4-H Ontario

www.4-hontario.ca

4-H ONTARIO PROJECT

Wheels In Motion
Mountain Biking

REFERENCE MANUAL

The 4-H Pledge

I pledge my Head to clearer thinking,
my Heart to greater loyalty,
my Hands to larger service and
my Health to better living
for my club, my community and my country.

The 4-H Motto

Learn To Do By Doing

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INTRODUCTION

Welcome to 4-H Ontario's 'Wheels in Motion!' Mountain Biking Project!

The excitement of riding the trails combined with the freedom of going long distances and seeing nature up close has made Mountain Biking a popular sport world-wide. It's a recreational sport that all members of the family can enjoy as well as competitive racers. Having total confidence in your ability is a must for this sport. Learn how to ride safely, be prepared and most of all, have fun, as you explore the world of Mountain Biking!

Objectives

1. To learn what equipment is essential to be able to go Mountain Biking.
2. To understand why it's important to have proper safety equipment.
3. To learn how to properly fit a helmet.
4. To learn the names of the parts of a Mountain Bike.
5. To learn basic Mountain Biking techniques.
6. To learn how to choose a proper tire and how to repair tires.
7. To learn why hydration is essential when Mountain Biking.
8. To understand proper nutrition and why it's important for high exertion.
9. To gain an appreciation for the benefits of Mountain Biking.

How to Use This Manual

4-H Ontario's Wheels In Motion Mountain Biking project is made up of 2 parts:

1. The Reference Book:

The reference book is laid out into 6 meetings:

- Meeting 1 – Mountain Biking Basics
- Meeting 2 – Mountain Biking 101
- Meeting 3 – The Wheels on the Bike go Round and Round
- Meeting 4 – The Up's & Down's of Riding
- Meeting 5 – Hitting The Trails!
- Meeting 6 – Drink up! The Importance of Water

Each meeting has been broken down into an Introduction with Sample Meeting agendas, References and Resources, Topic Information and Activities.

Sample Meeting Agendas: are at the beginning of each meeting. The agendas give suggestions for topic information, activities and judging and/or communications activities along with suggested times for each section. These are only suggestions – you will know your group best and will know the skill and attention level of your members. There is more topic information and activities than what can be completed in a two hour meeting. Be creative!

Activities: should be used in combination with the discussion of topic information to teach members in a hands-on, interactive learning environment.

2. The Record Book

This booklet is designed to make it easier for members to record information throughout the club. Members are to record their expectations and goals for the project in addition to contact information, meeting dates and roll calls. Print or photocopy pages from the Reference Book that you think will benefit the members either as a resource or an activity. Answers for the Activity Pages can be found at the back of the Record Book.
The Record Book should be given to each member at the beginning of the first meeting. Ask members to keep it in a binder or duotang so they can add to it easily.
Go through the Record Book with the members and explain the charts and forms. Encourage them to use their Record Books at every meeting and record as much information as possible. As an added incentive, a prize could be given at the end of the project for the best Record Book.

Planning a Meeting

Plan your meetings well. Review all the information well in advance so you are prepared and ready to hit the trails!

Before Each Meeting

- Read the topic information and activities and photocopy any relevant resources for the members' Record Books.
- Be familiar with the topic information for each meeting. Think of imaginative ways to present the information to the members. Do not rely on just reading the information out loud. Review available resources, plan the meetings and choose activities and themes that complement the ages and interests of your members. The Record Book contains extra activities that can be used if you need to fill in time or if one of the suggested meeting activities does not suit your group of members.
- Gather any equipment and/or resources that will be needed to complete the meeting.
- Each 4-H project must be held over a period of at least 4 separate meetings, totaling a

a minimum of 12 hours. Typically, a 4-H club consists of 6 meetings that are approximately 120 minutes (2 hours) in length. Before each meeting, create a timeline to ensure that you are providing an adequate amount of instructional time for club completion.

Included on the following page is a Leader's Planning Chart to help with the planning of meetings. In addition to the chart, keep track of what went well and what should be changed next time. That way, each time this project is run, the content of the meetings can be different!

When planning each meeting, a typical 4-H meeting agenda should include the following:
- Welcome & Call to Order
- 4-H Pledge
- Roll Call
- Parliamentary Procedure:
    - Secretary's Report
    - Treasurer's Report (if any)
    - Press Report
    - New Business: local and provincial 4-H activities/opportunities, upcoming club activities
- Meeting content, activities and recipes
- Clean-up
- Social Recreation and/or refreshments
- Adjournment

Judging and Communications

Each meeting must include either a judging or public speaking activity.
- Judging gives the members an opportunity to use judging techniques as part of the learning process. Through judging, members learn to evaluate, make decisions and communicate with others. They also develop critical thinking skills, confidence and self-esteem. Many examples are used in this reference book but use your imagination! As long as members are setting criteria and critically thinking about where items fit within that set of criteria, they are learning the basic skills of judging!

- A communications activity has been provided for each meeting but can be included in the Roll Call or social recreation time. These activities do not need to involve the topic of Mountain Biking as the outcome is more about understanding the concepts of effective communication.

Leader's Planning Chart

Mtg.#	Date/Place	Topics Covered	Activities	Materials Needed

As a club volunteer your responsibilities are to:

- Complete the volunteer screening process and to attend a volunteer training session.
- Notify the local Association of the club, arrange a meeting schedule and participate in club meetings, activities and the Achievement program.
- Review the project material in the Reference and Record books to familiarize yourself with the information and adapt it to fit your group. Be well organized and teach the material based on your group's age, interest and experience level.
- Organize the club so members gain parliamentary procedure, judging and communication skills.
- Have membership lists completed and submitted along with fee collected (if applicable) by the end of the second meeting.
- Have members fill out a Participant Agreement Form and identify any health concerns. Ensure that all members, leaders and parent helpers know the appropriate actions during any emergency. Check with members for any food allergies or dietary restrictions and plan snacks accordingly.

As a club member your responsibilities are to:

- Participate in at least 2/3 of his/her own club meeting time. Clubs must have a minimum of 12 hours of meeting time.
- Complete the project requirement to the satisfaction of the club leaders.
- Take part in the project Achievement Program.
- Fill in and complete the Record Book.

I pledge my Head to clearer thinking,
my Heart to greater loyalty,
my Hands to larger service and
my Health to better living
for my club, my community and my country.

4-H Ontario

Additional References and Resources

Bicycle Helmet Safety Institute http://www.bhsi.org/

Bicycling – Projects for Students by Students http://library.thinkquest.org/11569/html home/html_mbiking/parts.html

Canadian Cycling Association www.canadian-cycling.com

Discovery Education http://puzzlemaker.discoveryeducation.com

Health Canada www.healthcanada.gc.ca

International Mountain Biking Association www.imba.com

International Mountain Biking Association of Canada www.imba.com/canada

Kid's Health (Nemour's) http://kidshealth.org/kid/nutrition/

Ministry of Transportation www.mto.gov.on.ca

Mountain Biking Tips www.mtbtips.com

Mountain Bike Tourism Association www.mbta.ca

Mountain Equipment Co-op www.mec.ca

Ontario Cycling Association www.ontariocycling.org

Ontario Tourism http://ontariooutdoor.com

Ontario Trails Council www.ontariotrails.on.ca

Parks Canada www.pc.gc.ca

Upham Woods 4-H Outdoor Learning Centre www.uwex.edu/ces/4h/uphamwoods

MEETING 1 - Mountain Biking Basics

Objectives:

- Learn the election procedure for establishing an executive.
- Learn which Mountain Biking equipment is essential to be able to participate safely in this sport.
- Learn how to properly fit a helmet and why it's important.

Roll Calls

- Have you ever rode a Mountain Bike before? If so, where?
- What is your reason for wanting to learn more about Mountain Biking?
- Do you own a Mountain Bike? Why or why not?

Sample Meeting Agenda – 2 hrs. 15 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Public Speaking/Judging Activity	Activity #1 – Over The Mountain (found at the end of Meeting #1)	15 min
Parliamentary Procedure	Elect executive, hand out Record Books and discuss club requirement. Fill out club and member information in Record Books, and have each member fill out their "Member Expectations and Goals" page.	30 min
Topic Information Discussion	Discuss Getting Started with Mountain Biking	30 min
Activity Related to Topic	Activity #2 – Melon Drop (found at the end of Meeting #1)	15 min
Topic Information Discussion	Discuss the importance of helmets for Mountain Biking	20 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

Electing Your Executive

Elections can be chaired by a youth leader, senior member or club leader. The person chairing the elections is not eligible for any positions.

Procedure:

1. All positions are declared vacant by the chairperson, who indicates this by saying "I'd like to declare all positions vacant."
2. The group decides on the method of voting (i.e. show of hands, ballot or standing).
3. The chairperson accepts nomination from members for each position being filled. Nominations do not require a seconder. Nominations are closed by motion or declaration by the chairperson.
4. Each member nominated is asked if he/she will stand for the position. Names of members who decline are crossed off.
5. Voting takes place by selected method and majority rules (i.e. member with most votes).
6. Announce the name of the successful member. Offer congratulations and thank all others that ran for the position.
7. If ballots are used, a motion to destroy the ballots is required and voted on.

Steps in Making a Motion

The motion is a very important key to having good meetings. Motions are a way of introducing topics for discussion and allowing each member to speak and vote. Any member can make a motion.

Steps in Making a Motion:

1. Address the chairperson (i.e. raise your hand).
2. Wait for the chairperson to acknowledge you.
3. Make the motion: "I move that…"
4. Another person seconds the motion: "I second the motion."
5. Chairperson states the motion.
6. Chairperson calls for discussion of the motion.
7. Chairperson restates the motion.
8. Chairperson calls the vote: "All in favour? Opposed?"
9. Chairperson announces the result of the vote: "Motion carried" or "Motion defeated."

