

Axes and Saws

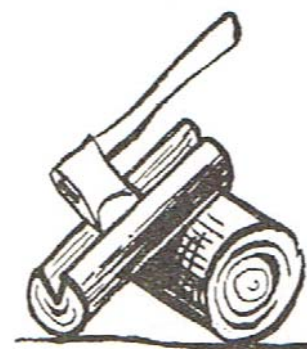
Introduction

Scouts and Venturers use axes, saws and knives at camp and on activities, to chop firewood, build gadgets such as gateways, tables and stands and of course to prepare food.

The emphasis of the training is on the following:

1. Sharpening and maintaining the tools.
2. Using them effectively so as to be able to survive in an emergency situation.
3. Using the tools wisely and safely.

You could also view handling and using knives safely as a type of handcraft activity.



Protecting the environment

SCOUTS do not encourage chopping up trees, either dead or alive. However, using axes and knives is a necessary part of teaching our youth members how to look after themselves and their families in the outdoors in an emergency or survival situation.

To ignore these tools on environmental grounds would be to place our members at risk if they found themselves in a survival situation. That's not the time to start learning to use these tools safely.

So in certain circumstances and with the permission of the land owners, we do train Scouts and Venturers how to use axes, saws and knives and how to build and light open fires.

Folding saw hint

Did you know that you can use a folding saw to split logs of up to 100mm in diameter into kindling and firewood? Here is a link to a website that has a video presentation on how to do this. You may like to reconsider the necessity of using axes after trying this.

<http://www.5min.com/Video/How-to-Use-a-Folding-Saw-151462951>

In reality, there is almost no reason when in camp to need to cut any timber greater than 100mm in diameter. Folding saws seldom need sharpening and can be folded up every time they are put down. They are a particularly safe and economical cutting tool to take to camp.



Sharp tools are safest

Contrary to what many people think, really sharp tools are the safest to use. The main reason is that the teeth or cutting edge slices into the timber, gets a grip on it and tends not to slip.

Blunt tools, bounce or glance off the timber and when this happens the tool is difficult to control, especially for the young users. This is when the user or someone nearby tends to get hurt.

Checking and storing your tools

Always and without fail, personally check any axe, saw or knife being taken to camp and ensure it is sharp or sharpened before packing it in the trailer. Keep a spray can of oil or WDF40 silicone spray in the Group store room and spray the tools before storing them.

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Axes and Saws, Continued

Protecting blades

In an ideal world, each axe you have in the Group store will have a leather pouch available to put over the head of the axe when it is not being used. In reality, if it ever had one, it has long been left in a field or in the bush.

Axe head cover

Here is a simple method of making a cover for your axe. If it gets lost or wet at camp, you simple make a new one out of a piece of cardboard from a carton in the food tent and a bit of light cord or rope.

- Cut a piece of cardboard and fold it around the axe head as shown in the illustration.
- Cut a nick in the cardboard close to the axe handle and tie the cord around it to stop the cardboard from slipping off the head.
- Lightly spraying the inside of the cardboard cover with oil would be beneficial as well.

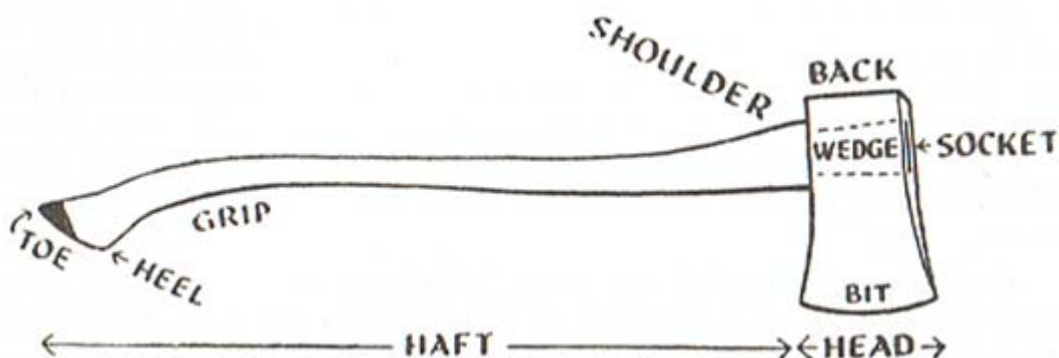


Saw blade cover

Saws are also dangerous when not in use. If placed in a toolbox or a trailer without a guard over the blade, you run the risk of people injuring themselves when sorting through the gear looking for something. Here is a easy way to make a guard:

