

Training others

This sheet provides practical ideas to help teach other volunteers and young people how to light fires safely and effectively. Training might take place informally on camp, or more formally as part of a skills workshop or training course.

Objectives

By the end of this session, participants will be able to:

1. State the safety rules involved in fire lighting.
2. Prepare an area for lighting a fire
3. Lay and light a fire
4. Put out a fire and clear the area correctly.

Equipment

- Tinder, kindling and fuel
- Matches, flints or other suitable ignition source
- Tools as appropriate e.g. spades
- Bucket of water, sand or fine soil
- Resources for running training activities as required.

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Lesson 1: Fire safety rules (15 minutes)

Introduce...

What? The topic of fires and the need to use them safely.

How? Ask the group about any experiences they have of fire in the past. Where have they seen fire before? Ask them what fire might be used for and create a list – these could be good and bad things.

Demonstrate...

What? Some of the dangers of fire.

How? This section requires a careful balance of material to develop a healthy respect for fire, without instilling fear or anxiety. Appropriate ways to cover this topic might be anecdotal evidence or YouTube videos showing a mixture of safe and unsafe fire use – possibly with news articles too.

Explain...

What? How to use fire safely.

How? Explain that with some basic rules we can use fire safely, effectively and as a tool to help us around camp. Introduce some of the basic safety rules (e.g. never leave a fire unattended).

Apply...

What? This activity consolidates the skills learned earlier in the session.

How? Ask the group to come up with their own set of safety rules, perhaps by asking small teams of participants to write rules on post-it notes before sticking them to a wall or display board. They can then move to other teams' walls or displays to pick out the rules they agree with/think are important.

Summarise...

What? This exercise checks understanding of the skills taught in the previous activity.

How? Display the safety post-it notes that were chosen together on a wall or display board. Remove any duplicates to come up with a master set of rules. Ask the teams to explain/justify why they have made that rule.

Lesson 2: Preparing to light a fire (30 minutes)

Introduce...

What? Good fires need good preparation.

How? If possible draw on personal experience. This could be a short story or anecdote about the trials and tribulations of trying to light a campfire with damp wood, or lighting a fire which then went out for lack of fuel!

examples of kindling and small fuel, and explain that it is important to make sure that the size of the fuel is appropriate for your fire. Also tell them where fuel and kindling is typically found and how to check if it is dry or not. You can explain the 'matchstick principle' – i.e. matches burn because they are thin and dry, so your kindling should also be matchstick-thin and dry!

Demonstrate...

What? How a fire area is set up and what it should include.

How? In an appropriate location show the group your preparations for lighting a fire. This should be a visual demonstration, so make a big show of clearing potential fuel from the floor, marking your fire area with logs, having a fire bucket etc. You could turn this into an observation game, asking small groups to note everything you do and report on their observations at the end of the demonstration. Score their responses. This feedback section is also an opportunity for you to explain why you did certain things.

Apply...

What? This activity consolidates the learning from earlier in the lesson.

How? Split the group into small teams and give each team 20 minutes to set up their own fire area and collect fuel. This can be a race, with prizes for the team that makes the fastest progress or collects the best wood pile.

Explain...

What? What is needed to light the fire and how it should be prepared.

How? Explain that some items are needed before you can light the fire, which of course includes having something to burn ('fuel'). Show the group

Summarise...

What? This activity checks understanding of the skills taught in the lesson.

How? As a group, move around each team's fire area and ask them to explain what they have done, with the other teams giving feedback. A good method for this would be 'two stars and a wish', where each group comes up with two positive things to comment on, and one thing that they would improve.

Lesson 3: Laying and lighting a fire (30 minutes)

Introduce...

What? The principles of fire lighting.

How? Ask the group to sit in a horseshoe around your fire area. Introduce the concept of the fire triangle (oxygen, fuel, heat). You can use labelled cards to help with this, or use sticks to build a triangle on the floor.

Demonstrate...

What? Small-stick fire lighting.

How? Remember that good demonstrations allow people to take in information visually without having to listen to what you are saying. They also make skills look obvious rather than easy, which might mean over-emphasizing your actions or changing your position/techniques to make the skill clearer to the group, even if it's not exactly how you would practise the skill yourself. Show the group how to create a flame and transfer it to the tinder so that the tinder ignites. Use a match or a flint to do this.

