

Cycling (Higher Risk)

Higher Care

Criteria:

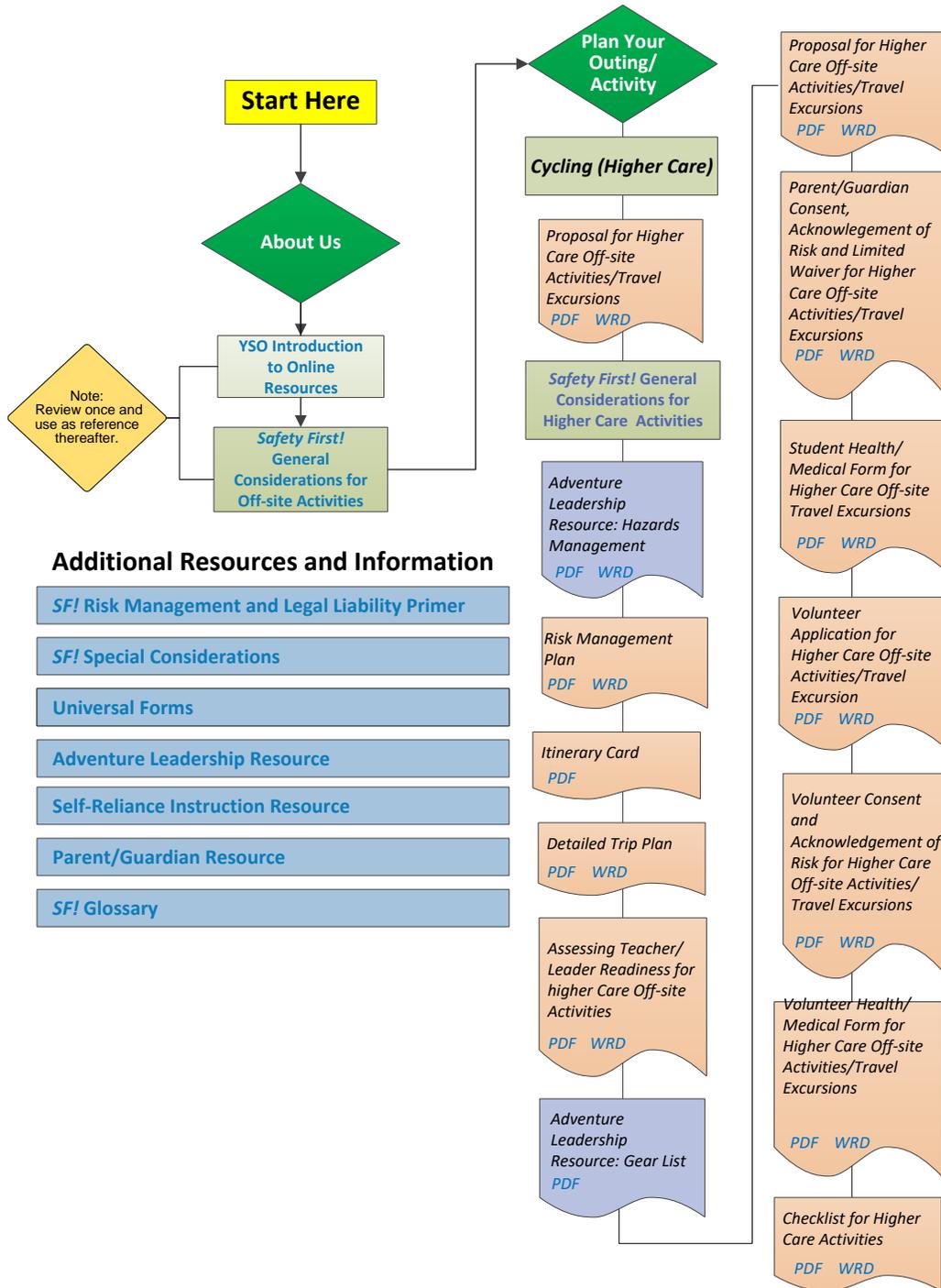
- Complex terrain: multiple junctions, steep, rough terrain;
- Semi-remote to remote: out of the community (e.g., provincial park, wilderness river);
- Higher inherent risk in the activity; skill and/or speed involved
- Lack of clear boundaries for activity: one could be lost for more than an hour;
- Long duration: typically (but not always) a half-day to many days duration;
- Far from support services: far from buildings and/or vehicles;
- Not close to emergency services: more than 20 minutes from EMS arrival on-site;
- Specific leadership training required: some specific technical and leadership training indicated;
- Significant preparation time of students: more than an hour of student prep needed.

