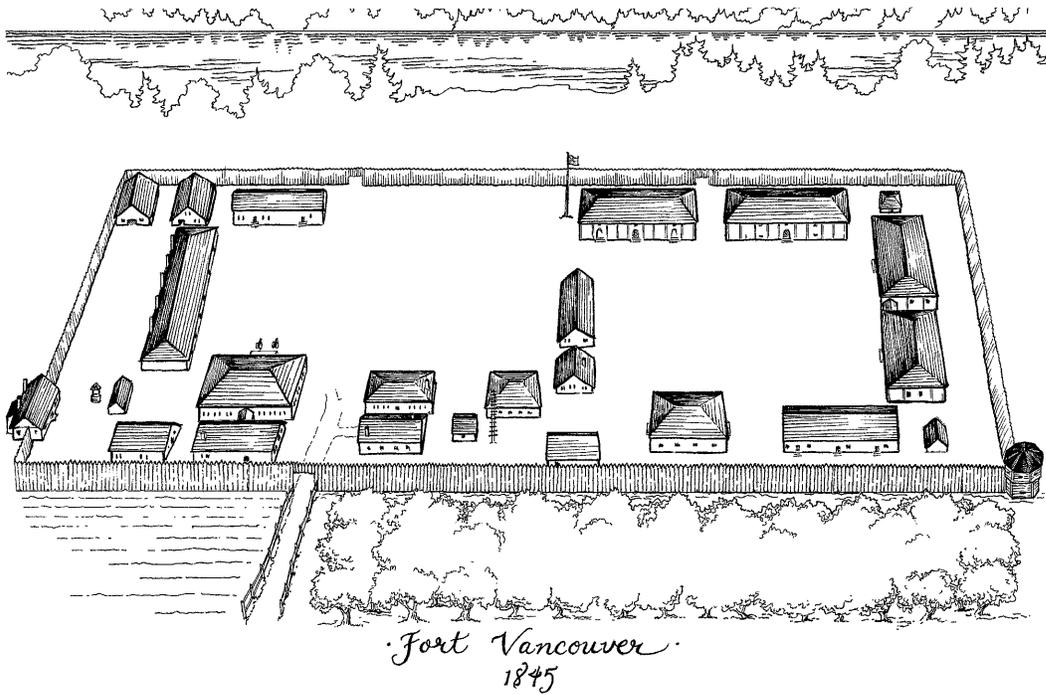


Crossroads & Conflict

An Environmental Living Program at Fort Vancouver National Historic Site
Version 2.0 Fall, 2008





Klahowya! Welcome to Fort Vancouver and the new Environmental Living Program (ELP), **Crossroads & Conflict**. This handbook will explain the program and how you and your students will participate. Please read it carefully. Should you have any questions or concerns, please don't hesitate to contact the program coordinator.

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Program Overview

The National Park Service created the Environmental Living Program (ELP) outline in 1974. At its most basic element, it is an immersion program, usually overnight, where the participants live as a group in a particular time in history, and generally at a particular place. They often study a person from that time, and try their best to live their life for a short time as that person would. The venue for these activities is Fort Vancouver National Historic Site, located in the Vancouver National Historic Reserve, Vancouver WA. This program will expose the participant to life on the frontier before the American Civil War. They will use tools, perform duties, work, cook and bake as if they were here in 1849.

In the program at Fort Vancouver, your group will take on dual roles:

- Soldiers of Company L, 1st US Artillery, the first US Army troops to arrive in the Pacific Northwest since the 1846 treaty.
- Hudson's Bay employees (engages), tentatively welcoming the American military and hoping it will help with a number of problems they are having with American settlers.

Upon arrival at Fort Vancouver, you will be enlisted in the frontier US Army, and you will remain in the Army until you go to bed that night. Upon awakening (or coming off guard duty) you will take on the role of engages of the Hudson's Bay Company (HBC). Participating in these dual roles will provide you with an opportunity to compare these two groups, and hopefully come away with a better understanding of the situation you are about to enter.

The Army set up tents and slept and cooked their meals within the fort walls. Their days were spent drilling, talking with HBC officials, and replacing and repairing their equipment. The Hudson's Bay Company employees, on the other hand, generally continued with the daily activities of running their business.

Your group will have a number of tasks to complete during your stay. They must organize their sleeping area, prepare cooking fires, cook meals, clean dishes and stand watch. They must also bake bread and sea biscuit, heat ovens, measure buildings and work at the blacksmith forge. They will learn and practice artillery drill as well as formation drill. They will weigh and bundle furs and work the fur press. All of these activities are based on actual tasks that needed to be completed by men and women who were here in 1849.

Background

The setting for the Fort Vancouver ELP is a British fur trading post, near the Pacific coast, in 1849. It is part of the network of trading houses and posts in North America, owned by the Hudson's Bay Company (HBC). Until recently, it was the regional collection and distribution center. Furs and other material traded to the Company at its various trading posts was collected at Fort Vancouver, and supplies and goods arriving from England and Hawaii are off-loaded here to be distributed to the various trading establishments. However, the Treaty of 1846 has changed all that. The United States and Great Britain agreed on a border between British North America (Canada) and United States territory west of the Rocky Mountains. It is the 49th Parallel (latitude). Fort Vancouver and several other HBC operations are now in American Territory, and they are slowly beginning to move all their business north of the border, including the huge headquarters operation here.

American soldiers arrive by ship in May, 1849 to “officially” take possession of the territory. But the HBC is operating legally, and is in no hurry to relinquish its profitable fur trade and mercantile operations here.

Supporting this trade has become a huge task for HBC. Crops of cereal grains and potatoes are planted and harvested along with beans, peas, squash, corn, tomatoes, onions and melons. Herds of cattle, sheep and goats are kept and hunters harvest from the game and wildfowl in the vicinity. Salmon and other fish are taken from the Columbia River and pickled. Craftsmen keep the homes and trading posts stocked with iron and steel tools, hardware, utensils, weapons, simple furniture, windows and lamps. The trading ships are kept in repair and smaller boats built at the shipyard. Mills saw boards from the massive trees harvested by loggers and grind wheat and other grains into flour.

