UNIT 4: Alcohol and other drugs
About Traffic Safety Essentials

Young people are at risk on our roads, particularly as passengers and when they begin driving. Road crashes are the single biggest killer of young Victorians aged 16-25 years. Victoria’s Road Safety Strategy 2012-2022 highlights the importance of road safety for young people, especially from the point at which they prepare for and begin to use the road as drivers. This starts just before they begin learning to drive right through to when they are fully licensed and have progressed through Victoria’s Graduated Licensing System.

Traffic Safety Essentials has been developed as the key Victorian road safety education resource for secondary schools with a focus on Year 10. It is in Year 10 that most young people become eligible for a Learner Permit, and begin the process of learning to drive a car. Traffic Safety Essentials links to AusVELS and is designed to assist secondary schools to implement a core road safety education program at Year 10. It is focused on helping young people to improve their decision making skills, develop an understanding of consequences and improve the safety of themselves and their peers.

This Year 10 classroom program takes an integrated approach to key road safety issues for young people at this critical point in their lives. It is around this time that they begin to learn to drive and also to travel more independently, often with their peers. Unfortunately young people can often be involved in tragic road crashes through poor decision making at critical times. The program takes this into account and features six units:

UNIT 1: Driving or just steering
UNIT 2 Focused or fractured
UNIT 3: Speeding and stopping
UNIT 4 Alcohol and other drugs
UNIT 5: Hoons or harassed
UNIT 6: Travel choices

All units contain a number of individual classroom activities, each of which are grouped into three sections that move students through a process, based around theories of behaviour change:

Problem recognition

Problem solving

Taking action

You can find details of other road safety education resources and programs that link with Traffic Safety Essentials at: www.roadsafetyeducation.vic.gov.au
Background to UNIT 4: Alcohol and other drugs

Alcohol and illegal drugs, and improper use of some prescription drugs, impact on road safety – whether as a pedestrian, passenger, driver, motorcyclist or cyclist. Being affected by alcohol and/or other drugs also puts people at high risk on public transport.

Blood Alcohol Concentration (BAC) is the concentration of alcohol present in a person’s breath (expressed in grams per 210 litres of exhaled air) or their blood (expressed in grams per 100 mls of blood). Fully licensed drivers must not drive unless they have a BAC of less than 0.05. Learner and probationary drivers and professional drivers, such as bus or truck drivers, need to have a zero BAC.

Alcohol is the most socially acceptable drug in Australia. However, it is illegal for people under the age of 18 to purchase it. Legal issues aside, alcohol compromises safety. Alcohol is second only to tobacco as the most preventable cause of death and hospitalisation in Australia.

The liver metabolizes most alcohol a person consumes. The amount of alcohol the liver can metabolize is limited, regardless of the amount that has been consumed. The rate at which alcohol is metabolized varies among individuals. However, generally the amount of alcohol in the blood (BAC) peaks within 30 to 45 minutes after consuming one standard drink.

A number of factors influence BAC – even when the same amount of alcohol is consumed:

- Gender: Women absorb and metabolize alcohol differently from men. They can have a higher BAC after consuming the same amount of alcohol as men.
- Size: A person with a larger body mass may have a lower BAC than a smaller person after the same amount of alcohol is consumed.
- Health: Healthier and fitter people tend to have a more efficient metabolism. People who have a liver that is not healthy or has been damaged may not metabolize alcohol as well as those with a healthy liver.
- Food: Food in the stomach and the type of food in the gastrointestinal tract, when alcohol is consumed, can influence the alcohol absorption process.

The effects of alcohol and other common illegal drugs

Alcohol

Any amount of alcohol increases risk. The only thing that will reduce the level of alcohol in the blood is time. Alcohol has a variety of effects and can:

- make responding to situations, making decisions or reacting fast difficult
- reduce the ability to judge speed and the distance from other vehicles or objects is reduced
- give a false sense of confidence and unrealistic view of driving skills
- make multi-tasking and concentrating difficult
- make a person feel sleepy or tired.
Tetrahydrocannabinol THC (the active component of cannabis)

Cannabis in any form reduces the ability to control a vehicle and drive safely. Driving after using cannabis:

- affects decision making ability, such as when an unexpected situation arises
- slows response time
- reduces the ability to perceive distance and time
- reduces the ability to concentrate and react
- affects co-ordination and alertness
- narrows and/or blurs the field of vision.

