

Focus Area 3

Road user issues

The activities in this focus area are designed for Year 7 and 8 students.

Overview of Focus Area 3

This section provides an overview of the units included in the *Road user issues* focus area and the content related to young people as future drivers, passengers, pedestrians, cyclists and riders of wheeled recreational devices (e.g. scooters, skateboards and rollerblades). It includes road safety statistics, interacting factors of crashes, the cost and consequences of road crashes, harm reduction strategies, road rules, and road user rights and responsibilities.

There are five units that allow all students to take part in learning experiences that demonstrate their knowledge, skills and development of values relating to safer road user behaviours.

Unit 3.1 Road safety – the facts

This unit focuses on the road safety issues for young road users and their involvement in road crashes as a passenger, driver, pedestrian, motorcyclist, cyclist and rider of wheeled recreational devices. Students will consider road crash statistics and discuss strategies to reduce the risk for young road users.

Unit 3.2 Why crashes happen

This unit focuses on crash theory and the causal factors of road crashes. Students will develop an understanding of how the combination of the road user's decisions and actions within the traffic environment may result in a crash. Students will also consider what characteristics of young people increase their risk such as overconfidence, risk-taking and inexperience, and traffic-related situations such as travelling more at night or as a passenger with a drink driver. Other factors such as the Big 4 or speed, fatigue, restraints and drink driving; reactions, braking and stopping distances; and peripheral vision are also included.

Unit 3.3 Reducing road user risks

This unit focuses on technological safety devices and their effectiveness in reducing injuries to road users such as restraints (e.g. seat belts), air bags and bicycle helmets. Active and passive safety features of vehicles and vehicle safety ratings are also considered.

Unit 3.4 Consequences of crashes

This unit focuses on the range of consequences that may result after involvement in a road crash. These include physical, financial, social, emotional and legislative. Students will consider various traffic-related situations, make decisions and identify strategies to reduce the risk to the road user. Students will also practise responding to traffic-related situations and be given the opportunity to listen to others' views and attitudes about young people and their behaviour in the traffic environment.

Unit 3.5 Road users and the law

This unit focuses on road rules and legislation applicable to pedestrians, cyclists and drivers, and community expectations for all road users to ensure the safety of themselves and others in the traffic environment.

Focus Area 3: Road user issues

Northern Territory Curriculum Framework Links

A list of possible links to the Band 4 NTCF outcomes is provided below. The outcomes chosen by an individual teacher will depend on the emphasis taken when using **Safer Roads Middle Years Resource (SRMY)** and should reflect only the outcomes that will be directly monitored and for which Evidence of Learning will be gathered.

Northern Territory Curriculum Framework Links

Safer Roads has a heavy emphasis on the Essential Learnings and the Health and Physical Education Learning Area.

SRMY Focus Area	Band Level	Exit Outcomes	Learning Area - Health and Physical Education	
		Essential Learnings & Learning Technologies	Promoting Individual and Community Health <i>Outcomes and Indicators</i>	Enhancing Personal Development and Relationships <i>Outcomes and Indicators</i>
3 Road User Issues	4	<p>Constructive Learner Con 3 Participates in efforts to value social responsibility through active and informed involvement within their family and community</p> <p>Inner Learner In 4 Assesses their wellbeing and takes action for healthy living</p> <p>In 5 Demonstrates resilience in pursuing choices and dealing with change</p> <p>Collaborative Learner Col 1 Listens attentively and considers the contributions and viewpoints of others</p>	<p>HP 4.1 Individual and Community Health and Safety</p> <p>Evaluate behaviours, situations and programs that are recognised community health needs, including substance use and explain their influence on personal and community wellbeing</p> <p>Explain how taking risks can have future consequences and affect future judgements</p> <p>Identify positive and negative aspects of risk taking and devise strategies to minimise harm</p> <p>Examine how group behaviour influences patterns of injury/disabilities or death, eg road accidents & risk taking</p>	<p>PD 4.1 Human Development</p> <p>Develop and explain self management skills that will assist in coping effectively in a range of situations, including drug use issues</p> <p>Identify family members they should look out for and ways to fulfil these responsibilities</p>

Teacher notes

- **Road crashes are one of the leading causes of injury-related death for young people aged between 0 and 16 years.**

Source: Monash Accident Research Centre (2003).

Young people involved in road crashes are more likely to be:

- injured than killed
 - killed when not wearing a restraint
 - killed as a passenger or pedestrian
 - seriously injured or hospitalised as a cyclist or rider of wheeled recreational devices such as skateboards, scooters and rollerblades.
- For information on Northern Territory statistics visit the Department of Lands and Planning, Northern Territory Transport Group website at: www.roadsafety.nt.gov.au
 - Overall, **young males are at a much greater risk of fatality and injury** as a result of road trauma than females.
 - **A number of factors may contribute to the over-representation of young people in road crashes**, with all of these factors being accentuated in males:
 - increase in personal independence with young people makes them less likely to be driven or accompanied to school by parents and generally allows much greater freedom on the streets
 - socialise more often than younger or older people
 - often travel with inexperienced drivers
 - assert their individuality in various ways
 - are highly influenced by their peers, at times in a negative way
 - have a fearless attitude and tend to take more risks
 - are easily distracted when they are travelling with friends
 - are over-confident in their ability to drive
 - believe that it won't happen to me.

- **Crashes have definite and distinguishable causes**, involve **risky behaviours and attitudes**, and are, in the main, **preventable**.
- **90% of road crashes are caused by human factors alone.**
 - **Driver:** the decisions the driver made, risk-taking (e.g. speeding, drink or drug driving, driving tired or not wearing a restraint) and other distractions both inside and outside the vehicle.
 - **Vehicle:** the condition of the vehicle (e.g. brakes, foggy windscreen or faulty lights) and the presence or absence of safety features (e.g. air bags and ABS brakes).
 - **Environment:** features of the road and the area around it (e.g. weather conditions severe rain/storms, smoke/haze, road surface and wildlife).
- It is important for teachers to be proactive and recognise that there may be students within any group that have been **directly or indirectly involved in road-related trauma** and its consequences. Talking about road trauma with young people can raise a range of issues, concerns and/or emotions. Students who feel uncomfortable or emotional during activities focusing on road user issues should be provided with the option to pass or disengage from the activity.

Unit 3.1

Unit 3.1 Road safety – the facts

The activities in this focus area are designed for Year 7 and 8 students.

For students:

Key understandings

- The traffic environment poses risks for all road users.
- Young people are over-represented in territory road safety statistics and are at more risk as pedestrians, passengers and drivers.
- Road crash injuries and fatalities are the result of factors such as speed, drink driving, fatigue, not wearing restraints, age and gender.
- Some choices increase the level of risk.

Key skills

- Evaluate own and others' beliefs about road safety trauma and associated issues.
- Share attitudes and values about road user behaviours.
- Make decisions and identify ways to minimise harm in traffic.

Activity 1: Road safety attitudes



RESOURCES:

- Photocopy *Resource Sheet 1: What do I think?* – one copy per student.

HOW:

Explain to students that the statements on *Resource Sheet 1: What do I think?* cover a range of road user issues that will prompt them to identify what they already understand and believe about road safety. The 'before' responses should be completed individually.

Give students the opportunity to share their responses and listen to others' opinions by setting up a **circle talk** (see p272). Nominate the number of the statement to be discussed and ask students standing inside the circle to begin. After 30 seconds, signal the students standing in the outside circle to have their turn. Keep the discussion time brief so students stay on task and actively listen. Move the outside circle in one or two places and repeat the procedure until all statements have been discussed.

Debrief the activity by further discussing the statements or answering any questions generated during the circle talk. Questions that are unanswered can be used to plan further learning experiences.

Collect the resource sheets so that students can complete the 'after' column once they have participated in several of the activities in this unit or focus area. This will give students the opportunity to talk about any changes to their attitudes and identify why they may have changed.

Activity 2: Facts about road safety



RESOURCES:

- Photocopy *Resource Sheet 2: Road crash facts* – one pre-cut set per group.
- Make number cards (1, 2, 3 and 4) – one set only.

HOW:

Explain to students that road crash statistics are presented in road user groups (e.g. passengers, drivers, motorcyclists, pedestrians and cyclists, for each gender and age); crash factors (e.g. speed, alcohol and restraints) and for rural and urban areas. Road crash statistics are collated by the NT Department of Lands and Planning, Road Safety Division.

Give each group a set of question and answer cards from *Resource Sheet 2: Road crash facts*. Explain the rules of **quiz dominoes** (see p270).

Unit 3.1 Road safety – the facts

Students play the game remembering to discuss the road safety statistics and information as each matching card is placed on the table. Groups continue playing until all of the domino cards have been placed.

Discuss any of the questions that students had difficulty answering or require further clarification.

Discuss

- *What did you learn about Northern Territory and national road users?*
- *What did you learn about road safety issues for young people your age?*
- *Why do you think the number of young people killed and injured is higher than other age groups?*
- *Knowing these statistics, in what traffic situations should young people your age make safer decisions?*

Identifying attitudes

Conduct a **human graph** (see p282) by placing the 1-4 number cards in a line across the room. Ask students to listen to the following statement about road crash statistics and decide which of the numbered responses best represents their opinion.

Road crash statistics could be reduced if:

1. speed limits were lowered
2. road users took more responsibility for their own safety and the safety of others
3. speeding and drink driving offenders were taken to emergency and rehabilitation centres
4. the legal BAC limit was 0.00 not 0.05.

Students should move to the numbered card that corresponds with their opinion then share their reasons for choosing that response with others standing in the same group.

Open the floor for discussion by inviting students from all groups to share with the class why they chose their statement response. Encourage students to agree or disagree with comments made by others, using their knowledge of statistics to support their response.

Ask students to line up to form a human graph then give quantitative statements to describe aspects of the graph. For example:

- *most of the class agree that the BAC limit for all drivers should be 0.00*
- *the number of people who chose taking offenders to emergency and rehabilitation centres is less than those who chose lowering speed limits*

- *more girls thought changing the legal BAC limit would reduce crash statistics.*

Repeat this procedure using the following statements.

Vehicle occupants don't always wear seat belts because:

1. they forget to put them on
2. the fine for not wearing a seat belt isn't high enough
3. they don't understand how it can reduce injuries in a crash
4. cars get overloaded and there aren't always enough seat belts.

If I was offered a lift by a friend who had been drinking, I might:

1. say I'm waiting for a friend to pick me up
2. ask them not to drink and drive
3. get in the car but keep checking that they are driving safely before saying anything
4. say no and organise another lift home.

If I could talk to road safety experts I would suggest they:

1. make the licensing system harder
2. build better roads with more safety features
3. make it compulsory for schools to have road safety education programs
4. run advertising campaigns that focus on the issues for children and young people.

Reflection

Use the **thought shapes** (see p301), in particular the triangle (what I have learnt) and circle shapes, (the thoughts still going around in my head) for students to reflect on this activity. Ask students to write their responses before sharing with a partner or small group.

Activity 3: Swap stats



RESOURCES:

- Photocopy *Resource Sheet 3: Swap stats* – enough for one card per student.
- Photocopy *Resource Sheet: PNI* (see p288) – one A3 copy per group.
- A whistle.

Unit 3.1 Road safety – the facts

HOW:

Explain to students that road crash statistics are compiled from road crash data forwarded and managed by the police to the NT transport authority – Department of Lands and Planning. For a crash to be included in this data, it must have resulted in bodily injury or material damage.

Give each student a question card from the *Resource Sheet 3: Swap stats*. Explain that the statistics shown come from Northern Territory Crash Statistics and Australian Government Department of Infrastructure, Transport, Regional Development and Local Government, Road Safety Report (2009). The term 'child' refers to 0-16 year olds and 17-24 year olds are referred to as 'young adult'.

Ask students to read their question and answer card.

Explain that students are to move around the room until a signal is given to stop (such as a whistle or music). Students then find the person nearest to them and share their stats cards. The pairs then swap cards and get ready to move again. This procedure is repeated several times so students encounter a range of statistics.

Clarify any questions that students raise after the swap stats activity has been completed.

Reducing crash statistics

Place students in groups and give each an A3 copy of *Resource Sheet: PNI*. Explain the **PNI** (see p288) is a framework that can be used to identify and consider the positive, negative and interesting aspects of a situation or problem.

Ask students to consider one of the following statements then use the PNI sheet to brainstorm and record their ideas. All responses generated during the discussion should be recorded as there is no right or wrong answer, however, students should be able to justify their response using the statistics.

Statements

- *The Government should increase the driver's licence age to 21 to reduce the road toll.*
- *Road safety education programs should be compulsory for students and their parents or caregivers.*
- *Manufacturers are now designing vehicles that will not start unless all vehicle occupants have put on their seat belt.*

As a class, discuss the responses generated during the PNI activity then ask students to indicate if they agree or disagree with the statement using the **first of five** (see p284) voting strategy. Give students time to share their opinions.

Discuss

- *Did knowing the NT and national statistics influence the way you responded on the PNI? How?*
- *Was your opinion influenced after listening to other students ideas about the statement? Why?*
- *What type of road safety messages should be provided to the community?*
- *What approach could be used to give these messages to young people your age? (Television, radio, newspaper, pre-movie info, mail out or text messages.)*

Reflection

Using the following questions, students complete a **think-pair-share-write** (see p299) to reflect on the information gained during the swap stats activity and consider their attitudes towards safer road user behaviour.

- *What did you learn about drivers on NT roads?*
- *What are the four main causes of road crashes?*
- *What could explain why young people are killed and injured more often than people in other age groups?*
- *Why do you think more males than females are involved in road crashes?*
- *Were there any similarities between the stats for young people and other age groups?*
- *How will knowing these statistics influence your behaviour on the road in the future?*

Activity 4: Applying understandings



RESOURCES:

- *Resource Sheet 1: What do I think?* – completed in Activity 1 of this unit.
- Photocopy *Assessment Task*: (optional) – one per student.
- Access to these websites
www.roadsafety.nt.gov.au - NT Department of Lands and Planning, Road Safety Division
www.infrastructure.gov.au/roads/safety/ - Australian Government Department of Infrastructure and Transport.

HOW:

The task outlined on the *Assessment Task* will encourage students to recall information gained on road statistics and associated issues from the previous activities. It will also require students to consider the road safety issues for young people and identify strategies that may reduce crash involvement for this road user group.

Place students in small groups or pairs to discuss the task and plan their research. Students can access statistics from the suggested websites to help complete their task.

Ask students to present their research to the class.

