

Course Name: Mountain Biking Community Development Grade:10

BIG IDEAS

Community and Planning Collaboration with user groups and identifying mutual needs provides quality development of sustainable resources	Safety and First Aid Understanding safe practices and risk management is greatly complimented by First Aid training	Mountain Biking Skills Foundational skill development increases ability and enjoyment of sport, fitness and opportunity	Leadership Development of leadership skills is ongoing	Mechanics and Repair Increasing mechanical knowledge and ability promotes a deeper understanding and accessibility
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Learning Standards

Curricular Competencies	Content
<i>Students are expected to do the following:</i> Community and Sustainable Planning: • Identify possible areas of trail development/maintenance/repair in collaboration with local interest groups, area stakeholders and regional and provincial authorities • Explore the area in question and hang flagging outlining the proposed trail/repair/maintenance project • Identify key elements requiring funding • Identify the individual elements and budgets needed for the specific proposal and grant request • Create and write the Grant Proposal/Request • Outline the multiple user groups that will benefit from the proposed improvements • Outline and itemize costs of implementation and scheduled maintenance/repair needed to ensure sustainable enjoyment and use of proposed improvements • Identify user groups and develop maintenance plans with all user groups and their respective interests • Seek sustainable development opportunities that increase access for multiple user groups	<i>Students are expected to know the following:</i> Community and Sustainable Planning: • Processes of consultation with community stakeholders • Environmentally sustainable trail building practices • Material and equipment costs and related permitting fees for trail design and construction • Community and stakeholder consultation processes • Scheduling and implementation of plans

- Promote healthy activities that increase access and reduce impact on the environment

Students are expected to do the following:

Safety, First Aid and Remote Evacuation:

- Demonstrate knowledge of Standard First Aid protocols and wilderness first-aid evacuation
- Construct a personal first-aid kit
- Identify the value of items in their personal first-aid kit
- Demonstrate an awareness of outdoor safety situations
- Use to technology to help mitigate risks and to act in emergency situations

Students are expected to do the following:

Environmental Sustainability and Trail Maintenance:

- Identify areas suitable for development and maintenance
- Understand sustainable trail development
- Manage and minimize erosion and environmental impact
- Manage drainage
- Understand soil compaction and the significance of using appropriate construction techniques for the area of development
- Design and build quality and lasting features including but not limited to: bench cut, berms, and bridges

Students are expected to do the following:

Students are expected to know the following:

Safety, First Aid and Remote Evacuation:

- Standard First Aid
- Remote evacuation procedures and protocols
- The unique nature of sport in a wilderness setting
- Risk management best practices
- Mountain biking responsibility code

Students are expected to know the following:

Environmental Sustainability and Trail Maintenance:

- The various interest and user groups implicated in a given riding area
- Principles of sustainable trail building techniques such as: drainage and erosion control and protection of sensitive habitats
- Corridor clearance and sight line considerations for safe best practices
- Appropriate technological applications to aid in sustainability and management such as recording GPS waypoints for mapping

Students are expected to know the following:

Riding Skill Development:

Riding Skill Development:

- Develop proper body position over a variety of terrain
- Understand balance and be able to shift balance points to increase traction and stability
- Understand fundamentals and advanced cornering techniques
- Increase pedaling efficiency and power
- Trail scanning techniques
- Proper use of shifting and gearing mechanisms
- Assess and mitigate risk through a collection of skills to increase ability and enjoyment of riding

Students are expected to do the following:

Physical Conditioning:

- Develop a basic understanding of human anatomy and physiology
- Participate in exercises that build endurance, strength, balance, and flexibility pertaining to the sport of mountain biking
- Build conditioning to enhance performance and reduce/rehabilitate injury
- Tracking fitness activity regularly using electronic and or paper based journals

Students are expected to do the following:

Basic Bicycle Mechanics and Repairs:

- Body position and balance
- Operation of controls
- Terrain awareness
- Direction control
- Pressure control
- Timing and coordination

Students are expected to know the following:

Physical Conditioning:

- The nature of the cardiovascular system
- Skeletal and muscular anatomy
- Principles of endurance training, strength training and flexibility
- Aspects of balance related to mountain biking
- F.I.T.T. principle
- SAID principle

Students are expected to know the following:

Basic Bicycle Mechanics and Repair:

- Identify tire and tubes that need repairing
- Determine the cause(s) of the flat or damage
- Repair tubes/ tires using the proper tools
- Describe the steps required to true a wheel and the equipment/tools required
- Name the components of the different types of brake systems
- Identify a bike with an unsafe braking system
- Describe the proper steps of the brake adjustment process
- Identify the parts of a headset
- Adjust/maintain and repair a headset
- Identify the parts of front and rear derailleurs
- Make adjustments to front and rear derailleurs to ensure smooth and accurate shifting

Students are expected to do the following:

Leadership Skills:

- Prepare an outline detailing the proposed ride
- Assess risks and possible areas of concern during proposed rides
- Prepare expectations of conduct for the proposed ride
- Outline possible first aid interventions and supplies needed for the student led ride
- School and community outreach
- Plan, prepare and lead an ability based group mountain bike ride

- The dynamic and static components of a mountain bike including:
 - Rims, hubs, spokes
 - Frame, fork and rear shock
 - Braking components
 - Cockpit control components
 - Adjustable height seat post
 - Drivetrain components
- How to use the basic tools in their trailside tool kit
- How to use an advanced full tool kit for extensive 'off the trail' repairs and maintenance

Students are expected to know the following:

Leadership skills:

- Pre-trip planning and preparation for leading a group ride
- How to plan and lead an appropriate, ability-based group ride
- How to encourage others in the community to participate in mountain biking safely through school and community outreach

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**Adapted from Jake Middleditch L.V. Rogers Secondary School, Nelson, B.C.*