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Vermont School Boards Insurance Trust

Risk Management Strategy for Forest Learning Programs

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5 Step Plan to Managing Risk with Forest Learning

1. Perform a hazard analysis of the environment
2. Use the Hierarchy of controls to help develop risk mitigation strategies for identified hazards
3. Develop a safety plan that speaks to both staff and students
4. Communicate and train on the plan
5. Review plan periodically for changes and any new hazards that may need to be addressed

Having a plan in place is important to have as a reference for everyone involved and helps take out some of the guesswork. It also shows your dedication to safety and your forest learning program. Safety is always first so the more you plan the safer your program will be.

Example Risk Assessment from Newbury Elementary School - Hazard Identification

The table below describes hazards that were identified at NES with a brief description of each. Some hazards may not have been observed but were assumed to be possible factors present during the analysis or throughout the course of the school year, given geography, climate, landscape, etc. The table does not classify, rank, or assess level of risk for each hazard.

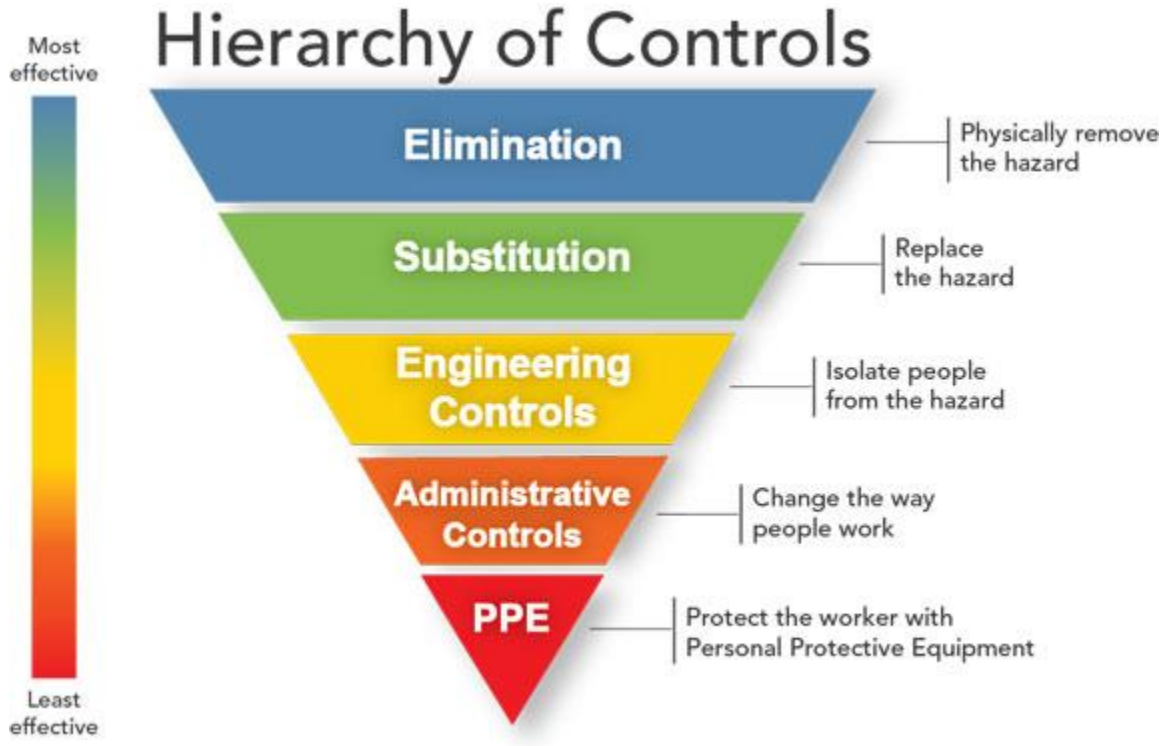
Hazard	**Notes**
Cold Weather Conditions	Low temps can make student learning difficult, hypothermia, frostbite, electronics can fail
Wet Weather Conditions	Precipitation affects visibility, being wet can be demoralizing, surfaces become slippery, water levels rise, erosion
Icy Weather Conditions	(See Cold Weather), surfaces become slippery, roadways increasingly dangerous, surfaces become harder, water may freeze over to create seemingly safe surface, ice chunks favorable projectiles, icicles
Hot Weather Conditions	Depletes energy levels, tempers can flare, dehydration, heat-related illnesses (heat stroke, heat exhaustion, heat syncope, heat rash), fire danger
Sun Exposure	(See Hot Weather), sunburn/poisoning, rapid melting, skin cancer, eye damage (especially on water or snow), immune system suppression
Wind	Wind chill effect, fire danger, widowmakers/dead trees, communication
Lightning	Electric Shock
Uneven Terrain	Tripping/falling, pacing affected, line of sight (LoS)
Steep Slopes	Falling, sliding, falling objects, pacing, LoS, erosion, physical exertion, fall potential at Mt. Pulaski summit
Rockfall	When climbing steep slopes rocks can be pushed loose and roll down
Widowmakers/ Dead Trees	Students shake trees, wind danger, many dead limbs and trees located: Pulaski Street, Forest School (FS), Mt. Pulaski
Protruding Objects	Bricks/rocks/logs around fire at FS, tripping/falling, injuries common, broken limb stubs of trees, buried scrap metal, stick forts
Streams	Drowning, water-born illnesses, students want to play with ice or stand on frozen stream, stream in path of Mt. Pulaski caused multiple accidents
Marsh	Insect breeding grounds, hidden holes/ uneven terrain, wildlife, erosion
Proximity to NES	Bathroom breaks while offsite affect student-staff ratio, response time

