

FOR YOURSELF, YOUR MACHINE, OTHERS AND THE LAND

Instructor's Guide
GRADES 1 TO 12





Government of Alberta ■ Tourism, Parks and Recreation

## i

# **ACKNOWLEDGEMENTS**

## Photo Credits:

- OffRoad Connections
- Portage College
- ATV World
- Alberta Transportation
- Alberta Sustainable Resource Development
- Alberta Tourism, Parks and Recreation
- International Snowmobile Manufacturers Association
- Penny Heather

We thank the Canadian Off-Highway Vehicle Distributors' Council who graciously allowed us to use their Adventure Trails interactive learning tool in this program.

# PROJECT STEERING COMMITTEE:

- Alberta Education
- Alberta Off Highway Vehicle Association
- Alberta Safety Council
- Alberta Snowmobile Association
- Alberta Sustainable Resource Development, Lands Division
- Alberta Tourism, Parks and Recreation, Sport and Recreation Division
- Alberta Tourism, Parks and Recreation, Tourism Division
- Alberta TrailNet
- Alberta Transportation, Driver Program and Licensing Standards
- Alberta Transportation, Office of Traffic Safety
- ATV Instructors
- ATV World
- Portage College

## **DEVELOPED BY:**

- Liza Sunley Consulting
- OffRoad Connections
- Alberta Centre for Injury Control & Research

## **2011 REVISIONS BY:**

Liza Sunley Consulting

#### DISCLAIMER OF LIABILITY FOR USE OF DOCUMENTS

Anyone making use of this document is advised that the Government of Alberta disclaims liability for any claims, actions, demands or suits which may arise by reason of any person relying on the information contained in this document, and more particularly, without limiting the generality of the foregoing, the government disclaims liability for the appropriateness or accuracy of the within guidelines, details or specifications for any project or activity.

In plain language, this document provides you with a variety of recreation safety, education and stewardship ideas. None of the descriptions, drawings or presentations are intended for construction purposes. The ideas come from various sources and do not represent Alberta government standards.

Published April 2010, Revised April 2012

ISBN:



# **TABLE OF CONTENTS**

Acknowledgements	i
Introduction	1
Ride with Respect Messages	2
Links to Alberta's Program of Study	4
Presenting Ride with Respect	5
Working with Schools	5
Lesson Plans	6
Grades 1-3	6
Grades 4-6	12
Grades 7-12	27
Appendices	41
Instructor Reference Material	41
Vehicle Definitions	42
Universal Key Safety Messages and Supporting Data	43
Legislation in Alberta	54
Avalanche Safety	55
Thin Ice	58
Hands-On Training in Alberta	59
Letter Templates	60
Letter to Teachers	60
Letter to Parents	61
Video Resources	62
Handouts	63

# **INTRODUCTION**

Welcome to the Ride with Respect Instructor Guide.

**Ride with Respect** is an awareness and education program for off-highway vehicles spearheaded by Alberta Tourism, Parks and Recreation as part of the Alberta Recreation Corridor and Trails Designation Program. It was developed by a collaboration of stakeholders and experts in the safety and stewardship areas.

1

This program is intended for children and youth from grades 1 to 12 and was designed for use by an instructor visiting a classroom.

The program takes a broad look at off-highway vehicle use among children and youth - the messages are applicable to all off-highway vehicles.

# RIDE WITH RESPECT MESSAGES

The overall message of **Ride with Respect** is that riding off-highway vehicles can be a fun activity and excellent way to enjoy all that Alberta has to offer. Riders have a responsibility to use respect, though, to keep themselves safe, to ensure other trail users have the same opportunity to enjoy themselves, and to minimize their impact on the land. The program provides practical and age-appropriate ways to ride with respect.

The content and messages in Ride with Respect were carefully chosen and based on a number of factors including:

- The types of injuries common among children and youth in Alberta
- Manufacturers' recommendations
- Research, literature and best practices
- Current recommendations and practices in Alberta
- Legislation governing off-highway vehicle use in Alberta

During the production of this program, a number of universal messages were developed. These are the overarching statements that are communicated to the students depending on grade level. Additional safety messages were also added based on grade and comprehension levels.

## **Universal Safety Messages**

Off-highway vehicles (OHVs) can cause serious injury or death. OHV injuries can be reduced by following these safety practices:

- Only ride an off-highway vehicle that fits your age, weight and experience. Follow manufacturers' recommendations.
- Wear an approved helmet with face and eye protection and buckle up.
- Take a hands-on training course to learn how to operate your off-highway vehicle.
- Ensure that you have constant, close, visual supervision by an adult.
- Refuse to carry or be a passenger on an off-highway vehicle built for one person. Follow the seating capacity and passenger size requirements of the off-highway vehicle.
- Zero tolerance alcohol, drugs and off-highway vehicles don't mix.

## **Universal Trail-Sharing Messages**

- Show courtesy to other trail users, hikers, horse riders, mountain bikers and cross country skiers in winter.
- Keep your noise low.
- Stay on the right side of the trail especially when passing oncoming riders or where site lines are restricted.



## **Universal Stewardship Messages**

- Stay on trails. Respect private property.
- Use bridges at water crossings. Do not ride across water.
- Avoid wheel spin.
- Do not harass wildlife or farm animals.
- Take out any garbage you bring in.
- Leave the outdoors better than you found it.
- Ride where and when permitted.

The Ride with Respect program is organized in four sections: Ride with Respect for Yourself, Your Machine, for Others and for the Land.

- Personal safety
- Safety related to the off-highway vehicle
- Respecting other trail users
- Stewardship and environmentally-friendly practices

## **Theme**

An important part of this program is its theme. "Respect" is a key theme running throughout the content. This includes respect for oneself, one's machine, for other trail users, and for the trail itself. The course is intended to move beyond taking actions simply because they are required by law. Students, particularly from grades 7 - 12, are encouraged to "raise the bar" and do the right thing even if it's not required.

# LINKS TO ALBERTA'S PROGRAM OF STUDY

**Ride with Respect** contains links to Alberta Education's Program of Study – the provincial curriculum. Many teachers will want to know how **Ride with Respect** helps to achieve the outcomes of the program of study. Instructors are encouraged to share the links with teachers.

## **Health and Life Skills Outcomes**

## **Grade One Outcome**

W-1.9 Describe and apply appropriate street safety behaviors in the community (e.g. as a passenger)

#### **Grade Two Outcome**

W-2.9 Describe and apply safety rules when using physical activity equipment; e.g. scooter.

#### **Grade Three Outcome**

W-3.9 Describe, apply and analyze appropriate safety behavior in the local community (e.g. street, railway crossings, dugouts, farm equipment, waterfront.)

## **Grade Four Outcome**

W-4.10 Describe and demonstrate ways to assist with the safety of others.

#### **Grade Five Outcome**

W–5.9 Determine appropriate safety behaviours for community recreational situations; e.g., using snowmobiles, all-terrain vehicles.

## **Grade Six Outcomes**

W-6.8 Analyze how laws, regulations and rules contribute to health and safety practices.

W-6.9 Evaluate the impact of personal behaviour on the safety of self and others.

## **Grade Seven to Nine Outcomes**

W-9.9 Analyze and evaluate laws and polices that promote personal, community and workplace safety e.g. driving, boating

## Grade 7 - 9 Outdoor Education Outcomes

- Develop an esthetic appreciation for the environments they visit.
- Identify potential impacts of their activities on environments.
- Select environmentally appropriate approaches to carrying out outdoor activities.
- Demonstrate basic knowledge, skills and attitudes necessary for safe, comfortable outdoor experiences in all seasons.

## **Career and Life Management Outcomes**

P2 - Evaluate choices and combinations of choices that can create barriers to achieving and maintaining health, and identify actions to improve health.

- Analyze poor choices or lack of ability to pursue healthy choices and decisions.
- Assess the effects of substance use and abuse—tobacco, alcohol, drugs—on health.
- Evaluate the impact of situations of risk and risks in combination.



## PRESENTING RIDE WITH RESPECT

Ride with Respect is broken into three levels depending on grades:

- Grades 1 − 3
- Grades 4 − 6
- Grades 7 − 12

A lesson plan, PowerPoint presentation, a list of equipment required, and accompanying handouts are supplied for each grade level.

Each of the lessons will take approximately 45 minutes to one hour to deliver. This will vary depending on the amount of discussion, the number of demonstrations and props you supply, and the amount of time the teacher allocates for your session.

Create an inviting and interactive atmosphere when delivering **Ride with Respect**. The lessons include ample opportunities to pose questions to the students to encourage discussion. Some students will have more experience than others with off-highway vehicles and their participation may help to initiate these discussions.

# **WORKING WITH SCHOOLS**

Schools and teachers are often very busy but they are receptive to programs such as **Ride with Respect**. Teachers will appreciate the clearly identified links to the Alberta Program of Studies. They will also appreciate the fact that an external expert is delivering the program so it does not require a great deal of preparation time.

Ride with Respect has provided templates for a letter to teachers that instructors may use to promote the program.

**Ride with Respect** has also provided a template for a letter that the teacher may send home to parents. This is important as both a tool for home-school communications, as well as a way to extend safety messaging to the parents as well.

These templates are available in the Letter Templates section of this Instructor Guide.

# **LESSON PLANS**

## **GRADES 1 - 3**

## **Learning Objectives**

The students will:

- Know which vehicles are classified as off-highway vehicles.
- Know that off-highway vehicle use can cause serious injury and death and that injuries can be reduced by following safety practices.
- Understand the ways they can protect themselves from injuries while riding an off-highway vehicle.
- Know how to show courtesy to other trail users.
- Know how to minimize the environmental impacts of using off-highway vehicles.
- Know it is best to ride with adult supervision at all times.

## Relationship with Alberta Education's Program of Studies

The information in this lesson meets the following outcomes of the Health and Life Skills Program of Studies in the Wellness Choices General Outcome.

#### **Grade One Outcome**

W-1.9 Describe and apply appropriate street safety behaviors in the community (e.g. as a passenger)

## **Grade Two Outcome**

 $\bullet$  W – 2.9 Describe and apply safety rules when using physical activity equipment; e.g. scooter.

#### **Grade Three Outcome**

W-3.9 Describe, apply and analyze appropriate safety behavior in the local community (e.g. street, railway crossings, dugouts, farm equipment, waterfront.)



## **Equipment**

## Required Equipment

- Lap top with an LCD projector, screen and DVD player. Most schools have this type of equipment but phone ahead to ensure it is available for use during your presentation.
- Different types of off-highway vehicle helmets (full faced, closed face, and three quarter shell) as well as a hockey and bicycle helmet, a ball cap and a toque.
- Helmet demonstration tools such as a helmet for eggs to use for demonstration purposes. When an egg wearing the helmet is dropped on the floor, it should not break, demonstrating how helmets protect our heads.

Styrofoam helmets can be purchased from Bil Ab Atlas:

Box 99, Stansgatan 1

SE-334 22 Anderstorp, Sweden

Phone: +46 (0) 371-191-00

contact@bilatlas.se

Cost: Approx. \$3.75 (US)/helmet + freight

Or helmets can be made by using Styrofoam or bubble wrap.

## Optional Equipment

• Instructors can demonstrate the fragility of the brain using a life-like gelatin brain.

Gelatin brain molds are available at:

Grand River Toys (Horrible Science – Bulging Brains)

Order online: https://www.grandrivertoys.com/p-1094-h9385.aspx

Phone: 1-800-567-5600

ThinkFirst Canada

Order online: http://www.thinkfirst.ca/order.aspx

Cost: Approx. \$16.00 (CDN)

Online gelatin brain recipe: http://www.thinkfirst.ca/downloads/resources/Gelatin\_brain\_mold\_recipe.pdf

- Instructors can use a large rock as an example of the things the students could hit if they are involved in an off-highway vehicle crash or rollover. This will reinforce the importance of wearing a helmet.
- Protective gear such as clothing, foot wear, gloves, goggles.

#### Introduction



## Slide 1

Thank the teacher for inviting you to the class to talk about something very important to you.