Cycling (Higher Care)

Cycling (Higher Risk)

Day Tripping Grade 5+
Overnight Tripping Grade 6+
Extended Tripping Grade 8+

Flow Chart, Steps to Success, and Safety Guidelines



Safety Guidelines

Cycling Higher Risk

Cycling in the higher care context may involve road or trail cycling in an environment and/or over a duration that presents higher objective risks than local, low risk cycling activities do. Cycling remains one of the most accessible, lifelong activities and exposing students to safe cycling in a variety of contexts is worthwhile where it can be undertaken with safety as a high priority.

Known Potential Risks

- Injuries related to vehicle crashes en route to and from activity area;
- Becoming lost or separated from the group or the group becoming split up;
- Injuries related to slips, trips, and falls in the program area or en-route to/from it;
- Injuries related to falling off the bike;
- Injuries related to colliding with a moving object (e.g., another cyclist) or with a fixed object (e.g., a tree);
- Injuries related to ill-fitting equipment, equipment malfunction, or failure to use the equipment properly;
- Injuries related to the physical demands of the activity and/or lack of activity skill;
- Weather changes creating adverse conditions;
- Hypothermia due to insufficient clothing;
- Loss of manual dexterity in hands during cold and wet weather;
- Hyperthermia (e.g., heat exhaustion, heat stroke) due to insufficient hydration, overdressing, and/or overexertion in a hot environment;
- Allergic reactions to natural substances (e.g., bee or wasp stings);
- Injuries related to interactions with animals and plants in the environment;
- Psychological injury due to anxiety or embarrassment (e.g., re: body size or shape, lack of fitness and/or skill);
- Illness related to poor hygiene, and
- Other risks normally associated with the activity and environment.
- Complications of an injury or illness due to remoteness and time to emergency services

Common Risk Mitigation Strategies

Cycling Daytrip (Higher Care):

Teacher/Leader Readiness

- The teacher/leader must be competent to organize the cycling activity; to demonstrate, instruct and supervise it; and to effect rescue and emergency procedures as necessary. The larger the

area and/or longer the cycling activity is to be, the more knowledge, skill, fitness and experience the leader must have.

- The teachers/leaders must be aware of and respect cycling related legislation in the province, as it relates to the cycling activity and environment.
- All teachers/leaders and accompanying supervisors should be comfortable on the type of bike and in the environment selected.
- The teachers/leaders should be very cognizant of their own riding habits and consciously work to be good role models (e.g., wear helmets, use signals consistently, walk where students are expected to walk).
- Training may be secured through Cycling Canada, Sprockids or other appropriate sources.
- At least one leader should have some skill in basic bicycle repair and maintenance.
- At least one supervisor must have first aid training, the level dependent upon the time/distance from EMS (refer to *First Aid in General Considerations for Higher Care Activities*).

Location

- Guidelines related to travel by bus or walking to/from a site are covered in Travel to/from Off-site Destinations in the General Considerations. If travelling by a means other than bus or walking, see Transportation in Special Considerations.
- If it is necessary to transport bikes (other than parents/guardians bringing them to the site), select an appropriate mode of transport for the bikes. This may include using trailers, vehicle bike racks and/or other methods of public conveyance (e.g., buses, trains). Check any trailers used for loose bolts and ensure lights are functioning. Ensure bike racks are well attached to the vehicle and bikes to the racks.
- Choose routes carefully in terms of the length, grade, road surfaces (paved, gravel, dirt), and consider the presence/frequency of traffic, complex intersections, and/or other hazards. Pre-travel the route or seek other reliable information to secure an estimate of the time needed, road or trail conditions, hazards present, and appropriateness for the group.
- Plan trip distances conservatively, in the event of a mechanical breakdown or other problem. Cycling trips usually cover substantially more distance than hiking outings, so it is easy to be quite far from home base. Headwinds can greatly affect pace. Consider direction of tour in relation to forecast and season and plan distances accordingly.
- For long road rides, having a driver with a vehicle (with a bike rack/trailer; i.e., a sag wagon) periodically checking in with a road cycling group, provides back-up if someone gets too tired to continue or has a mechanical issue the group can't deal with with the limited repair kit they can carry while riding.
- Avoid riding on sidewalks as much as practicable; yield to pedestrians.
- Avoid riding on busy roads, especially if there is no or a very narrow cycle lane or paved, marked shoulder. Quiet roads are generally safer, as well as more scenic and interesting.