Slippery Surfaces	Dead leaves, ice, loose gravel, mud, moss, wet surfaces, debarked logs
Inconsistent Line of Sight	Winding paths, hills, obstacles, and distance created LoS issues, communication, dispersion at FS
Motorized Vehicles	Pulaski Street, snowmobiles/ atvs
Fire Pit	Unclear ring, mindfulness of fire danger, becomes icy tripping hazard
Powerlines	Lines on Pulaski St. below widowmaker and dead limbs
Rusty Barbed Wire	Students' fort built against fence, hidden coils in dead leaves
Old Scrap Metal	At FS, some half-buried, some laying around
Harmful Plants & Fungi	Briars, poison ivy, wild parsnip, wild chervil, stinging nettle, many poisonous mushrooms (ingestion)
Animal Feces	Many harmful pathogens found in animal feces, lots of scat at FS
Vector-Borne Diseases	Mosquitoes, ticks, fleas, mites, lice, and biting flies can all be carriers, becomes greater hazard in Spring+Fall
Biting/Stinging Insects	(see above), bees/wasps, ants, spiders, anaphylaxis concerns
Viruses/ Bacteria	Typical student hygiene concerns, drinking from streams
Wild Animals	Rabies, moose, weasels, snakes
Hunters	Fall+late spring=VT hunting season, orange clothing?
Using Sticks For Play	Sticks commonly used as javelins, swords, or clubs, danger during fort construction, dead+down+detached
Unstable Forts	Large concern, significant weight on visually weak/unstable frames, inspections?
Roughhousing	Recess, hikes/walks when LoS interrupted
Throwing Objects	Ice, rocks, sticks, snow, pinecones
Exclusivity	Students choosing own groups, leaving student(s) out of decision making
Harassment	Unsupervised at FS, generally able to resolve independently
Challenge-Induced Stress	Not observed to negative extent, just consideration for OE risk mgmt.
Physical Condition	Differences in student physical condition caused division of groups, pacing, heavy physical exertion up Mt. Pulaski for some
Inadequate Clothing	Soaked cotton, thin/ non insulating layers, non-waterproof boots, lack of understanding of layering, gloves+boots main concern, student learning/ experience weakened, inaccessibility issue?
Improper Gear Use	Snowshoe issues: equipping, stepping on concrete/rock, lack of understanding of layering/ clothing systems
Medical Conditions/ Allergies	Not always clear, no hot sheet