Topic Information

Getting Started with Mountain Biking!

Mountain Biking can be done almost anywhere. It is an individual sport which requires endurance, strength and bike-handling skills. It is therefore essential to know the basic information to get started with Mountain Biking.

• Familiarize yourself with what Mountain Biking is all about. There are so many informative sources you can refer to including books and magazines as well as the Internet. Getting the gist of the sport is a big step.

• Although Mountain Biking is by far one of the safer sports, it is still important to know how to prevent injuries. Also, understanding that Mountain Biking can be dangerous is essential.

• Get familiar with the different variations of Mountain Biking and identify what appeals to you most.

• Be acquainted with the necessary gear and equipment. Know their features and uses.

• There are certain rules and etiquette to follow when it comes to Mountain Biking. These guidelines preserve trails and reduce the impact of the sport to the environment. Be aware of them.

• Take up formal lessons on it. By doing this, you will acquire knowledge from someone who really knows the sport.

• Know and understand at least the basic principles and aspects of the sport.

• Learn the different Mountain Biking techniques and other skills such as Mounting/ Dismounting a Mountain Bike.

• Practice what you already know and get familiar with the different terrains.

• Get in touch with experienced mountain bikers. Learn about how they take care of their bikes and the way they ride down and up the mountain. They can also give some important pointers or advice based on their previous mountain biking trips.

The items above can help you get through the initial difficulties you might encounter when you're just starting with Mountain Biking. But do not stop there. Let your creativity and imagination break the perceived limitations of what one can do with his or her bike. There's a whole world of Mountain Biking out there that's waiting for you!

Fun Fact
Mountain biking, or more specifically, cross country, became an Olympic sport in 1996 in Atlanta, Georgia, USA.

Essential Mountain Biking Equipment

WEAR A HELMET! Bike helmets can reduce the risk of brain injury by 85%.
• Mountain bike helmets are made from polystyrene, which crushes easily on impact and absorbs energy, thereby protecting the skull.
• The price of a helmet increases with the number of air flow vents, which improves the air circulation and helps keep your head cool.
• Visors protect the rider from sun glare or rain on the face.
• Look for adjustable straps with an anti-pinch buckle on the neck strap.

WEAR GLOVES! Help protect the skin on your hands if you fall.
• Padding on gloves helps to cushion the hands when gripping the handlebars on long rides.
• Full-fingered gloves are best for winter biking, to protect from the cold. Half-fingered gloves can be used in warmer weather.
• Rubber padding on the palm and fingers of gloves help to grip the handlebars, especially when it is wet.
• Gloves allow you to wipe glass bits or debris from the tire during a tube repair.

DRINK WATER! Water helps cool your body temperature when biking.
• Drink at least a litre of water in the hours before your ride.
• Bring two water bottles or a backpack hydration system with you on every ride.
• Drink at least one litre of water for each hour you ride.
• Drink every time you stop to rest or reach an easy section of trail.
• Continue to drink water and eat watery foods (watermelon, oranges) after your ride.

WEAR GLASSES! Protect your eyes from wind , bugs, twigs, dirt and the sun.
• Features to look for when buying Mountain Biking glasses include:
• Scratch Resistant
• UVA and UVB protection
• Wrap-around design
• Frames fit comfortably under bike helmet
• Non-breakable lenses, so they don't shatter if you fall
• Len Colours:
    - Black/Grey - too dark for mountain biking in the shade
    - Brown - good for sunny days
    - Amber/Rose/Orange - good for cloudy, hazy days
    - Yellow - good for early morning fog
    - Clear - good for night riding

Properly fitting your Helmet

Correct:

Helmet sits level on the head.
Straps are buckled snugly
under the chin.

Incorrect:

Helmet is placed too far back..
Forehead is exposed.
Straps are too loose.

Why should you wear a bike helmet?

• Bike helmets can reduce the risk of brain injury by 85%
• Bicycle-Related Head Injuries Cause:
- two-thirds of bicycle-related deaths each year
- one-third of non-fatal bicycle injuries each year
- more than 600,000 emergency department visits each year

Choosing the right helmet:

• Skateboard or in-line skating helmets do not offer the same protection for common bicycle falls as a bike helmet.
• Select a bike helmet that meets CSA, CPSC, Snell or ASTM safety standards.
• Helmets with a front peak are designed to hit the ground first, to protect your face.
• Helmets are only effective if worn properly, so make sure you wear a helmet that fits both correctly and comfortably.

Fitting properly is the key!

• Place the helmet on your head, with the front of the helmet 1 or 2 fingers width above your eyebrows.
• The helmet should fit snuggly but not be too tight. Many helmets include internal pads that can be added/removed and some helmets have a dial at the back for adjusting the tightness.
• Adjust the side straps to form a “Y” around your ears, with the buckles sitting just below your ears.
• Buckle the chinstrap and tighten it until you can fit only one finger between the strap and your chin.
• Do the “Shake Test”. Shake your head and make sure your helmet stays in place. If it moves, you need to re-fit and re-adjust.

Fun Fact

Helmet use has been estimated to reduce the risk of head injury by 85 percent.
Source: Bicycle Helmet Safety Institute

Is it safe to use a second-hand helmet?

Wearing a second-hand helmet is better than not wearing a helmet at all but, for safety reasons, it is not a good idea to buy a helmet second-hand. You may not know if the helmet has been in a crash and you may not know how old the helmet is.

Bike helmets are designed to protect your head against only one crash. After a crash in which the cyclist has hit his or her head, a helmet should be replaced, even if it doesn't look damaged. You should not rely on a helmet that has been in a crash to protect you from another head injury. Helmets should also be replaced if they are more than 5 years old. The plastics dry out and may become brittle with age. Also, older helmets may not meet current safety standards or they may have missing or broken parts.

If may be safe to use a second-hand helmet if you are getting the helmet from someone you know. It may also be safe to pass down a helmet from one sibling to the next. But, be sure to ask if the helmet has been in a crash or is more than 5 years old.

If you have any doubt about the history of a second hand helmet, buy a new one instead.

BEFORE THE NEXT MEETING

Try one of these activities at home.

1. Using a blank 8 ½" X 11" piece of paper, make a collage of Mountain Bike pictures using pictures from magazines or the Internet. Put the collage in your Record Book.

OR

Interview someone who goes Mountain Biking. Find out what kind and type of Mountain Bike they have, how old the Mountain Bike is, how long they have been Mountain Biking and if their favourite spots to Mountain Bike are close by. Record your findings below in your Record Book.

MEETING 1 DIGGING DEEPER

For Senior Members

A Buyer's Guide to Bicycle Helmets

- You always need a helmet wherever you ride. You can expect to crash in your next 7200 km of riding, or maybe much sooner than that!
- Even a low-speed fall on a bicycle trail can cause brain damage.
- Make sure your helmet fits to get all the protection you are paying for. A good fit means level on your head, touching all around, comfortably snug but not tight. The helmet should not move more than about an inch in any direction, and must not pull off no matter how hard you try.
- Pick white or a bright color for visibility to be sure that motorists and other cyclists can see you.
- Common sense tells you to avoid a helmet with snag points sticking out, a squared-off shell, inadequate vents, excessive vents, an extreme "aero" shape, dark colors, thin straps, complicated adjustments or a rigid visor that could snag in a fall.

Do You Need One? Yes!!

Medical research shows that bike helmets can prevent 48% to 85% of cyclists' head injuries. In Ontario, if you are under the age of 18 you are required by law to wear an approved bicycle helmet when travelling on any public road. Cyclists over 18 are encouraged to wear helmets for their own safety, but are not required to by law.

How Does a Helmet Work?

A helmet reduces the peak energy of a sharp impact. This requires a layer of stiff foam to cushion the blow. Most bicycle helmets do this with crushable expanded polystyrene (EPS), the white picnic cooler foam. EPS works well, but when crushed it does not recover. A similar foam called expanded polypropylene (EPP) does recover, but is much less common. Another foam called EPU (expanded polyurethane) has a uniform cell structure and crushes without rebound, but is heavier than EPS and its manufacturing process is not environmentally friendly. Other foams and deformable plastic systems appearing that may offer promise. The spongy foam pads inside a helmet are for comfort and fit, not for impact protection.

The helmet must stay on your head even when you hit more than once--usually a car first, and then the road, or perhaps several trees on a mountainside. So it needs a strong strap and buckle. The helmet should sit level on your head and cover as much as possible. Above all, with the strap fastened you should not be able to get the helmet off your head by any combination of pulling or twisting. If it comes off or slips enough to leave large areas of your head unprotected, adjust the straps again or try another helmet. Keep the strap comfortably snug when riding. The straps hold your helmet on, not the rear stabilizer.

What Type do I Need?

Most bike helmets are made of EPS foam with a thin plastic shell. The shell helps the helmet skid easily on rough pavement to avoid jerking your neck. The shell also holds the foam together after the first impact. Some excellent helmets are made by molding foam in the shell rather than adding the shell later.
Beware of gimmicks. You want a smoothly rounded outer shell, with no sharp ribs or snag points. Excessive vents mean less foam contacting your head, and that could concentrate force on one point. “Aero” helmets are not noticeably faster, and in a crash the “tail” could snag or knock the helmet aside. Skinny straps are less comfortable. Dark helmets are hard for motorists to see. Rigid visors can snag or shatter in a fall. Helmet standards do not address these problems--it’s up to you!
You need to choose a helmet that fits comfortably and meets safety standards. Check the inside of the helmet for stickers from one or more of the following organizations:

- Canadian Standard Association: CAN/CSA D113.2-M89
- Snell Memorial Foundation: Snell B90, Snell B90S, or Snell N94
- American National Standard Institute: ANSI Z90.4-1984
- American Society For Testing and Materials: ASTMF1447-94
- British Standards Institute: BS6863:1989
- Standards Association of Australia: AS2063.2-1990

Comfort Requirements

Coolness, ventilation, fit and sweat control are the most critical comfort needs. Air flow over the head determines coolness, and larger front vents provide better air flow. Most current helmets have adequate cooling for most riders. Sweat control can require a brow pad or separate sweatband. A snug fit with no pressure points ensures comfort and correct position on the head when you crash. Weight is not an issue with today’s bicycle helmets.