- Cut a piece of garden hose to the same length as the saw blade.
- Use a sharp knife or blade and slit the hose from one end to the other.
- Prise the cut in the hose apart and slide it over the blade.
- If you have some wire twists handy, tie the hose to the saw blade so it doesn't drop off.

Parts of an axe



It's a good idea to learn the parts of an axe as it assists when instructing others. You can talk about the bit instead of the sharp side of the blade etc.

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Axes and Saws, Continued

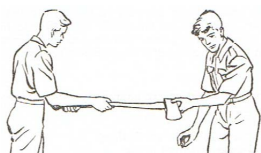
Carrying an axe

An unshielded axe can be a very dangerous tool to carry around. If the user trips, stumbles or falls when carrying an unshielded axe the chances of injury are quite high. Injuries might be:

- The user may cut an arm or leg by falling on the axe.
- A person walking beside the user of the axe could be hit and injured
- A user holding an axe by the handle could be hit by the axe swinging against their leg.



The illustration shows how to carry an unshielded axe. Remember that if you are walking with others, you always walk on the outside of the group with the axe on the opposite side of you from others. Note that the axe head is tilted away from the person's body.



Passing an axe to another person is done by passing the axe head first. If you pass it handle first, and let go of the head, the weight can cause the axe to fall and hit the other person's leg.

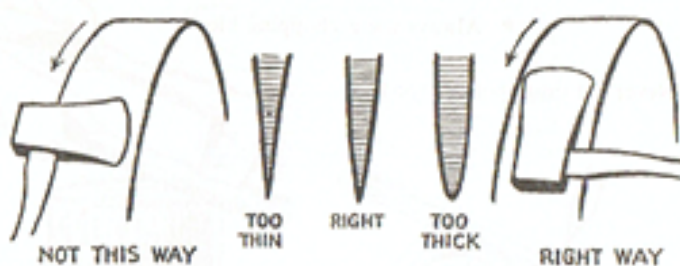
Sharpening an axe

When you buy an axe, the head is already correctly shaped and all you need to do is to rub it with a sharpening stone after every use to re-sharpen the blade.

However, over time the blade becomes worn and too thick to hold an edge and this is when they become dangerously blunt.

Re-shaping the blade is really a job for the professionals. They use a large grindstone that turns quite slowly and grinds the axe back in to shape without overheating it and damaging the steel.

This illustration shows the desired shape of a correctly sharpened axe head. Once upon a time every butcher's shop had such a grindstone, but today you may have to hunt around to find someone in an independent butchery with the skills to reshape the axe head for you.



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Axes and Saws, Continued

Sharpening an axe, *continued*

If the axe is not too thick, you can use a file to reshape it.

- Always file from the bit (the sharp end of the blade) towards the back of the head of the axe.
- Always use gloves to avoid injury
- Always have someone hold the axe handle firmly so it doesn't move and cause the file to slip.



The blade can be given a final sharpen using a carborundum stone purchased from any hardware store.

Use the stone as shown in the illustration, making sure the angle between the blade and the stone is about 20 degrees.

You can use oil or water to assist the grinding process. In the illustration oil has been used and clearly shows the circular motion used to grind the blade.

Most stones have a coarse side and a fine side. Start with the coarse side and then finish with 5 or 6 strokes using the fine side to put a very sharp edge on the bit.

Splitting firewood with an axe

Always have an area of ground put aside for cutting and splitting firewood and make sure only one person is inside that area when using an axe.

Roping off the area is a sensible thing to do and will remove a potential hazard.