But anything needed by the Company and not grown or produced locally must be imported, and there is a busy Marine Service, with ships arriving with goods and supplies from England and returning with furs, whale oil, fish, and other material from the Pacific Northwest.

Fort Vancouver is built at a crossroads. Indian trade trails lead north and south, while the Columbia allows trade and travel east and west. The Company has shouldered its way into a vast trading network that has existed for thousands of years before their arrival, and a number of the Indian nations of the Columbia River and plateau are resentful of its intrusion.

The Company must maintain good relations with them, for they are vital to the trade, but it is wary of them as well. In less than 75 years, diseases introduced by Euro- Americans will nearly wipe the original Indian population from the shores of the Columbia.

The young United States has also chosen this opportunity to begin flexing expansionist wings. Emigrants seeking free land and escape from famine and a depression begin moving overland to the Columbia and Willamette valleys. Many are shocked and disturbed to find an English trading company with a monopoly on goods in the region. Congress cancels a joint occupancy treaty with Great Britain in 1845, which allowed both Great Britain and the U.S. to conduct business in the Pacific Northwest. This action greatly heightens tensions between the two nations, and completely ignores the original population.

The U.S. is also seeking to acquire territory from Mexico in the Southwest, but finds it cannot contemplate a war with England as well as Mexico. A new treaty is negotiated with England, a compromise establishing the 49th latitude as the boundary between a British and American territory west of the Rocky Mountains, allowing the U.S. to fight an imperialist war with Mexico, defeating them in 1847, and leading to the establishment of California as the first state in the west (1849), followed by Oregon in 1859. Thomas Jefferson's vision of a bi- coastal nation is finally realized, and the last gasps of a British Empire in North America, two centuries old, are beginning to be heard.

Schedule: First Day

10:00 AM: Arrival at Fort Vancouver NHS waterfront. Briefing, and march to the fort site. All participants must carry their personal gear. All participants bring sack lunch.

10:45 AM: Arrival at fort site. Personal gear stowed in Bake House. Lunch in Bake House. Clean up.

11:30 PM: Preparing bread dough in the Kitchen (all)

12:30 PM: First Soldier Activity, making, bread baking in Kitchen

1:30 PM: Second Soldier Activity. See Group schedule

2:30 PM: Third Soldier Activity. See Group schedule

3:30 PM: Fourth Soldier Activity. See Group schedule

4:30 PM: Cook crew report to Kitchen (selected by group). Clean up crew (selected by group) start fire and hot water in Bake House.

6:00 PM: Supper in Bake House (menu determined by group).

6:30 PM: Clean- up, wash dishes, prep for breakfast and chop wood

7:00 PM: Personal time

7:30 PM: Assembly at Howitzer and firing of Howitzer by adult crew.

8:00 PM: Group meeting, stories, establish watches.

9:00 PM: Finish cleanup (if necessary). Prepare for the evening.

10:00 PM: Watches begin, new watch every 2 hrs, last watch begins at 4:00 AM. Lights out!

Private, Co. L, 1st US Artillery (First Day)

The first day of this program, participants will take on the roles of privates in the US Army; Co. L, 1st US Artillery. These were the first regular Army troops to arrive in the Oregon

Country following the settlement of the border question in 1846. Their arrival in May of 1849 begins a nearly continuous military presence in Vancouver, extending to the present day. The adult leaders will take on the roles of corporals, and the NPS staff that of the sergeant. Good Luck!

Arrival

All participants of the “Crossroads & Conflict” Environmental Living Program should arrive on the historic waterfront area by **10:00 AM**. There are two small parking lots in this area and parking may be limited, so a “kiss and go” drop off may be the best idea. Each student should have their personal gear in a knapsack, haversack or backpack that can be carried to the fort on foot. *Each participant should bring a sack lunch for this day, adults included.* Please follow the list of allowed and “contraband” items found in this handbook. The group may decide what is best for its situation; carry all bedding or have it go in with the **supply car**. The **supply car** is a single vehicle designated to carry to the fort all group gear, mainly food and clean- up supplies. A list of recommended and required items is found in this section. The driver of the supply car may or may not be an overnight adult. The supply car will be allowed into the fort to unload the group gear, then should return to the fort parking lot, if the adult is staying, or leave. Access will be through the road leading off of Fifth St.

The adults who will be participating in the program should plan on arriving before **10:00 AM** on the waterfront to drop their student off, then driving to the Red Lion parking lot, about 1/10th mile west on Columbia Way, to leave their vehicle, and then walk back to the waterfront. No vehicles are to be left overnight on the waterfront. The adults will have to carry their personal gear to the fort as well, *including their sack lunch!*

At **10:15 AM** the group will assemble by squads in the courtyard by the Old Apple Tree. They will be briefed by the ELP program coordinator (sergeant) and any questions or problems addressed. Then, just as Companies L & M, 1st US Artillery did in May 1849, the group will march from the waterfront to Fort Vancouver.

The company will enter by the SE gate and proceed directly to the Bake House, where their personal gear will be stowed. Next, sack lunches will be eaten, sitting at the tables in the Bake House. After lunch, clean up and floor swept, the company will re- assemble outside the Bake House at **11:30 AM** for their first Activity.

Activity: Bread Baking

An army marches on its stomach, Napoleon said, and bread was a major part of any army's diet. The first structures the 1st Artillery built upon arrival were bake ovens.

- Each squad will make bread for themselves, at least one loaf, to eat with supper.
- Parent volunteer (corporal) will give instructions on heating the oven, and will have kindled a fire in the oven before the squads arrives.
- Each squad will follow the standard recipe.
- Parent volunteer will explain how the oven is heated and supervise the making of the dough.
- Bread will be baked in time for the evening meal.