Equipment

- Parents/guardians are generally responsible for ensuring the bike is safe; e.g., taking it in to a bike shop for a safety inspection.
- If personal equipment, parents/guardians can be tasked with checking or having a bike technician check the bike over and fit it to the student prior to student using it in the activity. Bicycle inspection should include, but not limited to:
 - working brakes,
 - inflated tires with adequate tread,
 - functioning gears (if relevant),
 - secure headsets, and
 - bicycle should be appropriately fitted to the rider, including but not limited to adjusting for correct: seat height and position, pedal positioning, and placement of hands on handlebars.
- If planning a long ride and/or one in a remote area, have bikes checked out more thoroughly, (e.g., wheel trueness, bottom brackets, pedals, gears and visible bolts).
- Parents/guardians are responsible for outfitting their child/ward with correctly fitting single use approved bicycle helmets for cycling activities (see *Protective Equipment for Physical Activities in Special Considerations*), unless the school has assumed this responsibility. Cycling helmets reduce head injuries by 85-88%, are inexpensive, accessible and required by law for all minors in most provinces. Teachers/leaders must **REQUIRE** their use in all cycling activities and require them for any riding on highways in BC.
- Teachers/leaders should check that students' helmet straps are properly adjusted and buckled and require students to keep them on at all times while riding.
- Use closed-toe, stable shoes for cycling (e.g., runners, approach shoes, cycling shoes).
- Toe-clips or clipless pedals aid in cycling efficiency and in keeping the feet on the pedals, but riders who use them must know how to use them effectively and, more importantly, how to extricate themselves quickly if need be (especially on hills). Alternatively, if inadequate time and opportunity to learn to use these pedals safely, swap in flat pedals for the cycling activity.
- Clothing worn should be comfortable and appropriate for the weather.
- Secure pant legs, as necessary (e.g., clips, elastics), to avoid snagging under chain.
- Tie shoelaces and secure loose clothing and long hair.
- If road riding, at least the lead and sweep riders should be wearing clothing or safety vests that are brightly coloured or that have reflective tape to enhance visibility of the group to motorists.
- All riders should be strongly encouraged to wear brightly coloured (e.g., yellow, orange, white, red) and/or reflective clothing. This is the best defence when road riding; giving drivers every opportunity to see riders well in advance of passing them.
- Participants should wear brightly coloured clothing when riding on trails or dirt roads in rural areas, particularly in hunting season.

- Riders need a good layer(s) of clothing for wind protection if it is cool out; riders lose heat through convection (air moving past body carries body heat away).
- By law, each bike is required to be fitted with a bell/noisemaker. Reflectors are recommended.
- No earphones or cell phones while riding.
- Protective eyewear should be worn at night or on trails where branches protrude.
- A leader should carry a basic repair kit (e.g., patch kit and pump).
- The first aid kit should include large gauze pads and bandages to cover major road rash.
- Bring sufficient locks or supervise bikes to protect against theft if leaving them in a public place for a period of time.
- Avoid riding at night. If riding at dusk, reflective strips on the bike frame, clothing, use of a headlight, a red taillight and/or red reflectors on the rear of the bike increase visibility.

Instruction

- Teach/review, if/as relevant to the cycling activity, group and time available:
 - clothing and footwear for riding,
 - bike checks,
 - correct positioning on bicycle,
 - reading and obeying traffic signs and/or bike trail signs,
 - staying alert (inattention causes accidents),
 - how to signal and carry out turns safely,
 - how to maneuver the bike (e.g., riding up and down hills, cornering)
 - when to ride and when to walk (e.g., busy intersections),
 - anticipating and responding to rough patches in the road/trail including standing water, depressions, loose gravel, rocks, ruts etc.,
 - riding single file, leaving enough space to be able to dodge obstacles without endangering others,
 - calling out obstacles and traffic for those behind,
 - riding in the same direction as the traffic (ride on the right),
 - passing others safely; call out and pass on the left,
 - stopping and looking both ways before entering the street,
 - riding in a predictable manner; looking around before swerving, turning or changing lanes and signaling where appropriate,
 - safe riding procedures for if in traffic, near parked vehicles and especially around buses and trucks,
 - staying alert and focused on the road and traffic including moving and non-moving obstacles, road conditions and weather conditions,
 - handling equipment failure like flat tires or breaking chains,
 - efficient cycling technique and gear use,
 - handling gusting headwinds and crosswinds,
 - dealing with wet riding surfaces (which can be slippery and can reduce brake function),

- being aware of snow or ice which can be a seasonal hazard on trails,
 - basic bike maintenance (e.g., cleaning) and repair (e.g., changing a tire), and
 - how to fall/put the bike down safely.
- The relevant rules of the *Motor Vehicle Act* must be adhered to if going on roadways, including group riding protocol.
 - Students should be instructed to make eye contact with drivers and assume that they have not been seen until acknowledged.
 - Rules of the trail for off-road cycling must be reviewed, if trail riding.
 - Racing should generally not be done, except where students have been trained how to race and demonstrated they can race safely and an appropriate site is used.
 - If sharing the trail with other recreational users (e.g., walkers/joggers, hikers, horse riders), ensure that cyclists are familiar with protocols for safety and courtesy (e.g., ride under control and at reasonable speed; make verbal/bell contact, especially if coming up behind someone; dismount, move off to side and stand still while horse groups pass).
 - Instruct students to get themselves and all of their gear well off the road or trail when resting, having lunch, or stopping for any other reason.
 - Students should be competent at selecting and shifting gears effectively in response to changes in incline before venturing onto hilly trails.
 - If riding in bear country, particularly where heavily wooded, avoid group spreading out along the trail excessively. Attach noisemakers to bikes or persons and/or talk or sing when in confined woods.
 - If relevant to the cycling activity, see *Mountain Biking / Fat / BMX Biking*.