Explain that the presentation is about off-highway vehicles.

Explain that the reason this is important is that you want people to know how to enjoy using off-highway vehicles safely and how to make sure that everyone on the trail has fun. You also want to help protect the environment – the land and water – from damage that we could cause.

## Topic 1: What are off-highway vehicles?



## Slide 2

Pose this question: What are off-highway vehicles?

If the students are shy, the instructor may probe or explain what off-highway vehicles are using the next slide.



#### Slide 3

Pose this question: Do any of your parents have any of these machines at home?

Encourage discussion. Ask students to describe or point to the different machines.

Pose this question: Do you ride with Mom or Dad on the machine?

Encourage discussion.

Pose this question: Do you ride by yourself?

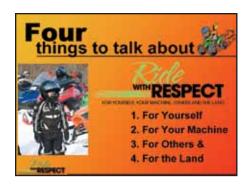
Encourage discussion.

Pose this question: When riding on the machine, do you wear a long sleeved shirt,

long pants and gloves?

Encourage discussion.





Today, we're going to learn about how to make it fun and safe for everyone and how to take care of our land.

We call it showing respect.

## **Topic 2: Adventure Trail**

Introduce the Adventure Trail CD. Explain that as they watch the CD, it will tell them:

- What a person should wear
- What size of a machine should be riding
- Where to ride
- What to do with garbage (empty juice boxes and chip bags)
- How to treat other campers and riders in the area

Tell the students that after we watch the CD, we will talk about what we learned.

## Adventure Trail CD sequence of slides.

This CD is interactive with a variety of prompts. The following information gives screen content and identifies the order of places on the screen to click the mouse on.

It will be helpful if you review the CD prior to your first presentation to familiarize yourself with how the program works.

## Screen 1: Storing food properly.

Click on: video screen, What's so funny, Raccoon in the guad box

## Screen 2: Dressing Properly for Riding OHVs

Click on: Why, Video screen

## Screen 3: Size of OHV

Click on: Raccoon, Video screen

## Screen 4: One Machine One Rider

Click on: Front of the quad, The eagle, Video screen

## Screen 5: Courtesy to Other Trail Users

Click on: Quad operator, The pig, Video screen

## Screen 6: Respect for Other Trail Users

Click on: Video screen

## Screen 7: Don't Harass Animals

Push the cursor to the moose's nose, Click on: Video screen

## Screen 8: Where to Ride OHVs

Click on: Why, Eyes looking out the log, Video screen

## Screen 9: Riding in Wet Lands

Click on: Turtle, Push curser up bear's nose, Video screen

## Screen 10; Keep Noise Low

Click on: Wreck it

## **Exit CD**



## **Summary of Adventure Trail**

Wrap up the session by asking the following questions.

Pose this question: Do you wear a helmet?

DEMO: Show students an egg and the styrofoam egg helmet.

DEMO: Hold up or point to the helmets and hats you have brought as props.

Have the student(s) point to one of the helmets that is similar to theirs.

DEMO: Choose a full face helmet and while pointing to the sticker on the back, explain that this sticker will tell you that it is the right one to wear while riding an off-highway vehicle. Discuss the importance of having a properly fitting helmet ensuring that it is fastened correctly. For helmet information, refer to the U.S. Consumer Product Safety Council's publication, "Which Helmet for which activity?" found at: http://www.cpsc.gov/cpscpub/pubs/349.pdf.

Pose this question: What else should a person wear when riding an off-highway vehicle?

Encourage discussion on clothing and gear.

Pose this question: Should you ride all by yourself?

Encourage discussion. Ask students why?

Pose this question: When riding where there are other campers and riders, what should you do?

Encourage discussion.

Pose this question: Should we ride through creeks wherever we want?

Encourage discussion.

#### Conclusion

Pose this Question: What would happen if I dropped this egg on the floor?

Pose this question: What about if I strapped this helmet on and then dropped it?

Encourage discussion. Drop the helmeted egg.

Thank the students for their attention. Remind them they need to wear a properly-fitted helmet, adhere to the seating capacity of the machine, ride an appropriately-sized machine and have a parent with them at all times as off-highway vehicles can cause serious injury and death. Using off-highway vehicles is a fun activity and doing things you discussed will help them enjoy it even more.

Tell them that you are leaving them an activity book for each person.

## **Handouts**

#### Required:

- Adventure Trail activity book for each student
- A copy of the CD for the classroom

Adventure Trail resources are available by contacting: Canadian Off-Highway Vehicle Distributor Council (COHV)

Phone toll free 1-877-470-2288 • Email info@cohv.ca

An online order form is available at http://www.cohv.ca/adventuretrailform.html

#### Optional:

Other handouts in the Handout section of the Instructor Guide.

## **GRADES 4 - 6**

## **Learning Objectives**

The students will:

- Know which vehicles are classified as off-highway vehicles.
- Know that off-highway vehicle use can cause serious injury and death and that injuries can be reduced by following safety practices.
- Understand the ways they can protect themselves from injuries while riding an off-highway vehicle.
- Understand how to show respect for other trail users.
- Know how to minimize the environmental impacts of using off-highway vehicles.
- Understand age restrictions and where off-highway vehicles can be operated according to provincial law.

## Relationship with Alberta Education's Program of Studies

The information in this lesson meets the following outcomes of the Health and Life Skills Program of Studies in the Wellness Choices General Outcome.

Wellness Choices General Outcome:

Students will make responsible and informed choices to maintain health and to promote safety for self and others.

#### **Grade Four Outcome**

W-4.10 Describe and demonstrate ways to assist with the safety of others.

## **Grade Five Outcome**

W-5.9 Determine appropriate safety behaviours for community recreational situations; e.g., using snowmobiles, all-terrain vehicles.

## **Grade Six Outcomes**

W-6.8 Analyze how laws, regulations and rules contribute to health and safety practices.

W-6.9 Evaluate the impact of personal behaviour on the safety of self and others.



## **Equipment:**

## Required Equipment

- Laptop with a LCD projector, screen and DVD player. Most schools have this type of equipment but phone ahead to ensure it is available for use during your presentation.
- Different types of off-highway vehicle helmets (full faced, closed face, and three quarter shell) as well as a hockey and bicycle helmet.
- Helmet demonstration tools such as a helmet for eggs to use for demonstration purposes. When an egg wearing the helmet is dropped on the floor, it should not break, demonstrating how helmets protect our heads.

Styrofoam helmets can be purchased from Bil Ab Atlas:

Box 99, Stansgatan 1

SE-334 22 Anderstorp, Sweden

Phone: +46 (0) 371-191-00

contact@bilatlas.se

Cost: Approx. \$3.75 (US)/helmet + freight

Or helmets can be made by using Styrofoam or bubble wrap.

## Optional Equipment

• Helmet demonstration tools such as a helmet for eggs to use for demonstration purposes.

• Instructors can demonstrate the fragility of the brain using a life-like gelatin brain.

Gelatin brain molds are available at:

Grand River Toys (Horrible Science – Bulging Brains)

Order online: https://www.grandrivertoys.com/p-1094-h9385.aspx

Phone: 1-800-567-5600

ThinkFirst Canada

Order online: http://www.thinkfirst.ca/order.aspx

Cost: Approx. \$16.00 (CDN)

Online gelatin brain recipe: http://www.thinkfirst.ca/downloads/resources/Gelatin\_brain\_mold\_recipe.pdf

- Instructors can use a large rock as an example of the things the students could hit if they are involved in an off-highway vehicle crash or rollover. This will reinforce the importance of wearing a helmet.
- Protective gear such as clothing, footwear, gloves, goggles.
- ATV and or snowmobile model.

## Introduction:



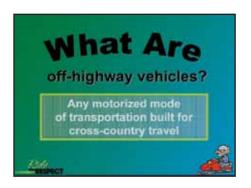
## Slide 1

Thank the teacher for inviting you to the class to talk about something very important to you.

Explain that the presentation is about off-highway vehicles and is brought to the students on behalf of the Alberta Government and your association/agency.

Explain that the reason this is important is that you want people to know how to enjoy using off-highway vehicles safely and how to make sure that everyone on the trail has fun. You also want to help protect the environment – the land and water – from damage that we could cause.

## Topic 1: What are off-highway vehicles?



## Slide 2

Pose this question: What are off-highway vehicles?

Encourage discussion.

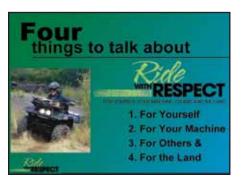
Pose this question: How many of you ride dirt bikes, quads or snowmobiles?

Encourage discussion.



## Slide 3

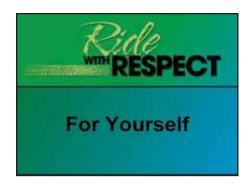
Discuss each vehicle and why the different machines are classed as off-highway vehicles.



## Slide 4

Explain that this course, **Ride with Respect**, is made up of four main things: respect for ourselves, respect for our machines, respect for other people, and respect for the land.





**Topic 2:** Respect for Yourself

This topic is about doing the things we need to do to stay safe. If we want to be alive and able to ride the next day, there are a few simple things we can all do.



#### Slide 6

Explain that when we respect ourselves as off-highway vehicle riders and passengers, we choose the proper gear for riding regardless of the machine we are using.

The first item of gear is an approved, properly fitting helmet. Different helmets may suit one sport better than another. For helmet information, refer to the U.S. Consumer Product Safety Council's publication, "Which Helmet for which activity?" found at: http://www.cpsc.gov/cpscpub/pubs/349.pdf.

**DEMO:** Show students an egg and the styrofoam egg helmet.

DEMO: Show a full faced helmet. Ask the students if any of them wear a helmet like this.

Explain that full faced helmets offer the rider excellent protection because of the chin guard.

**DEMO**: Show the students a closed face helmet. Suggest that this type is good for riding snowmobiles or street motorcycles.

DEMO: Show a three quarter shell helmet. It is similar to a full faced helmet in that the shell covers the back of the neck and ears but does not cover the front of the face. It has a chin strap. This type of helmet is used by policemen as it does not interfere with communication. The three quarter shell helmet offers much less protection for a person's face.

DEMO: Show a bicycle helmet and a hockey helmet and pose this question: Do any of you wear helmets like these?

Pose this question: Would it be appropriate to wear a helmet like this when riding on a quad or motorcycle?

Encourage the students to explain why bike and hockey helmets are not good for off-highway vehicles.

Pose this question: How can you tell if a helmet is approved for riding off-highway vehicles?

Hold up a helmet and show the students the sticker on the back of the shell. Students should look for one of the following stickers:

DOT - Department of Transport - the minimum you want for a safe helmet.

SNELL – one of the higher standards.



The clothing shown on the slide displays the winter dress for snowmobiles and the proper clothing and eye protection for motorcycles and quads.

Pose this question: What do you wear when riding the OHV?

After some discussion, explain that wearing expensive riding gear is good if Mom and Dad can afford it.

Remind the class that many students already have clothing that will work but they just don't realize it. Denim fabric or jean clothing is very acceptable. The need for long sleeved shirts, long pants and gloves is to protect the rider from willow, tree branches and thistle scratches. Over-the-ankle leather boots are a good choice because they give support to the ankles and protect the feet.

# Winter Time? • Dress in layers • Wear insulated boots • Wear a windproof outer layer • Stay off thin ice

#### Slide 8

Explain that, in the winter, there are special things they can do to stay safe.

Explain that they should dress in layers of clothing to protect against the loss of body heat. The outside layer should be wind proof.

Explain that they need to be cautious about riding on lakes and rivers. Thin ice is very dangerous. Explain that they should avoid:

- · Slushy ice and patches of open water
- Ice on or near moving water i.e., rivers, currents
- Ice that has thawed and refrozen
- Layered or rotten ice caused by sudden temperature change

More information about ice thickness is available in the Instructor Reference Material section of this Instructor Guide. A reference card is also available and useful to hand out. See the Instructor Reference Material for more information.



## Slide 9

Pose this question: Have any of you ever ridden in a utility vehicle (UTV) or side-by-side?