Compile a list of the strategies students identified to reduce road crashes for young people. Discuss the list and decide how effective each would be in relation to changing young people's road user behaviours.

Identifying attitudes

Return each student's copy of *Resource Sheet 1: What do I think?* that was completed in Activity 1 of this unit.

Ask students to cover or fold over the 'before' responses on their resource sheet then complete the 'after' column without talking to other students.

Place students in groups to share their responses and discuss any changes in their understandings or attitudes about road safety.

Discuss

- *Was your attitude towards road safety challenged by participating in these activities? Why or why not?*
- *Did listening to others' opinions alter your attitude towards road user behaviour? Why or why not?*

Reflection

Ask students to reflect on the activities covered in this unit by completing these **unfinished sentences** (see p302).

- *Think about the way you travel to and from school. What are two ways you can make your journey safer while travelling as:*
 - a passenger (either in a car or on public transport)...
 - a pedestrian ...
 - a cyclist or rider of a wheeled device (e.g. scooter, skateboard, inline skates) ...
- *Knowing that being a passenger in a car poses risks for people my age, I can reduce my level of risk by ... (describe two ways).*

Students can use information gained from the previous activities to:

- write a newspaper headline and report that provides factual information and supporting statistics on the involvement of young people in road crashes
- formulate a letter containing their opinion, information and key messages that should be addressed by government to reduce the road toll
- develop a road safety advertising campaign based on statistics, including supporting key messages for young people their age.

What do I think?

Read each statement then write your opinion in the 'before' column.



BEFORE (agree or disagree)	STATEMENT	AFTER (agree or disagree)
	1. Drivers like my parents are more likely to have a road crash than a young person aged 17 to 24 years.	
	2. More female drivers are killed or injured in crashes than male drivers.	
	3. There are more crashes in rural/remote areas than urban areas.	
	4. If I wear a seat belt I'm less likely to be injured in a road crash.	
	5. It's okay to drink and drive.	
	6. Drugs are becoming a contributing factor to road fatalities and injuries.	
	7. I'm more likely to be injured as a passenger than a pedestrian.	
	8. A serious road crash can affect many people.	
	9. It's safe for me to be in a car with a driver who has been drinking alcohol.	
	10. It's safer for a cyclist to wear a helmet as most crash injuries are to the head.	
	11. Young pedestrians always make safe decisions in traffic.	
	12. Random breath and drug testing is unfair and should be banned.	
	13. Everyone using the roads is responsible for their own safety and the safety of others.	
	14. I think anyone who doesn't wear a seat belt is crazy.	
	15. I believe speeding is dangerous and causes crashes.	
	16. It's healthier and environmentally friendly to walk, cycle and take public transport.	

Road crash facts

<p>Question</p> <p>Who are road users?</p>	<p>Answer</p> <p>On average, 19 cyclists are killed or hospitalised in the NT every year. <i>(10 year average, 2001 – 2010).</i></p>	<p>Question</p> <p>What is a restraint and does everyone have to wear one?</p>
<p>Question</p> <p>Is not wearing a restraint (seat belt) a significant contributor to deaths on NT roads</p>	<p>Answer</p> <p>The number of deaths caused annually by road crashes.</p>	<p>Answer</p> <p>A person killed, admitted to hospital or injured, requiring medical attention as a result of a road crash.</p>
<p>Question</p> <p>Who is responsible for ensuring all passengers in a vehicle wear a restraint?</p>	<p>Answer</p> <p>A person other than the driver travelling in a car, truck, bus or other vehicle.</p>	<p>Question</p> <p>Is it compulsory for cyclists to wear a bicycle helmet in the NT?</p>
<p>Question</p> <p>How many cyclists are killed or hospitalised in the NT every year?</p>	<p>Answer</p> <p>Yes, almost one in every two children killed on the road is a passenger travelling in a motor vehicle. <i>(source: Injury deaths Australia: children aged 5-14 years; National Injury Surveillance 1999).</i></p>	<p>Answer</p> <p>On average, 16 young people are killed and 178 are seriously injured on NT roads every year. <i>(10 year average, 2001 – 2010: Under 25 years).</i></p>

Road crash facts

<p>Question</p> <p>What percentage of people killed on NT roads between 2001 and 2010 were pedestrians?</p>	<p>Answer</p> <p>A cyclist must not ride a bicycle across a pedestrian crossing, children's or marked foot crossing.</p>	<p>Question</p> <p>Is a cyclist allowed to ride a bicycle across the road?</p>
<p>Question</p> <p>How are the majority of NT children aged 0-16 years of age killed or injured in road crashes?</p>	<p>Answer</p> <p>People who drive after drinking alcohol have a greatly increased risk of being involved in a crash. 49% of crashes are alcohol related. <i>(10 year average, 2001 – 2010).</i></p>	<p>Answer</p> <p>The majority of NT children aged 0-16 years of age are killed or injured while travelling as a passenger in a vehicle.</p>
<p>Question</p> <p>Have restraints (seat belts) reduced the road toll since they were made compulsory in 1972?</p>	<p>Answer</p> <p>A person who dies as a result of a road crash.</p>	<p>Question</p> <p>Why are bicycle helmets so important to the safety of riders?</p>
<p>Question</p> <p>What does the term 'casualty' mean in road safety terms?</p>	<p>Answer</p> <p>Speed is a contributing factor in all crashes. 20% of known crashes are speeding related. <i>(10 year average, 2001 – 2010).</i></p>	<p>Answer</p> <p>NT statistics over a 10 year period show that 49% of road fatalities were alcohol related, 32% involved persons under the age of 25, and 75% occurred in rural areas. <i>(10 year average, 2001 – 2010).</i></p>

Road crash facts

<p>Question</p> <p>What does the term 'passenger' mean in road safety terms?</p>	<p>Answer</p> <p>Between 2001 and 2010 20% of people killed on NT roads were pedestrians.</p> <p><i>(10 year average, 2001 – 2010).</i></p>	<p>Question</p> <p>What is the percentage of children not wearing a restraint aged between 0-16 who were killed or injured in car crashes in the NT? 3%, 23% or 32%?</p>
<p>Question</p> <p>What does the term 'fatal crash' mean?</p>	<p>Answer</p> <p>2009, with 31 fatalities.</p>	<p>Answer</p> <p>Overall the road toll has decreased since seat belts were made compulsory in 1972.</p>
<p>Question</p> <p>Which year from 2001 to 2010 had the most road fatalities in the NT?</p>	<p>Answer</p> <p>Drivers are responsible for ensuring all passengers wear their seat belts when riding in a vehicle. Penalties apply to drivers and passengers (16 and over) who fail to wear seat belts.</p>	<p>Question</p> <p>Is speed a contributing factor to deaths and injuries on NT roads?</p>
<p>Question</p> <p>Is alcohol a contributing factor in road crashes?</p>	<p>Answer</p> <p>You must wear an Australian Standard approved – properly fitted and fastened helmet when riding a bicycle on a road or road-related area. In the NT, this rule does not apply if you are over 17 years of age and riding on a public place or path which is separated from the road.</p>	<p>Answer</p> <p>Yes, on average 53% of drivers and passengers killed on NT roads were not wearing a restraint (seat belt).</p> <p><i>(10 year average, 2001 – 2010).</i></p>

Road crash facts

<p>Question</p> <p>What do recent statistics reveal about road fatalities in the NT?</p>	<p>Answer</p> <p>Bike helmets protect a rider's head in a fall or crash and can reduce the possibility of injury to the head and brain by approximately 85%.</p>	<p>Question</p> <p>Are passengers at risk in motor vehicles?</p>
<p>Question</p> <p>Which year from 2001 to 2010 had the least road fatalities in the NT?</p>	<p>Answer</p> <p>Of the 0-16 age group involved in NT car crashes, 32% were found not to be wearing a restraint.</p> <p><i>(Source: George Institute 2009).</i></p>	<p>Answer</p> <p>Drivers, passengers, motorcyclists, cyclists and pedestrians.</p>
<p>Question</p> <p>What does the term 'road toll' mean?</p>	<p>Answer</p> <p>2008, with 75 fatalities.</p>	<p>Question</p> <p>How many young people are killed or injured on NT roads every year?</p>
<p>Answer</p> <p>A restraint (e.g. seat belt) is designed to hold a person within the vehicle and limit movement during a road crash. It is compulsory to wear a restraint.</p>		

Road crash facts (answer sheet)

Question	Answer
<i>Which year from 2001 to 2010 had the most road fatalities in the NT?</i>	2008, with 75 fatalities.
<i>Which year from 2001 to 2010 had the least road fatalities in the NT?</i>	2009, with 31 fatalities.
<i>Is speed a contributing factor to deaths and injuries on NT roads?</i>	Speed is a contributing factor in all crashes. 20% of known crashes are speeding related. (10 year average, 2001 – 2010).
<i>How are the majority of NT children aged 0-16 years of age killed or injured in road crashes?</i>	The majority of NT children aged 0-16 years of age are killed or injured while travelling as a passenger in a vehicle.
<i>What does the term 'passenger' mean in road safety terms?</i>	A person other than the driver travelling in a car, truck, bus or other vehicle.
<i>Are passengers at risk in motor vehicles?</i>	Yes, almost one in every two children killed on the road is a passenger travelling in a motor vehicle. (Source: Injury deaths Australia: children aged 5-14 years; National Injury Surveillance 1999).
<i>How many young people are killed or injured on NT roads every year?</i>	On average, 16 young people are killed and 178 are seriously injured on NT roads every year. (10 year average, 2001 – 2010: Under 25 years).
<i>What does the term 'casualty' mean in road safety terms?</i>	A person killed, admitted to hospital or injured, requiring medical attention as a result of a road crash.
<i>What does the term 'fatal crash' mean?</i>	A person who dies as a result of a road crash.
<i>What does the term 'road toll' mean?</i>	The number of deaths caused annually by road crashes.
<i>Is alcohol a contributing factor in road crashes?</i>	People who drive after drinking alcohol have a greatly increased risk of being involved in a crash. 49% of crashes are alcohol related. (10 year average, 2001 – 2010).
<i>What do recent statistics reveal about road fatalities in the NT?</i>	NT statistics over a 10 year period show that 49% of road fatalities were alcohol related, 32% involved persons under the age of 25, and 75% occurred in rural areas. (10 year average, 2001 – 2010).
<i>Have restraints (seat belts) reduced the road toll since they were made compulsory in 1972?</i>	Overall the road toll has decreased since seat belts were made compulsory in 1972.
<i>Who are road users?</i>	Drivers, passengers, motorcyclists, cyclists and pedestrians.
<i>What is a restraint and does everyone have to wear one?</i>	A restraint (e.g. seat belt) is designed to hold a person within the vehicle and limit movement during a road crash. It is compulsory to wear a restraint.
<i>Is not wearing a restraint (seat belt) a significant contributor to deaths on NT roads?</i>	Yes, on average 53% of drivers and passengers killed on NT roads were not wearing a restraint (seat belt). (10 year average, 2001 – 2010).
<i>What is the percentage of children not wearing a restraint aged between 0-16 who were killed or injured in car crashes in the NT? 3%, 23% or 32%?</i>	Of the 0-16 age group involved in NT car crashes, 32% were found not to be wearing a restraint. (Source: George Institute 2009).
<i>Who is responsible for ensuring all passengers in a vehicle wear a restraint?</i>	Drivers are responsible for ensuring all passengers wear their seat belts when riding in a vehicle. Penalties apply to drivers and passengers (16 and over) who fail to wear seat belts.
<i>Why are bicycle helmets so important to the safety of riders?</i>	Bike helmets protect a riders head in a fall or crash and can reduce the possibility of injury to the head and brain by approximately 85%.
<i>Is it compulsory for cyclists to wear a bicycle helmet in the NT?</i>	You must wear an Australian Standard approved – properly fitted and fastened helmet when riding a bicycle on a road or road-related area. In the NT, this rule does not apply if you are over 17 years of age and riding on a public place or path which is separated from the road.
<i>Is a cyclist allowed to ride a bicycle across the road?</i>	A cyclist must not ride a bicycle across a pedestrian crossing, children's or marked foot crossing.
<i>How many cyclists are killed or hospitalised in the NT every year?</i>	On average, 19 cyclists are killed or hospitalised in the NT every year. (10 year average, 2001 – 2010).
<i>What percentage of people killed on NT roads between 2001 and 2010 were pedestrians?</i>	Between 2001 and 2010 20% of people killed on NT roads were pedestrians. (10 year average, 2001 – 2010).

Swap stats



Swapstat Card

Q: Are Territorians at greater risk of being killed in a road crash than people in the rest of the developed world

A: Yes - The risk of being killed on an NT road is about 3 times greater than anywhere else in Australia.



Swapstat Card

Q: What are the causes of being killed or injured on NT roads?

A: An NT Road Safety Taskforce Report (2006) found that one person will die and nine will be seriously injured every week due to speed, drink driving, fatigue, running red lights and failure to wear a seat belt (restraint).



Swapstat Card

Q: Are half of the fatal crashes in the NT alcohol-related?

A: At least 48% of fatal crashes and 17% of serious injuries in the NT are alcohol-related. (1 driver in every 42 is over the BAC limit).

Swapstat Card

Q: Is drug driving an issue in the NT?

A: Drug driving, including the use of cannabis, benzodiazepines, amphetamines and opiates, has the potential to increase the risk of road crashes in the NT. Almost one-in-three people detained for driving offences in the NT tested positive to illicit drugs.



Swapstat Card

Q: Is reducing speed fundamental to safer road use?

A: Australian Transport Safety Bureau research shows that a small reduction in speed has a major impact on the occurrence of crashes and the severity of injuries. Driving 10km/h faster can make the difference between a near-miss and a fatal crash. An increase in average vehicle speed from 100km/h to 110km/h can be expected to increase serious injury crashes by about 33% and fatal crashes by about 46%.

Swapstat Card

Q: Do people in the NT exceed the speed limit?

A: Northern Territory statistics for October 2005 show 178 speeding fines were issued in a three-day period, with 40% of those exceeding the speed limit by 15 km/h or more.



Swapstat Card

Q: How does the introduction of speed limits reduce the risk of road crashes?

A: The impact of introducing a speed limit on the Lasseter Highway from the Stuart Highway to Yulara, poses much less risk to Territorians. Since a 110km/h speed limit was introduced in December 2001, there has been a reduction in deaths by 37%, serious injuries by 44%, overturned vehicles by 38% and vehicles run-off-road by 27%.