Special Problems

Some head shapes require more adjusting with fitting pads and straps. Extra small heads may need thick fitting pads. Extra large heads require an XXL helmet. Ponytail ports can improve fit for those with long hair. Bald riders may want to avoid helmets with big top vents to prevent funny tan lines.

When Must I Replace a Helmet?

Replace any helmet if you crash. The impact of a crash crushes some of the foam, although the damage may not be visible. Helmets work so well that you need to examine them for marks or dents to know if you hit. Most manufacturers recommend replacement after five years. Replace the buckle if it cracks or a piece breaks off.

Warning! No Helmets on Playgrounds!

Warning: Children must remove helmets before climbing on playground equipment or trees, where a helmet can snag and choke them.

ACTIVITIES

Activity #1 - Over The Mountain

This ice breaker is especially useful when you have a rather large group. It allows a large number of participants to get to know each other in a relatively short amount of time. It has the added bonus of involving competition which often inspires even the least excited member to participate.

The 4-H Leader sets up the room so that there are chairs in a circle. There should be enough chairs for every member of the group except the Leader. As the members fill the chairs, the trainer explains that the activity is called Over The Mountain. The person in the middle of the circle will call out “Over The Mountain if...” followed by a characteristic that applies to the caller. For example, a 4-H Member might call out, “Over the mountain if you have taken more than 10 4-H Projects.” If the characteristic applies to the seated members, they must move and find a different seat. The new seat must be at least 2 places away from the old seat. The caller should also try to find a seat. Whoever is left without a seat becomes the new caller.

After the group activity, the Leader can ask the Members who they learned the most about, what they found the most unexpected, and who they would like to expand upon a response that was given.

Note: If there is someone in the group with a physical challenge, then this activity can be modified to have the Leader run the exercise. Have the Leader call out the various characteristics by saying ‘Over The Mountain if…’ and if the characteristic applies, the 4-H Member must sit down (or have them already sitting and have them put their hand down when their characteristic is called). The Leader keeps going until only one 4-H Member is left standing. After a round or two, a 4-H Member could continue the exercise by calling out ‘Over The Mountain if…’

Activity #2 - Melon Drop

To demonstrate how wearing a helmet while bicycling protects your head, try the Melon Drop Activity with 4-H Members.
Buy two honeydew melons, roughly the size of a head. Have 4-H Members draw a face on each melon. Discuss with Members that the human head is a fragile as the melons. Secure a proper bike helmet on one of the melons. Drop each melon from waist height, on the top of its head. The melon without a helmet will smash. The one with a helmet will be protected. Note, you should no longer use the helmet that’s been dropped as it may be damaged.

MEETING 2 - Mountain Biking 101

Objectives:

- Learn the names of the various parts of a Mountain Bike.
- Learn how to properly fit a bike.
- Learn basic Mountain Biking techniques and how to mount and dismount a Mountain bike properly.

Roll Calls

- Name one part on a Mountain Bike.
- Name one thing that is important to have your Mountain Bike fit you properly.
- Name one technique that you need to know for Mountain Biking.

Sample Meeting Agenda – 2 hrs. 5 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Parliamentary Procedure	Minutes & Business	10 min
Topic Information Discussion	Learn the parts of a bike and how to properly fit a bike	30 min
Activity Related to Topic	Activity #3 - Proper Fit of a Bicycle Task Sheet (worksheet found in the Record Book)	15 min
Topic Information Discussion	Discuss Basic Mountain Biking Techniques and the proper way to mount and dismount a bike.	25 min
Public Speaking/Judging Activity	Activity #4 – Bicycle Name Game (instructions can be found at the end of Meeting #2)	20 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

Topic Information

Getting to know your Mountain Bike

TOP TUBE:
Positioned low so it is less dangerous if you fall.

CHAINWHEEL:
Converts the force on the pedal into motion used to drive the chain, which in turn drives the rear wheel. In a mountain bike, there are normally three.

GRIP/HANDLEBARS/STEM:
The stem clamps the handlebars in the center and attaches them to the frame. Handlebars are normally a flat design, with a slight curve.

SEAT/SEAT POST:
The seat post attaches the seat to the frame, and is used to adjust the height of the seat by sliding it in and out of the frame.

SHOCKS:
Absorbs vibration during riding. Important when jumping over obstacles.

FRAME:
Smaller than on road racing bikes. This makes the bike stronger and easier to control. The vertical tubes are also less upright for added comfort and smoother steering.

BEARING:
Contains small steel balls which enable the wheel to move smoothly. Also situated in the bottom bracket, pedals and handle bars.

FREEWHEEL/GEAR CABLE:
Freewheel contains five, six, or seven sprockets. Gear cable connects the hear lever to the chainwheel or freewheel gear systems. Covered in a plastic tube called the housing.

NIPPLE/SPOKE:
The nipples are tiny tubes at the beginning of the rim which hold the spokes.

RIM:
Holds the tire and inner tube in place. Made of aluminum for light weight.

CRANK:
The arms that mount the pedals, which transfer pedaling power to the chain.

PEDAL:
You push the pedals with your feet, powering the bike.

WHEEL:
Normally approximately 66cm (26in.) in diameter.

SPROCKET/DERAILER GEAR SYSTEM:
The rear derailleur is the mechanism at the rear wheel that shifts the chain from gear to gear. So-called because the chain is thrown from one sprocket or chainwheel to the next; in other words, de-railed.

Chainwheel: Converts the force on the pedal into motion used to drive the chain which in turn drives the rear wheel. In a mountain bike, there are normally three.

Seat/Seat Post: The seat post attaches the seat to the frame and is used to adjust the height of the seat by sliding it in and out of the frame.

Frame: Smaller than road racing bikes. This makes the bike stronger and easier to control. The vertical tubes are also less upright for added comfort and smoother steering.

Freewheel/Gear Cable: Free wheel contains five, six or seven sprockets. Gear cable connects the hear lever to the chair wheel or freewheeel gear systems. Covered in a plastic tube called the housing.

Sprocket/ Derailleur Gear System: The rear derailleur is the mechanism at the rear wheel that shifts the chain from gear to gear. It's called this because the chain is thrown from one sprocket or chain wheel to the next (or in other words, de-railed).

Pedal: You push the pedal with your feet powering the bike.

Crank: The arms that mount the pedals, which transfer pedaling power to the chain.

Wheel: Normally approximately 66cm (26 inches) in diameter.

Rim: Holds the tire and inner tube in place. Made of aluminum for light weight.

Nipple/Spoke: The nipples are tiny tubes at the begging of the rim with hold the spokes.

Bearing: Contains small steel balls which enable the wheel to move smoothly. Lso situated in the bottom bracket, pedals and handle bars.

Shocks: Absorbs vibration during riding. Important when jumping over obstacles.

Grip/Handle Bars/Stem: The stem clamps the handle bars in the the centre and attaches them to the frame. Hand bars are normally a flat design, with a slight curve.

Top Tube: Positioned low so it is less dangerous if you fall.

Properly fitting your Mountain Bike

One of the most important things in Mountain Biking is getting a bike that fits you properly.

Handlebar Reach:

- While on the seat, lean over and grab the grips on the handlebars.
- Your waist should be bent forward at about a 45 degree angle, and the reach should feel comfortable.
- If you are too upright you won't be able to lift up your wheel to get over obstacles.
- If you're too stretched out, you won't be able to control your bike as easily.
- For small adjustments, you can move the seat backward or forward.
- For large adjustments, you may have to change the length of the stem.

Stand-over Height: (inseam clearance or crotch clearance):

- Stand straddling the bike. Both feet should be flat on the ground.
- There should be around 3" of space between the top tube and your crotch.
- Lift the bike off the ground until it touches you. The bike's wheels should be at least 3" off the ground.
- Many mountain bikes have a sloping top tube, which gives you extra crotch clearance to | ensure that you can jump off your bike safely.

Seat (Saddle) Height:

- Make sure that the seat is level with the ground. A level seat supports your full body weight, offers optimum pedaling efficiency and makes it easier to move around on the seat when necessary.
- Sit on the seat – you should be able to touch the ground with just your toes. If your entire foot can touch the ground, then you need to raise your seat.
- Adjust the seat so that your leg is almost straight (10 degree bend at the knee) when the pedal is in the lowest position.

To Adjust the Seat Height:

- Loosen the seatpost clamp by flipping the quick release lever on the seatpost binder bolt.
- Raise or lower the seatpost in small increments until you have it positioned correctly.
- Tighten the binder bolt and make sure that the seat points straight ahead.

Fun Fact

In Canada, of all adult bicycles sold, mountain bikes are by far the most popular.

Source: Parks Canada Mountain Biking Market Profiles, 2010

Mountain Biking Basic Techniques

When starting Mountain Biking, there are some very necessary basic techniques you need to know. For some, this list may sound very obvious, but for others it can be very useful. Review these techniques before you start riding the trails.

• Always commit to a track or line. This means that you need to think a few steps ahead and set out the line that you want to ride. If you hesitate for example because you are afraid of the obstacles that are ahead of you, it quite often happens that things go wrong. Your posture might change because you are afraid and thinking about your fear instead of just mountain biking. This is especially true going downhill. If you hesitate halfway through, you will surely fall off.