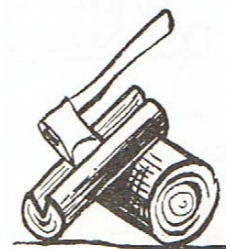
When using a hand axe to split small logs for kindling, always:

- Use a log or tree stump as a chopping block and place the wood as shown.
- Hold the wood in one hand and use the other to hold the axe.



When using a larger axe for splitting short lengths of a log, always:

- Place the wood against a larger piece of timber as shown in the illustration.
- Use both hands on the axe.



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Axes and Saws, Continued

Felling a tree

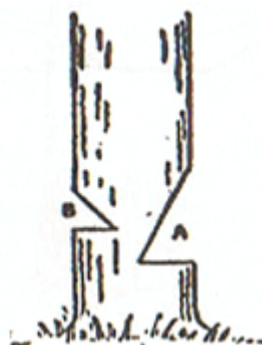
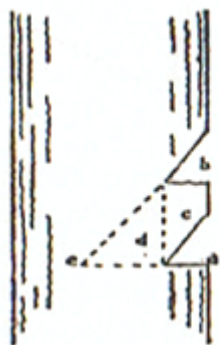
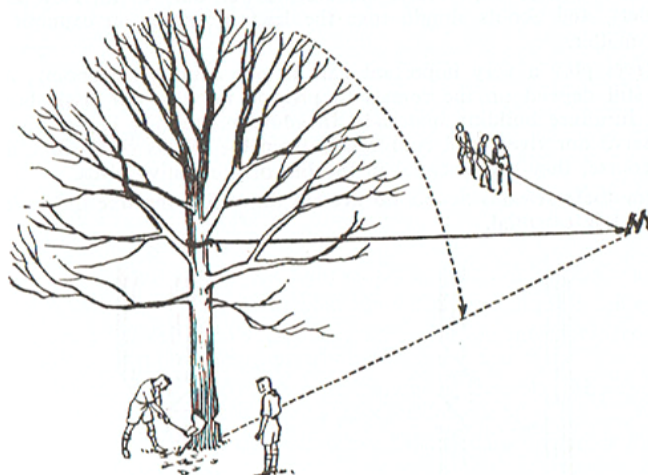
As mentioned previously SCOUTS try not to fell either alive or dead trees. However, assuming you have the landowner's permission to do so, the following is how you fell and trim a tree.

If you need to fell a tree in a particular direction, use the technique shown in this illustration.

Warning:

When the tree finally starts to fall, the trunk will nearly always kick back about 2 metres towards the person wielding the axe.

Serious injury is the least you can expect if you don't move smartly back from the tree once the observer warns you the tree is starting to fall.



Start by cutting a 'scarf' on the side of the tree that will fall onto the ground.

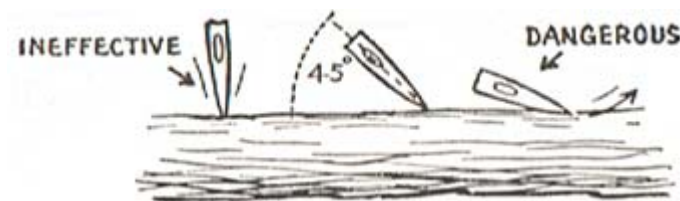
If the trunk is a substantial size you may need to start two 'scarfs' and join them together as shown in the left illustration.

Once you are just over half way through the trunk, move to the other side of the tree and start cutting another scarf about 100mm higher than the scarf on the other side of the tree.

Make sure you have an observer standing clear of the tree and who can warn you as soon as the tree starts to fall. When it does fall it will happen quickly and you may need the extra warning time given by the observer so you can move away from the trunk.

Note: You can fell a tree with a coarse cross cut saw using the same method. You will have to cut several scarfs though to avoid the saw jamming if the tree starts to lean and closes the sawcut.

