Board/Authority Authorized Course Framework Template

School District/Independent School Authority Name: SD 27 Cariboo Chilcotin	**School District/Independent School Authority Number (e.g. SD43, Authority #432):** SD 27
Developed by: Robert Manarin (Course Framework provided by SD 23)	**Date Developed:** December 1, 2024
School Name: Lake City Secondary	**Principal's Name:** Curt Levens
Superintendent Approval Date (for School Districts only): November 24, 2025	**Superintendent Signature (for School Districts only):**
Board/Authority Approval Date: November 24, 2025	**Board/Authority Chair Signature:**
Course Name: Mountain Biking 12	**Grade Level of Course:** 12
Number of Course Credits: 4	**Number of Hours of Instruction:** 120

Board/Authority Prerequisite(s):

The student athlete must have experience riding mountain bikes on mountain terrain and be riding at an intermediate to advanced level as recognized by the International Mountain Bike Association (IMBA Appendix A). The student athlete will be assessed on a closed, safe, level, predetermined course using the criteria before being allowed into the course.

Mountain biking experience intermediate level:

-10 to 20 days experience on blue and single black with moderate Technical Trail Features (TTFs)

-Comfortable at moderate speeds on technical blue trails with roots, forest debris, loose rocks, and tight single track. Must have experience on a cross country mountain bike with front suspension or Enduro full suspension mountain bike.

-Can ride, maintain balance, change gears and brake without thinking about it.

Special Training, Facilities or Equipment Required:

- The instructing teacher should be a mountain bike specialist who has a background or coaching training in mountain biking, equipment maintenance experience, and outdoor first aid training. The program will be delivered by the individual on their own or with the assistance of external mountain bike professionals and volunteers authorized by the Cariboo-Chilcotin School District Administration. The number of instructors will be determined by the size of the class.

- The program will take place at indoor (Gym & Classroom) and outdoor (Trails & Bike Park) facilities. A trailer may be required to transport bikes to trails on some occasions.

- A safety inspected modern Cross Country or Enduro Mountain bike with a minimum of disc brakes, and front Suspension. Downhill bikes are discouraged as student athletes will typically ride to the approved trail networks.

- Cross Country/Enduro Mountain Biking trails (green/blue/single black level as per International Mountain Biking Association standards)

- Appropriate safety gear including but not limited to a helmet, knee pads, elbow pads and gloves.

- Mountain biking specific shoes (skate or running are acceptable), jersey and shorts/pants including wet day waterproof or water-resistant jacket.

Course Synopsis:

Mountain biking 12 is designed to develop mountain biking skills and knowledge from an intermediate level to an advanced level. The class will build on a variety of sport specific movements, skills, systems, and strategies related to mountain biking. The course is a cross country/enduro mountain biking course therefore the class will be riding single black, blue or green runs as outlined by the international mountain biking association which is in alignment with other school mountain biking programs. There will be uphill and downhill riding involved in the mountain bike course on single track dirt/grass/gravel/ tree roots/boardwalks and rocky terrain.

The class will focus on the fundamentals of the sport:

- Prioritizing safety, safety guidelines, and riding safely.
- Equipment checks and safety.
- Self-assessment of skill level and safe warm up activities.
- Clear communication skills.
- Choosing safe and appropriate terrain for students' ability level.
- Riding with knowledge of upcoming terrain and maintaining a safe riding pace.
- Consistent position and balance skills through the climbing, neutral and ready positions, combined with a good range of movement.
- Consistently maintaining an efficient cadence and straight chain line.
- Braking without skidding on loose terrain, using both brakes.
- Climbing (riding uphill) and descending (riding downhill) on technical, single track (beginner, intermediate and advanced) terrain.
- Riding on banked and flat corners on various terrain surfaces.

- Maintaining chosen line (trail to be ridden) in technical (roots/rocky/or uneven) terrain.
- Learning how to use front and rear wheel lifts or standing to navigate technical (roots/rocky/or uneven) terrain.
- Seated front wheel lifts using a pedal stroke to navigate technical (roots/rocky/or uneven) terrain.
- Learning how to ride switchbacks (slow, tight turns).

Goals and Rationale:

Mountain Biking 12 provides students with an alternative to traditional physical education programs. It combines elements of both team and individual sports, fostering personal growth, technical skill development, and a healthy active lifestyle. The mountain biking 12 program will allow students to participate in a sport in which they are an integral part of a team and experience the benefits of team sports such as having a coach, teammates, and a network of support fostering camaraderie.