Soldier Activity 1: Artillery Drill

Although the U.S. Army expected no problems with the Hudson's Bay Company at Fort Vancouver, soldiers were kept in a constant state of readiness with drill. Drill was as much a part of a soldier's life as sleeping or marching. The Artillery Drill will be conducted using the park's M1841 12 pd Mountain Howitzer. **NO LIVE AMMUNITION OR BLACK POWDER WILL EVER BE USED WITH STUDENTS DRILLING!**

- Normal crew for the Howitzer is four. If your group has five or more, they will have extra soldiers at the ammunition chest.
- Each soldier will learn the four basic positions for manning the Howitzer, as well as the basic history and nomenclature of the piece. Basic positions are:

Gunner #1 (Right Front) This position is the sponge/rammer. His/her job is to clean the bore between shots and ram home each shell as it is introduced into the muzzle, and observes the shell for effect down range.

Gunner #2 (Left Front) This position retrieves the ammunition from the ammunition chest and introduces it into the muzzle of the gun, and also observes the effect of the shell down range.

Gunner #3 (Right Rear) This position controls the lanyard and friction primer and actually fires the Howitzer. He/She is looking away as the howitzer is fired and therefore cannot observe the shell's effect.

Gunner #4 (Commander) This position controls the operation of the gun and gives all commands for loading and firing. He/She also aims the gun and observes the shell down range for effect.

Gunner #5,etc. (Ammunition Chest) Upon the command of the gun commander, this position retrieves the proper shell from the chest and gives it to Gunner #2.

- All soldiers will be drilled in each position, and will become familiar with the Howitzer's operation.

Soldier Activity #2: Building Measurement

HBC has offered the US Army building space at the fort. The building they have offered is the Counting House or New Office. However, the Army must determine if it is large enough for their purpose.

- Measure the dimensions of the building and determine its size.
- Measure the inside rooms of the New Office and draw a floor plan with dimensions
- The Army would also like to place a flag pole north of the fort, but they want to make sure it is *taller* than the HBC flag pole. How can we measure the pole from the ground?
- Tools: Tape measure, clipboards, paper, pencils.

Soldier Activity #3 Camp Set- Up

Each platoon will be responsible for the establishment of its camping area. Tents will be set up, cots unfolded and placed inside the tents. Personal gear will then be stowed in tents. Each squad must also set up one adult (corporal) tent. Soldiers will sleep two to a tent. Corporals will have a tent alone.

- Camps will be established in designated area. Tents are to be set up with taught sides, properly spaced and squared with its neighbor and bordering the established company road.
- All cooking will be done in the Kitchen, both as 1st Artillery and HBC engages.

- All dish washing will be conducted in the Bake House. All water for dish washing and laundry will be heated on the Bake House stove.

Soldier Activity #4 Manual of Arms

Along with the Artillery Drill, each squad will learn a basic Manual of Arms for the time period. Each soldier will be furnished with a reproduction musket for use during the drill. **No black powder** will be issued, although the loading and “firing” of the muskets will be incorporated into the drill. The National Park Service Manual for the Handling and Firing of Flintlocks in Interpretative Demonstrations will be available to the adult volunteer (corporal) who will be leading this activity.

Night Activity: Watches

Night watches were kept not only from fear of attack (which never happened) but also as a look out for fire, approaching weather or the arrival of ships. Standing watch is not easy. You must arise in the middle of the night, your sleep interrupted, and it is sometimes cold or rainy. But keeping watch was vital to the safety of the group and was shared by all.

- Standing Watch will take place in the Bastion in the NW corner of the stockade.

- Watches will occur between 2000 hrs and 0600 hrs (10 PM and 6 AM). That eight hour time will be broken into four two- hour watches with one corporal and $\frac{1}{4}$ of the soldiers on each watch.
 - 1st Watch: 2000 hrs to 0000 hrs (10 PM until midnight)
 - 2nd Watch: 0000 hrs to 0200 hrs (Midnight until 2 AM)
 - 3rd Watch: 0200 hrs to 0400 hrs (2 AM until 4 AM)
 - 4th Watch: 0400 hrs to 0600 hrs (4 AM until 6 AM)
- Each watch will be under the command of an adult (corporal).
- At no time are soldiers to be left alone. Use the bathroom BEFORE you go on watch. Otherwise, two soldiers with lanterns may travel together to the bathroom.
- While they are on watch, soldiers may play cards, read or talk quietly. A table and chairs will be available in the Bastion. Coffee and hot water will be available all night in the Kitchen.
- Toward the end of each hour on watch, the watch group will take lanterns and walk a complete circuit around the interior of the fort, quietly checking all gate locks and door locks.
- As the watch group passes by the camp on its second inspection, they will wake up the next watch, and continue on to the Bastion. The new watch group will arise, make its way to the Bastion, and relieve the standing watch group.
- It is the responsibility of the new watch group to meet in the Kitchen and arrive at the Bastion ON TIME.

Bread Making & Baking

Bread was a staple of most nineteenth century diets, and for the Army private, fresh bread was available only when they were at post. The bread you are making today is a very simple

white bread, but it will taste delicious with your supper tonight. Traditionally, all breadstuffs would have been baked in the Bake House. However, since we are only producing a few loaves, we will use the kitchen oven.

Each squad will be responsible for 1- 2 loaves of bread. There will be four dough making stations set up in the kitchen, one per squad. Each squad will mix the ingredients, make and knead the dough for two loaves.

Ingredients:

7 Tin cups	Flour
2 oz.	Block Yeast OR
2 pkg.	Dry yeast
1 Tbsp	Sugar
4 tsp	Salt
2 Tin cups (approx)	Tepid water (~100 degrees)

MAKE SURE DAMPERS ARE OPEN!

Procedure:

- Start fires in oven and hearth.
- Pre- heat oven for about 2 hours
- Heat a small amount of water for the yeast
- Add yeast and sugar to about 1 cup of warm water
- Set aside for 5 to 10 minutes to let yeast begin “working”
- Add salt to flour and sift into large pan
- Form a crater in center of flour and pour in active yeast
- Add one (1) cup of potato water around outside of flour to not kill the yeast
- Add approx. one (1) cup of cold water to hot potato water around outside of flour
- Mix with spoon and then knead for about 5 minutes
- Form one large round loaf
- Coat with oil and cover with a clean cloth
- Let rise until doubled in size (approx. 1 hour)
- Punch down and knead for five (5) minutes
- Form 2 large 4 small loaves and let rise for about 30 to 45 minutes

- Bake for 50 to 60 minutes in 375 to 400 degree oven (watch for burning)
- Let cool 1 hour before serving

Measurements

Activity 1 Building Measurement

1. Privates should work in teams of two or more to complete this activity.
2. Please remember that the park is open to the public while you are completing these activities. Do not hinder in any way the public visitation of this historic site.
3. Each private will by sketching a scale floor plan of the New Office. Both exterior, and interior dimensions of each room on the ground floor must be measured. Tape measures and all writing material will be provided for this purpose.
4. Using the graph paper, create a scale drawing of the ground floor of the New Office, including all doors, windows etc.