Cutting angle



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Axes and Saws, Continued

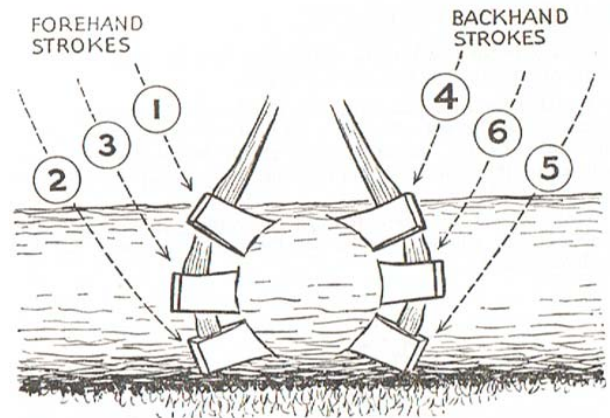
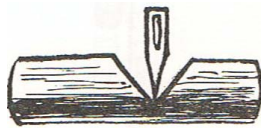
Cutting logs

This illustration shows the cutting pattern needed to cut a log in two.

A 100mm diameter log will probably need 2 cuts either side.

Bigger logs will need at least 3 cuts each side of the 'scarf'.

If possible turn the log over when half way through and start again on the other side until the two cuts join up.

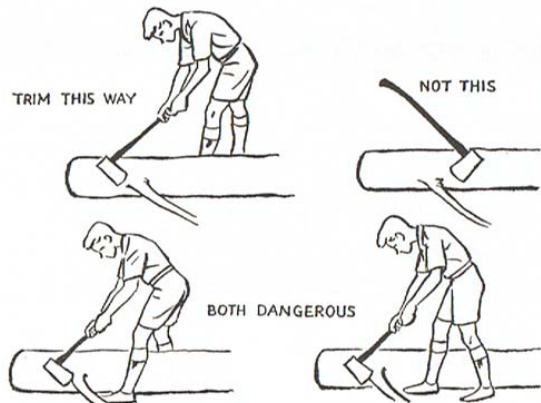


Trimming branches

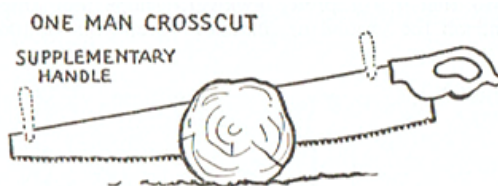
Trimming branches is relatively easy if the axe is sharp and you stand correctly and safely.

Always stand on the opposite side of the trunk and cut through the branch from what was the underside of the branch where it joins the trunk.

As you cut each branch try and drag it clear before cutting the next branch. By doing this you are removing potential hazards from your work area.



Types of saws



Here is what the teeth look like:



make it a two handed saw that both users pull alternately.

The main point to remember is that the users pull the saw towards themselves. The saw will not work if either user attempts to push it.

SCOUTS tend to use one of three types of saws when in camp.

The Cross Cut Bushman Saw

Not many Groups have the saws. They have been replaced by chainsaws and any remaining handsaws are generally used for forestry workers competitions and for training.

The saw illustrated is a single user saw, adapted by adding two upright handles on either end to

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Axes and Saws, Continued

Types of saws, continued



This is a modern bow saw.

It folds up and will easily fit in a pack or a Patrol box.

The blade is about 300mm long and will easily cope with timber up to 150mm long if needed.

It's easy to use, very robust and economical to buy.

Stocked by most outdoor retail shops, and also readily available on the internet.

The saw shown opposite is a folding saw.

- It is easy to use.
- Easily folds up when not in use
- Readily available from hardware stores or internet outdoor equipment sites.



Using the saws

The main thing to remember is to hold the timber still while cutting it. You may need someone to hold it, or you drive pegs into the ground on either side of the log and hold it still with one hand

Sharpening the saws

The two handed Cross Cut saw needs professional sharpening unless you happen to know a former bushman who has the skill.

The Bow Saw and Folding Saw need replacements blades which you buy from the supplier. They can be sharpened by a person trained to sharpen saw blades if needed, but it's cheaper to buy a new blade if you have to pay someone to sharpen the old blade.

Chain Saws Scouts **must not** use electric or petrol powered chain saws.