• Think 2-3 moves ahead. Don't focus on a single obstacle for a long time. Always be aware of the next thing you have to do.

• Don't lock your sights on the rider in front of you. You just might end up hitting a piece of rock that the rider in front of you has just managed to avoid. Look 1-2 meters ahead of you. Don't focus on your front wheel or the rear wheel of the rider in front of you.

• Shift to a light gear when hitting an unforeseen patch of sand, water or mud. Transfer your weight more to the rear wheels by leaning back. Don't slam on the brakes. This will only cause you to lose the little bit of traction you have. Relax and just "spin" your way through. This will allow your front tires to glide through the soft terrain.

• Slide off the saddle as you ride down a steep bank or riding downhill. This will allow more time to react to unforeseen obstacles. Besides, it's easier to fall off the back of the bike than to fly over the handlebars if you lose control.

• Don't grip the handlebars too tight. This will make your upper body tense and will tire you faster. Loosen up but, not too loose.

• Don't put your thumb above the handle bar. This will make it easier for you to loose grip if you hit something unexpectedly.

• Slightly bend your elbows and loosen your shoulders, but don't hunch. This will assist in absorbing the shocks that you might experience on the trail.

Mounting / Dismounting a Mountain Bike

Besides learning the Basic Techniques of Mountain Biking, learning to properly mount and dismount your Mountain Bike is equally as important. This sounds like it should be easy but do you know how to mount and dismount your Mountain Bike efficiently, safely, quickly and in the best possible way?

Mounting your Mountain Bike

1. Check that the size of the gear is not too large or too low. In either case it means that you cannot get any hold of the surface and that, in most cases, you cannot mount your bike. If you need to change the gear, then lift up the back wheel and shift gears while you turn the pedals with one foot.
2. Hold the handlebar with both of your hands.
3. One pedal should be in the 2 o'clock position.
4. Lift your right leg over the back of the saddle and place your right foot onto the pedal. Flick the pedal round to engage the toe-clip or cleat mechanism.
5. Bring the right pedal up to the two o'clock position. Push down with your right foot to begin pedaling.
6. Push off with your left foot.
7. Bring your backside onto the saddle.
8. As the left pedal comes around to the 'top dead centre,' place your left foot on the pedal and continue pedaling.

Dismounting your Mountain Bike

1. Decrease your biking speed by beginning to brake if you want to dismount your bike. Use both brakes evenly, unless it is downhill, in which case use the front brake very lightly. If you are going uphill, you do not need to do anything as velocity will be decreased automatically if you stop pedaling.

Right-sided dismount

2. If you have come to a standstill, place your left foot on the ground.
3. Lean the bike slightly to the left side and mo ve off the saddle to place your left foot flat on the ground and then take your right foot off the pedal and bring your right leg round and over the back of the saddle so that you are standing with the bike on your right.

Left-sided dismount

4. The same as point 2 and 3 but with the other foot.

In most cases you might prefer either the left- or the right-sided dismount, but it is advised that you should also feel comfortable with the other side dismount. The reason for this is that it could come in handy if your preferred side is impractical due to barriers.

BEFORE THE NEXT MEETING

Try one of the following activities:

1. Using your own bike, adjust the seat on your bike using the instructions from Meeting #2. Make sure your bike it fitted for you by checking the handlebar reach, the stand-over height, the saddle height in addition to adjusting the seat.

OR

2. Using magazines, the Internet or by visiting a sporting goods store, check out the various types of Mountain Bikes. Compare the different types and prices of each and record your findings in your Record Book.

MEETING 2 DIGGING DEEPER

How To Scan The Trail Ahead

Learning how to scan or read the trail ahead is an essential part of learning how to Mountain Bike, especially if you want to learn how to ride on a wide range of terrain. Scanning or reading the trail is the act of looking ahead to see what's coming up next and deciding how we're going to ride around, through or over it. There are four Mountain Biking basics techniques that every Mountain Biker needs to know to develop good trail read ability:

1.Look Further Ahead Along The Trail

Looking further ahead along the trail gives you earlier notice about what's coming up next. For general trail riding, you should be looking approximately 10 to 20 metres (30 to 60 feet) ahead of you. Start practicing looking further ahead by looking a bit past your comfort zone on any section of trail. Increase your speed and reach forward with your eyes to the point where you can still figure out what's just coming in to view.

Looking a good distance ahead gives you:

- more time to think and adapt before you get to that spot
- more time to prepare for the bigger obstacles
- more time to choose which line is best

2. Judge Quickly and Dismiss Often

Train yourself to make quick decisions and to make fewer decisions. To do this, focus only on obstacles and trail features that really matter to your forward progress. With each Mountain Bike ride your will grow your knowledge bank of trails, terrain types, obstacles and the way to ride them. And as you become more experienced, you will get better at judging how to handle each of these challenges.

You will still need to glance regularly at the trail and obstacles just in front of your front wheel but as soon as you've seen enough to get you past that point effectively, immediately turn your eyes forward and up the trail again.

3. Your Wheels Will Follow Your Eyes

This is the Golden Rule of Mountain biking. Look only where you want your wheels to go. If there's a nasty rock up ahead that your derailleur needs to miss and you know there's room for you to pedal through, then focus on the gap, not the rock. If you focus on the rock too much, there's a much greater chance you'll hit it.

4. Ride Hungry

This doesn't mean don't eat before you go riding! This means to ride with a hunger for the challenges that lie ahead and face them head on with enthusiasm.

- Expect the unexpected and be ready to change your gears, your position, your speed and your mind.
- Enjoy the challenges, the changes in the trail and the way that it all puts you to the test.

Night Riding

If you feel confident enough to ride at night, this will help to make you a better trail reader. At night, you can't rely on your peripheral vision as much because there is no sun lighting the countryside. Night riding will teach you to focus only on what really matters on the trail and not the distractions to the sides. Get some friends who are also experienced at Mountain Biking, grab a set of Mountain Bikes (that are equipped with lights) and find out for yourself why Mountain Biking at night is so much fun!

ACTIVITIES

Activity #4 – Bicycle Name Game

Have all of the 4-H Members identify themselves by their name and identify with a bicycle part and why. E.g. “Hi! My name is Anne and I am the handlebar because I like to be a leader and steer things.” After all of the 4-H Members have introduced themselves, have them construct a bike out of their bodies, using the parts they claimed to be. Anne might stand with her arms straight as the handlebars and someone else might ball up at her feet, acting as the wheel. Discuss the strengths each person brings to the group.

MEETING 3 - The Wheels on the Bike Go Round and Round

Objectives:

- Learn how to choose the right tire for your Mountain Bike.
- Learn how to remove, install and repair Mountain Bike tires.
- Learn how what equipment is needed for bike tire repairs.

Roll Calls

- Which kind of tire does your Mountain Bike have? (tubed or tubeless)
- Are the tires on your Mountain Bike narrow, medium or wide width tires?
- Name something you've learned in the club so far that you didn't know at Meeting #1.

Sample Meeting Agenda – 2 hrs. 25 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Parliamentary Procedure	Minutes & Business	10 min
Topic Information Discussion	Discuss the various types of tires available for Mountain Biking.	20 min
Activity Related to Topic	Activity #5 - Judging Mountain Bikes (judging sheet can be found in the Record Book)	30 min
Topic Information Discussion	Review removing and installing bike tires and tire repair.	20 min
Public Speaking/Judging Activity	Activity #6 - Fixing a Tire! Using the steps found in the manual, repair a tire with a punctured inner tube.	40 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

Topic Information

Choosing the right Mountain Bike tires

There are a lot of mountain bike tires on the market so it can be tricky to choose the right tires for you. There are a few questions you will need to answer to determine which tires you need to purchase:

1.What size of tire do I need?

Take a look at the size of your current tires by looking at the numbers on the sidewall of the tire. The first number indicates the tire diameter in inches when measured at the bead. The second number is the effective tire width. This is measured differently by different tire manufacturers.

Any new tires you are purchasing must be the same diameter as your old tires so they will fit on the rim. However, you may be able to choose a tire with a different width than what you currently have, within limits. Check with the manufacturer of your rim for guidelines for the minimum and maximum tire widths for your rim and stick within those sizes.

2. Is my current rim and tire combination Tubed or Tubeless?

Identify which one of the two wheel systems your bike has. It usually says on the sidewall if a tire is tubeless but not always. Unfortunately, not all tubeless rims indicate that they are tubeless. Before purchasing your Mountain Bike it's important to know if your rims are tubeless or not. If in doubt, check with the manufacturer of the rim.

Tubeless tires are usually more expensive but they have some good advantages:

- The ability to ride with lower air pressure to increase traction without the risk of pinching a tube (you must use tire sealant)
- The ability to seal small tire punctures as they happen so you can keep riding

Standard tube tires also have their advantages and have a place in the Mountain Biking world:

- Compared to tubeless tires, they are considerably cheaper
- Available in a wider choice of tread designs and sizes

3. What type of riding am I going to do? What type of terrain will I be riding on?

Choosing tires and the appropriate tire pressure depends on the type of riding and terrain that you're going to be riding on. Are you going to be riding downhill, cross-country, urban or all-mountain? Is the terrain loose and rocky, sandy, hard pack, muddy or urban?

If you're going to be riding mostly on dirt and fairly smooth surfaces, you can go with a bit higher tire pressures and maybe a smoother tire. When riding on a hard path surface that is smooth, the harder your tire is, the faster it's going to roll and the less rolling resistance you will have.

If you're going to be riding on terrain that's gravel and rocky that maybe has ledge then you will want to choose a tire that has bigger knobs and probably uses less tire pressure. A tire with bigger knobs will help you to get traction. When you lower your tire pressure, more surface of the tire will be touching the ground which will also give you more traction.