If the answer is yes, pose this question: What safety equipment did you see in the vehicle?

Pose this question: Did you use the seat belt?

Pose this question: Do you use the seat belt in your family vehicle – your car, truck or minivan?

Remind the students that wearing a seatbelt in a UTV is as important as when riding in the family vehicle. Kids and adults can be seriously hurt or killed in the case of a roll-over if they are thrown out.

Pose this question: If a person was riding in an amphibious machine like an Argo when it is in the water, should a person fasten the seat belt?

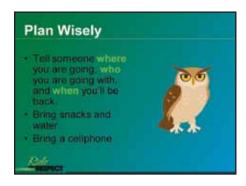
Discuss with students that the only time you do not wear a seat belt is if you are in an amphibious machine in the water. If the machine should capsize, a person would drown if they were unable to release their seat belt.





Explain that it is important to ride with an adult. The students should never ride alone. The adult should either be on the same machine – if it's built for two – or on a different machine in close proximity. The adult and youth should be able to speak to one another over the sound of the engine.

Note for Instructors: The Traffic Safety Act requires that persons under 14 years of age must be supervised by someone 18 years of age or older on the same vehicle or in close proximity.



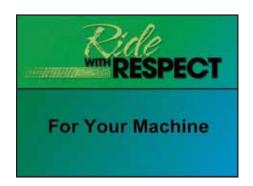
## Slide 11

Explain that in the planning stage of the trip, someone who is staying behind should be told when you plan to leave, where you are going, the route you will take, and the time you expect to be back. The names of the other riders going with you should be listed as well.

This type of planning lets others know the area where you will be if you are late and they have to come looking for you.

Encourage the students to take snacks and water. Explain that this will make the ride more comfortable if they get hungry. And if there's an emergency, they'll have something to eat and drink until you can get help.

## **Topic 3: Respect for Your Machine**



#### Slide 12

Introduce this section by explaining that off-highway vehicles are not toys. They are powerful machines that can be a lot of fun if they are respected.



Explain that when it comes to off-highway vehicles, one size does not fit all.

Pose this question: Does anyone know how to determine if an off-highway vehicle is the correct size?

Kids need to get the correct fit on an off-highway vehicle. **No child or youth under 16 years of age should operate an adult size ATV or snowmobile**. Kids should only operate an ATV or snowmobile that is appropriate for their age, weight, and maturity. Off-road utility vehicles (including amphibious models) should only be operated by persons with a valid driver's license. It is recommended that only youth 13 years of age and older operate off-highway motorcycles.

Explain that the best way to tell if the machine fits them is to check the manufacturers' recommendations. For a safe ride, it is very important to follow manufacturers' recommendations.

Explain that there is a general way to find the correct size of machine for their body size but does not replace following the manufacturers' recommendations.

Suggest that the students do the following procedure when they go home.

- Sit on the guad or snow machine.
- Take hold of the handlebars and stretch their fingers out to grasp the brake handles.
   Their fingers should reach out past and easily wrap around the brake handle. The arms should be slightly bent at the elbows.
- The next step is to place their feet flat on the pegs or running boards and stand up.
   With a slight bend in the knees there should be a gap of 10 to 15 centimeters (4 to 6 inches) between the seat of the machine and the highest point in the crotch.
   Explain that if they can do this easily, the vehicle is the correct size.

A similar exercise can be done at their desks.

- Have the students straddle the seats of their desks.
- With their feet flat on the floor, have them stand up. There should be a gap between the seat of their desk and the highest point of their crotch.

Also discuss the weight of the off-highway vehicle. A vehicle that is three times their body weight will be easer to handle than one that is six times their weight.

Explain that even people who race these machines will often choose one with lower power because it's more important that they can control them well to win races than just to have a lot of power.

Explain that vehicles come with owner's manuals and warning stickers. Check the stickers and read the manual because you will find helpful and important information – the information could even save your life.





Explain that if we do not fit the vehicle, we cannot control it and may end up damaging it, ourselves, or others on the trail.

This boy got hurt when he lost control of his ATV. He wasn't wearing a helmet and hurt his face. He shared this photo with us to help other kids understand why respecting off-highway vehicles is so important.

Note: This photo may not be used outside of the Ride With Respect program.



## Slide 15

To be safe, single-rider machines should have only one rider. Some off-highway vehicles are built to carry passengers and they are the only machine that should carry a passenger.

Pose this question: Have you ever ridden double on an off-highway vehicle?

Encourage them to describe what the seat is like on the machine at home.

Explain that on a quad designed for two, there is a space between the passenger and the driver, and that there are handles for the passenger by the small raised seat. There is also a platform for the passenger's feet. It is important that the passenger meet the manufacturers' age/size requirements so that they can plant their feet in the right place, securely hold onto to handles, and fit into seatbelts.

Explain to them that machines built for two riders are longer than a regular machine to make room for the driver and a passenger. With the extra space the driver is free to move to handle the machine.

When riding double on a regular single rider machine, the passenger crowds the driver and makes the vehicle difficult to handle. The extra person also overloads the vehicle and could cause it to tip over.



#### Slide 16

DEMO: Ask the students to sit at their desks, pretending they are riding an off-highway vehicle. Their feet should be firmly planted on the floor and their arms should be raised as if they are holding the handlebars. Provide instructions for turning left and right by turning the handlebars and shifting body weight. Ask the students to follow along with you. Explain that riding an off-highway vehicle requires special skills.

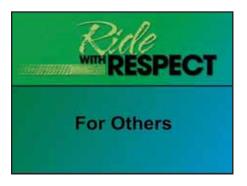
Depending on how much time you have, you could expand this by having the students do a walk-around and teaching hand signals.

Pose this question: Have any of you ever taken any off-highway vehicle training?

If someone has, ask them to describe the skills that they learned.

Explain that when you take a course, you will learn about the important parts of the machine, how to check the gas and oil and where the shut-off valve is. You will learn what to check before leaving on a ride. You will learn skills such as riding up and

down hills, turning corners, riding on side hills and crossing obstacles and avoiding rollovers and crashes. Hands-on training is very valuable.



## **Topic 4: Respect for Others**

#### Slide 17

Showing courtesy to all other trail users creates co-operation between trail users. We can all have more fun when other people using the trail respect us and our right to be there.



## Slide 18

Pose this question: With the number of people using the various trails for recreation, what can we do so that we all get along?

Explain that you can also show respect for other trail users by pulling your vehicle over to the side of the trail and slowing down when passing people not using vehicles – like horseback riders, cyclists or cross-country skiers - so that other people are not covered in dust, mud, snow or water.

After some discussion, pose this question: What are some of the things that bother you when you are camping or trail riding? What would you do to correct the problem? Direct their attention to the next slide.

When meeting horses, pull over, stop, shut off the motor and take off your helmet so that the horse can recognize you. Allow the riders to pass.

When approaching horses from the rear, stop and wait. This gives the riders time to turn the horses around so the animals can see you and not be frightened. The horse rider will signal and you can move to the edge of the trail and ride past slowly. It is important that a horse see what is making the sound so they are not frightened.

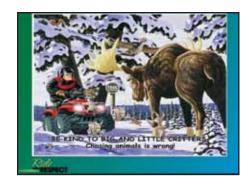


#### Slide 19

Explain to students that some off-highway vehicle mufflers are loud and irritate people and animals.

Pose this question: If a person has a loud muffler, what could be done to limit the





Ride at a speed that everyone in your group is comfortable with.

Stop to rest and check on your group often.

P.S. - What's missing?

noise? How might a person ride through an area where there are many campers?

Encourage discussion. Explain that driving slowly and not revving the motor will show that we respect the rights of others.

#### Slide 20

Pose this question: What would you do if you encountered a moose or other large animal on a trail?

After their responses, explain that they should stop and wait for the animal to leave the trail and move up into the bush before they carry on. If necessary, they might turn around and leave the way they came if the animal refuses to leave.

Do not attempt to approach any wild animal. Take only pictures. Explain that harassing an animal is not showing respect for wildlife and is punishable by law.

## Slide 21

All riders should travel at speeds that will accommodate the least experienced rider in the group. Ride carefully, be alert and stay in control.

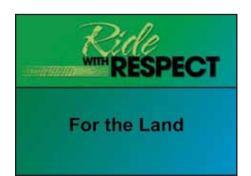
Pose the question: When riding with a group, who decides what trail will be ridden and who leads the group?

After some discussion, suggest that when riding with others, it shows respect when the least experienced member of the group has the opportunity to choose the trail and have the rest of the riders travel at that person's speed. The goal of the ride is to make it enjoyable for everyone. Stop often and check on the group you are riding with to make sure there are no problems.

When there are several riders traveling in single file, the person leading should stop often and check on the other riders. People get tired and a rest refreshes everyone.

Pose this question: What's wrong with this picture?

Encourage discussion. Explain that there is no adult with the kids.



## Topic 5: Respect for the Land

#### Slide 22

Explain that respecting the land is important because taking care of it makes sure it will be enjoyable for years to come.



Pose this question: When a person rides off the trail, what kinds of things can happen to the rider and the vehicle?

After some discussion, pose this question: What can happen to the area the person is riding on?

Explain that staying on a trail is safer for the rider, does not damage other vegetation and doesn't widen a trail.

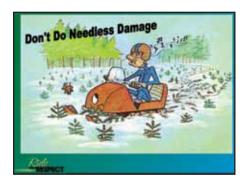
In wet areas, avoid spinning your tires, because it makes deep ruts which can be a problem for other riders.

Pose this question: Sometimes when riding on a trail, a person may encounter a muddy area. What could you do?

After listening to their responses, suggest that they wait until wet areas dry out before riding on them. If a person must go through the muddy area, remind them to try not to spin their tires as this can cut deep ruts that make it difficult for other riders to get through. They could also get stuck.

Pose this question: Can you think of reasons why cleaning your OHV before and after your ride can help protect the land? Encourage discussion.

Explain that cleaning your machine before and after your ride helps control the spread of weeds and also helps to prevent muffler fires.



## Slide 24

Explain that while riding a snowmobile over snow does not affect vegetation buried deep down, riding over the tops of small trees and shrubs that stick out of the snow can damage or kill them. It is important to stay on the groomed trail.



## Slide 25

Explain to the class that on some trails they may see a sign that says "Riparian Area - Do Not Cross."

Explain what a riparian area is, using the information below:

A riparian area is low and wet and may have water running through it. These areas provide water, livestock forage, fish and wildlife habitat. A healthy riparian area is one that is able to perform certain basic functions. These functions include primary vegetative production, protecting stream banks from erosion, trapping stream-born sediments which build up stream banks, promoting water absorption and storage, recharging groundwater reserves and regulating stream flow.

Explain that riding an off-highway vehicle through these areas can destroy them by changing groundwater flow and creating a muddy bog. Use designated creek crossing because silt can get stirred up and make it difficult for aquatic life downstream.





Remind the students to use bridges where possible. It is safer and does not disturb the riparian areas or the aquatic life in creeks.



## Slide 27

Encourage students to answer the questions on the slide.

Remind them that the proper place to ride is on trails. It is not good to tear up riparian areas and ride up and down creeks or sensitive slopes.

The photos on the right hand side are okay because their riders are on a trail, they are in a group, and they have helmets.



#### Slide 28

Pose this question: When you are out on a trail ride, what do you take with you? Students give a variety of items that should include food.

Pose this question: After eating, what do you do with the wrappings?

After the response, explain the following:

- It is a good idea for people to take a break and have a snack and drink. This not only adds to the enjoyment of the day but it gives them a chance to rest.
- If they are driving the machine, their arms can get tired and that could mean they could lose control of the vehicle.
- All food wrappings and empty cans or bottles must be taken out.
- Try to leave the area better than you found it!



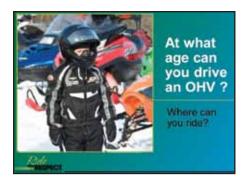
## Slide 29

After reading through this slide it will be helpful to use the chalk board to illustrate how riders may cross a highway to get to another trail.