Activity 2 Flagpole Measurement

The problem is to determine the height of the flagpole from the ground. Have the privates work in teams of two or more.

Method #1

- Choose a member of the squad and carefully measure and record their height in inches.
- Next, have that person stand next to the flagpole.
- Back away from the flagpole until a good view is obtained.
- Holding a pencil or stick at arm's length, align the top of the pencil with the top of the head of the private. Next, keeping the pencil still, move your thumb down the pencil until it is aligned with the bottom private's feet. Stop your thumb movement, and hold your thumb in place. The distance between the top end of the pencil and your thumbnail is the height of the private.
- Next, slowly, without moving your thumb, raise your hand with the pencil until your thumbnail is aligned with the private's head. Look for some feature on the flagpole which is opposite, or at the same level, as the end of the pencil. Slowly raise the hand with the pencil so that your thumbnail is now aligned with that feature. You have now measured 3 times the height of the private.
- Continue in this manner until you reach the top of the flagpole. If necessary, estimate the last measurement as it probably won't be a full pencil measure.
- Now, convert to inches by multiplying the scout's height (in inches) by the total number of measurements.

Example: scout is 48" tall

Flagpole was measured at 4.5 measures of scout's height

$$4.5 \times 48'' = 216'' \quad 216/12 = 18 \text{ feet}$$

Method #2

- Stand as close to the flagpole as you can, but still see the top and bottom.
- Take a pencil or stick, hold it up before you and sight along it, aligning the top with the top of the flagpole, and marking the bottom with your thumbnail.
- Slowly twist your wrist so that the pencil is now parallel to the ground, but your thumb remains aligned with the bottom.
- Have a squad member stand at the exact end of the pencil, where you are sighting it along the ground.
- Measure the distance from where the private is standing to the base of the flagpole.

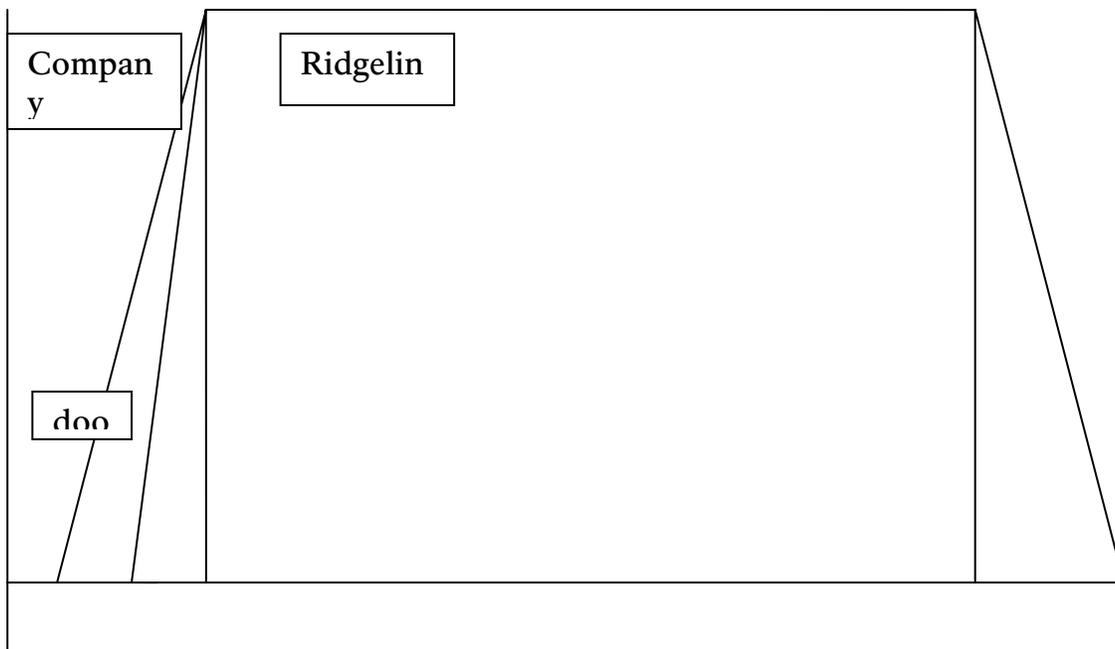
Camp Set Up

Establishing and setting up camp was one of the chores that soldiers did endlessly during their careers. The ELP participants will be setting up the tents and cots that will be their homes during the program. The privates will share tents, each with two cots, while the corporals will have private tents.

Be Safe!

Each tent will be furnished with 1 (one) candle lantern, and a hook to hang it from the ridge pole. Watch your head as you move about inside the tent, and make sure the candle is extinguished at lights out.

1. A company street, marked by a string line, will be present as you begin setting up shelters. The front of each tent **must** be aligned with this string line. The US Army is nothing, if not orderly! Once the ridgepole and uprights are in place, the alignment can be adjusted.
2. Unfold the tent and, making sure the door is facing the company street, lay it out on the ground. **Tie at least three of the door tapes shut so that the door is closed when the tent is raised.** The tent will be doubled over when it is laid out. See illustration.



3. The ridgepole is inserted inside the tent, between the two halves, and pushed all the way to the top of the shelter at the ridgeline.
4. One of the supports is now inserted between the halves and aligned with the hole in the ridgepole. Push the point on the support through the hole.
5. Repeat with the other support.
6. Carefully stand the tent upright, supporting the ridgepole as you raise the shelter to an upright position. **Align the front of the tent, with the door, along the company street. Allow 3 feet between tents along the company street.**
7. Hold the tent upright as the four corners are stretched taut and staked. Stake out the rear of the tent with 1 or 2 stakes.
8. Corporals will assist with the cot assembly. Each private's tent will be shared with two cots. The corporal's tent will have only one.