In contrast to other team sports in which only a handful of athletes participate at one time on the court or field in mountain biking everyone can be on their own bikes improving their abilities at the same time also currently in BC every high school mountain biking team is automatically eligible for provincials as long as they have participated in at least one mountain biking competition within BC this will allow every student the opportunity to experience going to a provincial competition something they might not have the opportunity to do in other sports.

The mountain biking 12 program will give students the opportunity to follow a passion and love for the outdoors which will hopefully be part of a healthy lifestyle well into their future.

Aboriginal Worldviews and Perspectives:

The mountain biking program is all about the support and development of the individual athlete as a person and athlete, providing them with an opportunity to be connected to the community. The class will spend time training outside for engagement with land and nature. The class will offer groupings allowing the individual students to feel part of something bigger through a learning centred approach that is experiential by nature and aligned with the indigenous perspectives and knowledge. The role of the teacher in mountain biking Academy is one of support, learning side by side with the student athletes helping to develop a love for mountain biking and the outdoors. We will focus on and adopt the following guiding principles prepared by the British Columbia aboriginal sport recreation and physical activity partners council:

- indigenous peoples possess significant traditional knowledge and cultural teachings, which recognize the positive influence of physical activity and sports games have on holistic personal development.
- Indigenous people in British Columbia live in complex geographical environments and as such experience unique living conditions and social realities.
- Indigenous peoples hold personal dignity and well-being as the foundation of their cultures and maintain the inherent right to live healthy and active lives.

We will also be following the First Peoples Principles of learning:

- learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors.
- Learning is holistic, reflexive, reflective, experiential, and relational.
- Learning involves recognizing the consequences of one's actions.

- Learning is embedded in memory, history, and story.
- Learning involves patience and time.
- Learning requires exploration of one's identity.

The course integrates respect for natural environments, reflecting Aboriginal perspectives on environmental stewardship and sustainability.

BIG IDEAS

Refining mountain biking skills and improving technical lines builds more speed and results in a safer ride.	Spending time outdoors allows us to understand our role in environmental awareness and stewardship in outdoor recreation and conservation.	Taking on a leadership role while mountain biking improves collaboration, teamwork, and communication skills while building confidence in oneself.	Working with young riders to maintain equipment helps to better understand the equipment usage while building relationships within the LCSS community.	Personal fitness can be maintained and improved through regular participation in physical activities and by technology to monitor improvement.

Course Name: Mountain Biking 12

Learning Standards

Curricular Competencies	Content
Students are expected to do the following: **Mountain biking activity skills and healthy living:** • Participate and lead a variety of mountain biking activities. • Refine, apply, and lead variety of intermediate and advanced skills for Mountain biking activities. • Monitor exertion levels and energy levels of themselves and others during mountain bike activities, while adjusting ride and group through leadership to meet changing conditions. • Analyze and explain nutritional considerations and other requirements for preparation for and preparation in mountain biking activities. • Explain how developing competence in mountain biking activities can increase confidence and encourage lifelong participation. • Maintain and do basic and advanced repairs on a mountain bike. • Understand their strengths and areas for growth. **Social responsibilities:** • Plan and implement ways to reduce potential impacts of mountain bike activities on the local environment. • Demonstrate awareness of cultural and place-based sensitivities regarding the use of outdoor locations. **Leadership, Collaboration, teamwork, and safety:** • Collaborate with and lead others in a variety of mountain biking activities. • Use applicable communication and leadership skills when interacting with others. • Anticipate and manage appropriate responses to emergency situations during mountain bike activities. • Demonstrate responsibility for personal safety and the safety of others. • Assess and manage skills during different levels (green/blue/black) of mountain bike activities.	*Students are expected to know the following:* • Health benefits of mountain biking activities. • Refine and apply mountain biking activity knowledge and skills. • Preparation for mountain biking activities. • Environmental conditions. • First Peoples traditional practices an ecological knowledge related to activities in the local environment. • The role of environmental awareness and stewardship in outdoor recreation and conservation. • Recognise, plan for, and implement strategies for adapting and responding to changing conditions and emergencies. • First aid skills and strategies for responding to emergencies. • Communicating in emergency situations, including communication with emergency and rescue services. • Mountain bike group management and leadership skills in a dynamic outdoor environment. • Responsible use of the outdoor environment. • Maintenance, use, and care of equipment and trails for mountain biking activities.