If there is a passenger on the off-highway vehicle, they must get off and walk across the road before getting back on.

Explain that while the Alberta law generally states there is no riding allowed in ditches, some communities have a bylaw which does allow this.

Explain that when the students are selecting a route for riding, they are responsible for ensuring they are permitted to ride there. Refer to the Legislation in Alberta information in the Instructor Reference Material section of this Instructor Guide for details.



## Side 30

Pose this question: Does anyone know the answer to the questions on the slide? After some discussion bring up the next slide.



## Slide 31

Read aloud the information on the slide.

Pose this question: Can someone explain in their own words what they think this means?

After a few students give their answers, explain the slide once more.



## Slide 32

This slide provides the opportunity to wrap up the presentation and to review the main objectives.

Instructors may pose some questions to review the content and remind the students of what they have learned.

- How do you know if an off-highway vehicle is the right size?
- If I remind you to "buckle up" before you ride an off-highway vehicle, what buckles am I talking about? (Note: answers should mention properly fitting helmets as well as seat belts for UTVs)
- Why is it a good idea to take a hands-on riding training course?
- Why is it best to ride with an adult?
- How many people should ride on an off-highway vehicle? How can you find out? Ask the students if they have any questions.



## **Conclusion**

Thank the students for their attention. Remind them that using off-highway vehicles is a fun activity and doing the things you discussed will help them enjoy it even more.

## **Handouts**

## Required:

- Riding Your OHV: What to Wear
- Outdoor (spot the differences)

Other optional handouts are available in the Handouts section of this Instructor Guide.

• Instructors may refer to the Hands-On Training in Alberta section of this Instructor Guide for students interested in more information about the availability of training.

## **GRADES 7-12**

## **Learning Objectives**

The students will:

- Know which vehicles are classified as off-highway vehicles.
- Know that off-highway vehicle use can cause serious injury and death and that injuries can be reduced by following safety practices.
- Understand the ways they can protect themselves from injuries while riding an off-highway vehicle.
- Understand how to show respect for other trail users.
- Know how to minimize the environmental impacts of using off-highway vehicles.
- Understand age restrictions and where off-highway vehicles can be operated according to provincial law.

## Relationship with Alberta Education's Program of Studies

The information in this lesson meets the following outcomes.

## Grade Nine Health and Life Skills Outcome:

W-9.9 Analyze and evaluate laws and polices that promote personal, community and workplace safety e.g. driving, boating

## Grade Seven - Nine Outdoor Education Outcomes:

- Develop an esthetic appreciation for the environments they visit.
- Identify potential impacts of their activities on environments.
- Select environmentally appropriate approaches to carrying out outdoor activities.
- Demonstrate basic knowledge, skills and attitudes necessary for safe, comfortable outdoor experiences in all seasons.

## Career and Life Management Outcomes:

P2 - Evaluate choices and combinations of choices that can create barriers to achieving and maintaining health, and identify actions to improve health.

- Analyze poor choices or lack of ability to pursue healthy choices and decisions.
- Assess the effects of substance use and abuse—tobacco, alcohol, drugs—on health.
- Evaluate the impact of situations of risk and risks in combination.



## **Equipment:**

## Required Equipment

- Laptop with a LCD projector, screen and DVD player. Most schools have this type of equipment but phone ahead to ensure it is available for use during your presentation.
- Different types of helmets (full faced, closed face, and three quarter shell), including a hockey and bicycle helmet, and proper footwear to show students.

## Optional Equipment

- Helmet demonstration tools such as a gelatin brain, helmet for eggs or a large rock to use for demonstration purposes.
- When an egg wearing the helmet is dropped on the floor, it should not break, demonstrating how helmets protect our heads.

Styrofoam helmets can be purchased from Bil Ab Atlas:

Box 99, Stansgatan 1

SE-334 22 Anderstorp, Sweden

Phone: +46 (0) 371-191-00

contact@bilatlas.se

Cost: Approx. \$3.75 (US)/helmet + freight

Or helmets can be made by using Styrofoam or bubble wrap.

• Instructors can demonstrate the fragility of the brain using a life-like gelatin brain.

Gelatin brain molds are available at:

Grand River Toys (Horrible Science – Bulging Brains)

Order online: https://www.grandrivertoys.com/p-1094-h9385.aspx

Phone: 1-800-567-5600

ThinkFirst Canada

Order online: http://www.thinkfirst.ca/order.aspx

Cost: Approx. \$16.00 (CDN)

Online gelatin brain recipe: http://www.thinkfirst.ca/downloads/resources/Gelatin\_brain\_mold\_recipe.pdf

- Instructors can use a large rock as an example of the things the students could hit if they are involved in an off-highway vehicle crash or rollover. This will reinforce the importance of wearing a helmet.
- ATV or snowmobile model.
- Protective gear such as clothing, boots, gloves, goggles.
- Avalanche kit.
- · Emergency kit.
- First aid kit.

## Introduction



## Slide 1

Thank the teacher for inviting you to the class to talk about something very important to you.

Explain that the presentation is about off-highway vehicles and is brought to the students on behalf of the Alberta Government and your association/agency.

Explain that the reason this is important is that you want people to know how to enjoy using off-highway vehicles safely and how to make sure that everyone on the trail has fun. You also want to help protect the environment – the land and water – from damage that we could cause.

## Topic 1: What are off-highway vehicles?



## Slide 2

Pose this question: What are off-highway vehicles?

Encourage discussion.

Pose this question: How many of you ride dirt bikes, quads, UTVs and snowmobiles? Discuss each vehicle and why the different machines are classed as off-highway vehicles.



#### Slide 3

Explain these machines.



#### Slide 4

Explain that this course, **Ride with Respect**, is made up of four main things: respect for ourselves, respect for our machines, respect for other people, and respect for the land.



## **Topic 2: Respect for Yourself**



## Slide 5

This topic is about doing the things we need to do to stay safe. If we want to be alive and able to ride the next day, there are a few simple things we can all do.



## Slide 6

Explain that when we respect ourselves as off-highway vehicle riders and passengers, we choose the proper gear for riding regardless of the machine we are using.

The first item of gear is an approved helmet that fits properly. Different helmets may suit one sport better than another. The key to an approved helmet is the sticker on the back. The sticker should read "DOT" or "Snell" or both. For helmet information, refer to the U.S. Consumer Product Safety Council's publication, "Which Helmet for which activity?" found at: http://www.cpsc.gov/cpscpub/pubs/349.pdf.

# DEMO: Instructors may demonstrate the importance of wearing a helmet using some of the optional equipment ideas discussed earlier in this lesson.

Show or point to a full faced helmet and ask the students if any of them wear a helmet like this.

Explain that full faced helmets offer the rider excellent protection because of the chin guard.

Show or point to a closed face helmet and suggest that this type is good for riding snowmobiles or street motorcycles.

The next helmet that can be shown is the three quarter helmet. It is similar to a full faced helmet in that the shell covers the back of the neck and ears but does not cover the front of the face. It has a chin strap. This type of helmet is used by policemen as it does not interfere with communication. The three quarter shell helmet offers much less protection for a person's face.

# DEMO: Display a bicycle helmet and a hockey helmet and pose this question: Do any of you wear helmets like these?

Pose this question: Would it be appropriate to wear a helmet like this when riding on a quad or motorcycle?



When riding a quad or utility vehicle, an approved, properly fitting helmet, long pants, long sleeved shirt or jacket, gloves, eye protection and over the ankle leather boots are items you need.

Off-highway motorcycle or dirt bike gear should include an approved helmet, goggles, gloves, long sleeved shirt, long pants and over the ankle high top boots. Some riders choose to wear chest protector, shoulder pads, elbow pads and shin pads.

In winter for snowmobile riding, dressing in layers with a wind proof outer layer will minimize heat loss. Wearing an approved full face helmet, insulated gloves or mitts and insulated boots are also required to ride comfortably.



## Slide 8

Explain to students: Side-by-sides or UTVs with roll cages come equipped with seat belts.

Always fasten the seat belt in case the machine tips over. If you don't wear the seat belt and the UTV rolls over you could get thrown out and the roll bars could crush you.





Pose this question: How many ride double?

What type of machine do you use?

Encourage discussion.

Explain the difference between single and double machines.

If you ride double you may have had some problems controlling the machine. There is a difference between single rider and two person machines. The single rider machine has a long seat which enables the rider to shift their weight to balance the machine. A second rider overloads and crowds the driver so that there isn't room to shift body position.

The two person machine is longer and comes from the manufacturer with a raised second seat and handles, as well as a foot pad for the passenger. From the slide you can see the gap between the passenger and driver. On a two person machine the passenger should copy the driver's body position. It is important that the passenger meet the manufacturers' age/size requirements so that they can plant their feet in the right place, securely hold onto to handles, and fit into seatbelts.

Explain the following way to find whether you fit a particular machine.

Try this: Sit on a machine, place your feet flat on the pegs or running boards. With your hands on the handle bars stretch out you fingers over the brake handles. Your fingers should reach past the break handles so that they can wrap around them. When doing this there should be a slight bend in both elbows. Stand up and there should be 10 to 15 cm (4 to 6 inches) gap between the seat of your OHV and the highest part of the crotch.

Remind students not to ride double on a single rider machine.

Explain that students should only ride an off-highway vehicle that fits their age, weight and experience.

Explain that vehicles come with owner's manuals and warning stickers. Check the stickers and read the manual because you will find helpful and important information – the information could even save your life. Explain that the recommendations and stickers aren't there just to protect the company from lawsuits or being sued. Companies use their research to make these recommendations because they want you to enjoy using their product and not get hurt.



When planning a ride, leave a responsible person the details on where you are going, the time you are leaving, time you expect to return, the route you will take. Leave a list of the people going with you. If you are late in returning from your trip people will know where to start looking.

Bring a communications device so you can reach the people you are riding with and so you can call for help if needed.

Don't ride alone. If you were to have a problem there is no one there to provide assistance.

On any outing a person should take extra food and water. The food will come in handy if you should be delayed due to a problem with a machine.

Always stay in control of your OHV. Don't speed, stunt, use alcohol or drugs. When setting the right example for others it shows you are a serious rider and sends the right message to the younger and less experienced riders.

The only amount of alcohol or drugs you should have in your system is zero. And don't ride when you are tired or sleepy.



#### Slide 11

Also carry a first aid kit, avalanche kit in winter, survival gear and extra rope.

Survival gear includes things like:

- Extra key
- Pocket knife
- Tow rope
- Map
- Compass
- · High energy food
- Space blanket
- Flares

- Flashlight
- Matches
- Mirror or reflective material
- Shovel
- Transceiver and prove
- Radio/cellphone
- Candles



#### Slide 12

UTVs should only be operated by persons with a valid driver's license.

The ATV Argo: Explain the Argo come equipped two ways, with and without a roll cage. The Argo without a roll cage does not come equipped with seat belts. When using the machine in water where it floats do not stand up and use a flotation jacket at all times.

The Argo with the roll cage comes with seat belts. Fasten the seat belts when operating on land. When operating the machine in water where it floats, use a flotation jacket, remain seated and do not fasten the seat belts. The reason for not wearing the seat belts is if the machine rolls over in the water you may not be able to get the seat belt off in time to prevent drowning.





Pose this question: Has anyone taken a course on an OHV?

If a student has taken a course, ask them what they learned.

Explain that taking an OHV course will provide you with knowledge about the OHV, the basic skills in riding the machine and the body position of the rider in different types of terrain.

A list of organizations that offer hands-on training is included in the Instructor Reference Material.



#### Slide 14

Pose this question. Where does a person go to find information on weather and trail conditions?

Encourage discussion.

In summer, local tourist or information centers, ATV or motorcycle clubs and the local forestry departments are some sources of information. Some service stations display local off-highway vehicle club pamphlets with information about the club and phone numbers of some members to contact. Provincial trail maps are also available for some areas of the province at www.tpr.alberta.ca/recreation/trails/classification.aspx.

