





Learning in the Leaves

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| Source | Use |
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| <p data-bbox="268 421 416 450">MATCHES</p>  | <p data-bbox="608 421 1481 539">Safety matches ignite due to the extreme reactivity of phosphorus with the potassium chlorate in the match head. When the match is struck the phosphorus and chlorate mix in a small amount forming something akin to the explosive Armstrong's mixture which ignites due to the friction.</p> |
| <p data-bbox="277 853 406 882">LIGHTER</p>  | <p data-bbox="608 853 1458 972">The spark ignites the flammable gas causing a flame to come out of the lighter which continues until either the top is closed (naphtha type), or the valve is released (butane type). Also available with a long neck ideal for lighting fires, often referred to as a gas lighter.</p> |
| <p data-bbox="268 1285 416 1314">FIRESTEEL</p>  | <p data-bbox="608 1285 1481 1599">Firesteels are one of the most important inventions in outdoor gear in the last 50 years. Firesteels start fires. Like other ignition sources (i.e. matches, lighters) their job is to start your tinder burning. The firesteel consists of a metal rod usually attached to a small handle. The metal is a cerium alloy mixed with an iron alloy to provide strength. This combined alloy is called mischmetal. The first firesteels had a slightly different formulation, called ferrocerium. Mischmetal has pyrophoricity. A pyrophoric substance (from the Greek "fire-bearing") ignites spontaneously in air at or below 55 °C (130 °F). When you scrape a sharp surface against a firesteel, it gives off hot sparks. When scraped, a firesteel produces molten sparks of 3000°C (5,500°F)!</p> |
| <p data-bbox="193 1718 491 1792">BURNING GLASS MAGNIFYING GLASS</p>  | <p data-bbox="608 1718 1481 1995">Any sort of magnifying lens may be used to start a fire on a sunny day. This would include a regular magnifying lens, some sort of special magnifier (as shown in the photo below), binoculars, glass bottle bottoms, eyeglasses (far-sighted prescriptions), and so on. A drop of water on the glass can intensify the sun light even further. You can even buy specialized "burning glasses", which are specially made for concentrating the sun's light for the purpose of starting fires. Simply hold the lens at such an angle as to focus the sun's light into as small an area as possible. Place some tinder under this spot and it will soon start to smoke and hopefully catch fire.</p> |

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| <p data-bbox="140 421 545 452">BATTERY AND STEEL WOOL</p>  | <p data-bbox="608 421 1476 539">Steel wool can be easily wrapped around tinder to help start a fire. If you have a 9V(rectangular in shape) battery, all it requires is a touch to get the fire started. Other batteries can be used, however you may need to use wire to ensure positive and negative ends both touch the wire.</p> |
| <p data-bbox="252 853 434 884">FIRE PISTON</p>  | <p data-bbox="608 853 1476 1256">The concept is pretty simple, a hollow cylinder is sealed at one end and left open on the other. A piston with an airtight seal is fitted into the hollow cylinder. The piston should have an O-ring (or other similar device) on one end to create the air tight seal. The other end of the piston should have a knob or handle used when compressing the piston into the cylinder. A hole or crevas in the end of the piston holds a small amount of tinder which is usually char cloth because it's easily combustable. To use one, load the end of the piston with tinder, lubricate the O-ring with petroleum jelly (if necessary to create an airtight seal) rest the cylinder on a solid sturdy surface and quickly slam or compress the piston into the cylinder. The compressed air will create a temperature hot enough to light the tinder in the piston. Once lit, quickly remove the burning tinder from the cylinder before it reduces the available oxygen and goes out.Next, transfer the tinder to a larger tinder bundle or similar component to build the fire.</p> |