Swapstat Card

Q: Are repeat speeding offences in the NT alarming?

A: Yes, considering that 34% of offenders between 2003 and 2005 received two or more speeding fines. Of the 44 276 individuals who were issued with speeding fines between 2003 and 2005:

- 8165 were issued with two speeding fines
- 3418 were issued with three speeding fines
- 3227 were issued with between 4 and 10 speeding fines.



Swap stats

Swapstat Card

Q: Is driving on the open road at higher speeds safe in the NT?

A: No, higher speeds result in higher rates of fatalities and crashes causing injuries. More than half of all fatal crashes in the NT are run-off-road or overturned crashes that imply loss of control and excessive speed. 38% of speed-related fatalities occurred on NT open roads.

Swapstat Card

Q: Is fatigue a contributor to road crashes in the NT?

A: Since 2000, fatigue has been recorded as a cause in 6% of deaths from road crashes and in 4% of serious injuries in the NT.

Swapstat Card

Q: What percentage of road deaths are attributed to Indigenous Territorians?

A: 50%

Swapstat Card

Q: Is there an increased risk of severe injury or death from not wearing a seat belt or restraint?

A: Yes, since 2000 on NT roads:

- 112 vehicle occupants who were not wearing seat belts have died (51% of fatalities where a seat belt was available).
- 276 were seriously injured (13% of serious injuries where a seat belt was available).

Swapstat Card

Q: Are NT traffic users at risk of harm from drivers who run red lights?

A: Red light running is high-risk behaviour. Since 2000 there have been 193 crashes attributed to drivers disobeying traffic lights in Darwin alone. These crashes resulted in four fatalities, 58 serious injuries, 45 people treated at hospital but not admitted, and 15 injured but not seeking treatment. In a 24-hour period in November 2005, road sensors indicated that at 11 Darwin intersections, as many as 2613 vehicles were potential red light runners.

Swapstat Card

Q: Are visitors to the NT counted in the NT crash data?

A: Visitors accounted for 20% of fatalities and 19% of serious injuries in the NT from 2000 to 2005. The most frequent crash type was single vehicle crashes in rural areas.

Swapstat Card

Q: Is driving on the open road at higher speeds safe in the NT?

A: No, higher speeds result in higher rates of fatalities and crashes causing injuries. More than half of all fatal crashes in the NT are run-off-road or overturned crashes that imply loss of control and excessive speed. 38% of speed-related fatalities occurred on NT open roads.

Swapstat Card

Q: What percentage of serious injuries involved Indigenous Territorians?

A: Of a total of 2995 fatalities and serious injuries in the NT in the period 2000 to 2005, a total of 779 or 26%, involved Indigenous Territorians.

Swap stats



Swapstat Card

Q: What percentage of 0-16 year old passengers were involved in fatal or hospital admitted road crashes in the NT between 1999 and 2008?

A: 48%



Swapstat Card

Q: What percentage of 0-16 year olds pedestrians were involved in fatal or hospital admitted road crashes in the NT between 1999 and 2008?

A: 16%



Swapstat Card

Q: What percentage of 0-16 year old bicyclists were involved in fatal or hospital admitted road crashes in the NT between 1999 and 2008?

A: 11%

Swapstat Card

Q: What percentage of 0-16 year old drivers were involved in fatal or hospital admitted road crashes in the NT between 1999 and 2008?

A: 13%



Swapstat Card

Q: How many males aged 0-16 years of age were involved in fatal or hospital admitted road crashes in the NT under the motorcycle road use group?

A: 51

Swapstat Card

Q: How many females aged 0-16 years of age were involved in fatal or hospital admitted road crashes in the NT under the motorcycle road use group?

A: 32



Swapstat Card

Q: Are more males than females represented in the NT 0-16 road user groups (1999-2008) under the following categories (driver, passenger, motorcyclist, bicyclist, pedestrian, other)?

A: Yes, males number 304 and females 216.

Swapstat Card

Q: Are 17-20 year old drivers more likely to be involved in a serious crash than drivers aged 21 and over?

A: 17 to 20 year old drivers are three times more likely to be involved in a serious crash than drivers aged 21 years and over. They are also over 11 times more likely to be killed in a crash than drivers aged 40 to 44 years due to their inexperience on the road.





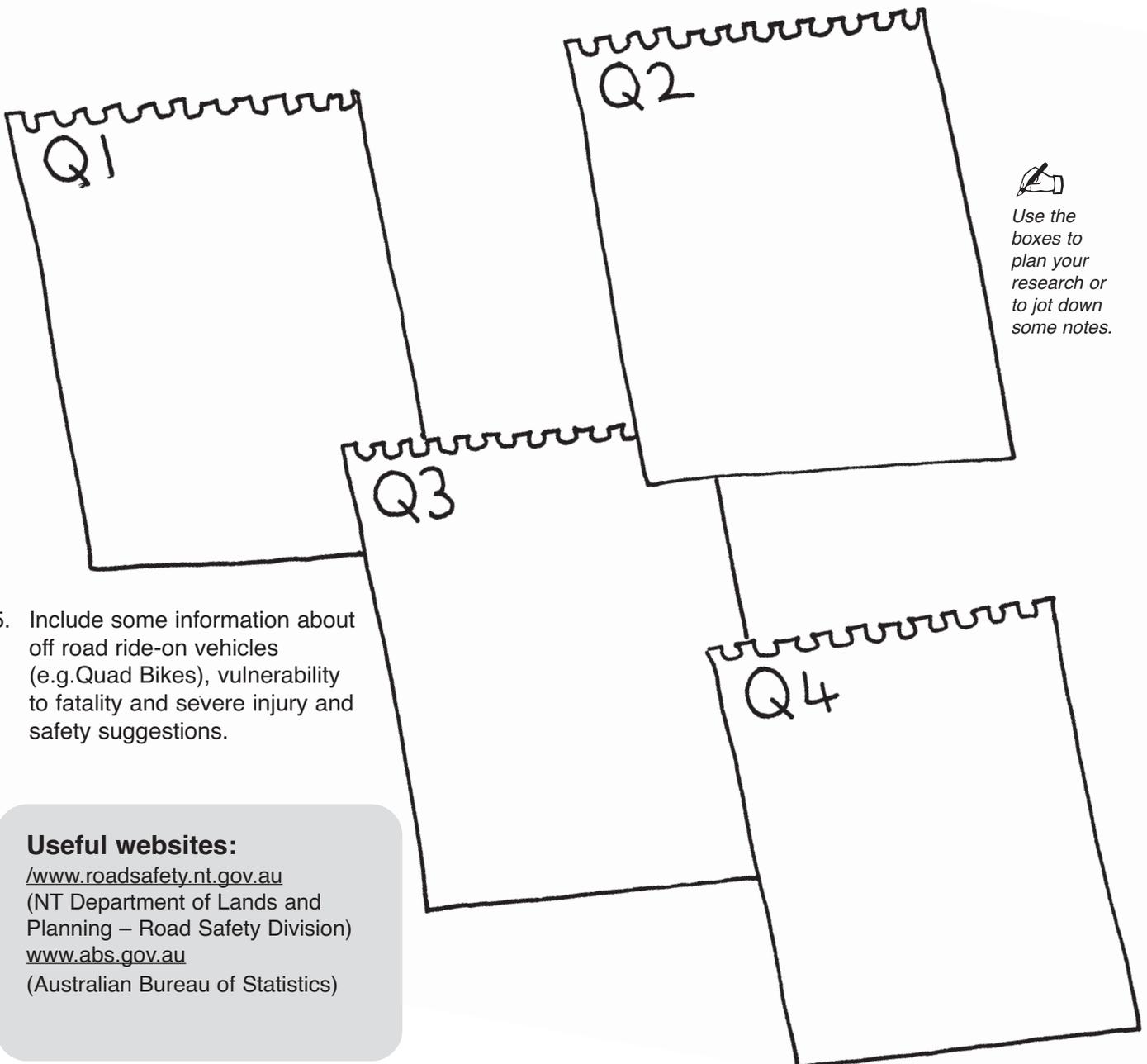
Assessment Task

You and another student have been asked by the Road Safety Executive Group (RSEG) to research data about young road users including drivers, to establish the factors that contribute to their involvement in road crashes (e.g. speed, alcohol and other drugs, not wearing restraints and fatigue).

The contract requires you to complete a written report and a presentation to the Road Safety Executive Group.

Your report and presentation should include:

1. statistics for all age groups and genders with a focus on young NT road users
2. graphs, illustrations, newspaper reports and articles, and other material to support the statistics and road user issues
3. some of the current strategies and community education campaigns that aim to reduce the involvement of young people in road crashes
4. suggestions to reduce crash involvement for young people including drivers.



5. Include some information about off road ride-on vehicles (e.g. Quad Bikes), vulnerability to fatality and severe injury and safety suggestions.

Useful websites:

www.roadsafety.nt.gov.au
(NT Department of Lands and Planning – Road Safety Division)
www.abs.gov.au
(Australian Bureau of Statistics)

Unit 3.2

Unit 3.2 Why crashes happen

The activities in this focus area are designed for Year 7 and 8 students.

For students:

Key understandings

- A road 'accident' is never an accident. It is the result of the combination of road user, road environment, risk factors and decisions made which result in a crash that, in turn, results in trauma.
- Crashes are not uncontrollable events but have definite causes and, by implication, can be avoided.
- 90% of road crashes are caused by human factors alone.
- Any moving vehicle does not come to an immediate stop after braking.
- The total stopping distance is equal to the road user's reaction distance and braking distance.
- A road user's safety in traffic may be affected by their reactions and vision.
- Strategies can be used to minimise exposure to risk in traffic.

Key skills

- Apply these understandings to their own personal situations as road users, and to the traffic environment.
- Identify risks and make decisions about staying safer in traffic-related situations.
- Share own opinions and attitudes about road user behaviour.

Activity 1: Crash theory

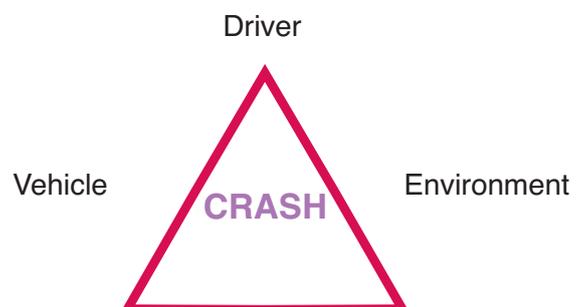


RESOURCES:

- Six large sheets of paper.
- Photocopy and cut out cards on *Resource Sheet 1: Crash theory* using three different colours – one card per student.

HOW:

Draw a triangle on the board and label as shown. Explain to students that road crashes are the result of the interaction of the driver, the vehicle and environment (both inside and outside the vehicle). However, 90% of road crashes are caused by human factors alone. Very few are the result of the vehicle or environment.



Write one of the following headings (driver, vehicle or environment) at the top of each piece of paper. Depending on the number of students there may be a need to have two sets for the **graffiti walk** (see p268).

Display the sheets and explain how to conduct a graffiti walk. Read the headings and give a couple of examples to clarify the task. Some are listed.

Unit 3.2 Why crashes happen

Driver	Vehicle	Environment
<ul style="list-style-type: none">• inexperienced• overconfident• risk taker• aggressive• drunk• tired• no seat belt• using mobile• drinking hot coffee	<ul style="list-style-type: none">• foggy windscreen• faulty brakes• powerful engine• headlights not working• 'un-roadworthy'• no horn• bald tyres	<ul style="list-style-type: none">• wet weather• road works• night time• crosswalk• bus lane• young child standing on back seat• aggressive passenger

Place students into groups. Groups move to one of the graffiti sheets and write further examples of factors that may cause a crash.

After a specified time, ask students to move to the next graffiti sheet where they should check previous listed responses and add others of their own. Repeat this procedure once more so students have responded to all three graffiti sheets.

Review the ideas listed on each sheet, giving more discussion time to the 'driver' sheet responses. Ask students to identify how the driver situations or actions could be avoided. This will help students to understand that in most cases it is the driver who can make a decision to change the outcome of a traffic situation. For example:

- tired driver - swap drivers or don't get behind the wheel of a car
- has consumed alcohol - call a family member or friend for a lift
- changing a CD – stop the car and change the CD.

Crash triangle

Distribute one coloured card from *Resource Sheet 1: Crash theory* to each student making sure there are equal numbers (i.e. groups of three) within the class.

Explain that each colour represents a crash factor (e.g. driver – white; environment – blue; vehicle - green).

Ask the class to form groups of three making sure that their group has a card of each colour.

Groups then discuss the scenario created by the three cards to determine the level of risk to the road user and then strategies that could be used to reduce the harm to the road user and others on the road.

Ask students to form new groups of three to allow discussion of different scenarios.

Discuss

- *In the scenarios you discussed, what factor contributed the most to a crash? (The driver.)*
- *What are some ways drivers can stay safer? (Plan ahead; don't drive tired or intoxicated; maintain the vehicle; limit passengers; make sure everyone wears a restraint.)*
- *Could you use some of these strategies in other traffic situations as a passenger or cyclist? (Don't walk home intoxicated; call for a lift; make sure bicycles are well maintained; wear a bicycle helmet.)*
- *What might affect a road user's ability to make a safer decision? (Emotions; temperament; use of alcohol or other drugs; friends; the situation such as an emergency.)*
- *How confident are you to make decisions that affect your safety in traffic? (Do the students have responses that they know would be effective when faced with negative influences from friends or peers? Can they assertively communicate concern about their safety in different traffic situations, e.g. driving with someone they think has been drinking or has taken other drugs?)*

Reflection

Ask students to write three ways they can increase their safety as a passenger in a motor vehicle (e.g. wear a seat belt, make sure the driver hasn't been drinking and don't distract the driver).

Place students in pairs to share and discuss their responses.

Activity 2: Factors contributing to crashes



RESOURCES:

- Photocopy *Resource Sheet 2: The Big 4* – one per student.
- Access to suggested internet sites.
- Toss a die questions – one copy per student.
- Die – one per group.

HOW:

Explain to students that speed, restraints, drink/drug driving, and fatigue are often described as the 'Big 4' in the context of road safety. These four factors contribute to road crashes and are reflected in statistics each year. Sometimes the term 'Fatal 5' is also used as 'driver distractions' are now recognised as a contributor to

Unit 3.2 Why crashes happen

crashes, although are not always easily determined in crash investigations.

In groups, students conduct a **scavenger hunt** (see p275) using *Resource Sheet 2: The Big 4* to research one of the factors and determine to what extent the factor contributes to road crashes.