Big Ideas – Elaborations

- Technical skill development: controlling speed, making power, riding through technical terrain, climbing terrain, managing drops and jumps, avoiding injuries, strengthening mental capacity, maintaining discipline add marching line and speed to skills to maximize bike flow.
- Tactile development: monitoring cardio and physical exertion to achieve realistic goals, learning to ride according to varying conditions.
- Learning to be active and live in the outdoors: learning and being active outdoors is holistic, reflexive, reflective, experiential, and rational in nature, will need to be active supports the well-being of the Self, the family, the community, and the land.
- Personal growth: how to be a leader in the environment using strategies for individual and team leadership, cooperation with others in Group settings, communicating effectively and with mutual respect for others and helping to build a positive community. Understanding that learning involves patience and time.
- Healthy lifestyle: living a life with proper nutrition, sleep, exercise, and hydration.,

Curricular Competencies – Elaborations

- Advanced Bike maintenance: Properly lead the maintenance and servicing of mountain bike components to be able to ensure ride safety on the trails.
- Advanced trail maintenance: Properly create and lead the construction and maintenance of TTFs including berms, drops, track and other trail features.
- Advanced Technical skills: Safely lead rides of single-track mountain bike trails under control in uphill and downhill situations under various terrain and trail conditions.
- Personal health: Monitor health, cardio, nutrition, sleep, exercise, and hydration to achieve realistic goals when mountain biking.
- Trail preparation: Manage food (food preparation, storage in transportation, leave no trace principles, hygiene) and water (transportation, treatment, sources).
- Personal growth: Demonstrate belonging to a community through individual and team leadership, cooperating with others, and using effective communication. Ride safely, within limits, while refining and increasing mountain biking skills.
- Mental aspects: demonstrate motivation to live a healthy lifestyle involving exercise, overcoming nervousness, working with a team, being accountable, and exhibiting leadership on the trail.
- Social and cultural responsibility: demonstrate understanding of cultural and place-based sensitivities: recognition and use of First Peoples territories, use of public land, private land, parks, and land stewardship.

  Leadership skills:
- Communication – could include being able to clearly communicate with their group and others, in a variety of settings and situations.
- Thinking – could include enhancing quality of program for participants, managing group dynamics, and problem solving.
- Personal and Social Responsibility – could include ensuring safety of self and others while appreciating, respecting, and preserving the natural environment.

Content – Elaborations

Skill development:

- Controlling your speed (know your stopping distances, brake with intention, braking over bumps and rough terrain).
- Making power (attention to posture, seated pedalling, standing pedaling, pedaling drills, sprinting, power tips).
- Cornering (basics of turns, bike geometry in turns, changing direction, ride smart lines through corners, foot down and foot level, inside foot in and out, rail berms, flat turns, off camber turns, switchbacks, loose cornering, and drift.

Content – Elaborations

- Riding downhill terrain (coasting hills, rolling berms or ledges, drops, wheelie drops, obstacles, TTFs).
- Riding uphill terrain (common climbing errors, modeling easy climbing, pedal geometry, body positioning).
- Controlling bike in the air (bumps, drops, jumps – various techniques for body and bike geometry for safe control).
- Avoiding injuries (chronic injuries, acute injuries, staying out of trouble, common mistakes and fixes, injury prevention, ride for a lifetime).
- Riding under varying conditions (roughness, slippery or wet, soft deep or loose dirt, avoiding ruts).
- Trail flow (see better lines, picking lines, dialing in your speed, ride with reserve, committing, matching line speed to your skills, state of flow.

Health:

- Benefits of mountain biking activities.
- Nutrition, diet, lifelong sport.

Preparation for mountain biking activities:

- Advanced bike maintenance (cleaning, chain repair, tire repair, derailer alignment, suspension adjustments and maintenance, lubrication, bleeding brakes, servicing dropper posts, replacing various parts.

Outdoor awareness:

- First Peoples traditional practices and ecological knowledge related to activities in the local environment.
- The role of environmental awareness and stewardship and outdoor recreation and conservation
- Strategies for adapting and responding to changing conditions and emergencies.
- Bear awareness.

Communication and emergency situations:

- Management of group dynamics and conflict in an outdoor environment.