Using alcohol and cannabis together tends to have a multiplying affect, in terms of impact on driving ability, even when only small amounts of each are used.

Methamphetamine (speed)

Methamphetamine (speed) impairs the normal activity of the brain and the body. Short-term effects can include increased confidence, increased sense of well-being, restlessness, irritability and aggressiveness. These effects mean that it’s dangerous to drive after using amphetamines. In particular methamphetamine can cause:

- tunnel vision effect reducing the ability to see and react to hazards
- a false sense of alertness and confidence, while reducing decision making ability
- dizziness, blurred vision, loss of coordination and other physical side effects
- a feeling of being anxious, irritable, hostile or aggressive
- micro sleeps as the drug wears off.

MDMA (ecstasy)

MDMA (ecstasy) can lead to being impulsive and make it difficult to be attentive when performing complex tasks such as driving. MDMA can:

- distort perception, thinking and memory
- impair vision
- cause disorientation
- slow reactions.

Like methamphetamine, MDMA can be detected in the blood for up to 24 hours after use.

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**Essential learning**

As an outcome of this unit students will understand:

- alcohol and/or other drug use can be illegal and unsafe when combined with road use
- decision making related to safety is affected by alcohol and/or other drug use
- alcohol and/or other drug use impair driving abilities
- alcohol and/or other drug affected pedestrians are at increased risk.
Links to AusVELS

Health and Physical Education
Dimension: Health knowledge and promotion

Learning focus: Students examine perceptions of challenge, risk and safety in a variety of settings such as in the home, school, the workplace and the community. They contrast risks that promote personal and social growth with those that endanger health. They discuss ways to balance risk and safety, and refine and evaluate harm minimisation strategies.

Students explore assertiveness and resilience strategies that could be used in a range of situations. Using techniques such as role play or simulation games, students are provided with opportunities to practise and reflect on the usefulness of these strategies.

Standard: Students identify and describe a range of social and cultural factors that influence the development of personal identity and values. They identify and explain the rights and responsibilities associated with developing greater independence.

They compare and evaluate perceptions of challenge, risk and safety. They demonstrate understanding of appropriate assertiveness and resilience strategies. They analyse the positive and negative health outcomes of a range of personal behaviours and community actions.

Thinking Processes

Learning focus: Students begin to formulate and test hypotheses, contentions and conjectures and to collect evidence to support or reject them. They develop their skills in synthesising complex information and solving problems that include a wide range of variables. Students develop questioning techniques appropriate to the complexity of ideas they investigate, to probe into and elicit information from varying sources. They work with others to modify their initial questions and to develop further their understanding that sources of information may vary in their validity.

Students explore differing perspectives and issues in depth and identify a range of creative possibilities. They are encouraged to examine and acknowledge a range of perspectives on an issue and to accommodate diversity. They engage positively with novelty and difference and are innovative in the ways they define and work through tasks, and find solutions. They practise creative thinking behaviours and strategies to find solutions, synthesise information and understand complex ideas.

Dimension: Reasoning, processing and inquiry

Standard: At Level 10, students discriminate in the way they use a variety of sources. They generate questions that explore perspectives. They process and synthesise complex information and complete activities focusing on problem solving and decision making which involve a wide range and complexity of variables and solutions. They employ appropriate methodologies for creating and verifying knowledge in different disciplines. They make informed decisions based on their analysis of various perspectives and, sometimes contradictory, information.

Dimension: Creativity

Standard: At Level 10, students experiment with innovative possibilities within the parameters of a task. They take calculated risks when defining tasks and generating solutions. They apply selectively a range of creative thinking strategies to broaden their knowledge and engage with contentious, ambiguous, novel and complex ideas.
Information and Communications Technology
Dimension: ICT for communicating

Learning Focus: Students expand their skills in locating information on websites by using general and specialised directories. They refine their searching techniques to get more precise results by using within suitable search engines, proximity operators, which specify where one term in a document must appear in relation to another term.

Standard: Students apply techniques to locate more precise information from websites, including searching general and specialised directories, and applying proximity operators.

Interpersonal Development
Dimension: Working in teams

Learning Focus: Students take opportunities to work in diverse teams within and beyond school, including the workplace, to complete tasks with several interrelated components. Some of these tasks are managed by the team, with limited teacher input.