In winter, avalanches pose a real threat for snowmobiling in the mountains. Information about snow conditions can be found on the Canadian Avalanche Centre's website (http://www.avalanche.ca). The centre has up to date information on many areas of the country. The centre has Danger Scale Cards which you can order for free and distribute to students.

Frozen ponds and lakes also pose a problem because of thin ice. The recommended thickness of clear fresh ice is 12 centimetres (5 inches) to support the weight of a snowmobile or quad.

More information about avalanches and thin ice is available in the Instructor Reference Material section of this Instructor Guide. A reference card is also available and useful to hand out. See the Instructor Reference Material for more information.

### **Topic 3:** Respect for your Machine



#### Slide 15

Off-highway vehicles are not toys. They can be powerful and even dangerous, causing serious injury or death, if we don't respect them.



Is your OHV ready to go?

Pose this question: What do you do to get an OHV ready for a ride?

Encourage discussion.

Make a careful check of tires and tire pressure, lights, oil, fuel, coolant, brakes and the emergency stop switch. Check the track and belt on a snowmobile to make sure they are in good running condition. The throttle and steering assembly should move freely. Clear the suspension of any debris. You should carry an extra belt and two spark plugs.

#### **Topic 4: Respect for Others**



#### Slide 17

Courtesy is important in making an outing enjoyable for other trail users.



#### Slide 18

Pose these questions: If you are out on your OHV what can you do to show courtesy to hikers, mountain bikers, or cross-country skiers?

In the summer when riding your dirt bike, to show courtesy to a group of approaching horseman what should you do?

Encourage discussion.

When passing hikers, mountain bikers or cross-country skiers slow down, pull your OHV over to the side of the trail so there is room for both to pass.

When approaching a person riding a horse you move to the side of the trail, shut off the motor and take off your helmet so the horse can recognize you. Let the horse rider pass by and go down the trail before starting the motor and continuing on. When coming from behind horses, once the horse riders know you are there, slow down and stop. This gives the riders time to turn the horses around so they may see where the sound is coming from and will not be frightened. The riders will signal you to come, pull over to the side of trail and go slowly by. Continue slowly down the trail before speeding up.

When riding in a group ride at a speed so that the least experienced person can keep up. Take short breaks to check on the rest of the group.

Avoid riding at night.





How does the OHV rider show consideration for others at a winter snowmobile rally or summertime campsite?

In the winter where you have a number of people gathered around snowmobiles visiting, move slowly by the group so you are able stop quickly in case someone steps out in front of you.

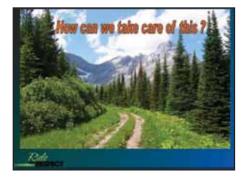
Revving your motor is an annoying sound when people are trying to talk. When riding your OHV close to campsites in the summer where people are sitting and talking, ride slowly past so the noise is low and doesn't get dust into the air and over the campers.

#### **Topic 5: Respect for the Land**



#### Slide 20

Taking care of the trails and wilderness areas will ensure they will be there for future generations to enjoy.



#### Slide 21

Pose this question: How do we take care of trails that are in wilderness areas? Encourage discussion.



#### Slide 22

Stay on designated trails. Use bridges where available. Riding off trails destroys grass, small trees and other vegetation. Riding through creeks pollutes the water with oil and silt.

Pose this question: Can you think of reasons why cleaning your OHV before and after your ride can help protect the land? Encourage discussion.

Explain that cleaning your machine before and after your ride helps control the spread of weeds and also helps to prevent muffler fires.



When camping in an area where you can ride your OHV, what condition do you leave the campsite in?

Camp in designated campsites. Build fires in proper fire pits. If there are no fire pits, use a camp stove to cook on. Clean up the area and take out everything you bring in. If there was garbage at the camp when you got there, take that garbage out also. Leave it better than you found it.



#### Slides 24

Stay out of riparian areas

A riparian area is low and wet and may have water running through it. These areas provide water, livestock forage, fish and wildlife habitat. A healthy riparian area is one that is able to perform certain basic functions. These functions include primary vegetative production, protecting stream banks from erosion, trapping stream-born sediments which build up stream banks, promoting water absorption and storage, recharging groundwater reserves and regulating stream flow.



#### Slides 25

Is this how we show respect for our machine, the land and the law?

Explain that riding an off-highway vehicle through riparian areas can destroy them by changing ground water flow and creating a muddy bog. This is especially true when 4x4 trucks are involved.

Remind students that if we abuse the land, we'll lose the right to enjoy it. Ruining the land is the same as vandalism like spray painting a sidewalk or carving initials into a park bench.



#### Slide 26

Mud bogging in a prepared place — this is the right way to do it. On private property, pits were dug and filled with water. Riders then drove in them. Later the holes were filled with the dirt that was dug out of them.





Encourage students to answer the questions that are on the slide.

Answer: On the left hand side, the riders are where they should not be. On the right hand side, riders are on a trail.

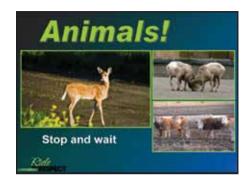


#### Slide 28

Use designated creek crossings. Running a machine up and down streams can stir up silt and make it difficult for aquatic life down stream. Use bridges to avoid bank destruction where available.

Pose this question: Sometimes when riding on a trail, a person may encounter a muddy area that has a lot of water, what could you do?

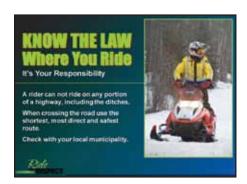
After listening to their responses, suggest that they leave and come back in a few days. This will allow the area to dry out. If a person must go through the muddy area, try not to spin your tires as this can cut deep ruts that make it difficult for other riders to get through. You can also get stuck.



#### Slide 29

Pose this question: What would you do when animals are on the trail?

When encountering animal(s) on a trail stop and stay on your machine. Don't rev your motor. If you wait, the animal will make its way off the trail. Wait until it moves back well off the trail then continue your ride. Do not attempt to approach a wild animal. When riding where there are cattle or other livestock, move slowly so they are not frightened and start to run.



#### Slide 30

After reading through this slide it will be helpful to use the chalk board to illustrate how riders may cross a highway to get to another trail.

If there is a passenger on the off-highway vehicle, they must get off and walk across the road before getting back on.

Explain that while the Alberta law generally states there is no riding allowed in ditches, some communities have a bylaw which does allow this.

Explain that when the students are selecting a route for riding, they are responsible for ensuring they are permitted to ride there. Refer to the Legislation in Alberta information in the Instructor Reference Material section of this Instructor Guide for details.



This slide asks the question what age can a person ride an OHV.

Review the content of the slide.

It is important that older students know the answer to this question because of the younger people that may ride with them.



#### Slide 32

This slide is an opportunity to wrap up the session.

Pose this question: Thinking about what we've been discussing, what are two ways we can:

- · Respect ourselves
- Respect the machine
- Respect others
- Respect the land

If students don't have specific answers, instructors may pose some questions to review the content and remind the students of what they have learned.

- How do you know if an off-highway vehicle is the right size?
- If I remind you to "buckle up" before you ride an off-highway vehicle, what buckles am I talking about? (Note: answers should mention helmets as well as seat belts for UTVs)
- Why is it a good idea to take a hands-on riding training course?
- How many people should ride on an off-highway vehicle? How can you find out?

Ask the students if they have any questions.

#### Conclusion

Thank the students for their attention. Remind them that using off-highway vehicles is a fun activity and that taking care of themselves, the trails and wilderness areas will mean opportunities for riding in the future.

#### **Handouts**

Handouts for this grade level are optional. Some materials you might want to provide are:

- Local club information
- Local hands-on training services



# **APPENDICES**

#### **Instructor Reference Material**

Vehicle Definitions

Universal Key Safety Messages and Supporting Data

Legislation in Alberta

Avalanche Safety

Thin Ice

#### **Hands-On Training in Alberta**

#### **Letter Templates**

Letter to Teachers

Letter to Parents

#### **Video Resources**

#### **Handouts**

# INSTRUCTOR REFERENCE MATERIAL

# **VEHICLE DEFINITIONS**

#### **Definition of an Off-Highway Vehicle**

Definition according to the Alberta Traffic Safety Act:

117(a): "off-highway vehicle" means any motorized mode of transportation built for cross-country travel on land, water, snow, ice or marsh or swamp land or on other natural terrain and, without limiting the generality of the foregoing, includes,

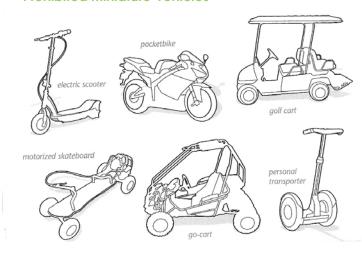
when specifically designed for such travel:

- (i) 4-wheel drive vehicles
- (ii) low pressure tire vehicles
- (iii) motorcycles and related 2-wheel vehicles
- (iv) amphibious vehicles
- (v) all-terrain vehicles
- (vi) miniature motor vehicles
- (vii) snow vehicles
- (viii) minibikes, and
- (ix) any other means of transportation that is propelled by any power other

than muscular power or wind (but does not include motor boats)

#### **Definition and examples of Miniature Vehicles**

#### **Prohibited Miniature Vehicles**



Prohibited Operation: These vehicles are motor vehicles as defined in the Traffic Safety Act, however they also meet the definition of "miniature vehicles" which are not permitted on a highway in Alberta, including sidewalks alongside the roadway. While many of these motorized vehicles will be used in a pedestrian-like manner, the operators of these vehicles do not meet the legal definition of "pedestrian."

Permitted Operation: Miniature vehicles may not be operated on a highway in Alberta; they may only be operated on private property.



# UNIVERSAL KEY SAFETY MESSAGES AND SUPPORTING DATA

The following information summarizes the research that was done to select the universal key safety messages as well as Alberta injury data. Please note that injury data is not available for all vehicles due to the limitations of the data collection process.

Instructors may find this information helpful if students, teachers or parents challenge or question them about specific safety recommendations

#### **Key Safety Messages**

Off-highway vehicles (OHVs) can cause serious injury or death. OHV injuries can be reduced by following these safety practices:

- Only ride an OHV that fits your age, weight and experience. Follow manufacturers' recommendations.
- Wear an approved helmet with face and eye protection and buckle up.
- Take a hands-on training course to learn how to operate your OHV.
- Ensure that you have constant, close, visual supervision by an adult.
- Refuse to carry or be a passenger on an OHV built for one person. Follow the seating capacity and passenger size requirements of the OHV.
- Drive sober Alcohol, drugs and OHVs don't mix.

#### Message One

Off-highway vehicles (OHVs) can cause serious injury or death. Only ride an OHV that fits your age, weight and experience. Follow manufacturers' recommendations.