Rushing	Timelines sometimes strained, loss of value, mistakes/judgement
Poor Communication	Staff-Staff: who's responsible for what/who?, Staff-Student: LoS, ratios, Slinky Effect/ dispersion while moving to/from FS, limited radios, boundaries, safety talk?, expectations
Unclear Boundaries	Few visible markers, many students unsure, wandering, unidentified hazards outside boundary, new hazards since last visit?
Running	Tripping/falling, sliding, collisions, separation
Lack of Understanding of Consequences	Students unwilling to follow rules they don't understand, minds not on consequence, little to no buy-in
Varied Levels of Experience	Some students can be trusted with more responsibility while others lag even at same age levels, some know better than others to take risks, travel times differ
Unclear Processes	Medkit/ hot sheet, teacher vs para ratio allowances, lead+sweep, safety talk, pacing, LoS/ dispersion, splitting up (w/ pacing issues, bathroom, behavioral), frequency of risk assessment?

Hierarchy of Controls

After performing a walkthrough of the environment, to identify potential risks, we recommend utilizing the hierarchy of controls:



Hierarchy of Controls in question format:

Elimination - Being our best option, can we remove this hazard? y/n

Substitution - Can we replace this hazard with one that is safe? y/n

Engineering Controls - Can we design out the hazard? y/n

Administrative Controls - Can we adjust tasks/procedures, schedules, create policies, install signs and warnings, and provide training? y/n

PPE - As our last resort, can we provide a product to protect against the hazard? y/n

Note: *This list of considerations below are not an all-inclusive list, but are common activities that should be addressed as it relates to risk management.*

Outdoor campfires/fire building:

Permit:

Check with your town office or your local forest fire warden to see if an open burn permit is necessary. Department of Forests, Parks and Recreation contact information: https://fpr.vermont.gov/vermont-town-forest-fire-warden-directory. We recommend discussing with your local forest fire warden different risk management strategies, as well.

Fire Danger Forecast:

Before planning to have an outdoor fire you should check your local fire danger forecast: https://fpr.vermont.gov/forest/wildland-fire/monitoring-fire-danger. This will help determine if you should be fire building.

Fire pits vs open ground:

We do not recommend having fires on open ground. Some fires can spread underground in certain circumstances. Consider using or building fire pits. Manufactured fire pits that are built on a stand, above the ground, are preferred. They also come with covers to help keep the fire controlled.

Fire Extinguisher:

A fire extinguisher should be nearby to help extinguish the fire as necessary. We recommend you use Class A extinguishers which are effective against fires involving paper, wood, textiles, and plastics.

Flammable liquids for fires:

We do not recommend utilizing flammable liquids in fire building.

Administrative controls to consider with fire building:

- Who starts and controls the fire?
- Teacher to student ratio?
- Age of student?
- How close to the fire? Create barriers as necessary.
- Training?

PPE for fire building:

Fire resistant gloves and a poker.

Outdoor shelter building:

- Structural integrity? – Recommend building only
- Removal/take down?
- Damage to natural habitat?
- Tools? Who's using them? Safety training with tools?

Wildlife, mosquitoes and ticks:

- Sightings of dangerous animals in the area – contact game warden and halt the forest learning program.
- Protection from dangerous animals that may approach?
- Plan to protect against mosquitos and ticks?

First aid and Emergency Planning:

First Aid Considerations:

You should consider, but not limited to, the following potential needs for first aid:

- burn
- cut
- sting
- break
- allergies
- medical conditions (i.e. asthma)
- prescriptions for certain children

Work with your school nurse to further develop needs and a kit.

Emergency services:

- Communication with administration at the school?
- Contact information needed while in the forest?
- Access to cell phone to call for emergency services?
- Can emergency services access the learning area? By vehicle if necessary?
- Wayfinding for emergency services? Create a drawing/sketch of areas where classrooms are held in the forest and access points with terrain notes.

Weather Considerations:

- Clothing and shoes of students and staff
- When is it safe to go out?

Liability:

For other liability questions please contact VSBIT's Risk Management Team: https://www.vsbit.org/ask-the-staff.