Recommended Instructional Components:

- Direct instruction
- Demonstrations
- Modeling
- Simulations
- Student in role
- Peer teaching
- Video analysis
- Experiential learning

Recommended Assessment Components: Ensure alignment with the principles of quality assessment

- Journal entries and logs.
- Student participation in the setting of criteria and the design of inquiries and self and peer assessments
- Monthly self assessments using technology- Strava regulatory APP for monitoring health and goals while mountain biking)
- Mountain Biking Class Learning Update reflection and goal setting
- Peer Performance Assessment
- Assessment on technical and riding skills by teacher (ongoing)
- Assessment on bike maintenance knowledge and skills by teacher (ongoing)

Learning Resources:

Zinn & the Art of Mountain Bike Maintenance: The World's Best-Selling Guide to Mountain Bik Repair

Publisher: VeloPress; 6th edition (February 7, 2018)

ISBN-10 1937715477

ISBN-13 978-1937715472

Mastering mountain bike skills 3rd edition

Publisher: Human Kinetics; 3rd edition (July 24, 2017)

ISBN 10: 1492544493

ISBN 13: 978-1492544494

International Mountain Biking Association https://www.imba.com/

Trail rating system: https://www.imba.com/resource/trail-difficulty-rating-system

https://www.crd.bc.ca/parks-recreation-culture/parks-trails/crd-regional-parks/park-usage-rules/trail-ratings

Additional Information:

The course is a Cross Country and Enduro mountain biking course. Therefore, the Mountain Biking 12 class will only be riding single black, blue or green runs as outlined by the international mountain biking association which is in alignment with other school mountain biking programs. There will be uphill and

downhill riding involved in the Mountain Biking 12 course on single track dirt/grass/gravel/ tree roots/boardwalks and rocky terrain and drops of no more than one meter. It aligns with other school mountain bike programs and adheres to safety standards.

There is a stigma that all mountain biking is dangerous. Mountain biking is not all about careening down hills and flying off jumps. The average speed attained on a mountain bike ride rarely exceeds 15 kilometers per hour. Cross country mountain biking is a sport that gets young people into the woods and away from the dangers of automobile traffic associated with Road cycling. There are risks associated with cross country and enduro mountain biking, but with proper skills instruction, and sound risk management practices, many of those risks can be proactively managed and mitigated in a cross country and enduro mountain biking program. The risks associated with cross country and enduro mountain biking are no worse than the risks of other high school sports such as hockey, skiing/snowboarding, and rugby with common injuries very similar to injuries associated with cross country running.

Appendix A: trail rating system

IMBA is the international mountain biking association that was formed in British Columbia and is now the internationally recognized authority on mountain biking policies including the mountain bike trail rating system.

IMBA Trail Difficulty Rating System

	EASIEST WHITE CIRCLE	EASY GREEN CIRCLE	MORE DIFFICULT BLUE SQUARE	VERY DIFFICULT BLACK DIAMOND	EXTREMELY DIFFICULT DBL. BLACK DIAMOND
TRAIL WIDTH	72" (1,800 mm) or more	36" (900 mm) or more	24" (600 mm) or more	12" (300 mm) or more	6" (150 mm) or more
TREAD SURFACE	Hardened or surfaced	Firm and stable	Mostly stable with some variability	Widely variable	Widely variable and unpredictable
AVERAGE TRAIL GRADE	Less than 5%	5% or less	10% or less	15% or less	20% or more
MAXIMUM TRAIL GRADE	Max 10%	Max 15%	Max 15% or greater	Max 15% or greater	Max 15% or greater
NATURAL OBSTACLES AND TECHNICAL TRAIL FEATURES (TTF)	None	Unavoidable obstacles 2" (50 mm) tall or less Avoidable obstacles may be present Unavoidable bridges 36" (900 mm) or wider	Unavoidable obstacles 8" (200 mm) tall or less Avoidable obstacles may be present Unavoidable bridges 24" (600 mm) or wider TTF's 24" (600 mm) high or less, width of deck is greater than 1/2 the height	Unavoidable obstacles 15" (380 mm) tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" (600 mm) or wider TTF's 48" (1,200 mm) high or less, width of deck is less than 1/2 the height Short sections may exceed criteria	Unavoidable obstacles 15" (380 mm) tall or less Avoidable obstacles may be present May include loose rocks Unavoidable bridges 24" (600 mm) or narrower TTF's 48" (1,200 mm) high or greater, width of deck is unpredictable Many sections may exceed criteria