#### **All Terrain Vehicle (**ATV)

#### Alberta Data: 2002-2009

113 Deaths

- 96 drivers
- 11 passengers, 9 with drivers over 16 years of age of which 5 were adult relatives and 4 were friends
- 6 other (loading/unloading ATV; pedestrians struck by ATV)
- 102 male; 11 female
- 17 were less than 16 years old

#### Mechanism of injury causing death

- Rolls/Flips 56
  - Of the 56 roll/flips, 39 occurred on flat terrain/no hill
- Collisions (vehicles, ATV, other) 25
- Struck tree 13
- Thrown 7
- Speed (not well documented)
- Multiple riders (approximately 20%) 21
  - 18 @ 1 passenger
  - 3 @ 2 or more passengers

#### Location

- 58 field/bush area
- 48 road/highway/ditch
- 1 farm
- 6 other

#### No helmet for drivers and passengers -73

- Head injury was the most common cause of death for drivers and passengers (n = 46)
- Of those drivers and passengers who died as a result of a head injury 36/46 were NOT wearing a helmet

#### Alcohol

- 83 deceased drivers were tested for alcohol consumption, 46 tested positive(100% male; 0% female)
- 33/46 were over the legal limit (0.08% blood alcohol concentration)

#### Deaths to youth/children less than 16 years old -17

- 13 male; 4 females
- 10 drivers; 7 passengers
- 11 rolls/flip (9 occurred on flat terrain/no hill); 4 collisions (vehicles, ATV, other); 2 thrown or struck
- 10 field/bush; 6 road/highway/ditch; 1 farm
- Multiple riders 10 (approximately 60%); 8 @ 1 passenger; 2 @ 2 or more passengers



#### **Snowmobiles**

Alberta Data: 2002-2008

**24 deaths** • 24 drivers

• 24 males

• 0 less than 16 years old

Mechanism of injury causing death

• 10 struck object (tree, post, wire, rock, culvert)

• 5 collision (snowmobile, ATV, vehicle)

4 thrown4 over edge1 avalanche

**Location** • 21 Field/Bush area

• 2 Highway/Road

• 1 Home

No helmet – 8 (5 unknown)

• 7 died as a result of a head injury. 2 were wearing a helmet, 2 were NOT wearing a helmet and

3 were unknown

• 23/24 deceased who were tested for alcohol consumption, 9/23 tested positive (100% male)

British Columbia Data: 2008/2009

During the 2008/2009 winter season, the British Columbia Coroners Service reported that 8

Albertans died in 7 separate avalanche incidents involving snowmobiles

#### Off-highway Motorcycle/Dirt bikes

Alberta Data: 2002-2009

12 Deaths • 12 drivers

• 0 passengers

• 12 male

• 2 were less than 16 years

Mechanism of injury causing death

4 ejected from off-highway motorcycle and struck a stationary object or the ground

4 collisions (motor vehicle or other OHV)

• 3 crushed by off-highway motorcycle

• 1 other

• 3 incidents mentioned high speed as a factor

• 3 incidents mentioned stunting as a contribution factor

• (none of the locations included organized, competitive events)

3 on roadways3 in gravel pits

• 6 other

• 6 were wearing helmets; 4 reports did not include helmet use

• 3 died of head injuries. Of those, 2 were NOT wearing helmets

• 6/12 were tested for alcohol, 2/6 tested positive (100% male)

#### Off-Road Utility Vehicle (Side-by-side UTVs (e.g. Rhino))

Alberta Data: 2007-2009

8 Deaths • 5 drivers

• 3 passengers, 1 under 16 years if age

• 7 male; 1 female

• 3 were less than 16 years old

Mechanism of injury causing death

Rolls/Flips – 7
 Other – 1

**Location** • 4 field/bush grea

• 3 road/highway/ditch

• 1 other

• 2 of 8 deceased were wearing a seat belt

• 5 of 8 deceased were not wearing a seat belt

• For 1 deceased, it is not known if they were wearing a seat belt.

No helmets for drivers/passengers – 4

• 3 deaths were caused by head injuries; one was NOT wearing a helmet

**Alcohol** – 3 • drivers were tested for alcohol 2 tested positive (100% male)

Alberta Centre for Injury Control & Research. Injury database March, 2010. Unpublished. Data available on request.

# Age Determination Guidelines: Relating Children's Ages to Toy Characteristics and Play Behavior

The U.S. Consumer Product Safety Commission (CPSC) is an independent federal regulatory agency established in 1973 by the Consumer Product Safety Act. The Commission's mission is to protect the public against unreasonable risks of injury and death associated with consumer products. They developed the Age Determination Guidelines by reviewing more than 200 articles on the topics of play, toys, materials, and the developmental behaviors of children. The following represents guidelines for ride-on toys which are used as guidelines for OHVs.

#### **6 Through 8 Years**

Most children have the physical ability to ride a bicycle without training wheels by the age of 6. They also have developed some understanding of the consequences of riding in areas shared by cars and pedestrians. Six-year-olds have developed the coordination to use hand brakes, and appropriately sized bicycles allow them to stand and straddle the bicycle with both feet on the ground. Children of this age group are very interested in popular wheeled vehicles like scooters and skateboards, and can operate slow-moving motorized vehicles [slow enough for parent to walk or jog beside the machine], particularly those with four wheels.

#### 9 Through 12 Years

Children 9 through 12 years old are very capable bicycle and scooter riders, and they can use bicycles with hand gears for different speeds. Bicycles and skateboards that are from licensed brand names or used by popular extreme sports riders are popular with this age group. They are usually fairly aware of traffic laws, but they are very likely to engage in high-risk behaviors like riding in traffic and stunt riding. Generally, 9- through 12-year-old children can operate a motorized wheeled vehicle that does not exceed 10 miles per hour and has gear shifting.

Faster-moving motorized bicycles and scooters are generally not appropriate even for 12-year-olds because of difficulty associated with both balancing and steering the vehicle while moving. Motorized scooters & bicycles require cognitive skills & motor skills that usually develop after age 12.

U.S. Consumer Product Safety Commission. (2002). Age Determination Guidelines: Relating Children's Ages to Toy Characteristics and Play Behavior. Retrieved March 2, 2010, from http://www.cpsc.gov/businfo/adg.pdf



#### **ATVs**

- ATV injury data from the United States reports that 89% of children less than 16 years of age injured in ATV crashes
  were injured while driving an adult-sized ATV.
  - U. S. Consumer Product Safety Commission. (2005). Part 2 Tab D. Analysis of Petition CP 02-4/HP 02-1 Requesting Ban of ATV's Sold for the Use of Children Under 16 years of Age Washington D. C.: U. S. p. 66-80.
- CPSC analysis indicates that the injury rate for children/youth under 16 years of age operating adult-sized ATVs is about twice the expected rate of those who are driving youth-size ATVs.
  - U. S. Consumer Product Safety Commission. (2006). Federal Register: Standards for all terrain vehicles and ban of three wheeled all-terrain vehicles: Notice of proposed rule making, 71(45):45904-45962.

#### **Snowmobiles**

- Children younger than 6 years of age do not have the strength or stamina to be transported safely as passengers on snowmobiles.
  - American Academy of Pediatrics (2000) Snowmobiling Hazards. Pediatrics, 106(5), 1141-1143.
- A review of children (ages 5 to 17 years) hospitalized at one Michigan institution between 1991 and 2000 found that
  the incidents appeared to be caused by reckless driving, poor decision making, excessive speed, and/or poor visibility,
  which is particularly disturbing because the child was driving the snowmobile in half of the cases.
  - DeCou, J. M., Fagerman, L. E., Ropele, D., Uitvlugt, N. D., Schlatter, M. G., & Connors, R. H. (2003). Snowmobile injuries and fatalities in children. Journal of Pediatric Surgery, 38(5), 784-787.
- Children younger than 16 years were injured or killed when they fell from their snowmobiles, had the vehicle roll over them, or crashed the snowmobile into other snowmobiles, vehicles, or stationary objects.
   American Academy of Pediatrics (2000) Snowmobiling Hazards. Pediatrics, 106(5), 1141-1143.
- The National Electronic Injury Surveillance System (NEISS) of the US Consumer Product Safety Commission (CPSC)
  found that a number of children were injured while being towed when their sled, tube, tire, or saucer overturned, struck
  an object or was hit by another vehicle. In general, children younger than 8 years who were injured or killed from
  incidents involving snowmobiles tended to be passengers on snowmobiles or sleds.
- American Academy of Pediatrics (2000) Snowmobiling Hazards. Pediatrics, 106(5), 1141-1143.
- If the need arises to tow a person the risk of injury is reduced by using a sled or cutter attached to the snowmobile using a rigid bar connection. The driver should travel at slow speed over level terrain away from trees, rocks and other vehicles, and a spotter should be used to watch the individuals being towed.
  - American Academy of Pediatrics (2000) Snowmobiling Hazards. Pediatrics, 106(5), 1141-1143.

#### Off-road Motorcycles/Dirt Bikes

- Among all children aged 19 years or younger in the United States, those aged 12 15 years suffer the highest rate of non-fatal injuries from off-road motorcycle riding.
  - Centers for Disease Control and Prevention. (2006) Morbidity and Mortality Weekly Report, Vo. 55, No. 22.

#### **Message Two**

Wear an approved helmet with face and eye protection and buckle up.

#### Alberta Data – Summary of Deaths and Helmet Use

#### ATVs (2002 - 2009)

- Head injury was the leading cause of death (46/113)
- Of those who died as a result of a head injury, 36/46 were NOT wearing a helmet

#### Snowmobiles (2002 - 2008)

• 7 died as a result of a head injury, 2 were wearing a helmet, 2 were NOT wearing a helmet and 3 were unknown

#### Off-highway Motorcycle/Dirt bikes (2002 – 2009)

• 3 died of head injuries, 2 were not wearing helmets

#### **Side-by-side UTVs (2007-2009)**

• 3 died of head injuries, 1 was not wearing a helmet, the other two were unknown

Alberta Centre for Injury Control & Research. Injury database March, 2010. Unpublished. Data available on request.

#### **OHV-related Research**

- A systematic review of the efficacy of motorcycle helmets to reduce morbidity and mortality from head injury found that helmets reduced risk of injury by approximately 69% and reduced the risk of death by approximately 42% among motorcycle riders. This review concluded that helmet use should be promoted globally for motorcycle rider safety.
   Liu BC, Ivers R, Norton R, Boufous S, Blows S, Lo SK. (2009). Helmet for preventing injury in motorcycle riders (Review). The Cochrane Library Art. No: D004333.Dol: 101002/14651858. CD004333.pub.3(2).
- In a Canadian study looking at OHV-related emergency room visits and hospitalizations for children less than 16, it was
  found that injuries from ATVs and dirt bikes were more severe in nature and more closely resembled injuries from motor
  vehicle collisions than injuries from bicycling.
  - Yanchar NL, Kennedy R, Russell C. (2006). ATVs: Motorized toys or vehicles for children? Injury Prevention; 12:30-34.

#### **ATVs**

- In a non-fatal injury producing incident, helmets are associated with as much as a 64% reduction in the risk of head injury. Helmet use also is associated with a 42% reduction in the risk of a fatality, given an incident resulting in injury. Rodgers GB. (1990). The effectiveness of helmets in reducing all-terrain vehicle injuries and deaths. Accident Analysis and Prevention. Vol. 22 No.1. pp 47-48.
- A 5-year study done by Holmes, et al. (2004) found that face fractures were also a common occurrence in ATV riders and occurred 24% more often in this population than they did in motorcycle riders and that individuals who sustain a face fracture are at an increased risk of neurologic impairment.
  - Holmes PJ, Loehler J, McGwin GJ, Loring RW. (2004). Frequency of maxillofacial injuries in all-terrain vehicle collisions. Journal of Oral Maxillofacial Surgery; 62(697):701.
- Organizations including the American Academy of Pediatrics recommend the use of motorcycle helmets at all times for all ATV riders as a means of reducing head injuries.
  - American Academy of Pediatrics: Committee on Injury and Poison Prevention (AAP). All-terrain vehicle injury prevention: Two-three-and four-wheeled unlicensed motor vehicles. Pediatrics 2000 June; 105(6):1352-1554.



#### **Message Three**

Take a hands-on training course to learn how to operate your OHV.

vehicles: Notice of proposed rule making. 71(45):45904-45962.

#### **ATVs**

- The number of ATV operators with less than one year driving experience or who drive less than 25 hours per year has increased substantially, and it is this group that has "overwhelmingly" the greatest risk for injury.

  Levenson MS. (2003). All-terrain vehicle 2001 injury and exposure studies. Washington D. C.: U. S. Consumer and Product Safety Commission.

  Retrieved March 2, 2010, from http://www.cpsc.gov/LIBRARY/FOIA/FOIA03/os/atvex2001.pdf
- An ATV driver training course may provide the experience necessary to reduce this risk. ATV driver training can introduce a new ATV driver to common and dangerous situations that may occur during off-road situations and provide the necessary knowledge and skills with which to navigate those situations.

  U. S. Consumer Product Safety Commission. (2006). Federal Register: Standards for all terrain vehicles and ban of three wheeled all-terrain
- A recent study examining the effects of ATV safety education showed that ATV training significantly improved safety behaviors including helmet use, adhering to stated seating capacity, and never riding on paved roads.