With less tire pressure you're going to corner differently and be able to grip differently. Don't be afraid to experiment with different levels of tire pressure to see what pressure will work best in each situation.

4. What do I want my new tires to do most for me?

You need to determine what are the two or three most important factors to you in choosing a bike tire. Do you want to be able to roll easier and maximize your racing speed? Or do you want them to be extremely durable and able to handle the roughest and sharpest terrain? Maybe you want a cross country tire that has a high grip centre and shoulder sections for better climbing and faster cornering?

Once you've answered the above questions, you're ready to determine which tire width you need based on the following choices (keeping the minimum and maximum tire width for your particular rims in mind):

Narrow tires (1.8-2.1 inches)

- Lowest rolling resistance
- Easier acceleration and pedaling because of small tread contact
- Less rim protection against rocks and trail features
- Less flotation over rough and sandy terrain
- Harsher ride

Medium width tire (2.2-2.5 inches)

- Increased grip
- Increased rolling resistance
- Average acceleration and pedaling because of increased tread contact
- Increased rim protection against rocks and trail features
- Increased flotation over rough and sandy terrain because of large air volume and shape

Wide tires (2.5 inches or wider)

- Highest grip levels for their intended use
- Highest rolling resistance, poor acceleration and hard to pedal due to larger tread contact
- Better downhill momentum because high tire mass works with gravity to create a flywheel effect
- Highest rim protection
- Highest flotation over rough terrain

After answering the above questions, you will be ready to choose the right Mountain Bike tires with confidence.

Removing & Installing the Front Tire

Most often, you will want to remove the front tire so you can put your bike on (or inside) your vehicle. Today's bikes all come with a quick release. It has a lever and you spin it loose. When you go to put your wheel back on, it's extremely important that the tire is put back on securely and correctly so it doesn't come loose and cause a serious accident.

Removing the Rear Tire

Removing the rear tire is a little more complicated than the front tire but it can be easily done by following these steps:

1. Shift to the smallest gear on your rear cluster with the chain riding on the middle front ring. There are two main advantages to changing to the smallest gear:
• The most outside derailleur position allows the maximum amount of clearance for your wheel to come out.
• Always shifting to the smallest gear will make it easier to remember that it will be the smallest gear your chain needs to find when you put the wheel back on.
2. Release the quick release lever (and your rear V-brake cable if no disc brakes are fitted on your bike).
3. Lift the back of the bike with one hand and turn the derailleur body with the other hand. Turn (pivot) the derailleur so that it swings to the back of the bike. If your wheel doesn't fall out of the drop-outs, hit the top of the wheel with the palm of your hand and then turn the derailleur. When you've turned the derailleur far enough, the wheel will drop down onto the chain.
4. Tilt your wheel and free it from the chain. You're done!

Installing the Rear Tire

1. Hook the chain with the cluster side of the quick release skewer.
2. Locate the chain back onto the smallest gear on the cluster as your lower the bike.
3. Push the derailleur cage/arm down and around using your thumb. As you're pushing, lower the bike gently and allow the derailleur to swing into position under the cluster. Your axle should be close to slipping into the drop-outs.
4. Locate the axle into the drop-outs of each chain stay. Guide the rotor gently in between the brake pads.
5. Lean and lock. Lean on your seat to push the drop-outs firmly onto both ends of the axle as you lock the quick release (re-connect your V-brake cable if no disc brakes are fitted on your bike).

Bike Tire Repair

Tools and Equipment Needed:
• Your tire
• Punctured inner tube
• Wheel assembly
• Air pump
• Tube repair kit (sand paper, rubber cement glue and patches)
• Set of tire levers (included in tube repair kit)

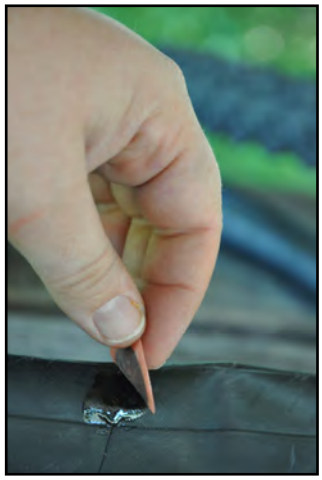
Step #1 – Remove the tire and inner tube

1. Disconnect the brakes from the wheel.
2. Remove the wheel from the bike frame by undoing the quick release.
3. Open the valve and deflate the inner tube completely.
4. Pinch the tire all the way around to help loosen it from the rim.
5. Insert one of the tire levers between the rim edge and the tire bead (DO NOT use screwdrivers or other sharp tools which can cut the tire).
6. Use leverage to flip one side of the tire bead on to the outside of the rim.
7. Use the hook at the other end of the tire lever to clip onto a spoke, locking the lever in place.
8. Insert another lever a few inches from the first.
9. Continue flipping the tire bead to the outside of the rim edge until one of the tire beads is completely free.
10. Find the leak and determine the cause of the flat tire.

Step #2 – Repair the inner tube

11. Find the leak(s) on the inner tube. If you have several leaks, a giant slash or you notice that leaks are coming from old patches, it may be time to consider replacing your inner tube completely.

12. Repair each leak following the instructions provided with your patch kit:
• Dry the damaged section of the inner tube thoroughly before starting the repair.
• Use sand paper to roughen the patch area of the inner tube. This improves contact between the patch and tube.
• Apply glue and wait a few minutes for the glue to cure before applying the patch. The glue should be tacky to the touch.
• After it is glued to the inner tube, apply pressure to the patch for several minutes.



Step #3 – Put it all back together

13. Using the tire levers if needed, work one side of the tire bead over the tim edge.
14. Partially inflate the repaired inner tube just enough to give it shape.
15. Insert the valve stem of the tube into the hole in the rim.
16. Starting from the valve stem, work the inner tube into the tire so it is completely tucked in.
17. Using only your hands, begin working the other side of the tire bead over the rim edge. Make sure not to pinch the tube between the tire and the rim edge.
18. Once the tire is back on the rim, work both sides of the tire bead from side to side to make sure the tube is not caught under the tire bead.
19. Re-inflate the tire to the recommended pressure. Check the bead periodically during inflation to ensure it's still properly seated on the rim.
20. Remount the wheel and reconnect the brakes.

BEFORE THE NEXT MEETING

Try one of the following activities at home.

1. Practice removing and replacing the front tire on your bike. Be sure to do it on a floor or a place where the ground is packed (not on the grass) in case you drop a piece off of your Mountain Bike. It will a lot harder to find if it drops in the grass!

OR

2. Using magazines, the Internet or by visiting a sporting goods store, compare the prices of various types of Mountain Bike tires. Record your findings in your Record Book.

MEETING 3 DIGGING DEEPER

What To Carry When Mountain Biking

For a usual bike ride of about 2 to 4 hours, what should you take so you are prepared for any situation? There's nothing worse than breaking down in the bush and not having the right Mountain Bike tools and having to walk home.

Besides food and drink, the following are items that should be in every Mountain Bikers tool kit for any trail ride, no matter how long or short it will be.

- Bike pump – make sure it fits both shraeder and presta valves. This way you can pump up anyone's flat tire, not just your own.
- A spare tube – even if your bike is tubeless, someone you're riding with might need a tube.

Everyone should be self-sufficient but if someone isn't, then it will put a stop to your fun as well.

- Tire levers – be careful using them so you don't damage your rim or tire
- Mountain Bike tool with chain breaker
- Tire patch kit
- Disc brake pads – in case the ride turns muddy. If you have a really muddy tire, you can wear through a set of pads in minutes.
- Money – it's always good to have a little bit of cash with you in case of an emergency.
- First Aid kit – band aids, gauze wrap and painkillers
- Zip ties
- Roll of electrical tape
- Replaceable derailleur hanger
- Cell phone
- Identification with medical information

For Long Distance Mountain Biking (75km and above)

- Map of the trail you will be using
- Cellular or satellite phone
- Compass (GPS, if you have the budget)
- Small flares
- Bicycle head light and tail light
- Matches
- Windbreaker or Jacket (depending on the temperature)
- Compact multi-tool set
- Whistle or Horn
- Pump and repair kit
- Allen wrenches
- Chain breaker
- Emergency Money
- Identification with medical info
- First-aid kit
- Food and drink (take extra just in case)

MEETING 4 - The Up's & Down's of Riding

Objectives:

- Learn how to properly position your Mountain Bike when riding.
- Learn the proper ways to go uphill, downhill, go over obstacles and shift gears.
- Learn how to replace your bike chain.

Roll Calls

- Name an obstacle you might encounter while Mountain Biking.
- How often have you changed a chain on a bicycle?
- Do you prefer to go on long trail rides on flat, open ground or up and down hill in bush areas?

Sample Meeting Agenda – 2 hrs. 10 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Parliamentary Procedure	Minutes & Business	10 min
Topic Information Discussion	Discuss Mountain Bike positioning, riding up and down hill, over obstacles, pop-a-wheelies and shifting gears.	30 min
Public Speaking/Judging Activity	Activity #7 - Bike Snail Race (instructions at the end of Meeting #4)	20 min
Topic Information Discussion	Discuss replacing your Mountain Bike chain and how to fit a new chain.	15 min
Activity Relating to Topic	Activity #8 - Replacing Your Bike Chain (instructions found in this reference manual)	30 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

Topic Information

Now that you have your bike ready to go, it's time to hit the trails, right? Not quite yet. Because Mountain Bikes are meant for trail riding which can mean rough terrain with hills, changing surfaces and obstacles, there are a few riding techniques to learn which will help you to have a safer and more enjoyable ride.

The Golden Rule of Mountain Biking
"Your wheels will follow your eyes."