Explain...

What? The steps you took to light the fire.

How? Repeat your demonstration but, this time, explain each step as you do it. Show the group how you are holding the match and explain why it is done in a certain way. You might also add a small bundle of kindling to your tinder for this demonstration to show the group how the fire is established, and explain how you would add further fuel.

Apply...

What? This activity consolidates the learning from earlier in the lesson.

How? In the same small teams as the previous lesson, ask the group to practise lighting a fire in their own fire areas. They should do this until everyone can light the tinder from one match, or from their first flint strike. Once they have achieved this you may permit them to build a larger fire.

Summarise...

What? This activity checks understanding of the skills taught in the lesson.

How? A great activity for this would be a relay race where participants have to race up to the fire area, light a ball of tinder and race back. The next participant then has to race up and add kindling before the tinder goes out and so on, until they have built a fire. This is also a good tool to reinforce the idea that once fuel is on the fire it should be left rather than fiddled with. Alternatively, teams could race to make a cup of tea, using the fire to boil the water.

Lesson 4: Extinguishing and clearing up after a fire (20 minutes)

Introduce...

What? That fires need to be extinguished properly and carefully, and fire sites need to be returned to their original state.

How? Ask the group what they think needs to happen when you are leaving the fire and why. What should happen at the end of the camp? It is useful to have some photos of forest fires, and/or picturesque locations scarred by camp fires.

Demonstrate...

What? How a fire is extinguished correctly.

How? Using your demonstration fire, show the group how to extinguish a fire – either by dousing or smothering, then spreading the embers to cool. Follow up with questions about why you extinguished the fire in this way.

Explain...

What? How to return a site to its original state and the standards you expect.

How? Explain the principle of 'leave no trace' or 'take nothing but photographs, leave nothing but footprints'. Give the group some expectations of what you would like this area to look like when you have finished.

Apply...

What? This activity consolidates the learning from earlier in the lesson.

How? Teams now extinguish their fires and return the fire area to its original condition, ensuring that they leave no trace.

Summarise...

What? This activity checks understanding of the skills taught in the lesson.

How? A good way to do this is to have a pre-printed series of photographs (or a slideshow on a laptop) showing the area before your session started. Ask participants to stand in the same place as the photo was taken and compare the two views – before and after. Does it look the same? Using this evidence they should fix what they can. They should acknowledge anything they can't fix and explain how they would lessen this impact next time they light a fire.

Taking it further...

You could create lessons to cover some of the following topics:

Play a True or False quiz. Sample statements:

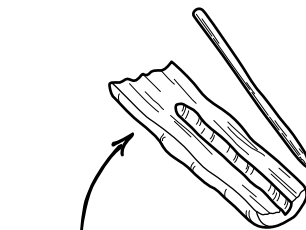
- 'It is a good idea to carry paraffin or meths in case the fire won't light.' [FALSE]
- 'You should pile on as much wood as possible once there is a reasonable flame.' [FALSE]
- 'Three elements are needed to light a fire: fuel, oxygen and heat.' [TRUE]
- 'It is a good idea to light your fire under overhanging trees in case it rains.' [FALSE]

Different sources of ignition – Investigate and learn how to use methods other than matches and lighters to start fires. Fire can be created by friction, by percussion, or by solar, electrical and chemical methods. You may wish to try making fire by percussion (striking materials to create a spark) using traditional flints and steels, fire pistons or ferrocerium rods ('fire steels'). Fire by friction includes the bow drill and fire plough techniques. Solar fires are created by focusing the sun's rays using a lens or mirror. Try making an improvised mirror by polishing the bottom of a coke can with chocolate or toothpaste.