Suggest students use the following websites to find information and statistical evidence to support their findings.

- www.roadsafety.nt.gov.au (NT Department of Lands and Planning – Road Safety Division)
- www.atsb.gov.au (Australian Transport Safety Bureau)
- www.infrastructure.gov.au/roads/safety/ – Australian Government Department of Infrastructure and Transport.
- www.drugsdriving.adf.org.au (Australian Drug Foundation)

Sharing information

Students can share the information gathered during the scavenger hunt by conducting a **jigsaw** (see p273) in groups of four where each of the Big 4 factors is represented.

Students should take turns to share their research, statistics and other material with members of the group. Encourage students to ask questions during the jigsaw activity.

Ask each jigsaw group to consider the information presented and write one interesting point about each crash factor. For example:

- o 53% of people killed in the NT (2001-2010) were not wearing a restraint (seat belt).
- o Recent NT statistics over a 10 year period show that 49% of road fatalities were alcohol related, 70% of alcohol related fatalities were male, and 75% of road fatalities occurred in a rural area.
- o 20% of road fatalities were known to be speed related.
- o Drug driving, including the use of cannabis, benzodiazepines, amphetamines and opiates, has the potential to increase the risk of road crashes in the NT. Almost one-in-three people detained for driving offences in the NT tested positive to illicit drugs.

Students could include these points in a Power Point presentation to share with other students or send home as an information sheet for parents.

Identifying attitudes

Give students a copy of these six questions and statements that are related to the Big 4. If possible, give students the questions several days before conducting this activity to give them time to consider the list and discuss their opinions with their family or friends.

1. *Young people are generally aware of the dangers of drinking and interacting with the traffic environment. However some still aren't getting the message. How do you think authorities should tackle this problem?*
2. *As a person's Blood Alcohol Concentration (BAC) increases their behaviour and response to traffic situations becomes more unpredictable. Should the legal BAC for fully licensed drivers be lowered to 0.00 BAC the same as L and P plate drivers?*
3. *Young people can lead busy lives. Most claim that they can drive sleepy and handle it.*
4. *Those refusing to comply with speed limits either don't believe that the faster you go the harder you hit or just don't care at all.*
5. *Almost everyone in Australia wears a seat belt, except the people who think they won't be in a crash.*
6. *Knowing about the Big 4 will influence how I act as a road user.*

Place students in groups of three or four. Give each group a die. Explain how to conduct a **toss a die** (see p299) and that the purpose of the activity is to listen to others' opinions about road user behaviours.

To start, one student rolls the die and answers the corresponding question on the list. Other group members listen to this student's response then the person to the left of the speaker asks one question about what they have heard. The die is then given to that student who repeats the previous steps.

Allow enough time for each student to roll the die and respond to at least two or three questions.

Discuss

- *How does it feel to share your opinions about road user behaviours with others?*
- *Has listening to others' opinions and thoughts about road user behaviours changed how you think about these issues?*
- *Do you think you will always have the same opinion about road use? Why or why not?*

Reflection

To personally reflect on this activity students can complete the following **unfinished sentences** (see p302) then share their responses with a partner or small group.

- *My current risk of harm from the Big 4 is ... (very high/high/moderate/low/very low)?*
- *Ways that I could reduce my risk of harm or continue to maintain a low level of harm from the Big 4 are ...*

- *If I had a friend who often had a few drinks before walking, riding or driving, I would ...*
- *If I was offered a lift in a car where a seat belt wasn't available for me to wear I would ...*

Note for teachers:

Activities 3 to 6 are simulated activities that aim to highlight a range of factors that can affect a road user's ability to interact safely with traffic.

It is not expected that teachers implement all of these activities.

Activity 3: Speeding and crashes



RESOURCES:

- Photocopy *Resource Sheet 3: How fast can you stop?* – one per student.
- Photocopy *Resource Sheet 4: Speed signs* – one set.
- Trundle wheel or 100 metre tape measure.
- Witches hat or marker (e.g. ice cream container, duster or ruler).
- Area approximately 100 metres long.
- 'Strongly agree' and 'strongly disagree' card – one set (optional).

HOW:

Students read through *Resource Sheet 3: How fast can you stop?* Explain that the time or distance it takes a vehicle to stop is the combination of both the driver's reaction time and braking distance of the vehicle (e.g. stopping distance = reaction distance + braking distance) and the interaction of other factors such as those identified in Activity 1 of this unit. The people and objects within the vehicle will, however, continue to move forward within the space of the vehicle at the speed the vehicle was initially travelling. This activity will simulate the distance that a vehicle continues to travel even after a driver has reacted quickly to an emergency.

Gather the markers, trundle wheel and speed signs from *Resource Sheet 4: Speed signs* and take students outside to an area that is at least 100 metres long.

Students should also take their resource sheet and a pencil.

Place a witch's hat or marker on the ground. Select a student to stand behind the marker. Explain to students that the marker represents the front of a car and the student, who is the 'driver', has just seen a small child run out onto the road about 30 metres in front of the car. The driver, the car and the weather are all in perfect condition.

Select seven students and give each a speed sign. Ask the class to estimate where the car travelling at each of the speeds indicated, would stop after the driver has reacted and braked. Students holding the signs then move to the place decided by the class.

Ask a student to use the trundle wheel to measure the estimated distances. Students record these measurements on their resource sheet.

When all guesses have been made, tell students the correct stopping distances (listed in the table below) and measure out each distance. Ask students who are holding the speed signs to move to that spot. Students should record the correct distance on their resource sheet.

Discuss

- *What did you notice about your estimations and the correct distances?*
- *What might affect stopping distances?* (Factors such as wet weather; different road surfaces; the size of the vehicle and the load it is carrying; driver reaction time.)
- *Knowing the distance it takes a vehicle to stop, what does that mean to you as a pedestrian, cyclist or future driver?* (Pedestrian – don't walk out in front of a vehicle. Cyclist – adjust distance between bike and vehicle in front. Driver – travel at or below posted speed, be alert and scan for hazards.)
- *If you were going to share this information about stopping distances with a pedestrian, what tips would you give them?*
- *Has your opinion about lower speed limits on local roads changed after completing this activity?*

Speed (km/h)	40	50	60	70	80	90	100	110
reaction distance (m)	8	10	12	14	16	18	20	22
braking distance (m)	9	14	20	26	36	43	56	68
stopping distance (m)	17	24	32	40	52	61	76	90

Source: Northern Territory Road User Handbook (2009)

Unit 3.2 Why crashes happen

- Other than stopping distance, what are some other advantages of driving at 40 km/h past schools?
- What other areas should have a 40 km/h limit?

Two second gap

It is recommended that drivers travelling at 60 km/h or lower leave at least a 'two second gap' between vehicles. This space will enhance safety by allowing the driver to scan more of the driving environment. The driver will have more time to avoid hazards and distance to react and stop if the vehicle in front suddenly stops.

The two second gap can be measured by identifying a marker such as a tree or pole on the road side. When the vehicle in front of a driver's car passes the marker, the driver should count 'one thousand and one, one thousand and two'. At the end of this two second period the driver's car should be passing the same marker.

Ask students what the preferred gap between traffic is in ideal and less than ideal conditions. List some reasons why having such a space is necessary.

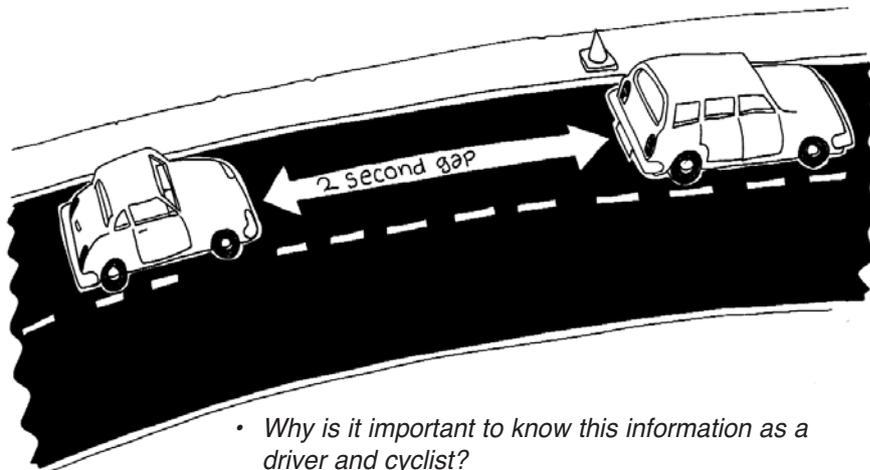
The following ideas can be used to demonstrate the two second rule.

- Take students to the roadside and stand next to a pole, tree or marker. Students choose a car driving past with a car following behind it to check if there is a two second gap.
- Students, in groups of three or four, line up around the perimeter of a basketball court then follow each other around the court. Vary the speeds students are moving by calling out instructions such as jog, run, walk, jog and slow down. Randomly blow a whistle to indicate when students are to stop. Instruct them not to deliberately 'crash' into other students.

Repeat the process with students trying to leave a two second gap between themselves and the person in front.

Discuss

- How does speed affect the distance required to stop?
- Why is it difficult to maintain a two second gap?
- How did the actions of the person in front and behind you affect your ability to keep a two second gap?
- What other factors other than speed may affect stopping distance? (Wet weather - both drivers and cyclists need to increase the distance between their vehicle and the vehicle in front.)



- Why is it important to know this information as a driver and cyclist?

Suggest students tell their family about the two second gap and practise checking the gap when next travelling as a passenger in a motor vehicle.

Speed opinions

Students indicate their opinions about some of the following statements by using a **fist of five** (see p284) where a 'fist' represents 'strongly disagree' and 'five fingers' represents 'strongly agree' or alternatively a **values continuum** (see p283) labelled 'strongly agree' and 'strongly disagree'. Encourage students to share and justify their views.

Statements

- The speed limit around schools should be reduced to 30 km/h.
- If you are an experienced driver you can stop a vehicle quicker than an inexperienced driver.
- It's okay to travel 5 km/h over the posted speed limit.
- Pedestrians should understand how long it can take a vehicle to stop.
- Most crashes could be avoided if all drivers travelled at the speed limit or less.
- There is never a reason to speed.
- Some countries have reduced the general urban speed limit to 50 km/h and have seen fatalities reduced by up to 25% on these roads. Therefore we should have a 50km/h limit too.

Reflection

Suggest to students that not all drivers adhere to the two second gap and because of this put themselves, their passengers and other road users at risk.

Ask students to write how they would tell a driver who was travelling too close behind a vehicle that they were concerned about their safety.

Activity 4: Reactions



RESOURCES:

- A4 sheets of paper – one per student.
- Photocopy *Resource Sheet 5: Touch timer* – one per student.
- Stopwatch or timing device – one between two.

HOW:

Explain to students that there are a range of factors that can affect a road user's ability to stop quickly. For example, in wet weather a cyclist will find it takes longer to stop than when the road and their tyres are dry.

Set students a **one minute challenge** (see p269) to write a list of other factors that can affect stopping distance. Some examples include:

- **reaction time** - which may be affected by factors such as fatigue, alcohol or other drugs, distractions or when a pedestrian is seen
- **condition of the road surface** - including whether it is wet or dry, gravel or an off-road area
- **condition of the vehicle** - including brakes and tyres
- **environmental conditions** - such as wet weather, sun in driver's eyes, night time
- **location of the vehicle** - including gravel roads, winding road, freeway or local road
- **speed the vehicle is travelling** - which is also a critical factor in determining the level of injury and possibility of a pedestrian surviving a crash. Even small reductions in impact speed can contribute to a significant decrease in trauma.

Students share their list of factors with others in the class.

If reaction time was not identified by students, include this in the discussion. Explain that reaction time contributes to the overall stopping distance of vehicles and bicycles (i.e. stopping distance = reaction distance + braking distance). The reaction distance is the time it takes the driver to respond to a situation and begin applying the vehicle's brakes. Braking distance is the distance it takes to bring the vehicle to a complete stop once the brakes are applied.

Explain that quick reactions by road users may reduce

crash involvement and the level of injury. Demonstrate this to students by writing on the board, the below sequence that represents the actions that occur when a driver sees a cyclist pull out in front of them.

For example: if a cyclist reacts slowly and other factors such as speed and load of the bicycle are included, the possibility of the cyclist being hit and injured is increased dramatically.

Reaction test

Place students in pairs. Give each student a copy of *Resource Sheet 5: Touch timer* and instruct them to place it face down. Studying the grid beforehand can alter the results.

Explain to students they are going to take turns to test their reactions. Nominate one of the partners to be the 'timer' and give them a stopwatch or timer. The other student is the 'subject'.

The timer's role is to uncover Grid 1 on the resource sheet and time how long it takes the subject to touch each of the numbers in order from 1 to 12. The subject should do this as quickly as possible. When the subject touches the number 12 the timer stops the stopwatch and records the time in the Grid 1 space provided on the resource sheet.

This procedure is repeated for Grid 2 then partners swap roles.

Students can calculate their average time and check their reaction rating.

Discuss

- *Were there any differences between your first and second test? Why?*
- *Why do you think some of our class scored a higher rating than others? (Tired, not concentrating, hard to do, felt pressure.)*
- *In traffic there may be situations where you need to have quick reactions. What might these be? (As a driver – stopping quickly if a child or animal ran onto the road; tyre blow out; car stops suddenly in front of your vehicle. As a pedestrian – when a driver doesn't stop at a crosswalk or give way at a traffic light. As a cyclist – a driver not realising you are riding next to them, opening a door as you ride by.)*
- *Why is it important for road users to know about reaction times? (e.g. drivers and cyclists should increase the distance between their vehicle and the vehicle in front; take breaks on trips to avoid fatigue; pedestrians need to constantly scan the traffic environment for hazards and be prepared to stop.)*



Unit 3.2 Why crashes happen

Practice versus reaction

Students can test if practice improves their reaction time using Grid 1 on the resource sheet.

The previous procedure is followed after the subject has completed touching the numbers in order on Grid 1 and recorded the time in the table on the sheet, they are given the opportunity to practise Grid 1 ten times before doing their second, third, fourth and fifth test. An average is calculated by adding the recorded times and dividing by five.

Discuss

- *Did your reaction times improve during the five trials? Why?* (Suggest that more experienced drivers who have had more opportunity to practise their traffic scanning skills often react quicker than a learner or new driver who is still concentrating on manoeuvring the vehicle and coping with traffic.)
- *What might affect a driver's reaction time?* (Distractions inside or outside the car, fatigue, alcohol and other drugs, weather conditions.)