Bike Positioning

The best thing to remember when Mountain Biking is to stay loose and keep your hands loose on the handlebars. You don't want a death grip on the handlebars. Stay out of your saddle (seat) as much as you can for control and keep in mind that you are always shifting and making minor adjustments to your body position to stay balanced to negotiate the obstacles you find on the trail. Keep your pedals level, butt back and have fun!

When you aren't pedaling, you will want to keep your pedals level, meaning one foot in front of the other. When you are seated and pedaling, it's okay to have one foot down and resting momentarily. Most of the time you will want to be up off your saddle, back a bit and pedals level. When your pedals are level, your weight is balanced and you have more control over your bike. When you're out of your saddle, you have more control over your bike and can move around easier and stay balanced.

Riding Uphill and Downhill

Climbing Uphill:

1. Make sure you stay seated.
2. Shift to a lower gear.
3. Lean forward and keep your back straight while you climb. Keep pressure on your front wheel by leaning on your handlebars. This helps to maintain traction.
4. Bend your elbows.
5. Lean even more on your handlebars if it feels like your front wheel is lifting off the ground which often happens on extremely steep climbs.
6. Keep pedaling!!!

The Challenge When Climbing Uphill?

Keep the majority of your weight on the front wheel so your bike doesn't flip over, but keep enough of your weight on the back wheel to prevent it from spinning.

Going Downhill:

1. Keep your pedals level to the ground, one foot in front of the other. If your pedals are level, you will have better balance and you will be centred on your bike.
2. Keep your weight on your pedals, not the seat. Move your butt behind the seat, to redistribute your weight.
3. Brake primarily with your rear brake, which your right hand controls. Lightly press your brake in and out instead of slamming it down. This is called fluttering.
4. Flutter the front and rear brakes in steep spots. Be careful when using your front brake. If it's squeezed too tightly, it could cause you to go over your handlebars.
5. Keep your legs and arms loose as you descend to absorb the bumps smoothly.

Riding Over an Obstacle

1. Approach the obstacle at medium speed.
2. Shift your body weight back onto your seat as you near the obstacle.
3. Life your butt off of the seat.
4. Have your pedals level to the ground.
5. Lean forward.
6. Compress your fork by putting your weight on the front wheel.
7. Raise up your front wheel and lift over the obstacle.
8. Put your front wheel down and continue riding.

Pop A Wheelie

1. Lower your seat so it is just below your handlebars and shift into an easy gear.
2. Pedal as slowly as you can go without tipping over. Keep you fingers positioned over your rear brake.
3. As your dominant foot (the foot you use to kick a ball) is at the top of the pedal stroke, stomp down with your foot while pulling up a bit on the handlebars.
4. If you feel like you are going to flip over backwards, gently squeeze your rear brake.
5. Lean back, extend your arms and keep pedaling.

How to Shift Gears on a Mountain Bike

Learning how to shift gears on a mountain bike is an essential skill for beginning Mountain Bikers to learn. If you shift the right way, you'll find many things in mountain biking become a whole lot easier. It will be easier to climb, accelerate, slow for tricky corners, go over obstacles and keep up with the others to name just a few of the many benefits of proper gear shifting. The following tips will help to make your Mountain Bike riding a much better experience:

- Never force the chain with your shift lever pressure. Think of shifting as guiding or allowing the chain to change place.
- Whether changing to a harder gear to speed up or an easier gear to slow down, always keep pedaling during the shift but back off your pedaling force prior to every shift and until the shift completes.
- Anticipate the trail conditions ahead of you and change to the right gears in advance. This will help you to maintain as much momentum as possible, increasing your efficiency and speed.
- For hill climbing in particular, make sure you change to the easier gears just before you think you need to. This will help you to keep as much momentum as possible.
- Lubricate your drive train and gear shifter cables regularly with bike chain oil.
- Always ride with a good chain line.

Fun Fact

Over one-half of mountain bikers cycle at least once per week. They prefer to cycle throughout the spring, summer and fall, on weekends or evenings.

Source: Parks Canada Mountain Biking Market Profiles, 2010

Replace Your Bike Chain Often

When should a bike chain be changed?

- For an occasional biker, every 12 months
- For a regular mountain biker, every 6 months or sooner
- For a high mileage rider, every 3 months or sooner

If you ride in really muddy, sandy or dirty conditions, the chain may need to be changed even sooner.

How to Fit A New Bike Chain

1. If you need to remove the old chain from your bike, use a bicycle chain breaker.
2. Line your old and new bike chains up side by side. Ensure the bike chains are pulled neat and straight and parallel to each other.
3. Count the number of links in your old chain. Include any previously removed links in your count. Your old chain, plus any removed or broken links equal the number of links your new chain needs to have. The old chain may be stretched so you want to make sure the new chain has the same number of links, not the same length.
4. Determine which is the last link in the new chain.
5. Shorten your new chain with a bike chain tool.
6. Fit the new chain to your bike.
7. Join the two ends of the new chain together and insert the locking pin that came with the new chain.
8. Fit your chain tool to the chain from the bottom and line the plunger tip up to the centre of the head of the locking pin.
9. Wind the locking pin through slowly until it's in place. You should feel the pin click into place.
10. Remove your chain tool and pivot the link you just connected. It should pivot easily but not be sloppy.
11. Remove the guide pin.
12. Lubricate the new chain with bike chain lube and remember to regularly oil the chain.

Lubricate Brake and Shift Cables Regularly

When you first buy a Mountain Bike, the brakes and gears shift great but over time things slowly change and it may be so gradual that you don't notice until it's too late. This could be the reason why shifting becomes sluggish and your brakes are sticking. Set up a regular maintenance schedule for your Mountain Bike and be sure to stick to it.

BEFORE THE NEXT MEETING

Try one of the following activities.

1. Using your own bike, practice your bike positioning. If you are having difficulty, work with a friend or a family member. Once you are comfortable, start practicing climbing uphill and going downhill on your bike.

OR

2. Check out your own bike at home. Is it time to put a new chain on your bike? Or does your bike chain just need to be lubricated? If so, proceed with either lubricating or changing your bike chain.

MEETING 4 DIGGING DEEPER

How To Corner on a Mountain Bike

Once you've become more experienced and comfortable with your Mountain Bike, it's time to learn how to properly corner on a Mountain Bike. You need to learn the proper technique before you can add speed to your ride.

The main thing to remember is to 'Keep relaxed and keep the flow.'

Even though this is hard to do when learning something new and not wanting to crash your bike, relaxing is the key. And it starts with relaxing your mind.

- Avoid thinking too much about what to do
- Only think about the six Mountain Bike cornering tips each time when approaching a corner
- Avoid tensing your body on the bike as this tension in your muscles will only slow your thoughts and your reactions
- Enjoy the corner

The six parts to the Basic Mountain Bike Cornering Technique are:

1. Set your speed

Set your corner speed before the corner begins. Focus on exiting the corner fast, rather than entering the corner fast and then skidding or braking heavily around the corner. Skidding and corner braking reduces your control.

2. Change gears

If you're not going to pedal around the corner, before going into it, shift to the gear you want to use for pedaling out of the corner. This way you'll be in the right gear to pedal back up to speed after the corner is done.

3. Look ahead

Look ahead into the corner, quickly scan the corner with your eyes, then shoot your eyes to the exit as you ride the turn.

4. Relax your hold

Keep a firm but relaxed hold of the handlebar and drop your shoulders so that you're not shrugging them.

5. Position your body

Put most of your weight through the seat and/or the pedals.

6. Push on the outside

If you're not pedaling the corner, push your outside food down on the pedal as you turn. This technique works to help ground the tires.

And remember, the right bike tires make a huge difference! They are one of the most important upgrades you can make to your bike.

ACTIVITIES

Activity #7 – Bicycle Snail Race

Material Needed: bikes, helmets, pylons

Set up the pylons about 50 feet apart to indicate the “start” and “finish” of the race. The object of the race is to see which rider can travel the slowest without touching the ground. The last rider to cross the finish line wins.

MEETING 5 - Hitting the Trails

Objectives:

- Learn to do a pre-ride check before a Mountain Biking expedition.
- Learn Mountain Biking etiquette.
- Learn about Mountain Biking in Ontario.

Roll Calls

- Name one thing you should check before going on a Mountain Biking expedition.
- Name one piece of etiquette Mountain Bike riders need to remember when out on the trail.
- If you could go Mountain Biking anywhere in Ontario, where would you go and why?

Sample Meeting Agenda – 2 hrs. 25 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Parliamentary Procedure	Minutes & Business	10 min
Topic Information Discussion	Discuss pre-ride checklists and Rules of the Trails.	20 min
Public Speaking/Judging Activity	Activity #9 – Leave No Trace Skits (instructions can be found at the end of Meeting #5)	30 min
Topic Information Discussion	Discuss Mountain Biking in Ontario and Six Simple Ways to get Better at Mountain Biking.	20 min
Activity Related to Topic	Activity #10 – Newspaper Bike (instructions can be found at the end of Meeting #5)	40 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Choose one of the At Home activities to complete.	

Topic Information

Pre-Ride Checklist

Before you leave on your Mountain Biking expedition, there are a few things you need to check:

- Make sure that your tires are properly inflated, depending on the type of trail you want to ride. Check them by feel or by using a tire gauge.
- Make sure that the front wheel is on securely and spinning freely as well as the rear wheel.
- Check that the brakes are working and the chain has been lubricated.
- Make sure you have all of the equipment needed to change a flat tire.
- Make sure you have enough water for your expedition.
- Remember to take your helmet, eye protection and gloves.

Rules of the Trails

1. *Ride on Open Trails Only*

Respect trail and road closures and ask if uncertain. Avoid trespassing on private land. Obtain permits or other authorization as may be required.