  Burgus SK, Madsen MD, Sanderson WT, Rautiainen RH. (2009). Youths Operating All-Terrain Vehicles Implications for Safety Education. Journal of Agromedicine; 14: 97-104.

#### **Snowmobiles**

- Common factors identified in other studies and contributing to snowmobile incidents include operator error, speeding, traveling on inappropriate terrain, nighttime operation and alcohol use.
   American Academy of Pediatrics (2000) Snowmobiling Hazards. Pediatrics, 106(5), 1141-1143.
- A study of snowmobile injury in Manitoba found that most trauma occurred during hours of suboptimal lighting (68%) or after midnight (18%).
  - Stewart, R. L., & Black, G. B. (2004). Snowmobile trauma: 10 years' experience at Manitoba's tertiary trauma centre. Canadian Journal of Surgery, 47(2), 90-94.

#### **Message Four**

Ensure that you have constant, close, visual supervision by an adult.

#### **All OHVs**

It is not known to what extent supervision reduces the risk of injury in children. When deciding how much supervision
would be adequate, factors such as characteristics of the child (impulsivity, physical and cognitive abilities), potential
hazards, and potential severity of injuries should be considered. The highest level of supervision includes attention,
proximity, and continuity.

Burgus SK, Madsen MD, Sanderson WT, Rautiainen RH. (2009). Youths Safety Education. Journal of Agromedicine; 14: 97-104.

#### **ATVs**

• Of the 14 ATV-related fatalities in Albertan children less than 16 years of age occurring from 2002 to 2007, 11 had no supervision (attention, proximity, or continuity).

Provincial regulations in Alberta only require supervision by an adult (≥18 years-old) when youth are driving an off-highway vehicle on public property. This regulation may not be enough to reduce child mortality from ATVs as it does not specify an adequate level of supervision. The majority of ATV-related fatalities for children less than 16 years of age appear to be occurring on private property, and helmets were confirmed to be worn by the deceased in only 3 out of 9 incidents on private property. Adequate supervision may reduce the risk of fatality or injury by ensuring helmet and other protective equipment use, appropriate size ATV use, rider training, and speed control; however, injuries may still occur under adequate supervision considering the inherent dangers associated with ATVs. ATVs need to be respected as motor vehicles not as simple, recreational toys.

Harris A, Drul C, Belton K, Voalklander D. (2009). Unpublished Article Available from: Alberta Centre for Injury Control & Research. 1-13.

The United States Consumer Product Safety Commission reported that there was no adult presence in 66% of fatal incidents in children less than 16 years of age on 4-wheel ATVs occurring between 1999 and 2000.
 U. S. Consumer Product Safety Commission. (2003). Tab F. Analysis of ATV-Related Fatality Data for CPSC Petition CP 02-4/HP 02-1 Washington D.C. 20207 p. 99-150. Retrieved March 2, 2010, from http://www.cpsc.gov/LIBRARY/FOIA/foia05/brief/atvpt3.pdf



#### **Message Five**

Refuse to carry or be a passenger on an OHV built for one person. Follow the seating capacity and passenger size requirements of the OHV.

#### Alberta Data – Deaths Involving Multiple Riders

#### ATVs (2002 - 2009)

- 11/113 ATV-related deaths were passengers
  - 21/113 ATV-related deaths involved multiple riders
  - 18 @ 1 passenger
  - 3 @ 2 or more passengers

#### In deaths to youth less than 16 years of age, 10/17 ATV-related deaths involved multiple riders

- 8 @ 1 passenger
- 2 @ 2 or more passengers

#### Snowmobiles (2002 - 2008)

• O snowmobile-related deaths were passengers

#### Off-highway Motorcycle/Dirt bikes (2002 – 2009)

• O off-highway motocycle/dirt bike-related deaths were passengers

#### Side-by-side UTVs (2007 - 2009)

• 3/8 UTVs-related deaths were passengers

Alberta Centre for Injury Control & Research. Injury database March, 2010. Unpublished. Data available on request.

#### **ATVs**

- In a Canadian study looking at OHV-related emergency room visits and hospitalizations for children less than 16, 29% of the children injured on ATVs were injured as passengers.
  - Yanchar NL, Kennedy R, Russell C. (2006). ATVs: Motorized toys or vehicles for children? Injury Prevention; 12:30-34.
- The United States Consumer Product Safety Commission reported multiple riders in 45% of fatal incidents in children less than 16 years of age on 4-wheel ATVs occurring between 1999 and 2000. Of the deceased, 76% were drivers and 24% were passengers. In most of the examined fatalities, the ATV was driven by a child less than 16 years of age. U.S. Consumer Product Safety Commission. (2003). Tab F. Analysis of ATV-Related Fatality Data for CPSC Petition CP 02-4/HP 02-1 Washington D.C. 20207 p. 99-150. Retrieved March 2, 2010, from http://www.cpsc.gov/LIBRARY/FOIA/foia05/brief/atvpt3.pdf

#### **Message Six**

Drive Sober – Alcohol, drugs and OHVs don't mix.

#### Alberta Data – Summary of Deaths and Alcohol Involvement

#### ATVs (2002 - 2009)

- 83/96 drivers were tested for alcohol consumption, 46 tested positive (100% male)
- 33/46 were over the legal limit (0.08% blood alcohol concentration)

#### Snowmobiles (2002 - 2008)

• 23/24 drivers were tested for alcohol consumption, 9/23 tested positive (100% male)

#### Off-highway Motorcycle/Dirt bikes (2002 – 2009)

• 6/12 drivers were tested for alcohol, 2/6 tested positive (100% male)

#### Side-by-side UTVs (2007 - 2009)

• 3/5 drivers were tested for alcohol, 2 tested positive (100% male)

Alberta Centre for Injury Control & Research. Injury database March, 2010. Unpublished. Data available on request.

#### **Zero Tolerance Recommendations**

Organizations including the Alberta Snowmobile Association, Canadian Off-Highway Vehicle Distributors Council, and Mothers Against Drunk Driving all recommend a **zero tolerance** for consumption of alcohol or drugs prior to or during operation of OHVs as the only course of action.

- Alberta Snowmobile Association (2010). Zero Tolerance. Retrieved February 23, 2010, from http://www.altasnowmobile. ab.ca/admin/contentx/default.cfm?h=11047&grp=1&Pageld=11047.
- Canadian Off-Highway Vehicle Distributors Council (2009). COHV Safe Rider Code. Retrieved February 23, 2010, from http://www.cohv.ca/ridercode.html.
- Mothers Against Drunk Driving. (2008). MADD Canada releases: On-trail or off-trail...Zero tolerance is the message...
   Don't drink and ride. Retrieved March 1, 2010, from http://www.madd.ca/english/news/pr/p20080110.htm.

#### **Legal Implications**

 A person can be charged for impaired driving for driving any motor vehicle including off-highway vehicles like ATVs and snowmobiles.

Department of Justice Canada. (2009). Fact Sheet Impaired Driving. Retrieved February 22, 2010, from http://www.justice.gc.ca/eng/pi/pcvi-cpcv/id-cafa.html.

#### **ATVs**

Alcohol and drug intoxication has been implicated as possibly the most pervasive risk factor in ATV related injuries. It
has been found that even small amounts of alcohol increase both the likelihood that the ATV user will be involved in an
ATV collision and that the injuries sustained in the collision will be more severe.

Hall AJ, Bixler D, Helmkamp JC, Kraner JC, Kaplan JA. (2009). Fatal all-terrain vehicle crashes: Injury types and alcohol use. AM J Prev Med; 36(4): 311-316.



#### **Snowmobiles**

• Numerous studies in various countries have found alcohol to be a contributing factor to snowmobile injury and death. For example, a study conducted in Manitoba found that alcohol use was associated with 88% of injuries sustained by patients during the 10-year study period. Of the 294 patients, 207 (70.4%) had a blood alcohol level greater than 0.08.

Stewart, R. L., & Black, G. B. (2004). Snowmobile trauma: 10 years' experience at Manitoba's tertiary trauma centre. Canadian Journal of Surgery, 47(2), 90-94.

# **LEGISLATION IN ALBERTA**

	Private Land	Provincially Numbered Highways	Municipal Roads and Highways	National Parks	Provincial Parks	Provincial Recreation Areas	Provincial Public Land
Examples (should not be considered an exhaustive list)	Farms, fields, acreages, industrial lots, private campgrounds	Highways 2, 11, 16, 28, 895, etc.	Streets, alleys, range and township roads	Banff, Jasper, Elk Island	Aspen Beach, Chain Lakes and other provincial parks	Chambers Creek, Lakeland and other Provincial Recreation Areas	Forest Land Use Zones, Grazing Leases, "Crown" land
Operation of an Off Highway Vehicle	Landowner's permission required	Not permitted on road surface or ditches (*)	Permitted where enabled by municipal bylaw. Consult enabling bylaws for details.	Not permitted	Not permitted	Only where permitted	Only where permitted
Operator's License	Landowner's discretion	n/a	Minimum of Class 7 required where riding is permitted	n/a	n/a	Not required	Not required
Age Restriction	Landowner's discretion	п/а	Must be 14 years, where riding is permitted.	п/а	n/a	Must be 14 years, where riding is permitted. Persons under 14 must be supervised by someone 18 years of age or older on the same vehicle or in close proximity.	Must be 14 years, where riding is permitted. Persons under 14 must be supervised by someone 18 years of age or older on the same vehicle or in close proximity
Vehicle Insurance and Registration	Landowner's discretion	n/a *Required for crossing highway	Required where riding is permitted. License plate must be attached to front or rear of vehicle and clearly visible.	n/a	n/a	Required where riding is permitted. License plate must be attached to front or rear of vehicle and clearly visible.	Required where riding is permitted. License plate must be attached to front or rear of vehicle and clearly visible.
Vehicle Equipment	Landowner's discretion	n/a	White head lamp, red tail lamp, spark-arresting muffler	n/a	n/a	Head lamp, tail lamp, spark- arresting muffler	Head lamp, tail lamp, spark- arresting muffler
Rider Equipment	Landowner's discretion	n/a	Helmet may be required. Consult enabling bylaw for additional details.	n/a	n/a	None required. Helmet and riding gear recommended	None required. Helmet and riding gear recommended
Relevant Legislation	Petty Trespass Act, Occupiers' Liability Act	Traffic Safety Act	Traffic Safety Act		Provincial Parks Act Provincial Parks Regulation	Provincial Parks Act Provincial Parks Regulation	Public Lands Act, Forest Recreation Regulation
Notes and additional expectations		Agricultural exemptions apply on some three digit highways. Applies to gravel or paved roads (*) Safe crossing is permitted as per Traffic Safery Act provided that machine is legal for operation on public land.	Includes ditches.  (7) Safe conssing may be permitted as per TSA provided that machine is legal for operation on public land.				Access may be controlled or subject to occupate/leaseholder discretion where other land use occurs (e.g. Forest Land Use Zones, grazing leases, industrial roads). Riders should stay out of lakes, streams and wetlands.
Contact	Landowner	Alberta Transportation	Municipality	Parks Canada	Alberta Tourism, Parks and Recreation	Alberta Tourism, Parks and Recreation	Alberta Sustainable Resource Development

For more information

The Traffic Safety Act is available at:

http://www.qp.alberta.ca/574.cfm?page=T06.cfm&leg\_type=Acts&isbncln=9780779742110

The Off-Highway Vehicle Regulation is available at:

http://www.qp.alberta.ca/574.cfm?page=2002\_319.cfm&leg\_type=Regs&isbncIn=077972013X

The Provincial Parks Act is available at:

http://www.qp.alberta.ca/574.cfm?page=1985\_102.cfm&leg\_type=Regs&isbncIn=9780779732586 The Provincial Parks (General) Regulation is available at:

http://www.qp.alberta.ca/574.cfm?page=P35.cfm&leg\_type=Acts&isbncln=9780779744978

The Public Lands Act is available at:

http://www.qp.alberta.ca/574.cfm?page=p40.cfm&leg\_type=Acts&isbncIn=9780779743100

The Forest Recreation Regulation is available at:

http://www.qp.alberta.ca/574.cfm?page=1979\_343.cfm&leg\_type=Regs&isbncIn=9780779747825



## AVALANCHE SAFETY



### **Avalanche Safety Tips**

Any snow-covered slope has the ability to slide. The majority of avalanches start on slopes between 30 and 45 degrees, ideal snowmobiling slopes.