Supervision

- A designated teacher/leader stays at the front of the pack to set an appropriate pace, and the sweep stays at the back of the pack. If there is a change in road/trail direction, the leader should ensure no one misses the turn.
- In-the-area supervision generally; constant visual supervision if students are dealing individually with a specific significant hazard encountered on the road or trail (e.g.s., riding near a water margin; crossing a cattle gate).
- Lead and sweep supervisors should carry communication equipment (e.g., cell phones, FRS, walkie-talkies) to facilitate communication between them, or create a relay system to pass messages up and back.
- Ratio as per calculation (See *Supervision* in *General Considerations for Higher Care Activities*).

Cycling Overnight/Extended Trip: all of Day Trip, plus:

Teacher/Leader Readiness

- All teachers/leaders should be competent, experienced cyclists.
- If going off-site, at least one teacher/leader should be competent in basic bicycle repair and maintenance, with more skill required in this area for longer, more remote trips.

Location/Equipment

- Be particularly aware of how much farther biking can take a group than hiking. The group that ventures far into the backcountry must be very well-prepared and self-sufficient.
- If road cycling, consider whether to use a sag wagon(s); support vehicle(s) carrying the gear while cyclists ride with just a few essentials vs. packing and carrying the gear on the bikes. The group will be able to travel farther with time saved fussing over packing everything on the bike each day and the bikes will be lighter so easier to manoeuvre, but the students may not get the same level of personal satisfaction as through being completely self-sufficient. Consider the trip objectives.
- Alternatively, even if cycling with gear on the bikes, if appropriate, a support vehicle traveling behind the group can offer a back-up in the event a bike needs major repairs or replacement or a rider cannot continue.
- If carrying gear on the bike, ensure that panniers are appropriately packed and balanced on each bike, with loads distributed low and roughly evenly around the bike (both front to rear and left to right). Place heavy items close to the bike.
- Encourage packing light for extended trips, including consideration of appropriate food (e.g., dehydrated, freeze dried).
- Pack gear in waterproof containers or plastic bags inserted into panniers.
- Heavy packs should not be worn on the back because of resulting reduced riding stability and potential for back injury and/or arm fatigue. Use panniers or other bike-supported bags or tow carts for heavy loads.
- Encourage the use of stiff soled shoes and ensure that if toe straps are used, they are sufficiently loose and the buckles are positioned in a manner that they do not cut into the side of the feet or they may cause plantar nerve palsy (numb toes).
- For long rides, cycling or other padded gloves should be worn and/or extra padding/tape put on the handlebars to avoid ulnar nerve palsy, which causes numbness of the hands.

Instruction

- Try to plan overnight and especially extended cycle tours for mid-April - June, when the weather and road or trail conditions tend to be most favourable and the students will have had the maximum amount of time to plan and develop their skills and fitness.
- Avoid travel in darkness except for emergencies. Try to select a camp spot with sufficient daylight left for everyone to get camp set before nightfall.
- Encourage students to vary their riding position and hand position on the handlebars frequently to avoid overuse stress.
- Attend to planning and preparation of students re: content knowledge, skill and fitness development. While most youth can ride a bike, a long ride and/or one involving carrying gear is significantly more challenging.
- Consider doing a shakedown day trip or overnight with loaded bikes prior to an extended tour to check out gear and group capacity.

- Warn students that acceleration is sluggish and that it is harder to stop in control with a loaded bike, so adjust their pace accordingly. It is also sometimes challenging mounting and/or dismounting a bike loaded with gear because it's less stable when stationary than when it is moving, so exercise care. If the loaded bike is heavy enough that a student can't manage it alone, then the activity is inappropriate; use a sag wagon for some of the gear.

If camping, refer to *Camping* for other considerations.

Notes

1. If, when reviewing the guidelines above, terms and concepts presented are unfamiliar, this is a strong indicator that additional personal leadership preparation (e.g., a training course, reading) or contracting a qualified service provider is advisable.
2. This document is not intended as an instructional guide. The teacher will need to use other references to learn how to teach students the skills (e.g., how to brake when inline skating, how to do a diagonal stride when cross-country skiing).