Cooking and Kitchen Operation

All cooking of any kind will be conducted in the Kitchen. All equipment and dishes in the Kitchen are available for use, but please be careful with what you use. And remember, everything you use will have to be washed.

Caution

You are cooking on an open hearth fire. Use the hearth crane to bring the pot to you, away from the fire. Closely supervise all use of sharp knives. Know where the fire extinguishers are, and never leave a fire unattended. A full bucket of water must be kept near the fire at all times.

1. **Kindle a fire in the hearth. Cooking is best done on a good bed of coals or a fire with low flames. It will take a while to achieve this, so get your fire started early!**

2. Lay out ingredients for the meal on the table. We strongly suggest cooking as simple, but tasty, a meal as possible; a one- pot stew or soup would be ideal. We encourage you also to actually make the meal, rather than open cans. This will expose your *soldiers* to a more authentic experience and probably produce a better meal, but it is entirely up to you.
3. Contained in this handbook are several period recipes to give you an idea how simple meals were prepared in the nineteenth century. Feel free to use or adapt them.
4. All used dishes, pots and utensils *must* be carried to the Bake House for washing.

Clean Up

1. All food preparation surfaces must be scrubbed clean and wiped with a solution of bleach, 1 T. bleach to 3 gallons of water, 2 T. to 5 gallons water. It would be convenient to have this solution in a couple of spray bottles for use in the Kitchen and Bake House.
2. Scuffle bucket water must be changed after use with the oven.
3. Clean, wet dishes and utensils may be air dried on the table on the south side, or in the plate drying rack above it.
4. Thoroughly sweep the floor.
5. If you leave the fire banked for the night watch, the screen **MUST** be in place.

Bake House Mess and Clean Up

All eating and dish washing will take place in the Bake House. Water will be heated on the wood stove in large kettles and used for dish washing. Water must be **HOT!** We recommend the use of rubber gloves for dish washing.

Clean up squad should have the wood stove lit and water heating as soon as possible after the last rotation of the afternoon. It takes a while to heat 4 gallons of water.

The sequence for dishwashing is:

- Scrape plates into garbage
- #1 basin is wash
- #2 basin is rinse
- #3 basin is final rinse and sanitize. This basin will contain a mild bleach solution

All dishes and utensils will then be air dried.

Garbage bag is to be tightly tied and left in the can for pickup in the morning. New garbage bags are available in the utility closet between the restrooms.

All eating surfaces are to be wiped and disinfected with a spray of bleach solution.

Floor around the stove and eating area are to be swept after each meal

Hudson's Bay Company Engage (Second Day)

To gain a better understanding of events that were unfolding in 1849, participants will take on roles as Hudson's Bay Co. employees, known as engages, during the second day of the program.

Schedule: Second Day

6:30 AM: Cook's Call (Fourth or last watch wakes them up)

7:00 AM: Wake Up!

7:30 AM: Breakfast

8:00 AM: Breakfast clean- up, pack personal belongings and take down tents.

8:30 AM: First Engage activity

9:30 AM: Second Engage activity.

10:30 AM: Third Engage activity

11:30 Noon: Fourth Engage Activity

12:30 PM: Program ends! Close out and return to waterfront.

Engage Activity #1: Making and Baking Sea Biscuit in the Bake House

Sea biscuit production continued at Fort Vancouver during the Army's arrival. It was available for trade with the Indians and employees, and the Company stocked its ships

arriving at Fort Vancouver for their return voyage back to England or across the Pacific Ocean. If you were an employee of the HBC, you were very familiar with sea biscuit!

- Making sea biscuit is much easier than making bread. There is no yeast, and only two ingredients; flour and water!
- The parent volunteer (chief baker) will have lit a fire in one of the huge bake ovens in the Bake House in the morning. It will take several hours to heat the oven.
- Each engage brigade will make biscuits with the chief baker, mixing the dough and forming the biscuit. Remember, uniformity is the goal for sea biscuit!
- Biscuits will be placed in the oven before the group leaves, and allowed to bake overnight.

Engage Activity #2: The Fur Press

By 1847, the central collection point for fur traded in the Columbia Department had moved to Fort Victoria. Fort Vancouver was now just another trading post, but it continued to collect furs traded along the Columbia River. Those furs were shipped to Victoria in 90 lb bales called *pieces*. Those pieces were created by compressing and tightly wrapping the fur in tanned hides. Interspersed among the furs were tobacco leaves, which helped keep the pelts free of insects and pests.

- Please be careful when using the Fur Press and Weighing Beam. Although these tools are intended to be used, they cannot hold up to rough use or misuse. Please follow all instructions for their use carefully.
- All pelts must be weighed before being wrapped. Weigh carefully! Remember you may be carrying it on your back soon!
- Remember to mix the pelts; some beaver, some fox, badger in each bale. Why would this be important?

Engage Activity #3 Blacksmithing

Upon arrival at Fort Vancouver after the long sea voyage, the Army discovers that it needs tent pegs. The HBC generously offers to produce them and tent peg production commences.

*****NOTE. Safety is of utmost importance. Working around a blacksmith forge exposes the engage to high heat and hot metal. The blacksmith instructor's directions MUST be obeyed at all times to prevent serious injury and burns.**

- The blacksmith/instructor will control the area around the forge at all times.
- Each engage will have a chance to make a tent peg.

The pegs resemble an upside down letter “J”. The long shaft will need to be pointed by pounding the hot metal into a point. The curved part will be created by simply folding the hot metal by hammering it over the horn of the anvil.



Engage Activity # 4 Making Toys

While everyone connected with the Hudson's Bay Co operation at Fort Vancouver worked long, hard days, there was time for play. It is likely that one of the tasks of the carpenters was the creation of simple wooden toys for the children of the company officers and employees. With this in mind, the engages will be making two of those simple playthings; a top and a “buzz saw.”