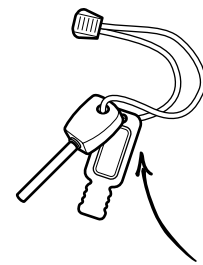
Fire lighting methods



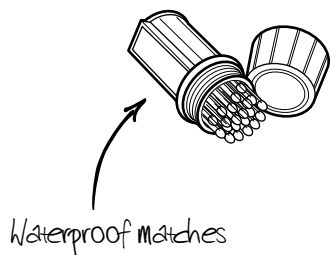
fire piston



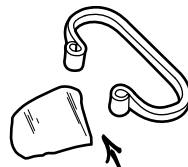
fire plough



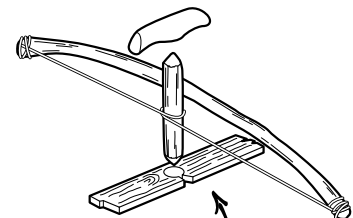
Fire steel (ferro rod)



Waterproof matches

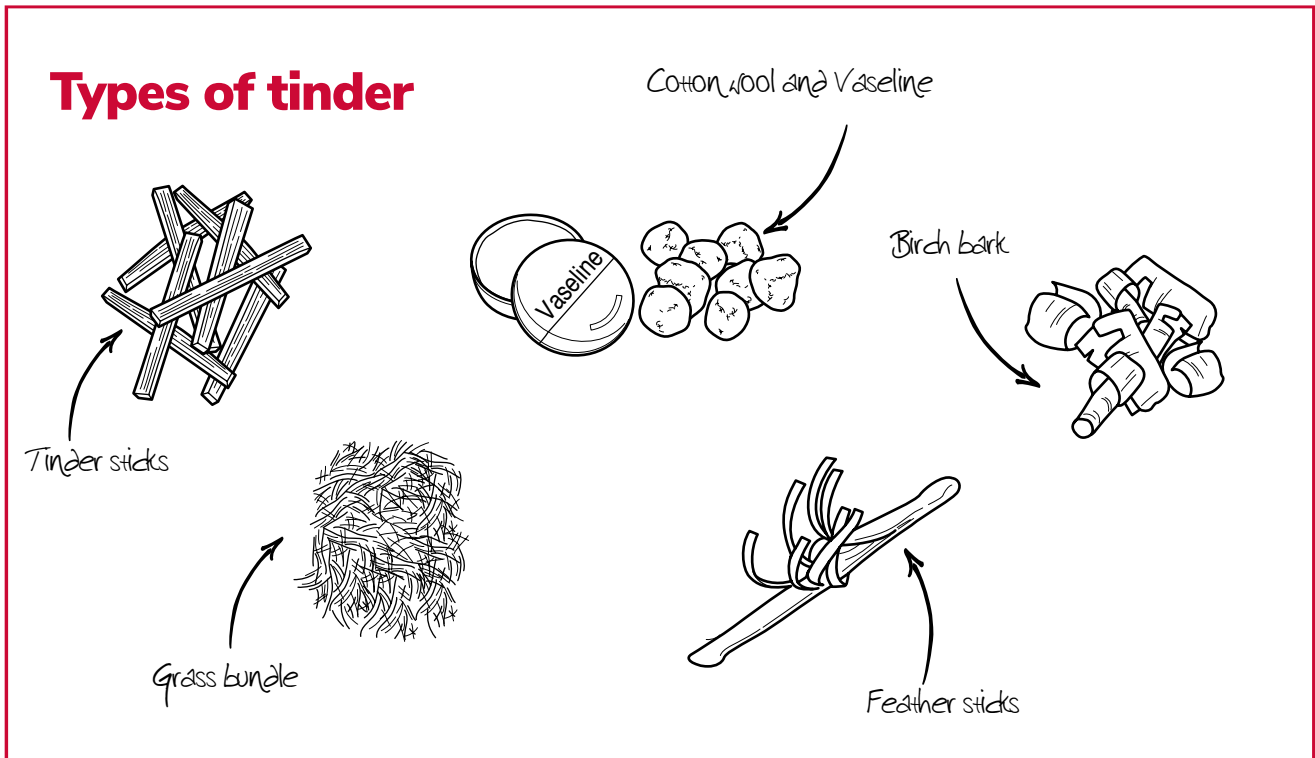


flint and steel



bow drill

Different tinders – Practise fire lighting using different natural and artificial tinders such as birch bark, dry grass, tinder sticks, feather sticks or cotton wool balls coated in petroleum jelly.



Different fire lays – Explore the different ways to structure a fire for different purposes. This could include tipi fires, stacks, star fires, long log fires and so on.

Backwoods cooking – Practise fire lighting for cooking. Remember, you'll need to light your fire well in advance to create cooking embers.