Reflection

Ask students to write a response to the following question. Responses could include concentrate, don't wear headphones or talk on mobiles, avoid distractions, scan the environment or be prepared to react. Discuss responses as a class.

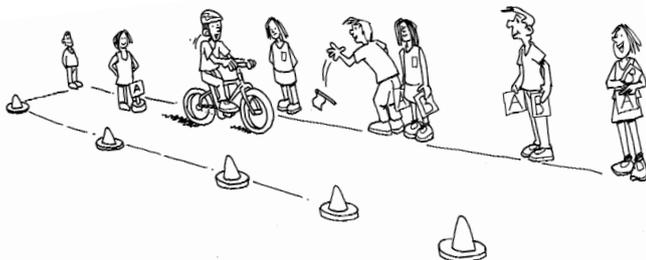
- What can you do to increase your ability to react quickly in traffic situations as a pedestrian and cyclist?

Activity 5: Stopping distance



RESOURCES:

- Bicycle and helmet.
- Long tape measure or trundle wheel.
- Six markers (e.g. witches hats, ice-cream containers, books) labelled Point A.
- Six markers labelled Point B.
- One stopping flag (e.g. a tea towel or hat).



HOW:

This activity simulates how far it takes a cyclist to stop a bike after reacting to a traffic hazard. Set up a 'track' approximately 100 metres in length on a bitumen area such as a basketball or netball court.

Give six students a Point A and Point B marker each. Have these students spread out along the track at intervals of around five to ten metres. Give one other student the 'stopping flag' and have them stand half way down the track.

Explain to the cyclist they are to ride down the track and apply both the front and rear bike brakes when the flag is dropped. The student closest to where the cyclist applies the brakes marks the spot with a Point A marker and the student closest to where the bike comes to a stop places a Point B marker. Measure and record the distance between both points to determine the stopping distance of the cyclist.

Include the following factors when repeating the activity to observe changes to stopping distance:

- cyclist riding at a faster and slower speed than the first trial
- cyclist carrying a heavy backpack
- spray the court with water (or throw a bucket of water) to reduce friction levels
- have students try to distract the cyclist.

Discuss

- *Did the bike come to an immediate stop in any of the trials? Why not?* (Stopping distance = reaction distance + braking distance.)
- *Which factors increased the stopping distance of the bike? Why?*
- *Which would take longer to stop – a truck or bike? Why?* (Larger, heavier vehicles take longer to stop.)

Reflection

Students can use a **think-pair-share** (see p299) to respond to the following question.

- Why do you as a road user need to be aware of the stopping distances of vehicles, including bikes?

Activity 6: Field of vision



RESOURCES:

- Large classroom protractor – one per group
- Photocopy *Resource Sheet 6: Blind spot* – one per student.
- Different coloured pencils – a set per group.

HOW:

Peripheral or side vision develops with age and is the ability to notice what is around the edge of your view. Explain to students that most people can see more than 90 degrees at each side making a total field of vision of over 180 degrees. A field of less than 70 degrees on each side is generally considered hazardous to safe driving as the awareness of movement and objects in peripheral vision is important for noticing and judging traffic.

Place students in groups of four and explain that this activity will test their peripheral vision. Each group will need a large protractor.

Explain the testing procedure to students then allow enough time for students to carry out each test.

1. Student One sits holding the protractor at eye level with their nose in the centre whilst looking at something in the distance directly ahead.
2. Student Two should stand behind Student One and slowly move the coloured pencil along the edge of the protractor from the back to the front.
3. Student One should call out when they can see the pencil.
4. Student Three marks the spot on the protractor.
5. The process is repeated for the other eye.
6. The points where the student first saw the pencil are recorded in degrees on a table (as shown) by Student Four.
7. Repeat this procedure until each member has been tested twice.

Field of vision

Test 1

Right eye _____

Left eye _____

Total of four readings _____

Divide the total by 4 to get the average _____

Test 2

Right eye _____

Left eye _____

Discuss with students the implications of limited peripheral vision for road users in traffic (e.g. noticing other road users to the side of their vehicle or a road sign) and ask students to suggest what can be done to compensate for smaller areas of side vision such as:

- developing the habit of continually glancing left and right, by turning the head if necessary
- reducing speed to compensate for the brief intervals between side glances.

Allow students to take home the protractors and test family member's peripheral vision. Suggest students test a younger sibling's peripheral vision as up to the age of ten, children will generally have around a third of an adult's side vision.

Discuss

- *What does this mean to you as a cyclist or driver in the future?* (Young drivers tend to not use their peripheral vision in contrast to more experienced drivers. Cyclists need to turn their head and check for traffic to see past the edge of bicycle helmets.)

Testing for blind spots

Explain to students that the 'blind spot' in each eye is the part of the retina where the nerve fibres leave the eye and there are no light sensitive cells. In a traffic situation this blind spot may affect the ability of a driver to see pedestrians and cyclists.

Give each student a copy of *Resource Sheet 6: Blind spot* and explain the procedure for discovering the blind spot. Allow enough time for students to undertake the procedure.

After students have undertaken the procedure ask them to discuss and answer the following questions on the resource sheet. If correctly performed, students should have noticed that the dot completely disappeared at a distance of about 15 to 20cm from their face.

Answers to questions on Resource Sheet 6:

- *Knowing that driver's have a blind spot in their vision, what should a pedestrian or cyclist do to stay safer?* (Pedestrian - if you are crossing the road, make sure that the driver has seen you. The best way to check is by making eye contact and waiting until you can see that the vehicle is coming to a stop. Cyclist – ride where the driver will be able to see you and have eye contact with the driver.)
- *How might the blind spot affect a pedestrian's ability to see a car and what can they do to try to overcome this?* (Turn their head when looking for cars and check more than once before crossing. Look over their shoulder if necessary.)
- *Being visible to drivers can increase a pedestrian's safety. What factors can make it difficult for a driver to see a pedestrian?* (Visibility conditions such as sun glare, low light levels or at dusk and dawn, night time, overcast, wet or foggy weather. How conspicuous the pedestrian is, such as wearing light or reflective clothing at night, having reflective strips on backpacks or shoes, or the size of the pedestrian such as a child compared to an adult. Location of pedestrian such as standing between parked cars, or on the road edge with no street lighting.)

Reflection

Use a **think-pair-share** (see p299) for students to share their responses to the questions. Suggest students take the resource sheet home and test other family members.

Activity adapted from VicRoads, 2005, Teaching Pedestrian Safety in Secondary Schools.

Crash theory

<p>Driver</p> <p>Inexperienced</p>	<p>Environment</p> <p>Wet weather</p>	<p>Vehicle</p> <p>Foggy windows</p>
<p>Driver</p> <p>Overconfident</p>	<p>Environment</p> <p>Road works</p>	<p>Vehicle</p> <p>Faulty brakes</p>
<p>Driver</p> <p>Risk taker</p>	<p>Environment</p> <p>Busy city street</p>	<p>Vehicle</p> <p>Gears stick</p>
<p>Driver</p> <p>Has drunk alcohol</p>	<p>Environment</p> <p>Crying child in back seat</p>	<p>Vehicle</p> <p>High powered engine</p>
<p>Driver</p> <p>Distracted</p>	<p>Environment</p> <p>Passenger who has drunk alcohol</p>	<p>Vehicle</p> <p>Faulty seat belt</p>
<p>Driver</p> <p>Not wearing a seat belt</p>	<p>Environment</p> <p>Traffic lights not working</p>	<p>Vehicle</p> <p>Headlights not working</p>
<p>Driver</p> <p>Changing a CD</p>	<p>Environment</p> <p>Off road track</p>	<p>Vehicle</p> <p>Faulty indicators</p>

The Big 4

Big 4 risk factor: _____

1. Give three statistics that support the inclusion of this crash factor in the Big 4.



Speed

2. This factor increases the level of risk for a road user because: (list 3 reasons)



Drink driving

3. Is this crash factor more of a problem in urban or rural areas? Provide some evidence to support your response.

4. Has the crash factor increased or decreased in the last ten years? Why?



Restraints

5. What are two myths about this crash factor (e.g. winding down the window helps overcome fatigue; if you wear a seat belt you'll be trapped in the car)?

6. What are two ways you could reduce your risk as a passenger in relation to this Big 4 factor?



Fatigue

Websites

www.roadsafety.nt.gov.au (NT Department of Lands and Planning – Road Safety Division)

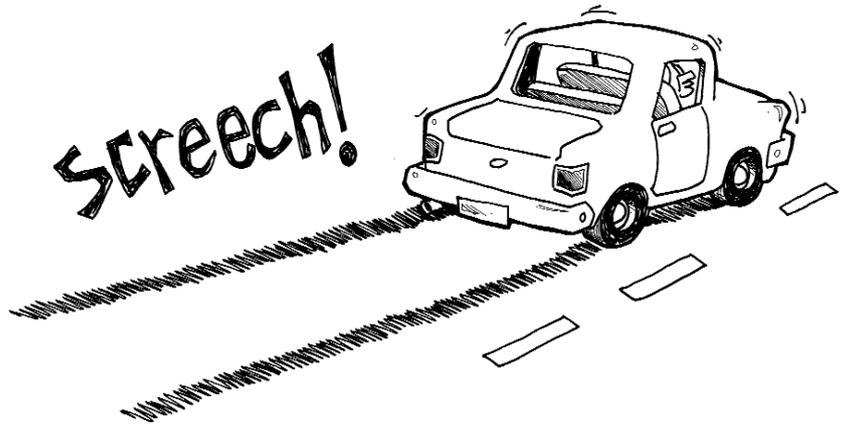
www.infrastructure.gov.au/roads/safety/ (Australian Government Department of Infrastructure and Transport)

www.atsb.gov.au (Australian Transport Safety Bureau) www.drugsdriving.adf.org.au (Australian Drug Foundation)

How fast can you stop?

Reaction distance

This is the distance a car will travel from when the driver sees a problem and hits the brakes. The time it will take a driver to react - if they're alert and not playing with the radio or chatting with mates - is 1.5 seconds. But if the car is being driven at 60 km/h it will still travel 25 metres in the time it takes for the message to get from the driver's brain to their foot.



Braking distance

This is the number of metres a car will travel between the driver hitting the brakes and coming to a complete stop. The car will cover another 20 metres before this happens, assuming the road is dry and the car has good tyres and brakes. If the road is wet or the car is a bit dodgy things can change dramatically.

Stopping distance

This is worked out by adding the reaction distance to the braking distance. For example, if a car is travelling at 20 km/h:

$$\begin{array}{rcccl} \text{reaction distance} & & \text{braking distance} & & \text{stopping distance} \\ 8 \text{ metres} & + & 2 \text{ metres} & = & 10 \text{ metres} \end{array}$$

Let's assume it's a dry day, your car is new and the tyres and brakes are in good condition. You're driving along when a young child runs onto the road about 30 metres in front of your car. How far will it take you to stop?

1. Estimate where your car will stop, travelling at each of the speeds shown below, and place the corresponding speed sign at that distance.
2. Measure your estimation and write the distance in the table.
3. Now check the correct stopping distances and move the speed signs to that distance.

At which speed/s would the car:

- stop in time? _____
- touch the child? _____
- hit the child? _____

Speed	Stopping distance	
	Guess (in metres)	Actual (in metres)
40 km/h		
50 km/h		
60 km/h		
70 km/h		
80 km/h		
100 km/h		
110 km/h		

Why is it important for drivers, cyclists and pedestrians to know about stopping distances?

Speed signs



Speed signs



Speed signs



Speed signs



Speed signs



Speed signs



Speed signs



Speed signs



Touch timer

Let's test your reactions. Touch the numbers on Grid 1 in order from 1 to 12 as quickly as you can. Record your time in the table.

Do the same for Grid 2 then work out your average reaction time by adding the two scores together then dividing the answer by 2.



Grid 1			
4	10	8	12
3	6	1	7
9	5	2	11

Grid 2			
10	8	11	1
2	9	3	5
6	7	12	4

Grid	Time (sec)
1	
2	
Average =	
My rating =	
Less than 5	<i>Excellent</i>
5-7	<i>Not bad!</i>
7-9	<i>Average</i>
More than 9	<i>Steady Eddy!</i>

Trial	Time (sec)
1	
2	
3	
4	
5	
Average =	

Describe and explain your results.

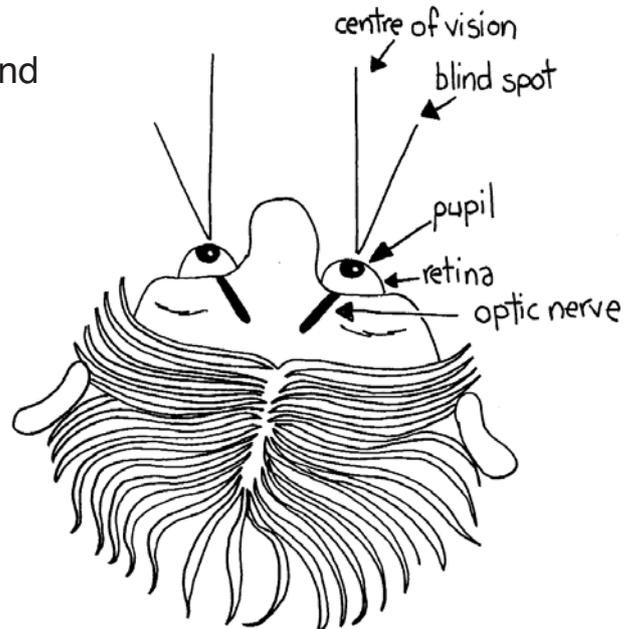
Relate your results to an experienced and inexperienced driver in an emergency situation.

Blind spot

The blind spot in each eye is the part of the retina where the nerve fibres leave the eye and there are no light sensitive cells.

- Hold this piece of paper at arm's length.
- Close your left eye.
- Stare at the cross with your right eye.
- Keep staring at the cross and bring the page slowly towards your face.
- You should be able to see the dot out of the corner of your eye if you keep focussed on the cross.

► **What happens as you bring the page in towards your face? Why?**



Now turn the page upside down and repeat the steps for your left eye with your right eye closed.

1. Knowing that driver's have a blind spot in their vision, what should a pedestrian or cyclist do to stay safer?

2. How might the blind spot affect a pedestrian's ability to see a car and what can a pedestrian do to try to overcome this?