This activity, like the blacksmith shop operation, will include instruction in the safe and proper use of a few simple hand tools (hand drill, miter box, saw and dowel sharpener).

While the toys are simple, the project is a multidisciplinary one including concepts from history, sociology, math, physics and art.

Procedure: Making the Top

- Select a dowel and sharpen one end in the sharpener. **BE VERY CAREFUL. THERE ARE SHARP EDGES INSIDE THE SHARPENER!**
- Place the sharpened dowel in the miter box and carefully using the hand saw, cut it to the appropriate length and round the sharp, cut end slightly with sand paper.
- Now place the dowel into the hole in the wooden “tire” and line it up with the hole in the bench and GENTLY pound the dowel, using the wooden mallet, so that the sharpened end protrudes about $\frac{1}{2}$ to $\frac{3}{4}$ inch.
- Select a piece of wood for your top “handle”. Drill a hole of appropriate dimension near one end. Smooth edges of hole with sand paper.
- Place handle over long end of dowel and carefully wrap the string around the dowel.
- Place handle and top on smooth surface, with the point only touching the surface and taking hold of the handle, quickly and smoothly pull the string and quickly lift the handle off the top.
- Watch it spin!

Procedure: Making the Buzz Saw

- Select a wooden disc and place it in the drilling jig.
- Carefully drill two holes about $\frac{1}{8}$ inch apart and approximately centered in the disc.
- Thread a string through both holes and tie the two ends together.
- Center disc on the string and, holding the string ends, flip the disc over and over so that string begins to twist, then pull on the string ends to make the disc “buzz.”

Bake House/Sea Biscuit baking

Sea biscuit, a staple of the British Navy and the fur trade, was a major production item at Fort Vancouver. In fact, biscuit production was of such importance to the trade that the Company rarely had enough wheat to completely meet its needs. It not only grew as much wheat locally near the fort as it could, but also bought surplus wheat from American farmers. And nearly all of it went into the production of sea biscuit or “hard bread.” And “hard” it was!

The recreated Bake House is fully functional, and the biscuit made during the ELP will be baked overnight in the ovens.

Caution

The oven has fire in it. The iron door will eventually become hot. Use extreme care when opening and closing the oven door. Do not let any of the children do this. Make sure that the oven dampers, there are two on each oven, are open. The handles should be *vertical*.

Preparation

1. A fire should be kindled in the right- hand bake oven as breakfast is being prepared. Fire making materials will be on hand; tinder or shavings, split wood and matches or flint and steel. The fire will eventually heat the brick in the oven, and later, after the ash has been removed, the radiant heat from the brick will bake the biscuit.
2. Set out the small table in the room and from the dough trough on the south side, retrieve pen, ink and paper contracts. Arrange these for easy use by the children.
3. A bucket of water should be fetched from the faucet in the utility closet between the restrooms and brought into the Bake House.
4. A basin of warm water should be fetched from the faucet as well and placed on the barrel on the south side of the room. This will be the hand washing station after the biscuit is prepared.
5. Prepare on the large table five dough mixing stations, each consisting of a large metal basin containing two (2) cups of flour. The water bucket with dipper should be at the head of the table, with the mixing stations around the sides. Dust the table with flour where the biscuit may be rolled out or flattened.

6. Throughout the morning, the fire in the oven should be built up, and spread out evenly across the fore part of the oven.

As the students enter the Bake House, they will have to be signed on as *engages* of the Hudson's Bay Company. Explain what signing the contract means as a worker or *engage*. Explain what they will be doing, showing them the oven, each of the long handled tools (peel, scuffle & rake) and talk about sea biscuit and its importance to the fur trade and maritime service. Have them put on aprons, and gather around the table.

Production (Method 1)

1. Using a cup or dipper, pour a small amount of water into each of the basins containing flour.
2. Have the *engages* begin mixing the dough by hand, thoroughly mixing the flour and water together. A good dough will be somewhat tough, and will not stick to the fingers. If the dough is too dry, add a small amount of water and continue mixing. If the dough is too wet, add a small amount of flour and mix.
3. When all the dough is made, and of the correct consistency, it is time to make the biscuits. Each basin should produce 2- 3 biscuits.
4. Take a lump of dough and form it into a small ball, a bit smaller than a tennis ball. Place the ball on a floured part of the table and *gently* flatten it with the heel of your hand, evenly so that you produce a flat "O" shaped biscuit about ¼" thick. Uniformity is important, so all biscuits should be about the same size and thickness. If they aren't, do them over.
5. Repeat if there is enough dough.
6. When there is a group of uniform biscuit, produce nails and *gently* punch 15 evenly spaced holes in each. Finished biscuits should be set aside on a table until oven is ready for baking.
7. When all available dough has been used to make biscuits, have the *engages* wash their hands in basin of warm water, retrieved from the wash house.
8. Gather the group together, collect the aprons and answer any questions.

Production (Method 2)

1. Follow above directions, but make a larger batch of dough in one of the basins.
2. When the dough is the right consistency, not sticking to your hands, roll it out on the floured table with rolling pin.
3. Using a biscuit cutter, cut out biscuits& punch holes in the biscuits using the hole press. Rework the remaining dough until it is too small an amount to work with.
4. Wash hand, etc

Fur Store and Press

Trade, and particularly the trade in fur, was what the Hudson's Bay Company (HBC) was all about. This "store" or warehouse was the collection point for all fur traded at any HBC post west of the Rocky Mountains. By late spring, most Indian trappers had made their way to the nearest HBC outpost and traded in their winter's take in fur for supplies for the coming year. Those furs would be baled into 90 lb packs called a "piece". When the year's take in fur had been assembled and packaged, the "pieces" would be put aboard a canoe or bateau, or picked up by a coastal trading ship, and brought to Fort Vancouver.

The bales in the Fur Store represent those furs. The work in the Fur Store really began when all the "pieces" had been assembled. Each bale had to be opened and unpacked, the pelts being spread out or hung up for inspection. A slip of paper in each bale would list its contents. The clerks would tally the pelts, inspect them, weigh them and order them to be repacked in larger bales, "overseas" bales. The large fur press was the device used to compress and pack these bales.