2. *Leave No Trace*

Be sensitive to the dirt beneath you. Recognize different types of soils and trail construction. Practice low-impact cycling. Wet and muddy trails are more vulnerable to damage. When the trail bed is soft, consider other riding options. This also means staying on existing trails and not creating new ones. If the trail is too difficult or too soft to ride, dismount and walk the trail.

Be sure to pack out at least as much as you pack in. Do not leave anything on the trail!

3. *Control Your Bicycle!*

Inattention for even a second can cause problems. Obey all bicycle speed regulations and recommendations.

4. *Always Yield on the Trail*

Let your fellow trail users know you're coming. A friendly greeting or bell is considerate and works well. Don't startle others. Show your respect when passing by. Slow down to a walking pace or even stop. Anticipate other trail users around corners or in blind spots. Yielding means slowing down, establishing communication, preparing to stop if necessary and passing safely. Thank anyone who yields their right-of-way to you or holds pets or young children as you pass.

5. *Never Scare Animals*

All animals are startled by an unannounced approach, a sudden movement or a loud noise. This can be dangerous for you, others around you and the animals. Give the animals extra room and time to adjust to you.

When passing horses use special care and follow directions from the horseback riders. Ask if uncertain. Since some horses are scared of bikes, it is best if you dismount your Mountain Bike at least 15 metres from the horse. Most horse owners will thank you for dismounting and will appreciate it. You never know when you might encounter inexperienced riders and/or horses.

Running cattle and disturbing wildlife is a serious offense. Leave gates as you found them.

6. *Plan Ahead*

Know your equipment, your ability and the area in which you are riding and prepare accordingly. Be self-sufficient at all times. Keep your equipment in good repair and carry necessary supplies for changes in weather or other conditions. Always wear a helmet and appropriate safety gear.

Fun Fact

It is estimated that approximately one million people in Canada go Mountain Biking each year while almost 7.5 million people in Canada enjoy recreational bicycling.
Source: Parks Canada Mountain Biking Market Profiles, 2010

Mountain Biking in Ontario

With thousands of kilometres and hundreds of excellent trails for you to explore in Ontario, no two Mountain Biking experiences will be the same. Set out on cottage country trails, untouched conservation lands, rugged wilderness trails, ravine systems and abandoned logging roads and you'll find all kinds of riding experiences. Just choose the environment you want, the length of trail and the level of difficulty.

To find out what trails are available in Ontario visit:

Ontario Trails Council www.ontariotrails.on.ca

Ontario Outdoor (Ontario Tourism) http://ontariooutdoor.com

Fun Fact

Men are twice as likely to have purchased mountain bikes compared with women.
Source: Parks Canada Mountain Biking Market Profiles, 2010

Six Simple Ways to get Better at Mountain Biking

1. *Good Company*

Ride with fellow riders who encourage you to do better and who don't mind waiting while you have second or third attempts at tricky parts of the trail.

2. *The Right Tires*

Choose mountain bike tires suited to your level of skill and the terrain you ride. The right tires can make a huge difference.

3. *Tire Pressure*

Lower tire pressures offer higher level of grip. And that extra grip you gain from lower pressures can help you climb a little further up the hill. Just don't set your pressure too low for your weight and risk punctures or wheel damage.

4. *Listen to Your Body*

Once you get tired, your balance and concentration won't be as good. When this happens, it's time to head for home.

5. *Happy Feet*

Loosen your pedals. If you ride clip-less pedals, adjust them so that you can release your shoes quickly and easily. You will be able to concentrate more on the trail instead of worrying about getting your feet stuck in your pedals. Once your skill level improves you can firm up the pedal clamping tension.

6. *Home Maintenance*

After a ride, perform any necessary Mountain Bike maintenance, repairs or adjustments before the next ride. It's much easier to fix your bike at home rather than out on the trails.

Before the Next Meeting

Try one of the following activities.

1. Make a list of items you would carry in your own Mountain Biking Travel Kit if you were going on a long expedition. Record your list in your Record Book.

OR

2. Find out what Mountain Biking courses are in your area. What is the distance from where you live to the 5 closest Mountain Biking trails in Ontario? Record your findings in your Record Book.

MEETING 5 DIGGING DEEPER

Outdoor Survival

Whether planned or unplanned, those going Mountain Biking should be aware of the Seven Basic Survival Needs in case you find yourself outdoors for an evening. It is a time when you are forced to rely on your own resources to live. Most times, it is a sudden and unplanned situation where there is little or no help and it could happen anywhere. There are usually four reasons why we get into survival situations:

1. Lack of skills – lost and don't know how to use a compass
2. Weather – can't control
3. Accidents – illness or injury
4. Under prepared

The Seven Basic Survival Needs:

1. PMA – Positive Mental Attitude

The most important thing in any survival situation is not to panic. Your brain is your best tool for figuring out what resources you have and for coming up with a plan to provide for your needs. Panic can lead to irrational, counterproductive decisions that actually make the situation worse, not better. This is the hardest yet the most important of all of the survival skills. Using the STOP acronym helps you to make a plan of attack. Sit-down, Think, Observe and Plan.

2. Air

Although we take it for granted, in a drowning, choking or toxic fume situation, it becomes critical to maintain an adequate supply of oxygen to the brain.

3. Shelter

A shelter is used to conserve the heat your body already has. Clothing is considered shelter because it traps a layer of warm air and holds it next to your body. The best way to keep warm is to keep from losing heat. Exposure is one of the most common causes of death in the backcountry. When building a shelter, you want to find a spot that will protect you from wind, precipitation or sun, depending on your situation. When building a shelter you should keep the following in mind:

a. Location
b. Shelter size
c. Conservation
d. Insulation

4. Warmth

If you are in an extended survival situation, shelter alone may not be enough. Physical activity of any kind will increase blood flow and raise body temperature. The body heat from a warm person can be used to heat a cold person. Warmth can be added through building a fire or drinking hot liquids.

A fire has many purposes in a survival situation. It will keep you warm, purify water, cook food and signal your presence to others. The smaller the fire, the more efficient it will be. A small fire is better than a bigger one. A big fire may make you feel better, but will waste your energy having to gather fuel.

5. Rest

Any physical activity will burn calories. This is energy that cannot be used later. Resting will conserve calories so that they may be burned slowly for warmth over time. Before any activity, be sure to weigh the benefits and costs, especially if you have no food to give yourself more energy.

6. Water

It is possible to survive three full days without water but as the body dehydrates, it begins to function less efficiently. Water loss can occur through breathing, sweating and evaporation. There is no guarantee of pure water but there are three ways you can treat water so it's drinkable:

1. Boil water for at least 10 minutes (add 1 minute for every 3000m in elevation gain)
2. Filter the water
3. Chemically treat the water

If the water is not purified, you run the risk of getting giardia, a micro-organism that causes dysentery and vomiting.

Once you treat your water you want to keep in mind the concept of conservation. There are a few good ideas to keep in mind:

1. Don't eat anything unless you have some liquid (digestion uses most of your body fluids to process food)
2. Travel during cool hours
3. Walk at an easy pace without breaking a sweat
4. Don't drink urine
5. Store water in your stomach by trying to drink as much water as possible
6. Don't try to conserve water by not drinking it

There are several ways to get water:

1. River, lake or other water source
2. Rain
3. Absorbing dew from plants with a cloth
4. Tapping a vine, plant or tree

7. Food

In most survival situations, food is not top priority. However, food helps your body to stay warm by adding calories to burn and therefore, raising body temperature through metabolism. Food is usually the first thing people think of when in reality, it's one of the last things they need. Humans can go for three weeks without food as long as water is available. When gathering food, there are a few things to consider:

1. Gather with respect, whether it's plants or animals. Take only what you need.
2. Make sure the area where you are collecting from is not polluted or contaminated.
3. Positive identification is essential! There are many look a likes. Don't eat anything that you aren't sure of.
4. Make sure you know what kind of food preparation is needed.
5. Know what parts of the plant are edible in what season.

ACTIVITIES

Activity #9 – Leave No Trace Skits

Break 4-H Members into groups. Ask each group to name a principal of 'Leave No Trace.' Each groups' principal must be different. Then ask each group to come up with a 3 to 5 minute skit demonstrating their principal and have them act out their skit in front of everyone else.

Principals of Leave No Trace

- Plan Ahead and Prepare
- Travel and Camp on Durable Surfaces
- Dispose of Waste Properly
- Leave What You Find
- Minimize Campfire Impacts
- Respect Wildlife
- Be Considerate of Other Visitors

Activity #10 – Newspaper Bike

Materials Needed: masking tape, string, lots of newspaper
Divide 4-H Members into groups of a maximum of 8 Members per group. Assign someone (or ask for a volunteer) to be the note-taker for the group to record what worked and what didn't work.

4-H Members have 25 minutes to build a bike from newspaper, string and masking tape. Once 25 minutes is up, it's time to judge the bikes. Ask the note-taker in each group to read what they wrote and then discuss why certain ideas did not work.

MEETING 6 - Drink Up! The Importance of Hydration

Objectives:

- Learn why it's essential to drink water while Mountain Biking
- Learn why nutrition is important.
- Plan for the Achievement Program.

Roll Calls

- Name one new thing you've learned in the Mountain Biking project.
- Name a good food to pack on a Mountain Biking expedition.
- Name one benefit to Mountain Biking.

Sample Meeting Agenda – 2 hrs. 15 minutes

Welcome, Call to Order & Pledge		10 min
Roll Call		5 min
Parliamentary Procedure	Minutes & Business	10 min
Topic Information Discussion	Discuss hydration while Mountain Biking (or performing any activity).	20 min
Activity Related to Topic	Activity #11 - Snowball Fight - Hydration (instructions can be found at the end of Meeting #6.	20 min
Topic Information Discussion	Discuss the importance of nutrition. Make plans for the Achievement Program.	30 min
Public Speaking/Judging Activity	Activity #12 - Gilligan's Island (instructions can be found at the end of Meeting #6)	30 min
Wrap up, Adjournment & Social Time!		10 min
At Home Challenge	Get ready for the Achievement Program!	