Standard: At Level 10, students work collaboratively, negotiate roles and delegate tasks to complete complex tasks in teams. Working with the strengths of a team they achieve agreed goals within set timeframes. Students describe how they respect and build on the ideas and opinions of team members and clearly articulate or record their reflections on the effectiveness of learning in a team. They develop and implement strategies for improving their contributions to achieving the team goals.
Problem recognition: How do alcohol and other drugs affect a road user?

**Preparation**

See the *Background* section for this unit for details on the effects of alcohol and other prevalent drugs. Students will require access to the library and the Internet. Make a copy of the *Activity Sheet 4.1: Fact Cards* (pages 15-16) and cut these into small cards.

**What to do**

**Internet Research**

Provide the class with some facts (use the cards made from *Activity Sheet 4.1: Fact Cards*).

Have the students work in pairs or groups of three and take one of the Fact Cards, then research and write about:

- Any further information they discover related to their fact card.
- How the brain and performance (such as driving or walking) are affected by the substance(s) referred to in their fact card.

Discuss the value of the information for making choices about alcohol and other drug use and driving or walking.

**Discussion**

Clarify with students what they think of when you talk about alcohol and other drugs. Ensure that students consider prescription and ‘over the counter’ drugs as well, and remember that it is not just illegal drugs that can be a problem.

**Debrief**

Debrief with the class:

- Would people still travel when affected by alcohol and other drugs if they knew the risks they were taking?
- What information about alcohol and other drugs do members of the travelling public need to have before they make decisions about their safety risk and that of others?
- What knowledge, skills, and attitudes are required for safe travel and for the decisions around how to travel if affected by alcohol and other drugs?
Preparation

See the Background section for this unit for details on the effects of alcohol and other popular drugs.

What to do

Brainstorm and Discussion

Brainstorm and discuss with students their perception of walking as a safe activity. What can make it a risky activity?

- What are the physical attributes of a person who is affected by alcohol or illicit drugs and the impact on their walking? How will this impact on safety?
- What are the cognitive attributes that can be affected by alcohol or illicit drugs? How will this impact on safety?
- What makes a walker more vulnerable than a driver?

Small Group Work

Remind students that in every trip, no matter what mode of travel they choose, a person usually becomes a pedestrian at some point.

Have students develop a typical scenario they would find in their local community, where a pedestrian who is intoxicated could be at great risk. Have students identify the risks and consider solutions to the problem.

Have students imagine they are the town planner or community health worker. Design an intervention that would keep pedestrians safer, particularly if they were affected by alcohol or illicit drugs.
Preparation

The small group research work will require access to the library and the Internet.

What to do

Small Group Work

The following initiatives have been implemented in Victoria to address the issue of road users affected by alcohol and other drugs. Allocate one of these initiatives to each small group:

- Random roadside saliva testing for illicit drugs.
- Random roadside breath testing for alcohol.
- Use of alcohol ignition interlocks.
- The law and penalties for road users who are detected with either alcohol or illicit drugs in their system.
- Public breath testing machines and personal breathalysers.
- Fencing and improved lighting outside hotels and other licensed venues to improve safety for pedestrians.
- Encouragement for the responsible serving of alcohol in hotels and other licensed venues.

Present Findings

Each group is to research and then present their findings back to the class.

The research should identify:

- What is the initiative?
- How does it work? (Describe the process, including court procedure if relevant.)
- Why has this been implemented in Victoria?
- Is this initiative used elsewhere? Where and how?
- How effective is it and are there ways it could be improved?
Problem solving: Understanding the myths about alcohol and other drugs

**Preparation**

Familiarise yourself with the *Background* section for this unit and use this to dispel some of the myths that students may hold about alcohol and other drugs.

**What to do**

**Explanation**

Explain to students that alcohol and other drugs are key factors in road deaths of young drivers – despite initiatives such as a zero BAC limit applying to Learner Permit and Probationary Licence drivers.

**Discussion**

Ask and discuss what could be the reasons why young people ignore the risks of being intoxicated, or affected by other drugs, and walk or drive a vehicle.

Discuss which of these reasons are true and which are myth.

**Small Group Work**

Brainstorm in small groups some alternatives to travelling when intoxicated or affected by drugs. Consider how feasible these would be in different circumstances students may find themselves in.