As the large bales were being packed, they would eventually weigh almost 300 lbs each, tobacco leaves were interspersed among the pelts to prevent insect and rodent infestation aboard ship on the long sea voyage to England.

Procedure

- All pelts, bales and equipment in the Fur Store is HANDS ON. However, that does not mean that it can be abused. This is not a playground, and the park will not tolerate misuse of its equipment.
- Carefully clear the hanging scales of weights and pelts. Select a **SMALL** engage in your brigade and carefully place him/her on one pan of the scale. Carefully add weight to the other pan until the two pans are about even.
How much do they weigh?
(If you run out of weights, weigh a large stack of pelts and use them for weight as well.)
- Repeat one or two times with other engages.
- Study a bale in the Fur Store, and try to envision how that would be put together using the press. Lay cord through the channels in the bottom of the press, then carefully fold and place pelts on the bottom of the press until a sufficient weight are used. Don't forget the tobacco! Gently begin compressing the bundle and then lash the bale closed with the rope ties.
- This bundle would then be wrapped in a wrapper of elk or deer hide, pulled close, trimmed and stitched close.

When you are finished, please return the pelts into piles, along with the wrapper hide, and remove all weights and pelts from the scale.

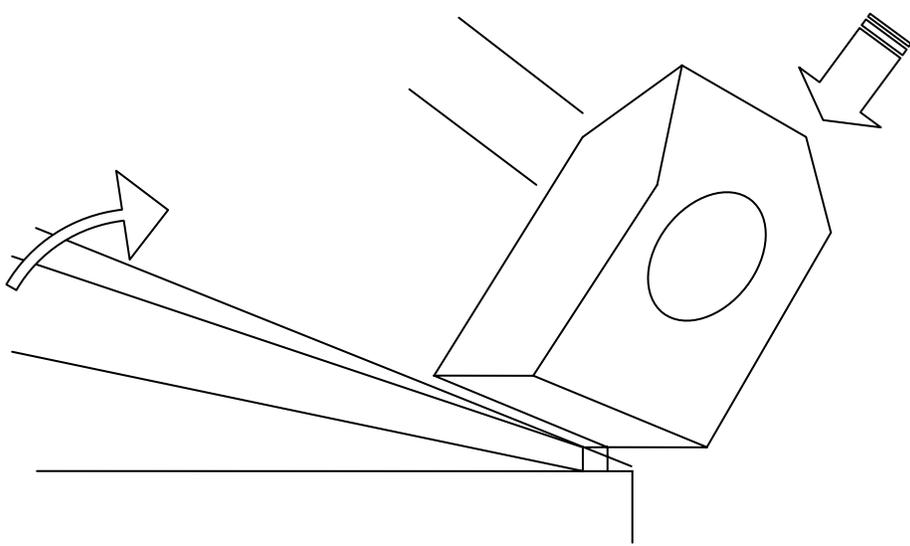
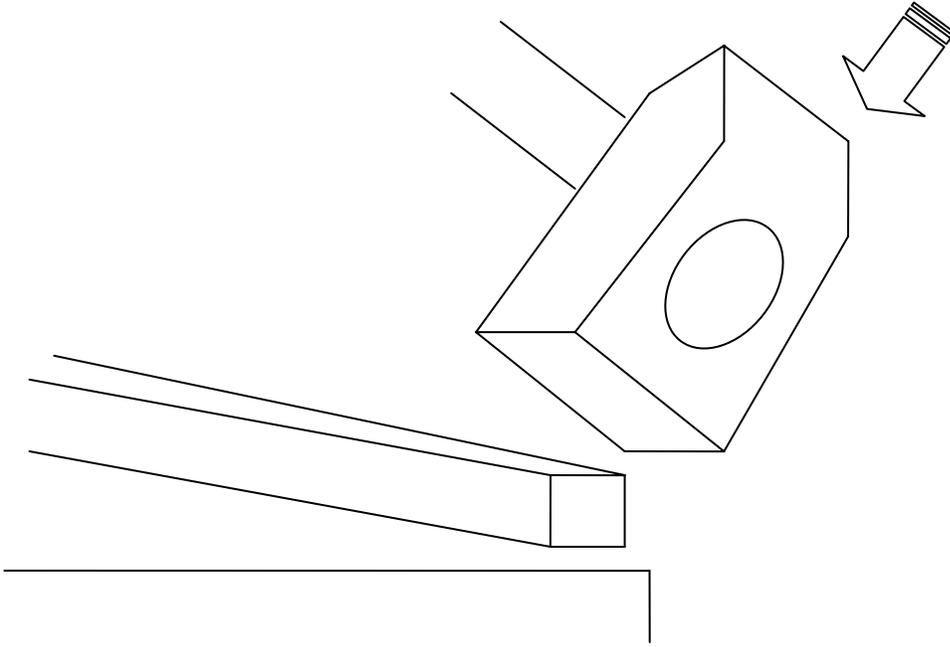
Blacksmith Shop