Topic Information

Water – Drink Up!

Always hydrate before going out on the trails. It is far easier to maintain hydration on a biking trip than to rehydrate. Maintaining proper hydration is based on many factors:

- Time
- Temperature
- Exertion
- Body weight
- Individual perspiration rate

A good guideline to follow is to drink a litre of water for every 1 hour of time spent outdoors. And, continue to drink water or eat watery foods (watermelon, oranges) after your ride. Hydration is important when Mountain Biking because water:

- Serves as a lubricant in bone joints
- Regulates and maintains normal body temperature
- Regulates blood-sugar
- Maintains blood pressure
- Helps food digestion and nutrient distribution by blood circulation

Dehydration – The Warning Signs

- Nausea
- Vomiting
- Headaches
- Elevated body temperature
- Dry lips and mouth
- Dry skin
- Dry eyes
- Water retention problems
- Muscle or joint soreness
- Hoarse voice
- Constipation
- Restlessness
- Muscle cramps
- Infrequent and dark-coloured urine
- Light-headedness, dizziness and loss of energy
- Confusion

Even mild dehydration can affect a person's physical and mental performance.
One way to know if you are getting enough water is by the colour of your urine. Darker urine that's a deep yellow or the colour of apple juice may mean that you're not getting enough water. It's better if your urine is a light lemonade colour. Be aware though, that some vitamin supplements or medications can darken your urine even if you are hydrated.

Drink Up!

The following liquids are the best to re-hydrate with:

- Water
- Milk
- Sports drinks
- Juice

Sports Drinks vs. Water

Sports drinks contain electrolytes which are dissolved salts that can carry an electrical charge. The cells of your body rely on electrolytes to carry the electric impulses responsible for muscle contractions and nerve impulses to other cells. You lose electrolytes when you sweat and these are replenished by drinking lots of fluids and eating food.

Sports Drinks are popular with athletes because they contain water to combat dehydration, salt to replace electrolytes and carbohydrates as a source of energy (calories). However, replacing electrolytes by drinking Sports Drinks is only significant if you are doing intense exercise for longer than 90 minutes. It's really not necessary to replace losses of sodium, potassium and other electrolytes during exercise since you're unlikely to deplete your body's stores of these minerals during normal exercise. If you are exercising for less than 90 minutes, then your best option is to drink water.

Don't wait until you feel thirsty. Thirst is a sign that your body has needed liquids for a while. But, don't force yourself to drink more fluids than you may need either. It's hard to stay active when there's a lot of water sloshing around in your stomach!

Trail Nutrition

One hour of Mountain Biking will burn 400 to 800 calories. It is best to bring high energy foods to refuel. Some examples of high energy hiking foods are:

- whole grains
- lean meats
- salmon (in a vacuum sealed package)
- peanut butter
- energy bars
- fresh fruit (mainly citrus and berries)
- dehydrated fruit
- nuts

Always eat breakfast. It gets your metabolism off to a strong start.

On backpacking trips where water is available, pre-packaged dehydrated meals are a good lightweight option for meal around camp. Bring foods that are trail friendly. Avoid foods that are easily smashed or crumbled. On warm days, also avoid bringing foods that can melt such as chocolate.

Proteins

Many foods contain protein but the best sources of protein are:

- beef
- poultry
- fish
- eggs
- dairy products
- nuts
- seeds
- legumes (like black beans and lentils)

Protein builds up, maintains and replaces the tissues in your body. Your muscles, organs and immune system are made up mostly of protein. Your body uses the protein you eat to make specialized protein molecules that have specific jobs. Your body uses protein to make hemoglobin, the part of red blood cells that carries oxygen to every part of your body. Other proteins are used to build cardiac muscle (cardiac muscle is your heart!). Whether you're running, biking or just hanging out, protein is doing important work like moving your legs, moving your lungs and protecting you from disease.

Carbohydrates

Most foods contain carbohydrates which the body breaks down into simple sugars. These are the major source of energy for the body.

Simple Carbohydrates: These are also called simple sugars. Simple sugars are found in refined sugars like white sugar. You'll also find simple sugars in nutritious foods such as fruit and milk.

Complex Carbohydrates: These are also called starches. Starches include grain products such as bread, crackers, pasta, oatmeal, whole-grain wheat bread and rice as well as vegetables.

When you eat carbohydrates, your body breaks them down into simple sugars. These sugars are absorbed into the bloodstream. As the sugar level rises in your body, the pancreas releases a hormone called insulin. Insulin is needed to move sugar from the blood into the cells, where the sugar can be used as a source of energy. When this process goes fast – as with simple sugars – you're more likely feel hungry again soon. When it occurs slowly, as with a whole-grain food, you'll be satisfied longer. These type of complex carbohydrates give you energy over a longer period of time.

Fats

Fat is a component in food and is an important part of a healthy diet. Young children need a certain amount of fat in their diets so the brain and nervous system develop correctly. That's why toddlers need to drink whole milk, which has more fat, and older kids can drink low-fat or skim milk. Fat helps a child's body grow and develop like it should. Fat fuels the body and helps to absorb some vitamins. They are also the building blocks of hormones and they insulate nervous tissue in the body. Fat is not the enemy but you need to choose the right amount and the right kind of fat.

Some foods, including most fruits and vegetables, have almost no fat. Other foods are higher in fat including nuts, oil, butter and margarine. There are three major types of fat:
Unsaturated Fats: These are found in plant foods and fish and may be good for heart health. The best of the unsaturated fats are found in olive oil, peanut oil, canola oil, albacore tuna and salmon.

Saturated Fats: These fats are found in meat and other animal products such as butter, cheese and all milk except skim milk. Saturated fats are also found in palm and coconut oils. Eating too much saturated fat can raise blood cholesterol levels and increase the risk of heart disease.

Trans Fats: These fats are found in margarine. Trans fats are also found in certain foods such as snack foods, baked goods and fried foods. When you see "hydrogenated" or "partially hydrogenated" oils on an ingredient list, these foods contain trans fats. Like saturated fats, trans fats can raise cholesterol and increase the risk of heart disease.

Vitamins

One thing our bodies can't do is make vitamins. That's where food comes in. Your body is able to get the vitamins it needs from the foods you eat because different foods contain different vitamins. That's why it's important to eat a variety of foods each day. From A to K, all vitamins play an important role in keeping our bodies healthy.

Minerals

Minerals are also an essential part of the diet. Minerals help your body to grow, develop and stay healthy. The body uses mineral to perform many different functions such as building strong bones, transmitting nerve impulses, making hormones and maintaining a normal heartbeat. Minerals that you get from food include:

- Calcium
- Iron
- Potassium
- Zinc

ACTIVITIES

Activity #11 – Snowball Fight – Hydration

Materials Needed: paper, 1 piece of paper per participant

Give 4-H Members a clean sheet of white unlined paper. Have them write down one sign of dehydration on the paper. Next, have them crunch the paper into a ball. Have them stand in a large circle around the room. Then allow them 30 seconds of an all-out snowball fight!

Snowballs are to be thrown around the circle but no snowball is to be thrown at anyone's face. If this happens, then the snowball fight is automatically over.

When the time is up, have them locate a "snowball." One by one, have each 4-H member un-crumple their snowball and announce what the dehydration sign is that they have. If someone has also said that answer, then the 4-H member has to sit down. See how many different symptoms the Member's can name.

Activity #12 – Gilligan's Island

Materials Needed: clipboard, paper, pencil

Split 4-H Members into groups of approximately four to five in each group and give each group a clipboard, paper and pencil. Then, give each group the following scenario: They have been Mountain Biking in Northern Ontario on a trail through Algonquin Park. It's starting to get dark and the group realizes they are lost and are going to have to spend the night in the park. Which five items would the group choose to have with them to increase their chances of survival?

Tell the Members to be specific. Give them about 15 minutes to work within their group. They must come to a consensus within their group as to which five items they want. Have them write down their items, the reason why they chose each item and then present this to the group.

The purpose of this activity is to get 4-H Members to think critically and creatively and be able to justify their reason for choosing certain items over others.

ACTIVITIES

Achievement Program Ideas/Suggestions

- Volunteer to help with a fundraiser that features Mountain Biking and/or participate in it.
- Host a Mountain Biking Day and invite family and friends.
- Make a display about Mountain Biking and display at a local school, Agricultural Fair or community event.
- Have members make a presentation at school about why safety is the most important aspect about Mountain Biking.
- Create a skit about Mountain Biking in your area and present it at a school or a community event.

Special Projects

These projects are done outside of meeting time and are for members interested in doing more – often senior members. It's up to you as the leader to decide if you will require members to complete a Special Project for club completion. Some ideas include:

- Write a press release about Mountain Biking in your area.
- Interview a Mountain Biking enthusiast and write a press release for the newspaper.
- Create a display about the benefits of Mountain Biking.
- Investigate what kind of training is required by competitive Mountain Bike racers.
- Create a cost comparison chart of different styles of Mountain Bikes that are available for purchase.
- Create a video about safe Mountain Biking and post on YouTube.

Tour Ideas

- Visit a National or Provincial Park and check out their trails.
- Attend a meeting of local Mountain Biking enthusiasts.
- Have guest speakers attend meetings to supplement the material in the Reference Manual. Speakers could include a Mountain Biking instructor, a tire service repairman, a park ranger from a National or Provincial Park or a Search & Rescue/Policeman to name a few.
- Visit a store that sells Mountain Biking equipment.