

Forestry Field Trip/Outdoor Lab Guide: Staying Warm and Comfortable

Intro: The primary goal of this document is to help students plan appropriately for bad weather so they can maximize their benefit and enjoyment from forestry field trips and outdoor labs. Rather than simply listing recommended materials and equipment, though, it seeks to inform and educate students about preparing for outdoor excursions in general. Many very well educated and experienced people still lack basic knowledge of the fundamentals of staying warm and comfortable in adverse weather situations. For a student interested in a career in conservation or forestry, outdoor skills may be particularly useful. Best of all, because it is written for students, by students, it is budget conscious! (Suggestions for buying outdoor clothing in Vancouver follow at the end)

Clothing is not the only consideration when preparing for cold or wet weather!

Food: Your body maintains its heat by burning calories, which it gets from the food you eat. That's right! I suggest eating well before and during field trips. Fatty foods such as cheese, butter and nuts will provide long lasting calorie supplies. Some arctic explorers and cold weather mountaineers bring energy rich butter as their main food supply on long trips. Delicious and warm! Because FRST field trips/labs are much less extreme, I simply recommend eating a good meal beforehand and then bringing snacks along for the trip.

Hydration: Similar to how water is important to maintain ideal body temperature on a hot day, it is also very important for staying warm on cold days. Being adequately hydrated will help your body regulate its temperature. Of course, once your body is hydrated, additional water will not necessarily make you warmer!

Cold drinking water can be unappealing if the weather is cold, though, and it can even freeze in your bottle if it is well below zero degrees (which is a possibility during the snowshoe trip on Cypress). A common solution is to either bring a thermos of hot non-caffeinated tea or to fill a water bottle with hot water when leaving home. With the latter strategy, the water will likely be a pleasant drinking temperature by the time it is needed.

Coffee and caffeinated tea are both diuretics so neither are a suitable substitute for water. Whiskey and other alcoholic beverages are also diuretics. Furthermore, alcohol dilates blood vessels and creates a temporary sensation of warmth as blood flow increasingly brings heat from the core, where it is most needed, to the skin, where it is quickly lost. Contrary to popular belief, alcohol will cool you down rather than warm you up!

Clothing:

While food and hydration are important for staying warm and comfortable, clothing is definitely the most important consideration. There are many different strategies for an outdoor cold weather clothing system but a few fundamentals should be considered:

1. Dress in Layers! Temperatures change throughout the day, and as you travel from sheltered to exposed areas. Weather in the mountains and on the water changes rapidly. You heat up as you exercise, and cool as your activity levels drop. Dress in layers of clothing so you can adapt to these changing conditions.

2. Cotton Kills! Cotton absorbs water well and once it is wet, it completely loses its insulation value and acts to intensify the evaporative cooling effect. Most of our clothes are made from cotton (i.e. Jeans, T-shirts and most socks) and it is a good insulator when completely dry but in wet outdoor environments it is pretty much useless. Mountaineering and outdoor schools refer to it as the "death fabric" or "doom rags." Staying completely dry is ideal but very difficult during prolonged periods in wet weather so cotton should be avoided as much as possible. Excellent alternatives are wool, polyester (including fleece), nylon, alpaca, caribou, etc. (anything but cotton). All these materials are either poor absorbers (like fleece) or retain their thermal value when wet (like wool).

3. Don't forget your toque! A high proportion of your body heat is lost through your head and neck so packing a lightweight toque (or beanie as they are sometimes called) is well worth its weight. Scarves, balaclavas and extra toques can be considerations for really cold weather while a hat or hooded jacket may be sufficient on a rainy day. Gloves can also be nice to have, as your hands may get cold digging in the soil or while throwing snow balls at each other on the Cypress snowshoeing trip. If you don't have gloves, wool socks can be worn on your hands!

4. Sometimes it rains! Rain gear is highly recommended on all trips/labs unless you are absolutely sure there is no chance of precipitation. You should have both a rain jacket and rain pants. Many people own Gore-Tex raingear. Gore-Tex is comfortable to work or hike in, excellent in snow and light rain. It will not keep out heavy rain or keep you dry in wet vegetation. Gore-Tex is usually quite expensive and absorbs dirt well, which is not good for the fabric. Plastic rain gear is usually less expensive, entirely waterproof until torn and is not affected by getting dirty. It does not breathe, though, so it can be uncomfortable for vigorous activity such as hiking. Heavy rubber/plastic raingear is suitable for field trips or labs in wet conditions as there seems to be more standing than hiking. Exercise caution when buying plastic raingear though; the cheapest plastic rain gear (i.e. \$20 for a new rain jacket and rain

pants) is very poor quality and deteriorates extremely quickly, being thus a waste of money and ecologically insensitive. (From my experience, Canadian Tire's plastic rain gear is extremely bad!).

