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# CARPENTER PROJECT STATION

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## General

The Carpenter's Shop was a very important part of the Post's Quartermaster Depot. The shop is housed in a reconstruction of the Quartermaster's Shops Building. This building housed the blacksmith, wheelwright, and carpenter's shops for the quartermaster depot. The civilian Master Carpenter was responsible for all wood construction at the post. He also had apprentice carpenters, wheelwrights, laborers and soldiers on paid extra duty to assist him in his duties. The carpenters, in addition to building the fort also made everything from tables and benches to repairing the many wagons that supplied the Fort.

## Carpenter's Shop Policies

It is imperative that safety be maintained in the shop at all times. The tools are sharp and the hammers heavy and can smash little fingers very easily. There are some very old antique tools in the shop and they are not recommended for heavy use, demonstrations only. At the Teacher Parent Workshop you will learn which ones these are. It is important to clean up after each squad has finished their project and before the next squad arrives; do not wait until the end of the day. Tools need to be cleaned and put away at the end of the day as well. There is a **FIRE EXTINGUISHER** located under a marked barrel to the left of the door on north side of room.

## Carpenter's Shop Equipment Supplied by Fort Tejon

Froe	auger bits	hand planes
mallet	hammers	wooden mallets
hand saws	hand drills	draw knives
wood chisels	cut nails	

## Carpenter's Shop Procedures

In the Carpenter's Shop students will have the opportunity to make something useful during their visit to the Fort. The emphasis here is for the students to use period hand tools to create something that they can use during their activities at Fort Tejon. A common project for the students is to make, crates, wooden toys or toolboxes. The possible projects are endless; they are only bounded by your imagination and that of the children. These projects all take time to plan. When choosing to complete an individual project for each student, please note that lumber, nails, and other material is your responsibility to bring. These projects require funding and time to prep. There is another option now available to our program in the Carpentry Shop. It is called "The Carpentry Tools that Built Fort Tejon".

We will supply some basis tools for your project. It is recommended that your parents who will be working in the Carpenter's Shop get their inspiration for a project when they attend the Teacher Parent Workshop. There are benches and tables to use for making your projects. There is a vise also to help hold your stock while cutting and drilling. We do not recommend painting your project because of the mess to shop and clothing; therefore we will not supply any to your class.

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# CARPENTRY TOOLS THAT BUILT FORT TEJON

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## Purpose

This station does not require additional expenses for lumber and time prepping materials. However, attending the Parent Teacher Training is required for success of the station. Two adult chaperones are needed to staff the station. Basically, students will have the chance to use 3-5 different period correct carpentry hand tools. Parents will introduce the tool to the students: name, uses, and safety. Then the tool will actually be used by the student with supervision from the parents. Safety concerns are with eye protection, gloves, splinters, and avoiding cuts from sharp blades. The order of tool use is not important, but please have a plan with your parent partner. Alternating on presenting on the tool will share the load and allow the preparation of the next station to keep the students flowing through.

## Tools

**a. Froe or Frow or Shake Axe** – is a tool for splitting wood along the grain. It is used in combination with a wooden mallet to make planks of wood for shingles. This tool is more precise than using an axe as the user does not have to aim and swing the splitting blade. Students use the mallet. Adults hold the froe. Safety glasses are required.

**b. Drawknife or Raw Shave or Shaving Knife** – a traditional hand tool used to remove shaving of wood by drawing toward the user. It has a handle on each end and the blade is flat on the bottom. It is used for rough work and general shaping before using finishing tool like a plane. Secure the wood before the students start working. Gloves and apron are recommended for students.

**c. Hand Plane** – is a tool used to shave wood smooth, flatten, or to reduce thickness. It leaves a smooth finished surface. This tool has a very sharp blade set at a specific angle to shave paper thin layers of wood. The blade is very sharp and do not cut yourself on the blade.

**d. Cross Cuts Saw** – this tool is used to cut wood to length. It has two different types of teeth: cutters and rakers. The saw we have can be operated by two people. It is important to get into a good rhythm; pull relax, pull, and relax. Do not push the saw. It will bind. The saw has a leather guard on the first and last foot of the saw.

**e. Brace and Bit** – these tools are used together to make round holes in wood. The brace holds the drill bit and uses leverage to help twist the drill bit. The drill bit has a screw tip with cutters on the outside and chisel part to remove wood. Significant pressure is needed to get the bit to bite. For a clean hole flip the wood over and finish the hole from the other side to prevent tear-out.

## **Introduction for Squads**

This building is a replica of the Quartermaster Shop. The original was a three room adobe with wood shingles located across the interstate. The Quartermaster Shops housed the Blacksmith, Wheel-Wright, and Carpenter's Shop. The Quartermaster is a senior soldier who supervises, stores, and distributes supplies and provisions.

The Army had two portable saw mills to rip cut logs into dimensional lumber. Mules would power the circular saw blade by walking in a circle. Even with the saw mill, the lumber still needed to be cut to length using a cross cut saw.

## **Conclusion for Squads**

Quiz the students on the name of the tools. Ask them what it does. Do this for all the tools you used. Conclude the station with something like this... "Now that you participated in the carpentry shop, I hope you realize that skills, sharp tools, and muscles are needed to use carpentry hand tools." Look around the Fort for the various carpentry work.