3. Being visible to drivers can increase a pedestrian's safety. What factors can make it difficult for a driver to see a pedestrian?

Unit 3.3

Unit 3.3 Reducing road user risks

The activities in this focus area are designed for Year 7 and 8 students.

For students:

Key understandings

- Road safety devices and initiatives are based on research, statistics or observations and are continually being developed, advertised, assessed and improved.
- Technological developments are making vehicles and the road environment safer for all road users.
- The effectiveness of safety devices depends to a great extent on correct and appropriate use.
- Vehicle occupants are safer in some vehicles than others.
- Safety should be a high consideration when purchasing a vehicle.
- A road environment should warn, inform, guide, control and forgive road users.
- There is a need to have laws, rules and regulations to promote safe interaction for all road users in the traffic environment.

Key skills

- Identify strategies that promote safer interaction with the traffic environment.
- Apply these understandings to personal situations as road users by making safer decisions.
- Share own opinions and attitudes about road user behaviour.

Activity 1: Road safety facts



RESOURCES:

- Photocopy and cut out cards from *Resource Sheet 1: Quiz quest* – one set per group.
- Photocopy *Resource Sheet 2: Quiz Quest board* to A3 size – one per group.
- 1 minute timer or stop watch (optional) – one per group.

HOW:

The questions in this activity are designed to stimulate discussion of road rules, road user attitudes and behaviours, strategies and protective equipment that may minimise harm in the traffic environment.

Divide students into groups of three or four. Name each group either Team A or B. Make sure there are equal numbers of A and B teams.

Place a Team A with a Team B. Each pair of opposing teams will need to have one set of quiz question cards from *Resource Sheet 1: Quiz quest* and an A3 copy of *Resource Sheet 2: Quiz quest board*. Each team should select a 'quiz master' who will be responsible for reading the questions and keeping track of scores for the opposing team.

The quiz starts with Team A nominating the category and level of difficulty (e.g. 'protective equipment' for 20 points). The quiz master for Team B reads the question for Team A to answer within a set time limit (e.g. 1 minute).

If correct, Team A receives the point and chooses another question. The quiz master places the card on the quiz board to show the question has been used.

If the answer was incorrect, the quiz master gives the correct answer and places the card on the quiz board. Team B then chooses a category and level of difficulty and the game continues until all questions have been answered. The team with the highest score are the quiz winners.

Unit 3.3 Reducing road user risks

After the quiz, teams report back on questions that created discussion or were not answered correctly. Clarify these questions and record any that require further exploration.

Activity adapted from RTA NSW, 2004, *Road Risks – Your choice*.

Reflection

Give students time to reflect on the information covered in this activity by completing a **3-2-1 reflect** (see p302). For example:

- **3 recalls** – write 3 facts about road users and their safety
- **2 so what's** – write 2 pieces of road safety information that was important to me
- **1 question** – write one question or thought still going around in my head (e.g. *What road rules do I need to learn before I start to ride a bicycle or drive a car?*).

Students can share their responses with a partner, then with the class to ascertain if the main concepts were understood.

Activity 2: Active and passive safety features of vehicles



RESOURCES:

- Photocopy *Resource Sheet 3: Safer cars save lives* – one per student.
- A4 paper – one sheet per student.
- Cards labelled 'agree', 'unsure' and 'disagree' – one set.

HOW:

Explain that most vehicles today have safety features and devices that are designed in two categories:

1. **passive** safety features that protect and minimise injuries of vehicle occupants in a crash (e.g. air bags, seat belts or crumple zones)
2. **active** safety features that prevent a vehicle having a crash or ensure the driver is in the best position to control the vehicle in any emergency situation that arises (e.g. electronic stability control, ABS, wider vision areas or lighting).

Ask students to use an **ABC graffiti** sheet (see p268) to brainstorm inventions and devices, words or phrases related to the following sentence starter (e.g. A – air bags, B – brakes, C – crumple zones...).

- A vehicle that is safer than any other...

Within a designated time, students complete the graffiti sheet then review their list and circle five words or phrases. Students use these to write one or two sentences that summarise their thoughts about safer vehicles. Ask groups to share their summaries with the class.

In groups, ask students to use a **Y chart** (see p279) labelled 'passive', 'active' and 'others' to sort the ideas generated in the ABC graffiti. Check the lists for accuracy.

Give students a copy of *Resource Sheet 3: Safer cars save lives*. Ask students to research one of the safety features listed on the resource sheet (or alternatively from the ABC graffiti sheet) and present their findings to the class. The presentation could include photographs, illustrations or diagrams, written information, advertisements for the product and examples if available.

After the presentations, have students rank the features according to the protection they offer. Of these, ask students to tick those that are standard features in vehicles. Discuss why the remaining features are not standard items (e.g. cost, seen as added extras or only in more expensive vehicles).

Considering opinions

Set up a **values continuum** (see p283) using the 'agree', 'disagree' and 'unsure' cards.

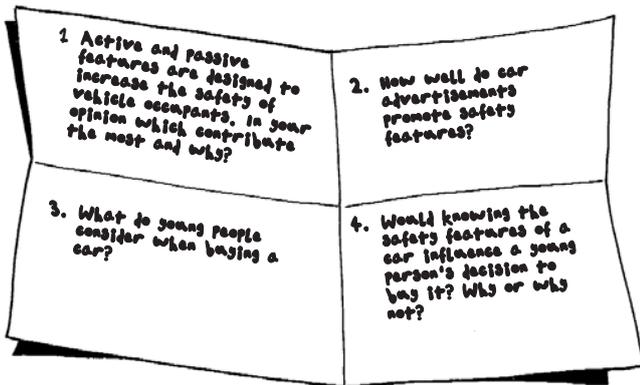
Have students consider one of the following statements and decide which position on the continuum best represents their opinion.

- Safety features should be standard in all vehicles.
- Young people will always choose to drive cars that look cool.
- Safer cars do not make safer journeys.

Ask students standing near each other to share their ideas. Open the floor for discussion and invite groups to present their opinions to the class. Encourage students to agree or disagree with comments made by others. Debrief the values continuum activity.

Identifying attitudes

Place students in groups of four and allocate each a number from one to four. Conduct a **rip and review** (see p274) by having students fold a piece of paper into quarters and write one of the following questions in each quarter.



1. Active and passive features are designed to increase the safety of vehicle occupants. In your opinion which contribute the most and why?
2. How well do car advertisements promote safety features?
3. What do young people consider when buying a car?
4. Would knowing the safety features of a car influence a young person's decision to buy it? Why or why not?

Ask students to respond to each question remembering that other members of their group will be reading their answer.

Students then tear their sheet into quarters and give these to the group member who has the corresponding number (e.g. all responses to question one are given to student number one). Students read their set of responses then take turns to summarise the main points to other members of their group.

Reflection

Ask students to complete the following **unfinished sentence** (see p302) then share their response with a partner.

- If I could buy any car I would buy a _____ because _____.

Note for teachers:

Activities 3 to 8 are simulated activities that aim to highlight a range of factors that can affect a road user's ability to interact safely with traffic.

It is not expected that teachers implement all of these activities.

Activity 3: Crash impact



RESOURCES:

- Drinking straws – several packets.
- Boiled eggs or biscuits – one per student.
- Different sized pieces of cardboard, paper, alfoil, bubble wrap – enough for each student.
- Sticky tape and scissors – enough for one between two.
- Ruler – one per group.

HOW:

This activity will simulate the impact of a car crash and demonstrate how crumple zones are designed to collapse during the crash. The crumple zone helps to absorb some energy from the crash, reducing the force transferred to the vehicle occupants.

Ask students to design a container that will protect an egg or biscuit (representing a vehicle occupant) from breaking during a fall using the straws, cardboard, paper, foil and bubble wrap. Explain to students that the container will be dropped from a height of one metre onto concrete or a hard surface (simulating a vehicle hitting a solid object). Set a time limit for the completion of the designs.

In groups, students should measure and mark a one-metre drop then test and observe the effects of the crash on each design.

Ask students to identify why some gave more protection to the egg or biscuit than others. Suggest to students that it is better to design a container which crumples and absorbs the impact rather than one which bounces along or stays in a rigid shape.

Discuss

- *Why are vehicles designed with 'crumple zones'?* (If a car doesn't crumple during a crash, the occupants are more likely to be injured or killed. This is because the car is not absorbing the force of the impact and occupants are thrown around more.)
- *Why do people often say that cars made forty years ago didn't crumple like cars today?* (It is commonly believed that 'modern' cars are inferior because they collapse more during crashes. This change in car body construction has been purposely introduced to save lives after rigorous crash testing and changes in technology. It isn't because cars are mass produced or built using inferior products.)
- *What other safety features in a vehicle may help the occupants to survive or reduce their injuries in a crash?*

Unit 3.3 Reducing road user risks

Activity 4: Seat belts



RESOURCES:

- Ball of play dough or plasticine – size of a tennis ball.
- 15cm length of 2cm wide fabric (e.g. ribbon).
- Large toy car, roller skate or trolley with wheels – needs to be open.
- Stiff material about 30cm x 50 cm for a ramp (e.g. lid of a box, piece of wood).
- Blocks of wood or pile of books – to height of 30cm.
- One large elastic band.

HOW:

Explain to students that if seat belts are worn correctly they are effective in reducing injuries to vehicle occupants as they restrict movement of passengers in a crash.

To simulate the effects of not wearing a seat belt correctly, have a student mould a handful of play dough into a ball. This will represent a vehicle occupant. Hold the fabric tightly at each end and draw the straight, flat fabric firmly across the play dough. Observe and discuss what happens to the play dough (e.g. the straight fabric will have little effect on the surface of the play dough).

Reshape the play dough and repeat the process using the twisted fabric. Students should now see how the twisted fabric digs into the surface of the play dough.

Discuss

- *What differences were there between the straight and twisted fabric on the play dough?*
- *What injuries do you think a twisted seat belt could cause in a crash? (Deep cuts, cracked ribs or internal injuries.)*
- *Are seat belts appropriate for young children? Why or why not? (No. A seat belt is designed for a person of certain weight and height. A young child should be seated in a correctly fitted and appropriate for weight and height, child car restraint to reduce injuries in the event of a road crash.)*
- *What else might cause a seat belt to not work correctly? (Buckle not connecting or frayed at connection points.)*

- *What other road users need to wear protective equipment and how should it be worn correctly for it to be effective? (Cyclists must wear a helmet that is Australian Standards approved. The helmet straps should fit the cyclist's head firmly and be buckled in.)*

Activity adapted from NSW Road Traffic Authority, 2004, Road Risks – Your choice.

Newton's First Law of motion

Write Newton's First Law of Motion on the board and ask students to decide what it means in a road safety context.

Every body continues in its state of rest or uniform motion, in a straight line, unless acted upon by an external force.

Use the following instructions to simulate how a 'passenger' (the play dough) will keep moving or be thrown from a moving vehicle if a seat belt or restraint is not used.

1. Stack several blocks of wood or books high enough to give the ramp an angle of at least 45 degrees.
2. Place the ramp on the edge of the books or wood.
3. Make sure the lower end of the ramp is close to a wall or table leg to increase the impact of the 'crash'.
4. Make a ball of play dough to represent the 'passenger'.
5. Place the play dough ball on the 'car' then release it down the ramp.
6. Observe and discuss what happens to the play dough.
7. Now attach the play dough to the car using the elastic band.
8. Repeat the procedure and observe any changes to the movement of the play dough.

Discuss

- *When wearing a seat belt, what happens to the movement of a vehicle occupant? (The occupant comes to a stop along with the car rather than being thrown from the car.)*
- *Knowing Newton's First Law of motion, what other actions should vehicle occupants take to reduce injuries if involved in a crash? (Store luggage and objects in the boot or glove box of the car as these can become lethal projectiles in a crash.)*

Reflection

Ask students to respond to the following **unfinished sentences** (see p302) then share their thoughts with a partner.

- People still choose not to wear a seat belt...
- More people would wear seat belts if ...

Activity 5: Air bags



RESOURCES:

- Photocopy *Resource Sheet 4: Air bags* – one per student.
- Access ANCAP ratings on www.ancap.com.au
- Balloons – one per group.
- One tall glass/vase/coffee jar (at least 14 cm high) – one per group.
- Two boiled eggs per group.

HOW:

This activity will simulate how an air bag is designed to deploy and reduce the injuries of vehicle occupants in a road crash. Each group will need a set of equipment and a copy of *Resource Sheet 4: Air bags* to carry out the test. Make sure students test the egg without a balloon first.

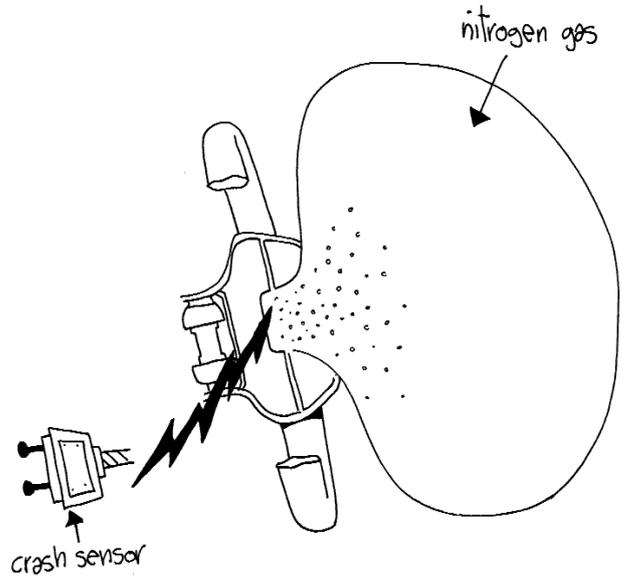
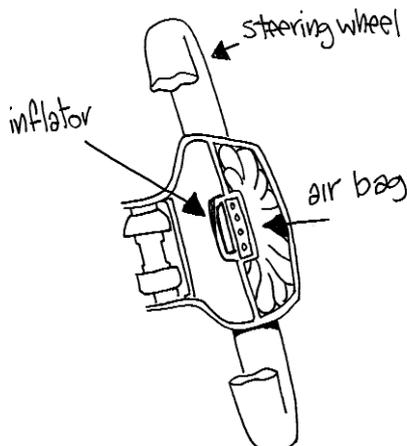
Discuss students' observations in relation to vehicle air bags. Remind students that front-impact air bags are not fitted in all vehicles, and only some have side-impact air bags.

Discuss

- What safety benefits do air bags offer vehicle occupants?
- If a vehicle does not have air bags installed, what other features offer protection to occupants in the event of a crash?