5. These trails are not paved! Expect slippery roots, rocks and mud puddles during field trips. Hiking boots that protect your ankles, rubber boots with good treads or caulk boots are suitable, depending on how much walking is required. Check with your instructor. Wear two layers of socks. A lighter layer and a heavier layer. Wool socks are best for the heavier layer. Socks are usually cheap at stores that sell work clothing (often very expensive at MEC or outdoor clothing stores). Wet shoes are pretty comfortable if they are at least warm. Sandals, running shoes etc. are not suitable.

6. Bring an extra layer or two! Carrying an extra sweater or jacket is well worth the burden of a few extra kg in your day pack. Weather can change quickly or one can become wet and surprised by the coolness of a damp forest, or the exposure of the field trip site. The priority of the body's thermoregulatory system is to keep its core warm; as the core cools it slows blood flow to the body's extremities such as feet and hands. If you keep your body's core temperature up then your hands and feet will be warmer. The best way to learn what clothing is suitable for the outdoors is from experience; do not worry, you will be getting lots of this on forestry field trips and labs. Pay attention to what works for you. If you were cold on a trip, try to figure out what you can do next time to be more comfortable. Check the weather forecast to see if what you wore during the prior week's field trip will still be adequate. Remember that it will likely be several degrees colder up in the mountains. The outdoors can be quite intimidating if someone is only accustomed to urban settings or likewise to a more hospitable climate; learning how to prepare for BC's variable weather conditions is a huge step towards appreciating and interacting with the beautiful natural environments that are easily accessible around BC.

Suggestions for shopping:

-**Thrift and Second Hand Stores** can be excellent for fleece jackets, wool sweaters and toques. They are scattered throughout the city and usually very cheap. For example, there are 2 in the first block East after Alma. It seems that they are much more expensive downtown though. You should be able to discover the locations of nearby thrift stores using the web. <http://www.yellowpages.ca/bus/British-Columbia/Vancouver>

-**Sports consignment stores** (used sports equipment) can be excellent for raingear, cheap socks, gloves, fleece jackets, wool socks, toques and hiking boots. **Cheapskates** (used clothing only) or **Sports Junkies** www.sportsjunkies.com (near MEC; both new and used clothing) are two good options.

-**Outdoor and Work stores:** **Mark's Work Wearhouse** <http://www2.marks.com> is good for basic work boots and durable clothing. **The Army and Navy** www.armyandnavy.ca has everything one needs for the outdoors and is very cheap. A great place for wool socks, boots, toques, etc. **3-Vets** is a good place for pretty good but still cheap rain gear and gum boots. Vancouver is full of more expensive outdoor stores. Many are clustered along Broadway in between Main St. and Cambie St. so it is a good area to shop with variety and a decent possibility of finding a good deal. For example, **Taiga Works** www.taigaworks.ca has very good quality and mid-range prices.

www.Craigslist.ca You might get lucky and find a great deal on raingear or boots.

- Of course, if money is no concern, a trip to **Mountain Equipment Co-op** <http://www.mec.ca/Main/home.jsp> can get you conveniently prepared for any field trip (or for a trip to Antarctica for that matter).

Other: Most students would agree that forestry field trips and often outdoor labs are in very beautiful locations and are wonderful change from classroom labs and lectures. You are sure to have a good time, make some friends and get a different perspective of the material you are studying in lecture. They are not only for our pleasure though, and the instructors expect that students pay attention and learn as much as possible. Some of the themes discussed are likely to appear on exams so taking notes is highly recommended. "Rite in the Rain," booklets are available from the UBC bookstore in the stationary section. They are durable when wet and an excellent option for rainy days. The larger "Rite in the Rain" booklets are expensive and much larger than a student could possibly fill in a single semester or two of field trips. The smallest booklets may be sufficient and can be easily slid into ones pocket for convenience. Discussing details with other students after the field trip/lab is a good way to fill in any blanks and make sure the concepts are understood. Be sure to bring your plant ID book as well and maximize the experience by asking questions and participating as much as possible!

MEC - 130 West Broadway, tel.: 604.872.7858

TAIGA – 301 West Broadway, tel. 604-875-6644

Sports Junkies – 102 West Broadway, tel.604-879-6000

Cheapskates – 3644 – West 16th Ave., 604-222-1125

3-Vets – 2200 Yukon Street, 604-872-5475

Mark's Work Wearhouse – 1885 West 4th Ave., 604-736-2678

Army and Navy – 3917 Main Street, 604-879-1020