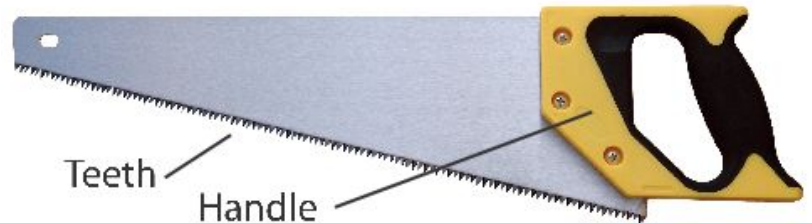


Hand Saws (Regular, Pull Saw, Jab Saw, Dovetail Saw, Hack Saw, Coping Saw)

v3, Updated April 2018

Identify:

Handle, Teeth (during intro: invite to gently touch teeth to see how sharp they are)



Accompanying Tools:

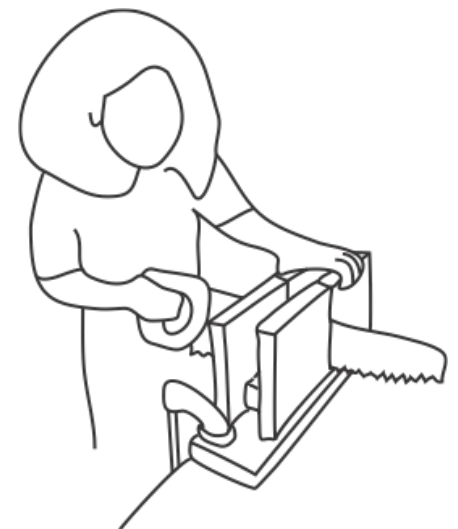
Clamps (usually at least 2),
Miter Box (optional, but helpful when a square or precisely angled cut is required)

Safety:

- Does not require immediate adult supervision after trained
- Safety goggles
- Clamp securely to a heavy object, in a vise or on a sawhorse or low stable surface
- Blood bubble is several feet around the cutting space. After cut has a groove, a hand may be placed closer on the material, ideally on the far side of a clamp.
- Use proper blade for material - i.e. hack saws for metal only, smaller saws for delicate and more precise cuts

Operation:

- Body position is vital. Shoulder is preferably above cut.
- Material to be cut is firmly clamped or in a vise. Small or abnormally shaped materials should be secured in a vise.
- Initially draw backwards several times to start a groove. Pulling toward yourself gives you more control.
- Saw from around 1" down the saw blade from the handle to 1" in from the tip. Rarely will the tip end of the saw's teeth engage the material. The sweet spot on the blade will become apparent.
- Use one or two hands to pull back and forth with arm acting like a piston. If one hand, keep loose hand far away from blade.
- If tool is binding, use less pressure.
- Constant tool binding can be due to waggle in arm or pressing too hard. Use smooth strokes. Readjust your stance and arm position.
- When cutting metal, clamp material in a vise with cut close to the jaws of the vise. Flexing material can cause the blade to bind.
- When cutting tubes, short items, or unusual shapes, use a vise.



- Some tinkerers may stand too far away and cut with the handle going toward their stomach. Encourage them to stand close and draw their elbow along the side of their body.