Check the ANCAP ratings, information and footage on cars undergoing tests with and without dummies and air bags on the suggested website.

Activity adapted from NRMA and Qwestacon, RoadZone: Educating tomorrow's drivers education kit.



Activity 5: Reducing riding risks and injuries



RESOURCES:

- Hard boiled eggs (peeled) – 2 per group.
- Small plastic container with a lid – one per group.
- Access to water or a bucket full.
- Photocopy *Assessment Task* – one per student.
- Photocopy *Resource Sheet: Decision-making model* (see p292-294) – one per group.
- Computers with internet access.
- Photocopy *Parent and Student Information Sheet: Cycling safety* (see p375) – one per student.

HOW:

Give each group a set of materials (i.e. eggs, container and water) and ask students to carry out the following test.

1. Place one egg in a container without any water and seal the lid.
2. Shake vigorously for 10 seconds then look at the egg.
3. Discuss observations.
4. Clean out the container and fill it with water.
5. Place the second egg in the container of water and seal the lid.
6. Shake vigorously for 10 seconds then look at the egg.
7. Discuss observations.

Unit 3.3 Reducing road user risks

Discuss why the egg surrounded by water had less damage than the egg without water in the container. Explain to students that the brain 'floats' in a watery fluid called Cerebrospinal Fluid (CSF) and that the CSF acts as a 'shock absorber' to stop the brain being bruised or damaged if it gently hits the skull. During a severe crash the natural protection of CSF is inadequate. Only a bike helmet can provide the extra protection.)

Discuss

- *Why did the egg surrounded by water have less damage?*
- *What protection does a helmet offer a cyclist who is involved in a road crash? (The helmet absorbs the impact.)*

Activity adapted from NRMA and Questacon, RoadZone: Educating tomorrow's drivers education kit.

Physical consequences of a road crash

Conduct a **scavenger hunt** (see p275) to investigate acquired brain injury, a possible consequence of a road crash, and how it can affect people. The following questions will help to focus students' research.

Scavenger hunt

1. What does the term 'acquired brain injury' mean?
2. How does brain injury occur?
3. What are the short and long term effects of a brain injury?
4. How does a helmet offer protection to the brain in a crash?
5. What might reduce the level of protection?
6. Do some helmets offer better protection than others? Why?

Suggest that students access these websites then share their findings with the class.

- www.headway.org.uk/ (Headway National Head Injuries Association of UK)
- www.biausa.org (Brain Injury Association, Inc)
- www.headwest.asn.au (Headwest – Head Injured Society of Western Australian Inc)

Effectiveness of helmet legislation

In the NT people must wear an Australian Standard approved – properly fitted and fastened helmet when riding a bicycle on a road or road-related area. In the NT this rule does not apply if you are over 17 years.

Give each student a copy of *Assessment Task: Helmet hunt*. Explain to students that the websites listed on the resource sheet are a suggestion only. Decide on key words that could be used when searching the internet.

After completing the investigation, students can present their findings and conclusions on the issue to the class.

Reducing risk

Place students in groups. Give each group one of the following scenarios and a **decision-making model** (see p286).

Ask students to read the scenario, define the problem then identify the choices the character can make to stay safer.

Scenario 1

David and his mates are going to ride their bikes to footy training. David knows that none of his mates wear helmets. David's parents have told him they will confiscate his bike and ground him for a week if they find out that he hasn't been wearing a helmet. He's worried his mates will think he's a loser and kick him out of the group.

Scenario 2

Chantelle has just bought a skateboard and wants to learn how to use it. Her friend James has offered to teach her at the local skate park. When Chantelle gets there she starts to put on her helmet, elbow and knee pads but suddenly notices that none of the other kids are wearing any. Chantelle doesn't want to get hurt especially as she is having her birthday party on Saturday night.

As a class, discuss the decisions made by each group. Ask students to decide if they faced a similar situation would they feel comfortable to use these ideas. Stress to students that predicting problems and having prepared responses or strategies to deal with these is worthwhile.

Identify attitudes on helmet use

Conduct an **oxford style debate** (see p283) to assess students' attitudes towards using helmets. Each of the following statements should be written on a card (i.e. one statement per card).

The most effective way to reduce cyclist injuries and deaths is:

1. compulsory helmet wearing
2. giving accurate information about the protection a helmet offers

3. making it compulsory for bike riders to pass a practical on-road test
4. having guest speakers present information about acquired brain injury.

Select four students and ask them to stand in a corner of the room with one of the statement cards. The four students take turns to read the statement on their card.

When all statements have been read ask the rest of the class to decide which statement they support and to move to that corner. Students standing together should then discuss why they have chosen the statement and list three dot points supporting their response.

Ask one student from each group to present the three dot points. Open the debate and encourage students to justify their responses and question others' attitudes and opinions about helmets.

Give students a copy of the *Parent and Student Information Sheet: Cycling safety* and *Parent and Student Information Sheet: Bicycle safety* to take home and share with their family.

Reflection

Debrief the activity by having students write down their responses to each of the **thought shapes** (see p301) then sharing these with a partner or small group.

Activity 6: Safer roads



RESOURCES:

- Large sheet of paper – one per group.

HOW:

Research and designs, both internationally and nationally, are focusing on making traffic environments safer for all road users. One example of this is a wire rope barrier that absorbs the force of impact of a vehicle and directs it back onto the road rather than the vehicle running off the shoulder into oncoming traffic or vegetation along the road edge.

Explain to students that a safer road environment should:

- **warn** road users of approaching features of the road (e.g. bridges, T junction, curves and speed signs)

- **inform** road users of the type of unusual conditions that are likely to be encountered (e.g. slippery when wet road sign, road works and gravel road)
- **guide** road users (e.g. guide posts and cats eyes)
- **control** road user movement and direction of travel (e.g. traffic lights, line markings, stop and give way signs, roundabouts and overtaking lanes)
- **forgive** road users inappropriate behaviour or errors in judgment (e.g. road shoulder sealing, guard railing and rumble strips).

Ask groups to create **mind maps** (see p278) highlighting safety features and devices in the traffic environment which include the design and management of roadways, adjoining areas and road user's interaction with traffic. The previous headings may prompt students' thoughts and discussion.

Ask groups to tick the features found in their local area then identify traffic 'black spots' that require further modification to increase road users' safety (e.g. installation of a roundabout at an intersection, increase the shoulder sealing or install a 'rumble strip' or audible edging on a long straight stretch of road where many crashes have occurred).

Written response

Ask students to write letters to the local newspaper highlighting a road safety issue in their local area or around the school. The letter should explain the level of risk that these areas pose to all or specific road users and propose a plan for changes to reduce harm. For example, traffic travelling past the school is still not slowing down to the 40 km/h speed limit and poses a risk to students coming to and leaving school. The installation of a speed hump would make motorists slow down and flashing speed signs would highlight the school zone.

Quiz quest

Protective equipment

10

Q: When were seat belts made compulsory in Australia?

A: 1972. Seat belts were required to be fitted to cars in Australia for all seats and wearing of seat belts was

Protective equipment

20

Q: How much does wearing a helmet reduce injury to your brain?

A: Wearing a helmet could potentially reduce injury to your brain by 85%.

Protective equipment

30

Q: What are three features in a family car that are designed to protect you in a crash?

A: Seat belts; air bags; safety glass; padded door trims; crumple zones.

Protective equipment

40

Q: What are three features of a highway designed to warn or protect you in the event of a crash?

A: Speed signs; rumble strips on the side of road; guard rails; median strips; truck arrester areas; warning signs.

Protective equipment

50

Q: What two ways can seat belts protect you in a crash?

A: Minimise contact with the car interior; spread the crash force over the body; reduce chance of being thrown out of the vehicle.

Road users

10

Q: Between what ages are people referred to as 'young drivers'?

A: 16 to 25 years of age.

Road users

20

Q: Who is over-represented in crash statistics – males or females?

A: Males are usually over-represented in most road user categories.

Road users

30

Q: What are the Big 4 in road safety?

A: Speed; restraints; drink driving; fatigue.

Road users

40

Q: Give 3 reasons why young drivers are involved in crashes?

A: Overconfident; inexperienced; take risks; speed; drink driving; tired.

Road users

50

Q: Which factor contributes the most to crashes - driver, vehicle or environment?

A: In nearly 90% of crashes the driver is the contributing factor.

Quiz quest

Road rules

10

Q: What should pedestrians do before stepping out onto the road?

A: Stop, look, listen and think before they cross.

Road rules

20

Q: When are pedestrians allowed to walk on the road?

A: If there is no footpath pedestrians are allowed to walk on the road edge facing oncoming traffic.

Road rules

30

Q: At what age can you sit the Learner's Permit Theory Test?

A: You can sit the Learner's Permit Theory Test at 16 years of age.

Road rules

40

Q: Is the Blood Alcohol Concentration limit for P plate drivers the same as fully licensed drivers?

A: No. The legal Blood Alcohol Concentration levels for P-plates is 0.00% and fully licensed drivers 0.05%

Road rules

50

Q: What are two road rules that apply to drivers and cyclists?

A: Use lights after dark; be fitted with working brakes; travel on the left side of the road; obey Stop and Give way signs.

Reducing risk

10

Q: What are two things that cyclists and drivers should do in wet weather?

A: Slow down and increase the distance between themselves and the vehicle in front.

Reducing risk

20

Q: What is one skill that cyclists and drivers use?

A: Scanning for hazards and possible dangerous situations.

Reducing risk

30

Q: What are three things young drivers can do to reduce their chance of being in a crash?

A: Travel at posted speed; don't drink and drive; don't drive tired; avoid driver distractions.

Reducing risk

40

Q: What are three things a passenger can do to help the driver?

A: Answer mobile phone; navigate; sit quietly; deal with noisy children; hold food.

Reducing risk

50

Q: Where are three places that are safer for pedestrians to cross?

A: Pedestrian or school crossing; pedestrian phased signals; straight stretch of road.

Quiz quest board

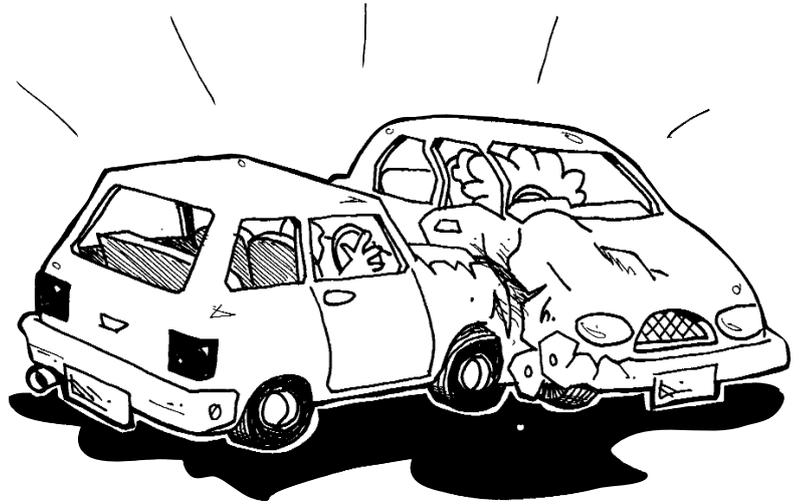
Road rules 10	Reducing risk 10	Protective equipment 10	Road users 10
Road rules 20	Reducing risk 20	Protective equipment 20	Road users 20
Road rules 30	Reducing risk 30	Protective equipment 30	Road users 30
Road rules 40	Reducing risk 40	Protective equipment 40	Road users 40
Road rules 50	Reducing risk 50	Protective equipment 50	Road users 50

Safer cars save lives

Vehicle designs are now focusing on safety features that can be divided into two groups:

Group 1 - Passive safety

Passive safety is how well the car will protect you in a crash. It is determined by the structural and interior design of the car and the inclusion of features such as air bags, seat belts, seating and controls that will minimise injuries in the event of a crash.



Group 2 – Active safety

Active safety relates to the features that prevent you from having a crash in the first place such as electronic safety control, good braking system and steering, vision and lighting. These features will ensure that you are in the best position to control the vehicle in any emergency situation that arises.

automatic braking system (ABS)

bi-xenon headlights

crumple zone

electronic brake distribution

pretension seat belts

electronic braking system

front and side impact air bags

child car restraints

cruise control with distance sensors

electronic stability control

safety glass

reflectors

Research a safety feature from your ABC graffiti or the list provided. Answer the following questions.

- Who first patented the idea and when?
- Has the original design been altered in any way? If so, why?
- Is it a passive or active safety feature? Why?
- How does it work?
- What evidence is there to prove that it has reduced occupant injuries?
- What costs are involved (e.g. purchase and installation)?
- Is it now in all vehicles and if so when did it become a standard feature?
- Which vehicles have the feature fitted as standard?
- Are these vehicles expensive or within the budget of most people?
- Would you choose to have it in your car?

Present your findings to the class. Include a written report, timeline of development, photographs, diagrams, illustrations and advertisements.

Air bags

Have you ever wondered how an air bag works? Air bags inflate in less than half a second during a crash. They reduce the impact and protect the head and chest of front seat passengers. Head and chest injuries are the most common cause of death for passengers in cars.

This activity will simulate how a cushion of air can help to reduce occupant injuries in a crash.

You will need:

- two boiled eggs – these represent your head
- one balloon slightly inflated – represents an inflated air bag
- one tall glass/vase/coffee jar – represents the dashboard or steering of a car

What to do

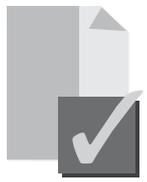
1. Inflate the balloon with a small breath and tie it off. Don't put it in the glass just yet! The balloon should be small enough to fit into the glass and cover the bottom of the glass with a layer of air. If the balloon is over inflated the egg will bounce off. If under inflated the egg may crack very easily.
2. Drop one egg into the glass from the top and watch what happens. Drop the egg from the mouth or opening of the glass. If you drop it too high the egg may miss the glass or bounce out and crack more.
3. Remove the egg and put it aside.
4. Place the balloon in the bottom of the glass.
5. Drop the second egg onto the balloon in the glass and record your observations.



Record your observations. Relate this information to the protection an air bag offers a vehicle occupant.

Without the balloon	
With the balloon	

Research and draw a diagram of what occurs when an air bag is activated in a crash. The web site www.whyfiles.org/032air_bag/how_work.html will help you.



