

Scout Skills

Use of Axes and Saws

info

Scout
Information
Centre

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INFORMATION SHEET

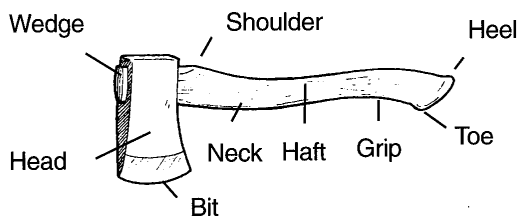
The axe is an essential tool for all camps where open fires are used. Like any tool, the axe or saw should only be used for its correct purpose, the safety guidelines followed, it should be properly cared for and should always be treated with respect.

Which axe?

Each axe or saw is designed to do a different job and should only be used for their intended purpose. It should never be used to do the job more suited to another type of axe, saw, knife, mallet, hammer and so on.

Hand-axe - For use with one hand, it is used to cut and trim small firewood, thin branches and twigs and should not be used on live wood. Any wood larger than three inches in diameter (about the size of your wrist) should be cut using a bow saw (see opposite).

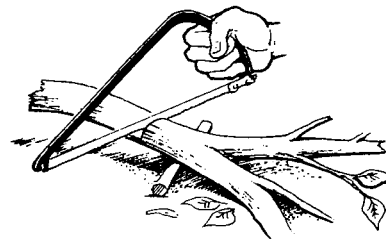
The main parts of the hand-axe are:



Hand-axes may have either wooden or metal hafts. Those with metal hafts are one-piece and have a rubber handle around the grip. All hand-axes should have an accompanying mask, which covers the blade and fits securely round the back of the head.

Felling axe - This is for use with both hands, is larger than the hand-axe and is used for felling upright, live trees. It is important that the correct size and weight of axe is chosen. It is difficult (and dangerous) to try and control one of an inappropriate size. No one should attempt to use a felling axe until they are competent with a hand-axe.

Bow Saw - Not strictly an axe of course, but often used in conjunction with axes for preparing firewood. You may come across a variation of the bow saw, for example, the bush or 'sandvic' saw. Bow saws are used for wood too large for using a hand-axe and are often safer and easier than the felling axe for cutting small timber. They should be greased to prevent them from rusting and, as blades are relatively cheap, it is advisable to replace the blades rather than attempting to sharpen them!

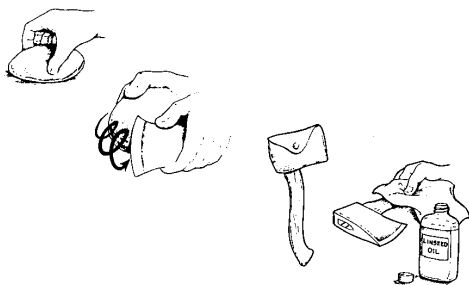


Care of the axe

- Mask the axe when not in use, using a correctly fitting mask and not by sticking it in the ground. An axe may be masked temporarily in the chopping block but make sure that the blade follows the grain of the wood, is secure in the wood, and that the haft is not overhanging the block and can trip anyone.
- In camp, keep all axes and saws dry. Never leave them out overnight. Fit the mask or sheath and keep them out of the way in a store tent (but not just inside where someone

might kneel or step on them going into the tent!).

- Sharpen the axe with a round carborundum stone (available in different grades of coarseness). You should start with a coarse stone and then finish with a fine stone depending on how much sharpening the axe requires. (It should be used with oil.) Move the stone round in small circles on each side of the axe face. Keep your fingers away from the bit.
- Keep the axe head greased to prevent it rusting and oil a wooden handle regularly with linseed oil.
- Replace a damaged haft with a new one never attempt to repair it.



Safety guidelines

- To prevent the axe being snared in clothing you should not wear scarves, ties, lanyards or any loose clothing;
- Wear strong leather boots, rather than trainers or soft shoes;
- Clear the ground nearby and make sure there are no overhanging branches, ropes, people or other obstructions within three axe lengths of you (that is one outstretched arm and the length of three axes). Never ask anyone to hold the wood you are cutting;
- Inspect the axe before use. Never use it if the head and haft do not line up straight, if the haft is split, chipped or otherwise damaged or broken, or if the head is loose;
- Never use a blunt axe - it can slip or bounce off of wood yet can still penetrate flesh;
- Always use a chopping block below the wood to be chopped and don't let the axe go into the ground;
- Chop directly over the chopping block. The part to be cut should be resting on the block;

- Always stop when feeling tired. If you carry on, you are more likely to miss and cause a serious injury;
- Mask the axe when not in use;
- Carry the axe cradled upside down in your hand with your arm by your side. Make sure the axe bit is facing forward with your fingers out of the way so that if you fall the axe would go into the ground;
- Pass the axe to someone else by standing side by side, facing the same direction. Pass the head first.



