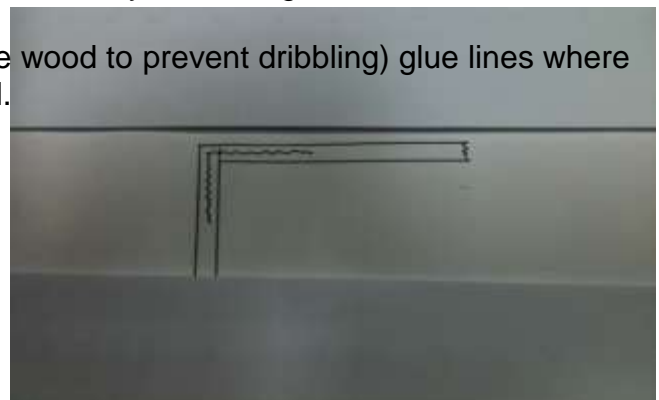
- 2) Using the glue gun put a dot on one of the black marks.

### PUT THE GUN DOWN

- 3) Press the wood together keeping hands well away from the glue.

- 4) Lay the wood flat and 'draw'

- a. (with glue gun nozzle touching the wood to prevent dribbling) glue lines where the card triangle is to be attached.



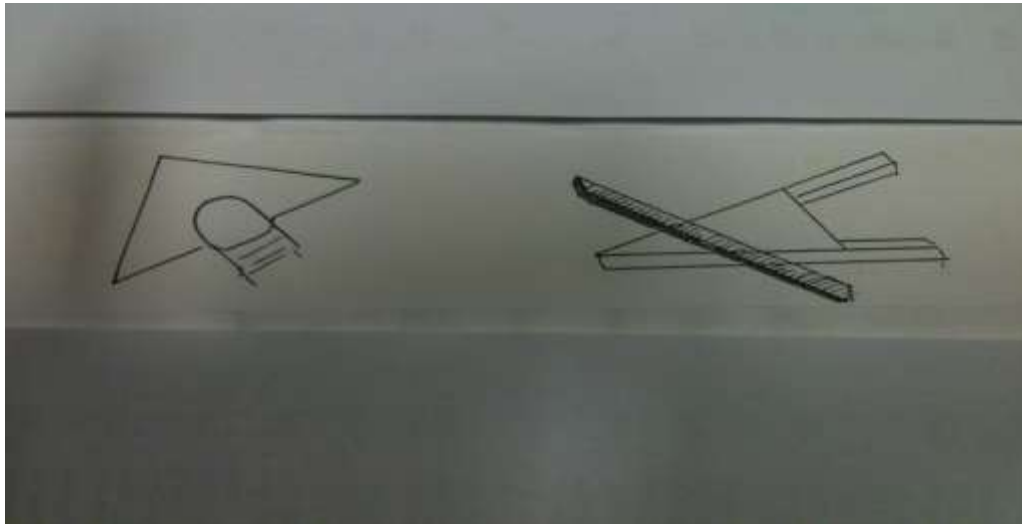


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## PUT THE GUN DOWN

- 5) Take a card triangle and hole it in the centre, NOT AT THE EDGE, and place the triangle lightly on the corner.
- 6) Use a scrap of wood to press the triangle down NOT FINGERS.



- 7) If the children follow these guidelines their fingers should never touch the glue.
- 8) In case they do, the sink should have water in it ready for a hand to plunge into.
- 9) To give more protection flexible gloves are being bought but since heat travels through the material, the guidelines should stay as they are.
- 10) Only children using glue guns should be near them.
- 11) There should be NO QUEUING. If children are waiting, they should sign their names on a list and then leave the gluing area to get on with other tasks.
- 12) There should always be an adult by the glue guns. A parent helper aware of these guidelines is ideal, otherwise the teacher must stay with the guns and children come to her.
- 13) Glue guns must be switched off when not in use.

## 8. IN CONCLUSION

Children should be aware of the dangers of these tools. Anyone messing about in the room (even if they do not have a tool personally) should not be allowed to continue with any technical activity that lesson. Messing about should include vocal silliness, which can distract others. Children need to be trained to listen immediately the teacher talks to them and to maintain an acceptable noise level.