

TECHNIQUE DESCRIPTION

Fire with flint stones



Introduction

There are different ways and materials used to light a fire. In pre-historic times men couldn't make fire himself but got fire after e.g. lighting. In the late Stone Age men discovered a method using flint stones and iron ore which is still difficult. When the knowledge of welding was developed the iron ore was changed into a piece of raw iron. Even Ötzi had a bag with flint stone, piece of iron and tinder fungus with him...

Background information

Fire with flint stones

Flint stones are very hard and splinter when breaking. The edges of broken flint stones are so sharp; it's used in the Stone Age as knife, axe and points of spear and arrow. The principle of making fire with flint stones and fire steel is that you scrape with the sharp edge of the flint stone a little piece of the iron. Because of the friction during the hit, these little pieces of metal begin to glow. In fact, it's the metal that makes the sparks, not the stone. Therefore hitting with two flint stones won't work. It is only possible with iron containing material such as marcasite, an iron containing stone.

Tinder

The sparks are very tiny and you won't even feel it on your hand. Therefore you need a material that will light immediately, even with this small sparks. We call this type of material tinder. In nature, the most known tinder is the tinder fungus (or real amadou or horse hoof - *polyporus fomentarius*) which can be used as tinder and works best after a process of boiling in horse urine. Because the tinder fungus is protected we work with a man-made tinder, charcloth, burned and carbonized cotton.

Making fire with flint stones

Step 1: Preparations

1. If you want to make a fire you need materials to burn. You need a good hand full of hay, a flint stone, fire steel and some charcloth **[pic 1]**
2. Make a birds nest of the hay and put the piece of charcloth in the middle of it. **[pic 4]**

Step 2: making fire

3. Take the flint stone in one hand and the fire steel in the other hand **[pic 2]**
4. Hit the steel against the flint stones (or the other way around) to get friction and create sparks **[pic 3]**
5. Aim the sparks at the tinder in the middle of your birds nest **[pic 4]**
6. When a spark hits the tinder, you will see that the cotton starts glowing **[pic 5]**
7. Close the hay around the tinder and blow softly in the hay, at the tinder **[pic 6]**
8. When it starts smoking you can blow more and stronger. Hold the hay above your head and turn away from the wind, so the wind can help you blowing and you won't get smoke in your face. Keep blowing until the flames come out **[pic 7]**. Carefully put it in the fire barrel and let it burn out.

Step 3: making the tinder

We use charcloth as tinder, which is easy to make. You need 100% cotton. The principle of making charcloth is that you carbonize the cotton instead of burning it. There are two ways of making it

1. The way we do with participants:

- Take a piece of cotton, hold it vertical above the candle and set it on fire **[pic 9]**
- When the whole piece is almost burning, put it between the *tinder maker* (two wooden boards, or a newspaper) **[pic 10]** to get it out **[pic 11]**.

2. The fast way of making a lot of charcloth

- Another way is putting cotton in a tin with a lid with holes.
- Put the closed tin in the fire.
- When the smoke from the holes stops your charcloth is ready.
- Take the hot tin out the fire and bury it for a while under the ground (if you open the hot tin immediately after you take it out the fire the charcloth will light by the heat of the tin and will burn away
- Dig it up when it's cooled down.

Safety:

- Be sure both a bucket of water and fire blanket are present
- Be careful with flammable clothing (polyester, fleece, etc.) and flammable materials on the underground.
- When the hay is burning, participants can panic because of the big flames and lots of smoke. Be sure that the burning materials will be put in the fire barrel.
- Let them be very careful with steels and Flintstones. Most injuries happen in this activity by hitting the hands with Flintstone or steel.



“vuursteen”

flintstone - la pierre pour le feu



“tondel”
tinder /
amadou



Most Primitive Scouting Experience - www.mpse.nl