Tricks of the trade

- Like any tool, if it is well looked after, it will do its job better and last longer!
- Always use an axe within the marked out chopping area. Don't take it along to the source of wood. A bow saw would be more effective here.
- Enforce the chopping area as a 'no go' area for anyone not properly trained or clothed.
- Chop enough wood to keep the fire wood pile stocked but do not over stock the pile.
- Always mask an axe or saw when not in use.

Further information

Learn to use the bow saw and the felling axe' competently. Compare the benefits of using each.

Learn to repair an axe (such as replacing the haft) from an experienced Quartermaster.

TEACH YOURSELF

For the purposes of this sheet we are specifically looking at the hand-axe as it is the most commonly used in Scouting, but many of the principles apply to other axes.

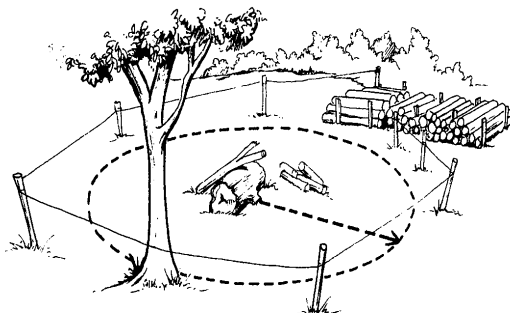
How to use the hand-axe

Before attempting to use a hand-axe, it is important to read the Information Sheet and familiarise yourself with the different parts of an axe and the safety guidelines.

Only use the hand-axe in a marked chopping area. Ideally this will be near to the fire area but separated from it by a woodpile containing prepared wood, graded into different sizes.

The chopping area must have:

- A radius of at least three axe lengths (that is the length of the user's outstretched arm, plus three axes);



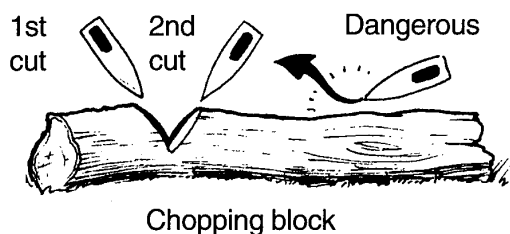
- No overhanging branches;
- Been fenced off and been marked clearly as a chopping area;
- Had the ground covered with plastic or hessian sheets;
- A chopping block - a log held in place by pegs at each corner and positioned in the middle of the chopping area.

Before commencing, you should check your clothing and make sure that it meets the safety guidelines as described in the Information Sheet. Then inspect the axe to make sure it is safe to use.

Campers should be warned not to enter the chopping area whilst others are using hand axes. Persons may enter the area only when properly clothed and if trained in the use of axes. Be especially careful of younger campers who might be particularly inquisitive!

Procedure

1. Crouch (or kneel on one knee) behind the chopping block.
2. Hold the wood to be chopped with one hand.
3. With the other hand grip the hand-axe on the lower part of the haft, on the 'grip'. Hold the axe firmly but not rigidly. Note: only hold the hand-axe with one hand.



4. Chop the wood by keeping the axe and the lower part of the arm straight and bending your arm at the elbow rather than the wrist or shoulder. Chop at 45 degree angles to the length of the wood making alternate left and right cuts to create a small 'V'. The 'V' will get wider as you cut through the wood, creating the chippings, until it is cut in half. Do not try to cut at right angles to the length of the wood; this will make the axe bounce.
5. Always watch the point at which you are aiming. Indeed, when practising, it is a good idea to put a chalk mark on the log and try to hit that.
6. Clear chippings away regularly and use them for kindling (that is, small pieces of wood suitable for starting a fire).

Sharpening an axe

Sharpen the axe with a round carborundum stone.

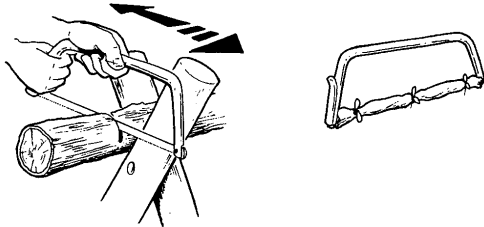
Hold the stone so that your fingers don't protrude onto the blade. If you put the stone flat on a table or other flat surface, then lift it with your fingers

and use the face which was on the table for sharpening, your fingers should always be clear of the blade!

Move the stone round in small circles on each side of the axe face. For extensive sharpening, lay the axe, bit upwards, against a grindstone and rotate the grindstone slowly towards the bit. It should become good practice to sharpen the axe after use and before storing.