**Share the Ideas With the Class**

Have each group take some of the related ideas for alternatives to travelling when intoxicated or affected by drugs and develop slogans designed for young people. Use the slogans in posters, web pages or other ways of communicating their messages to young people.

**A bit more info...**

Examples of why young people ignore risks:
- Belief that there is no alternative way to travel.
- Belief that you can drive better with a few drinks or that some drugs make you more alert.
- Belief that it is safer to be in a car with a tipsy driver than to travel by public transport or to walk.
- Belief that it’s unlikely that the police would be around.
- Belief that it’s only a short distance to travel and that nothing bad will happen.

**A bit more info...**

Examples of strategies when intoxicated:
- Stay over at a friend’s place.
- Don’t drink alcohol if you need to travel.
- Voluntarily install alcohol interlock devices.
- Call a taxi.
- Call parents or family member.
- Ask a sober friend for a lift.
Taking action: How much can you drink?

Preparation

Further information about alcohol and standard drinks can be found at: www.alcohol.gov.au

What to do

Explanation

Remind students that the legal limit for learner and probationary drivers is zero BAC. Whilst some medications, mouth washes and other preparations may have a small amount of alcohol in them it is usually insufficient to register as a significant BAC reading – meaning this is not an excuse that can be used!

Explain to students that many organisations provide advice on the approximate number of standard drinks that can be consumed before exceeding the BAC limit. They use a standard drinks measure.

A bit more info…

1 standard drink (containing 10 grams of alcohol) is approximately:
- 375 ml of light beer
- 285 ml of heavy beer
- 100 ml of wine
- 60 ml of fortified wine
- 30 ml of spirits.

Examples of difficulties which may occur with standard drinks

- Drinks perceived to be the same can be of different strengths. Why?
- Glass sizes vary, such as wine glasses, and so it can be difficult to know whether it is a standard drink.
- Some drinks, such as champagne, can be absorbed quicker than other alcoholic beverages. Why?
- The rate of absorption and metabolism can vary in the same person from day to day. Why and how?

A bit more info…

Things that need to be kept in mind:
- The standard drinks measure is only an estimate.
- For the first hour after drinking has stopped the BAC will continue to increase as the alcohol is absorbed into the bloodstream. Any estimation of a reduction in BAC should only commence in the second hour after stopping drinking.

Everyone differs in their metabolism, and several factors will impact on how quickly alcohol leaves the system, such as gender, the health of the liver, general levels of health, presence of food, fatigue and fitness levels, levels of dehydration and tolerance to alcohol.

Discussion

Discuss what students think a standard drink is. A standard drink is considered as one with ‘10 grams of alcohol’ regardless of glass or container size or type of alcohol (e.g. beer, wine or spirit).
Ask what is wrong with this measure.

Promote discussion around where a drinker can find information about alcohol content (on the beverage container, drink coasters and wallet cards); how accessible this information is every time a person drinks (can you read it when you are in a dark environment, or when already affected) and why there is so much ignorance around what a standard drink is (ambiguous and difficult to interpret).

Small Group Discussion of Scenarios

Discuss each of the following scenarios in small groups and have them decide what they would need to know before they could determine the time when each drinker would be back to zero BAC. They should consider:

- Whether the drinks were standard drinks – containing exactly 10 grams of alcohol.
- BAC – taking into consideration the factors mentioned earlier, such as health, gender, weight and presence of food.
- Health of the liver – a healthy liver metabolises alcohol at around one standard drink per hour.

### Scenarios - How long would it take for an intoxicated person to have a zero BAC?

**Ted is 90 kg. He has had six standard drinks over two hours. It is now 11pm and he has decided to stop drinking. At what time is it likely that Ted will have a zero BAC?**

**Louise is 50 kg. She has had six standard drinks over 2 hours. It is now 11pm and she has decided to stop drinking. At what time is it likely that Louise will have a zero BAC?**

**Steve is 84 kg. He has had a big night and has had 14 standard drinks over 5 hours. He finishes drinking at 2am. At what time is it likely that Steve will have a zero BAC?**

Debrief as a Class and Discuss

- How accurate can the calculations be?
- What could be the consequences if the calculations are not accurate?
- What is the best advice to listen to in relation to drinking and road use?

