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The Hatchet Survival Guide

Chapters 9 & 10

Recommendations: For students in Grades 6-9. Outdoor activity. Adult supervision recommended for students working with fire.

Purpose: Accompany reading a novel with learning some real survival skills

Materials:

- The Hatchet by Gary Paulsen
  - Free online pdf *(contains minor typos)* https://scotland.k12.mo.us/view/637.pdf
  - Audio: https://www.youtube.com/watch?v=9JfqS46GZSc
- Activity Materials will be included with instructions for the specific activities below

Chapter Summaries: Brian discovers the hard work of making and tending fire but also the extreme comfort of having it as a companion and protector.

Survival Skill 10 –Making Fire

Brian turned the head backward so he would strike with the flat rear of the hatchet and hit the black rock gently. Too gently, and nothing happened. He struck harder, a glancing blow, and two or three weak sparks skipped off the rock and died immediately. He swung harder, held the hatchet so it would hit a longer, sliding blow, and the black rock exploded in fire. Sparks flew so heavily that several of them skittered and jumped on the sand beneath the rock and he smiled and stuck again and again.

Clearly there had to be something for the sparks to ignite, some kind of tinder or kindling—but what?

Purpose: Making a fire is useful for light, warmth, cooking, boiling water, protection from animals, smoke for signals and keeping mosquitos away, and a sense of companionship or belonging.

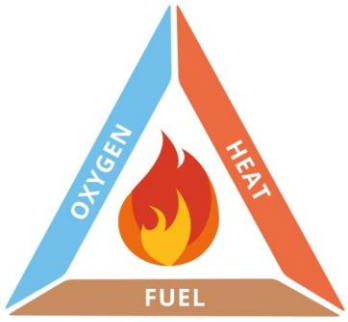
Materials:

- An existing firepit. If there isn't one available, an old metal cooking sheet or a large flat rock will also work to protect the ground.

- If using a cooking sheet, you will also need 2 stick approximately the length and thickness of your forearm.
- A bucket of water or sand for extinguishing
- Check with the local fire station to make sure there isn't a burn ban in effect
- Fuel *(see details below)*

How it Works:

Context: All fires require three things: fuel, oxygen and a spark. This is called the fire triangle.



If at any time the fire isn't igniting or was lit but is going out, it is because the triangle is out of balance. Adjust, add more and get better with practice over time.

Step 1: First, you will need to gather fuel for the fire. We want to use only natural materials so that we don't harm the environment or ourselves by burning fuels that emit chemicals, toxins, and pollutants.

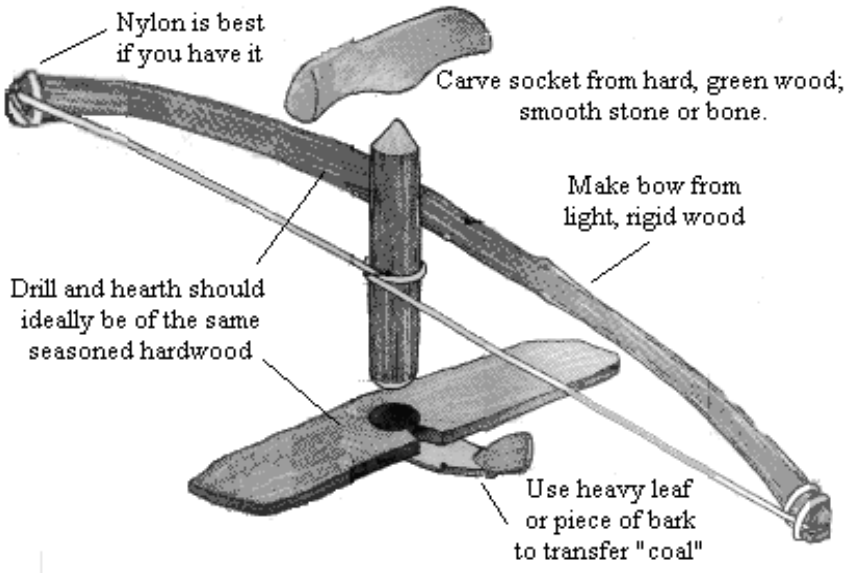
The first type of fuel is Tinder. Tinder is the lightest, smallest, most flammable fuel source and is responsible for holding the spark until it builds enough heat and flame to ignite wood. Finding birch bark on the ground is a great natural tinder because it has a resin in its fibers allowing it to burn hot and quickly even if its' been wet. Some other sources of tinder that you might find around the house include paper, cardboard, and dryer lint.

The next type of fuel is Kindling. Kindling is wood that is thin like hair or matches and no thicker than a pen or pencil. The thinnest pieces of kindling will be able to ignite from the tinder and from there you can increase the thickness of the sticks that you add.

The last type of fuel is Chunk. Chunk wood refers to thumb and wrist size sticks all the way up to split logs that you have seen used in woodstoves or for campfires. Thicker sticks have more fiber to break down into carbon which means they will burn for longer. Feeding the fire with chunk wood will allow you to concentrate on other camp tasks such as cooking or boiling water.

Step 2: To light the fire you need heat from a spark to ignite the fuel. Other than lightning and magnified UV rays, starting a fire in the woods will require friction. The main methods of starting a friction fire are:

Hand Drill	

Video Demo here Tip: Use a wildflower stalk such as Mullen for the drill.	
Bow Drill Video Demo here Tips: Make the drill and base board from the same type of wood. Kneel on one knee, use the other knee to stabilize your hand putting pressure down on the socket.	
Flint & Steel Video Demo here and here Tips: Use glancing blows to create sparks.	

Have all other fuel prepped and ready.			

More commonly *(and easily)* used are matches or a butane lighter.

Light a nest of tinder at the base of your firepit and add the kindling and chunk wood in increasing thickness.

Step 3: If you want you can blow at the heart of the fire *(low near the base and central)* to increase the flame. Blowing hard and fast like candles on a birthday cake **will not** work well. Instead, think about learning to play a wind instrument. If you can, do this in one big breath: blow low and slow at first and then, as you see the parts of the fire glow more brightly, blow slightly harder and harder. There will be a whooshing roaring sound as the flames grow bigger.

Adding oxygen increases the reaction so after blowing, you will probably also need to add more wood.

Step 4: Keep it going until you're done. A fire is hungry and as such needs to be fed constantly, especially at first. When you've reached chunk wood the fire will be more sustained and less demanding.

Step 5: Put it out. About 10-15 minutes before you are finished with the fire, stop adding wood so that it can burn down to ash as much as possible. Before walking away, add water or sand over the entire firepit to put the fire out. Stir around with a stick to make sure you've extinguished all the coals.

A video from Gould Lake's own: Fintan's 1 Match Fire

Other Types of Fire

Smudge Fire: Mosses, fungi, and punky wood are added to the fire to make it smoky

Signal Fire: The fire is built up tall with up to body length pieces of chunk wood and materials that produce dark smoke are added such as damp leaves and green wood.

Cooking Fire: Kept small, often allowed to burn down to hot coals so that the food will cook through and not just char on the outside.

Other Cool Ways to Make a Spark with Household Items. Adult supervision required.

- AA Battery & Gum Wrapper: https://www.youtube.com/watch?v=0Tny2rPAoPc
- 9V Battery & Steel Wool: https://www.youtube.com/watch?v=CRUOkYVKalQ
- Chocolate Bar & Soda Can: https://www.youtube.com/watch?time_continue=83&v=ipMd5A7eUsc&feature=emb_title

See “The Hatchet Chapters 11 & 12” on the Gould Lake website for more content!