Using a bow saw

1. Make sure that the wood is held firmly - if you must use your hand for this, keep it well away from the blade.



2. Start slowly, pulling the blade backward towards you until the blade is well into the wood. Then push and pull in a steady rhythm using the whole length of the blade.
3. Always mask the saw after use - either use a plastic 'clip-on' mask or tie a length of sacking around the blade.

Can you do it?

When you feel confident about the use of axes, check how you are doing and see which of the following you can tick off:

- Know when to use a hand-axe, felling axe and bow saw;
- Identify the main parts of a hand-axe;
- Demonstrate the safe use of a hand-axe;
- State the safety rules when using an axe;
- Demonstrate the correct method of sharpening an axe;
- Demonstrate the safe use of a bow saw.

So you want more?

Learn to set out a chopping area;
Learn how to care for and repair an axe;
Learn how to use a felling axe.

Your notes on this session

HOW TO TRAIN OTHERS

This section is designed to give some practical ideas about how you can help other people to understand how to use axes properly. Those people might be Leaders or Scouts either in an informal way on a Troop night or more formally on a skills workshop, training course or something similar.

Objectives

1. By the end of this session, participants will be able to:
2. Identify the main parts of a hand-axe;
3. Demonstrate the safe use of a hand-axe;
4. State the safety rules for using an axe;
5. Demonstrate the correct method for sharpening an axe.

Time

It is likely to take a minimum of 45 minutes to train someone in the practical and safety elements of using a hand-axe.

Equipment

A range of different hand axes.

Diagrams and charts showing the parts of an axe.
Games/jigsaws/word puzzles as required by the methods.

Range of carborundum stones.

Grindstone.

Different types of wood for cutting, including dry wood, green sticks and other types of wood available locally.

Properly laid out chopping area (see Information Sheet and Teach Yourself).

A written set of safety guidelines for each participant (optional).

Training method

As with any practical subject, adults and Scouts are likely to be bored by a long, theoretical session, particularly if held indoors. The safety rules and parts of the axe can be taught by demonstration and illustration by an experienced Scouter using a real axe. Indeed, it is recommended that the participants can see it being used properly before they have a go themselves. However, move onto the practical work as soon as possible as they will learn properly by actually having a go.

At the start of the session the trainer should explain what a hand axe is, and is not, used for. Reference might also be made to the felling axe and bow saw for comparison. This will help participants put the rest of the session into context. It is also important that before any participant is given a hand axe to use, they should be able to state the safety rules.

Participants should have the opportunity to practise on different woods, with different axes and to sharpen axes using different stones. Following the practical work, discuss the different uses of axes and saws.

Training activities

1. In pairs, without any prior training, participants are asked to list 'common sense' safety rules for using a hand axe. Ideas are corrected and/or amended in a supportive manner by the trainer.
2. Each participant is given a drawing of a hand axe and asked to label the different parts.
3. Various word puzzle games (for example crossword, wordsearch, hang man) can be used to cover or check the parts of an axe as well as the safety rules.
4. Small groups could be given a hand axe 'jigsaw' with each part of the jigsaw representing a different part of the axe.
5. Each participant should have the opportunity to complete the chopping of a piece of firewood. The trainer should give feedback on all the key points and the participant should be given the chance to correct their technique.

6. Ask participants to try chopping different types of wood, including dry wood, green stick and any other types available locally.
7. Each participant has a go at sharpening an axe using different sizes and/or grades of carborundum stones and a grindstone. Review the effects of different stones.
8. Examples of warped, damaged, rusted and blunt axes can be shown to discuss the importance of proper care for an axe.

Hints and tips

Make sure that all participants are wearing appropriate clothing and footwear as outlined in the safety guidelines before undertaking the practical activities.

Stress the importance of masking an axe when not in use, of ensuring only trained Scouts and adults are allowed into the chopping area and of keeping the axe in the store tent except when needed.

The use of a bow saw can easily be adapted to this session but felling axes should not.

Checking their progress

Through observation, check whether each participant is demonstrating safe practice as well as competent use of the axe. Tell any participant whom you feel needs further support and/or practice before using an axe without supervision.

Sometime after the session, run a quiz to check the safety rules and parts of an axe can be recalled.

Ask participants whether they feel they are happy with their ability to:

1. Identify the main parts of a hand axe.
2. Demonstrate the safe use of a hand axe.
3. State the safety rules for using a hand axe.
4. Demonstrate the correct method of sharpening an axe.

So they want to know more?

Participants may wish to, or need to, learn how to:

- Set up a chopping area;
- Care for, and store, axes and saws;
- Repair damaged axes;
- Make leather masks;
- Use a bow saw, felling axe or whittling knife.

Your notes on this session