**A bit more info...**

**Things that needs to be kept in mind:**

- The standard drinks measure is only an estimate, and so are any calculations.
- The best advice is to not mix alcohol with road use.
Taking action: Why don’t we make some changes?

**Preparation**

Further information about alcohol and standard drinks can be found at: [www.alcohol.gov.au](http://www.alcohol.gov.au)

**What to do**

**Small Group Work**

Have the class develop some strategies for developing a safe drinking culture and safe drinking levels.

Pair students up and have them come up with two ideas. Have pairs come together and come up with five ideas – two each and an additional one. Have groups of four join and to decide on ten ideas. Share all ideas with the whole class.

**Planning Some Actions**

Identify what could be done to ensure the suggested strategies become actions. Adopt one of the initiatives and commence planning that will lead to action.

- Who would be a good champion for the cause?
- How could the idea ‘get legs’?
- What needs to be done, and in what order?
- What resources are required?
- How could relevant information be disseminated?
ENRICHMENT ACTIVITIES

- Use the *Rethinking Drinking* program to further explore the standard drinks concept and issues about the pouring of standard drinks. This resource was sent to all secondary schools in 2004 by the Commonwealth Department of Education, Science and Technology (DEST).


- Review the *Drink Driving FAQ* from the RACV: www.racv.com.au/wps/wcm/connect/racv/Internet/Auxiliary/faqs/road+safety/drink+driving. Have the class develop a list of additional questions they would like answered and as a group research questions to find the answers. As an alternative develop a list of Common Questions on Drug Use and Driving and research responses.


EXPLORE OTHER ROAD SAFETY EDUCATION RESOURCES AND PROGRAMS FOR SECONDARY SCHOOLS ONLINE AT: www.roadsafetyeducation.vic.gov.au
### ACTIVITY SHEET 4.1  FACT CARDS

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<th>FACT CARD</th>
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<tbody>
<tr>
<td><img src="image1.png" alt="Cannabis and pills" /></td>
<td><img src="image2.png" alt="Beverage and math symbol" /></td>
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<tr>
<td>In 2010, approximately 37% of all drivers and motorcyclists killed in Victoria had drugs in their system, with cannabis and stimulants the most common.</td>
<td>Pedestrians with a BAC reading over 0.15 are fifteen times more likely to be involved in a crash than those without the presence of alcohol.</td>
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<td><img src="image3.png" alt="Graves and crosses" /></td>
<td><img src="image4.png" alt="Graph" /></td>
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<td>Drug driving is a major cause of road deaths in Victoria.</td>
<td>Each year about one quarter of drivers killed in road crashes had a blood alcohol concentration (BAC) of 0.05 or greater.</td>
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<td><img src="image5.png" alt="Blood alcohol concentration scale" /></td>
<td><img src="image6.png" alt="Cannabis and pill" /></td>
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<td>At a BAC of 0.05, your risk of being involved in a road crash is about double compared with a BAC of zero.</td>
<td>A driver who has recently consumed cannabis or an amphetamine based substance is at the same risk of having a crash as a driver with a blood alcohol concentration equal to or greater than 0.10.</td>
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### ACTIVITY SHEET 4.1  FACT CARDS

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<td><img src="image" alt="Males with a BAC reading between 0.12 and 0.15 have a crash risk three times that of a sober pedestrian. For females a reading above 0.12 exposes them to a crash risk thirty times greater than for female pedestrians without the presence of alcohol." /></td>
<td><img src="image" alt="0.10" /></td>
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<td><strong>Males with a BAC reading between 0.12 and 0.15 have a crash risk three times that of a sober pedestrian. For females a reading above 0.12 exposes them to a crash risk thirty times greater than for female pedestrians without the presence of alcohol.</strong></td>
<td><strong>After recent use of THC (the active component of cannabis) the risk of being killed in a fatal crash is similar to a driver with a BAC of approximately 0.10 or above.</strong></td>
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<td><img src="image" alt="Insurance Policy" /></td>
<td><img src="image" alt="If you have consumed drugs and alcohol you are unable to make clear decisions and are more inclined to becoming frustrated and violent." /></td>
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<tr>
<td><strong>If you are involved in a crash as a driver and you have a BAC exceeding the legal limit your insurance will be compromised.</strong></td>
<td><strong>If you have consumed drugs and alcohol you are unable to make clear decisions and are more inclined to becoming frustrated and violent.</strong></td>
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