#### Be Prepared:

- Plan a trip (difficulty, length, danger exposure) that takes into consideration current conditions, people's interests and skills, terrain and other hazards.
- Ensure group members have proper avalanche safety training.
- Carry survival equipment in a backpack including: transceiver, shovel, probe and spare batteries.
- Obtain the Canadian Avalanche Centre (CAC) Public Avalanche Bulletin for latest conditions:
   1-800-667-1105 or <a href="https://www.avalanche.ca">www.avalanche.ca</a>. Consult the CAC Avaluator Trip Planner.
- Test the transceiver's transmit and receive functions at home.
- Ensure all transceivers are on transmit before leaving the trucks for the ride.

#### Route Selection. It's Up to You - Know Before You Go:

- Travel low angle slopes, heavily treed areas, ridges and broad valley bottoms to avoid avalanche paths.
- If you choose to ride an avalanche slope, minimize your risk.
- Avoid slopes with excess wind loaded snow.
- ◆ Learn the significance of wind, sun, shade, and terrain shape on avalanche danger.
- Be aware of escape routes and safe stopping areas.
- Avoid terrain traps or terrain features that can:
  - · Increase the depth of burial
    - Gullies
    - Steep transition areas (sharp changes in the slope angle)
    - Sharp valleys
    - · Creek beds
    - · Walls or ridges crossing the natural path

more...







- Decrease the chance for escape
  - Gullies
  - Crevasses
  - Open water
- Increase the chance of injury
  - Cliffs
  - Rocks and trees in avalanche path

#### Keep in contact:

- Always ride in a group.
- Maintain constant visual contact at all time.
- Cross suspect slopes one at a time.
- Use a hand signal for "avalanche path...spread out".
- Listen to concerns of all group members.

#### **Travel Habits:**

- Park in safe areas, pointed to safer areas (escape route).
- Kill switch up.
- Allow the snow to settle after a storm.
- Test (track up) small slopes with low consequences.
- Test slopes using wide, fast passes before placing yourself in committing terrain.
- Make sure that only one machine is on the slope at any time, even if your buddy is stuck.
- Do not let your guard down slopes can avalanche even after multiple passes.

#### If you're caught in an avalanche, try to:

- Call out, draw attention to yourself.
- React fast, attempt to ride out of the slide.
- If no longer in control, separate yourself from your snowmobile.
- FIGHT HARD with swimming motions, trying to stay on top of the snow and get to the side.
- Grab trees, rocks, etc. to avoid being tumbled down the slope.
- Keep your mouth closed and your teeth clenched.

#### When the avalanche slows, try to:

Use your hands to create airspace in front of your face.



- Thrust an arm to the surface.
- Once the avalanche stops the snow sets up like concrete.

#### When the avalanche stops, try to:

- Remain calm.
- Control your breathing to conserve your oxygen, relax.
- Shout only when rescuers are very near (sound does not travel well within the snow pack).

#### **Searching for a Victim:**

Someone needs to take charge.

- Take a moment to organize the rescue.
- Consider the possibility of another avalanche before attempting a rescue. Set an escape route and post a lookout if necessary.
- Look for surface clues: a hand, hat, glove, etc.
- Note the last seen point of the victim(s).

#### Search with Beacons:

- Ensure all rescuers' beacons are switched to receive.
- Spread out at 30 metre intervals to cover the debris.
- Don't litter the slope with rescuers' belongings.
- Search around and downhill of any clues.
- When a signal is picked up assign one or two to locate it while others continue the search.
- Pinpoint the signal to a small radius, then probe to find the victim.
- Without removing the probe, quickly dig out the victim.
- Turn the victim's beacon to receive if others are still buried.

# Public Avalanche Bulletins are available by calling 1-800-667-1105 www.avalanche.ca

If you have any suggestions on traffic safety issues that are of interest to you and your community, or for more information, please contact:

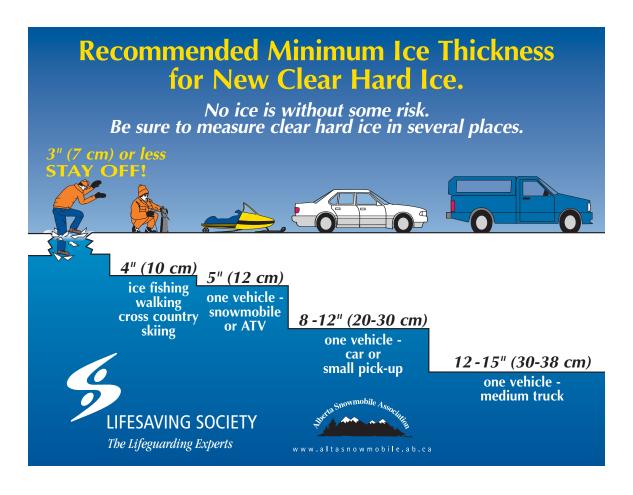
Office of Traffic Safety Alberta Transportation Room 109, Twin Atria, 4999 - 98 Ave. Edmonton, AB T6B 2X3 Tel: 780-422-8839 Fax: 780-422-3682

Website: www.saferoads.com

Alberta Snowmobile Association 11759 Groat Road Edmonton, AB T5M 3K6 Tel: 780-427-2695 Fax: 780-415-1779

Website: www.altasnowmobile.ab.ca

# THIN ICE



This handy wallet-sized reference card shows the recommended minimum ice thickness for winter activities.

Available for purchase at the SHOP: **www.lifesaving.org** 



- It is critical that the ice quality or type of ice is evaluated before you travel.
- \* Clear hard, new ice is the only kind of ice recommended for travel.
- ★ Avoid!
  - slushy ice
  - ice on or near moving water i.e., rivers,
  - ice that has thawed and refrozen
  - layered or rotten ice caused by sudden temperature changes
- \* Other risk factors that weaken or "rot" ice:
  - snow on ice that acts as a blanket to prevent hardening of ice
  - pressure ridges due to wind or current pressure

NO ICE IS WITHOUT SOME RISK...
MINIMIZE YOUR RISK



Art/Graphics copyright, 1997 State of Minnesota, Department of Natural Resources. Used with permission.



# HANDS-ON TRAINING IN ALBERTA

The following is a list of some of the companies and organizations that offer hands-on training for off-highway vehicle use in Alberta. This does not imply an endorsement of these trainers by the authors of this document.

#### Alberta Off-Highway Vehicle Association

500 Country Hills Blvd. #725

Box 38017

Calgary, Alberta T3K 5G9 Email: info@aohva.com Phone: (403) 673-3332

AOHVA offers the CASI ATV RiderCourse

#### **Alberta Safety Council**

4831-93 Avenue NW Edmonton, Alberta

T6B 3A2

Email: info@safetycouncil.ab.ca Phone: (780) 462-7300 Fax: (780) 462-7318

Toll Free: (800) 301-6407

#### **Alberta Snowmobile Association**

11759 Groat Road

Edmonton, Alberta T5M 3K6

E-mail: info@altasnowmobile.ab.ca

Phone: (780) 427-2695

#### **ATV World**

Email: atvworld@shaw.ca Phone: (780) 220-7577 Toll Free: (888) 660-7577

#### **Crowsnest Pass Quad Squad**

P.O. Box 308

Bellevue, AB TOK OCO Email: info@quadsquad.ca Phone: (403) 562-8686 Fax: (403) 562-8687

#### **Portage College**

Box 417, 9531-94 Avenue Lac La Biche, Alberta TOA 2CO Email: info@portagecollege.ca Toll free: (866) 623-5551

#### **Pro Safety Services**

22B Centre Street

Strathmore, AB T1P 1H6 Phone: (403) 703-0540 Email: info@prosafety.ca

#### **Safety Now**

#210, 6700 76 Street Red Deer, Alberta T4N 0P9 Toll free: 1-877-949-9190 Email: info@safetynow.ca Phone: (403) 340-1883

#### **Hidden Trails**

Box 1711

Cochrane AB T4C 1B7

Email: info@HiddenTrailsAdventures.com

Phone: (403) 980-9822 Toll free: (866) 853-4433

# LETTER TEMPLATES

#### **Letter To Teachers**

Dear [name]:

We are writing to tell you about **Ride with Respect**. This program was developed by the Alberta Government in association with the Alberta Off-Highway Vehicle Association, the Alberta Snowmobile Association, the Alberta Safety Council and Alberta TrailNet. It provides children and youth with information about operating off-highway vehicles in a safe, respectful, and environmentally-friendly manner.

The increasing number of injuries, hospitalizations, and deaths on off-highway vehicles are well documented by studies and reports. Our goal is to reduce these incidents through education. We also want to teach students how to be respectful of other trail users and to be aware of how to "tread lightly" on the land on which we ride.

Ride with Respect is broken into three levels:

- Grades 1 − 3
- Grades 4 − 6
- Grades 7 12

Each lesson helps to meet the Alberta Education Program of Studies and we would be happy to share these links with you.

We would be pleased to present - at no cost - the **Ride with Respect** program to the students at your school. The lesson takes approximately 45 minutes to deliver and is interactive and participative in nature. I also have some educational worksheets that I can leave with the students to encourage discussion on these topics at home.

Please do not hesitate to contact me at [phone number] or [email address] if you have any questions about this program or to book a presentation.

Yours in safety,

[name]

[organization]

Letter to parents



Dear Parents:

[Name of school] prides itself on its caring and safe school community. We care about one another and want every student, teacher and staff member to be safe and healthy.

On [date], your child will take the **Ride with Respect** program. This program was developed by the Alberta Government in partnership with the Alberta Off-Highway Vehicle Association (AOHVA), the Alberta Snowmobile Association (ASA), the Alberta Safety Council (ASC) and Alberta TrailNet. It provides children and youth with information about operating off-highway vehicles in a safe, respectful, and environmentally-friendly manner.

Whether you and/or your child operates off-highway vehicles like ATVs, snowmobiles, and dirt bikes on a regular basis or just occasionally with friends or family, there are some simple ways to stay safe, ensure everyone has a good time, and to protect the land.

The program is organized into four streams:

#### **Respect for Yourself**

Your child will learn:

- What equipment to wear
- How to ride safely

#### Respect for the Machine

Your child will learn:

- What vehicle to ride for their age and size
- How to use the machine safely

#### **Respect for Others**

Your child will learn:

- How to respect others' rights
- How to practice trail etiquette

#### Respect for the Land

Your child will learn:

- · Where to ride
- How to be a good trail steward
- How to respect the land

Sincerely,

[teacher/principal]

# VIDEO RESOURCES

The following are video resources which might be useful in the delivery of **Ride with Respect**. There are many resources currently in use but not all are currently available. This list includes a selection of ones currently available.

#### **ATV Safety Institute**

#### A Guide to Off-Highway Riding

18 minutes

Discusses preparation procedures, safety tips, and responsible riding habits for the ATV rider and off-highway motorcyclist.

#### Ride Safe, Ride Smart

9 minutes

Discusses riding an ATV that is right for your age, wearing proper protective gear and respecting the environment. Provided from both a farming and recreation perspective.

#### **Canadian Off-Highway Vehicle Distributors' Council**

#### **Adventure Trail**

Self-guided

An interactive CD and activity book that teaches young riders the rules around riding safely

#### **International Snowmobile Manufacturers Association**

#### **Safe Riders**

22 minutes

Snowmobile safety video discusses ice, riding sober, behaviour, and avalanche safety.

#### **Montana Collaboration**

#### On the Right Trail

Produced by Tread Lightly! and Montana Trail Vehicle Riders Association with Montana Fish, Wildlife & Parks



# **HANDOUTS**