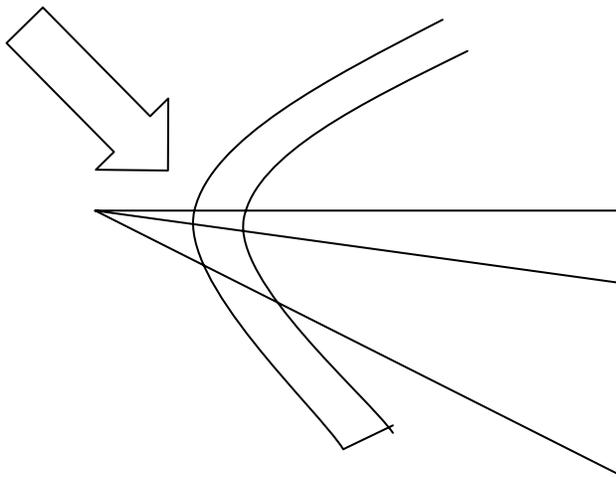
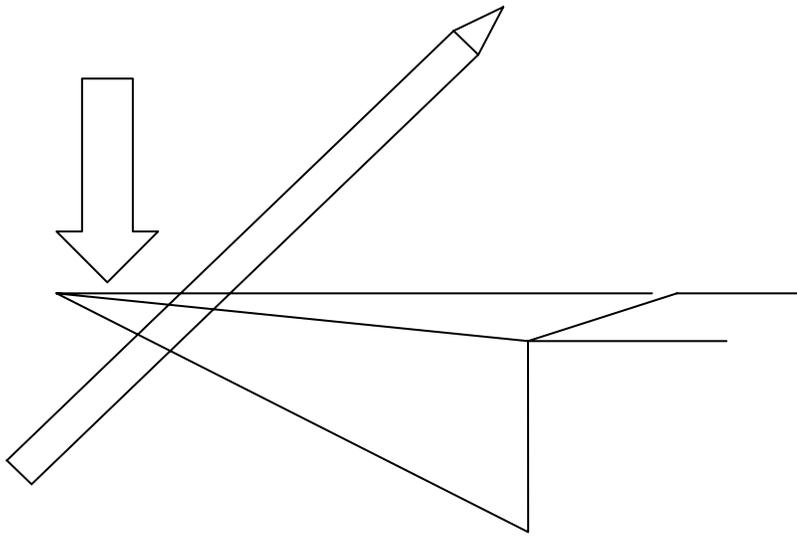
There are inherent hazards working in a blacksmith shop. The forge contains a coal fire which can be extremely hot, over 2000 deg. F! There may be hot metal around the fire on the brick hearth. There are sparks and smoke. So, please pay attention to what you are doing, and follow the blacksmith's instructions. Wear protective gear (safety glasses and apron) at all times as well as natural fiber clothing. Assume that all metal on the forge is hot! If you must test it, use the backs of your fingers, brushing it lightly, to test the temperature.

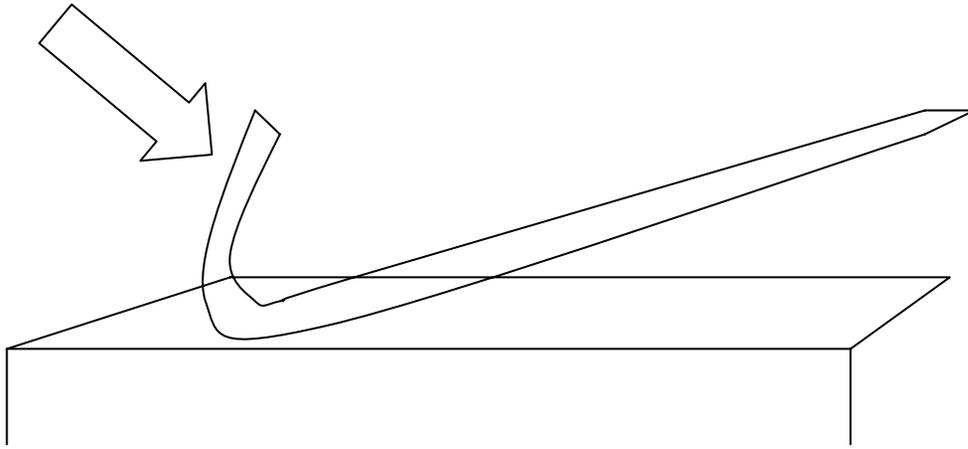
Procedure

The blacksmith project for the ELP is a tent stake. The goal is for all participants to make 1 tent stake, which they will be able to take home.

- The squad should enter the blacksmith shop through the east door. The blacksmith will divide the squad between two or three forges.
- All squad members will wear natural fiber clothing; cotton, linen or wool, and will have long sleeve shirts. **OPEN TOED SHOES ARE NOT ALLOWED!**
- Put on aprons and safety glasses.
- Gather around the anvil and listen carefully to the blacksmith's instructions. You will be taking a pre-cut 12" piece of steel and forging it into a tent stake, similar to a letter "J" without the cross piece at the top.
- First, the steel blank will be measured and marked with punch, the mark indicating where the blank will be bent and 4 inches from the end.
- Smooth out the punch marked end of the bar by heating and lightly hammering the edges until all sharp burrs are gone. This is called chamfering.
- Next, the point will be formed by heating the opposite end of the bar and pinching the steel; hammering it at an angle between the anvil face and the hammer. The stock will be heated in the forge and then the engage will hammer the end of the steel as the blacksmith holds it. The steel is held at a slight angle off the face of the anvil and two sides are hammered to form the pointed end. (See illustrations)
- Next, the other end of the steel will be heated and placed on the bick of the anvil so that the punched mark is in the proper place, directly on top of the bick. The engage will hammer the stake down and around the bick to form the top or bend of the stake.
- A low red heat will then be taken and the stake wire brushed and coated in bee's wax.







Crossroads & Conflict

What to Bring (and Not Bring)

Your personal items should fit into a small bag or backpack. In order to maintain a sense of historic accuracy at the program, please follow this list closely, especially the **DO NOT BRING** items.

Bring:

- A full change of clothes.
(If you like, you may bring clothes which resemble a blue, military uniform of the Civil War era and “pioneer” work clothes for the second day.) You must have a natural fiber long-sleeved shirt and long pants or jeans for the Blacksmith Shop. **NO OPEN-TOED SHOES OR SANDLES!**
- Pajamas or long underwear to sleep in (It can get very cool at night)
- Toothbrush/toothpaste, comb/brush, soap and towel
- **Warm** sweater and coat for the evening & watch duty
- Waterproof jacket and pants (optional)
- Book to read during personal time (if desired)
- Warm sleeping bag (preferable) or blankets, and sleeping pad if desired
- Pillow
- Water bottle or canteen
- Medications (park staff are not authorized to provide or administer **ANY** medications)
- Sack lunch for Saturday

Do Not Bring:

- **Cell phones, MP3 players, or any electronic device, including cameras.** The group will have a designated photographer
- **Personal food of any kind** (unless you **want** animals in your tent!) Exception is Saturday lunch
- Any alcohol or tobacco products, or any recreational drugs of any kind
- Hairdryers, electric toothbrush, curling iron etc.
- Flashlight (We will be using lanterns)
- Toys, stuffed animals or games