Assessment Task



You have been contracted by the Road Safety Executive Group to determine if the introduction of compulsory bicycle helmet legislation has helped to reduce the number of cyclist injuries. The Executive Group also want you to identify why cyclists and in particular teenagers are not complying with the current legislation.

Task 1

Write a report that includes answers to the following questions:

- What is the law in the NT for wearing bicycle helmets?
- Has compulsory bike helmet legislation been effective in reducing the number of cyclist injuries and deaths?
- Has the number of cyclist injuries and fatalities for teenagers increased or decreased in the last 10 years? Why?
- What may affect the level of protection a helmet offers?
- What other laws or standards are in place to control the production of bicycle helmets?

Task 2

Give an oral presentation that includes statistics, graphs, photos and suggestions to encourage teenagers to wear bicycle helmets.

Websites to use

- **Monash University Accident Research Centre (MUARC)**

www.general.monash.edu.au/muarc/

This site contains a range of research information and reports from 'Hazard' which is a magazine produced by MUARC on bike crashes and helmet wearing.

- **Bicycle Helmet Safety Institute**

www.bhsi.org

This United States website has a range of information about bike helmets including a report on helmet effectiveness written by an Australian researcher Dr Michael Henderson.

- **Road Safety Branch**

www.roadsafety.nt.gov.au

(NT Department of Lands and Planning – Road Safety Division)

Unit 3.4

Unit 3.4 Consequences of crashes

The activities in this focus area are designed for Year 7 and 8 students.

For students:

Key understandings

- Risk-taking in the traffic environment has far reaching and varied costs and consequences. These can be considered in terms of physical, emotional, social, financial and legal consequences.
- The decisions made about road use can have a range of short and long term consequences.
- Crashes are not uncontrollable events but have definite causes and, by implication, can be avoided.
- Trauma is the emotional and physical shock resulting from a road crash.
- In the context of road trauma, resilience is important for an individual, group and community.

Key skills

- Apply these understandings to personal situations as road users, and to the traffic environment.
- Predict problems in a range of traffic-related situations.
- Make decisions and plan strategies for reducing or avoiding harm to themselves or to others in traffic situations.
- Practice using responses suitable for traffic-related situations.
- Evaluate others' attitudes and values about road user behaviours.

Activity 1: Identifying crash factors and resulting consequences



RESOURCES:

- Photocopy *Resource Sheet 1: News headlines* – one per student.
- Photocopy *Resource Sheet 2: Crash* – one per student.
- Photocopy *Resource Sheet: Decision-making model* (see p292-294) – one per group.
- Photocopy *Parent and Student Information Sheet: Getting home safely* (see p374) – one per student.
- A4 paper – one per group.
- A3 paper – one per group.

HOW:

Explain to students that a road crash is the result of three interacting factors – the road user, vehicle and environment – and in 90% of crashes driver behaviour is the major contributor.

Place students in groups and hand out copies of *Resource Sheet 1: Newspaper headlines*. Ask students to read the newspaper articles and highlight the factors that contributed to each crash.

Groups then write these factors on a **Y chart** (see p279) labelled 'vehicle', 'road user' and 'environment'. Examples may include:

- **road user:** speeding; drink driving; young; tired; risk taker; under influence of alcohol
- **vehicle:** high powered; vehicle not driven before
- **environment:** country road; higher speed limits; local road; glare of oncoming traffic; poor street lighting.

As a class, discuss the crash factors that groups identified on the Y charts then ask students to decide which of these factors contributed the most in each crash. This will highlight to students that the driver is usually the major contributor in crashes.

Making safer decisions

Give each group a copy of *Resource Sheet: Decision-making model* (see p292-294). If students have not previously used a **decision-making model**, it may help to model the process before students begin this activity.

Ask students to select one of the newspaper articles on the resource sheet and identify the actions or decisions that the driver and/or passengers could have made to change the outcome of the crash.

Remind students that in any situation there are always a number of choices that can be made and each may have positive and negative outcomes. The group should consider these and reach a consensus on a decision (i.e. something they would really do). Remind groups that their decision should reduce the level of risk for all road users.

As a class, discuss the actions or decisions that groups identified using the decision-making model. Ask students to decide if young people, faced with a similar situation, would use these strategies.

Talk about other traffic-related situations where students have felt unsafe, the decisions they made to reduce their risk and whether it was easy or difficult to carry through with their decision.

Discuss

- *As a passenger, how comfortable do you feel telling someone you know (e.g. friend, family member or relative) that you don't feel safe?*
- *What might stop you from telling someone you are worried about your safety in a car?*
- *What strategies might you use to keep safe as a passenger?*

Identifying strategies to reduce harm

Suggest to students that road users, by making decisions at crucial times, can keep themselves and others safer in the traffic environment. Ask students to construct a timeline to show the events and factors leading up to the crash as described in the 'fireworks' crash article on the resource sheet. For example: the driver had been drinking; late at night; country road; vehicle not previously driven by the teenager.

When timelines have been completed, ask students to identify where different actions and decisions made by

the driver and/or passengers could have averted the crash and altered the outcome of the journey. Discuss why these decisions may not have been made at the time.

After the discussion, suggest to students that learning to recognise situations that may become unsafe is crucial and that having a 'tool kit' of strategies to deal with these situations will make them feel more confident if the need arises.

Identifying consequences of crashes

Explain to students that road crashes can cost millions of dollars. This figure represents the physical, financial and legal costs and also the social and emotional costs of a road crash which cannot simply be measured in dollars (e.g. mental anguish; pain and physical suffering; family disruption; shattered career plans; medical fees; insurance premiums; time away from work, school or university).

To highlight the impact a road crash has on an individual, family and the community have students complete **mind maps** (see p278) using *Resource Sheet 2: Crash*. It may help students if the process for creating a mind map is modelled.

Ask students to consider not only the road crash article but crashes in general when building their mind map. Remind students to think beyond the immediate consequences and effects and include the possible long-term consequences for people both directly and indirectly involved in the crash. Some examples for each consequence are provided.

- **Physical** – short and long term injuries; facial disfigurement; plastic surgery; loss of limb; acquired brain injury.
- **Emotional** – dealing with grief and loss; sense of guilt; depression; difficulty sleeping.
- **Social** – rejected by family or peers; ostracised in the community; lose driver's licence and independence; stigma of criminal charge or imprisonment.
- **Financial** - lawyers for court cases; repairs to vehicle if not covered by insurance; loss of wages while in hospital; attendance at the scene by emergency and police officers; funerals; alterations to home to accommodate wheelchair access; ongoing rehabilitation costs; expenses for medical issues related to initial injuries.
- **Legal** – criminal record; not allowed to enter some countries; loss of driver's licence; prison sentence.

Select groups to present the examples generated for each of the mind map headings and further discuss these as a class.

Unit 3.4 Consequences of crashes

Discuss

- What did the mind map highlight to you?
- Which of the consequences identified in the mind map would most affect you or change the way you act as a passenger or driver? Why?
- Which legal consequences would most deter you from driving dangerously? (Highlight to students that some countries will not allow entry if the person has been charged with a criminal offence.)

Give students a copy of the *Parent and Student Information Sheet: Getting home safely* to discuss with their family.

Reflection

Several suggestions are provided to allow students to reflect on this activity.

- To explain the consequences of a road crash from the perspective of a family member or relative of the driver in one of the newspaper articles, have students write a letter to the editor of a newspaper or a diary entry describing the impact on their life and those directly or indirectly involved in the crash. Students should outline how long it has been since the crash, how the person has been affected, what they are feeling and plans for the future.
- Ask students to design a road safety campaign encouraging young people to drive safely. Messages related to the impact a road crash can have on individuals, families and the community should be included. (Research indicates that young males are more concerned about injuring others and losing their driver's licence than causing harm to themselves.)
- Use a **circle talk** (see p272) to enable students to discuss the following questions and reflect on their learning during these activities.

- How would people involved in a crash be affected – immediately after the crash; after one year; and after five years?
- What changes would happen if someone in your family was permanently disabled?
- How would your life change if you were permanently disabled?
- What is one action that you can take now to reduce the likelihood of being involved in a crash as a passenger and pedestrian?

Activity 2: Decisions influencing crash involvement



RESOURCES:

- Photocopy and cut out cards on *Resource Sheet 3: Passenger scenarios* – one set.
- Photocopy and cut out cards on *Resource Sheet 4: Pedestrian scenarios* – one set.
- Photocopy and cut out cards on *Resource Sheet 5: Wheel user scenarios* – one set.
- Photocopy and cut out cards on *Resource Sheet 6: Future driver scenarios* – one set.
- A3 paper – one per group.

HOW:

This activity will help students identify the factors and road user decisions that contribute to a road crash and encourage them to consider how making a safer and timely decision can alter the outcome and reduce road user harm.

Place students in groups and give each a scenario from one of the resource sheets and an A3 sheet of paper.

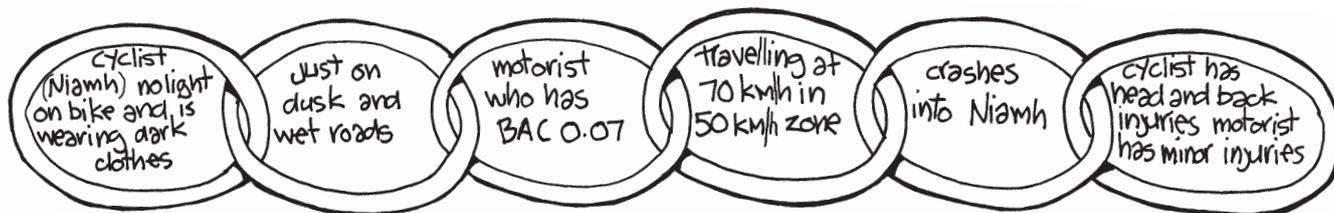
Ask groups to read the scenario and presume that it results in a crash. Groups must then identify the contributing events or factors of the crash and represent these in a chain (or flow chart) on the A3 paper.

The chain can include drawings of the characters and their mode of transport, relevant information (e.g. location, weather, time of day) and thought bubbles for each character (e.g. in the chain of events for wheel use scenario 4, illustrated on the following page, the cyclist might be thinking 'I'll need to ride faster so I don't get soaked' or 'Lucky I don't have too far to go. I might get picked up for not having any lights'.)

When the chain of events has been completed, nominate one member from each group to act as an envoy. This student moves to another group to show and describe the scenario's chain of events, identifying the factors that contributed to the crash. Envoys then stay with their new group.

Planning ahead

Explain to students that everyone makes decisions differently (e.g. off the top of their head, tossing a coin or after talking to others) however, the decision is usually considered in light of the positive and negative



consequences and how you are feeling at the time.

Ask each group to mark on the chain of events the point or points where a different decision or alternative action would have produced a safer outcome for each of the road users. Groups should be able to justify their decision with the rest of the class.

Envoys then return to their original group and present the decisions and actions identified. Groups must decide if these would change the outcome for each road user in the scenario. If groups disagree they should justify their decision.

Share some of the flow charts and talk about how predicting problems and having plans in place can contribute to the safety of all road users.

Ask students to individually write two or three ways they could plan ahead to make their journey safer as a passenger, pedestrian and cyclist (e.g. know the safest route to walk or ride; have a 'getting home' arrangement with their family such as catching a taxi and parents paying the cost or ringing for a lift no matter what the time).

Discuss these as a class to allow students to listen to a range of strategies that they may be able to use in traffic situations.

Activity adapted from VicRoads, 1994.
Choices, Alcohol and Road safety.

Practising decisions in traffic-related situations

Explain that in most real-life situations, students will need to be able to make quick decisions. These may be made by mentally using a decision-making process however the time allowed may influence the student to not make the safest decision.

Conduct **snap decisions** (see p291) using one of the scenarios described on the road user resource sheets.

Select one student who becomes the 'character' facing the dilemma in the scenario. Two other students should stand either side of the character and provide 'positive' and 'negative' ideas for the 'character' to consider and make a snap decision. The character must not use their own thoughts only those provided as for and against arguments.

Repeat the activity several times, using different scenarios and students.

Discuss

- Did it help you to make a decision by hearing the positive and negative suggestions? Why or why not?
- Would you have made the same decision if you could have considered your own opinions and thoughts? Why or why not?

Activity 3: Effects of a crash



RESOURCES:

- Photocopy and cut out cards on *Resource Sheet 7: Crash scene* – one set.

HOW:

Explain to students that a road crash can involve a range of people either directly or indirectly and the effects of the crash on each person may vary. To set the scene for a **role-play** (see p289), give selected students a card from *Resource Sheet 7: Crash scene* and ask them to read their card to the class.

As a class:

- brainstorm other people who may be affected by the crash (e.g. family, friends, emergency staff, tow truck operator and police). Ask students without a role card to choose one of these characters for the role-play
- decide the type of vehicles being driven and where the crash occurs
- identify factors that contributed to the crash.

Students with role cards should develop their character using the provided information.

Nominate one student to be a journalist for a local television station. This student should interview those directly or indirectly involved in the crash to listen to their story and how the crash will affect them. The interview should explore the emotional, practical and social implications of the person's involvement in the crash.

Discuss

- Was each character affected in the same way? Why or why not?

Unit 3.4 Consequences of crashes

- Why didn't each character have the same reaction or perspective to the crash?
- Were those directly involved in the crash scene more likely to be affected? Why?
- If you were the 19 year old driver, how would you feel and what might you do?
- What could have changed this situation? (E.g. the 19 year old driver and passenger should have called a taxi, friend or family member for a lift home.)

Reflection

Ask students to write some of the short and long term consequences for one of the characters involved in the crash scenario.

Discuss these as a class and talk about what help the character may require and who they could go to for help. For example, those emotionally affected could seek help and support from family, friends, school counsellors and local services.

Activity 4: Strategies to reduce road crashes



RESOURCES:

- Contact the Alcohol and Other Drugs section, NT Department of Health or the NT Department of Lands and Planning, Road Safety Division for access to ad campaigns to review or watch the ads on the *Safer Roads, Middle Years* DVD.
- Number cards one to four – one set.
- A4 and A3 paper – one sheet per student.

HOW:

Explain to students that ad campaigns usually have a slogan or strong message that conveys a message about road safety.

Ask students to choose an advertisement to analyse, and write responses to the following questions.

- What was your immediate response to the ad? (Distress, concern, disbelief, surprised.)
- What do you like or dislike about the ad?
- Who do you think the ad is targeting?
- What messages are being conveyed and are they supported by research?
- Was music or other gimmicks used to attract the viewer's attention? If so, how?

- Given the purpose of the campaigns, what do you consider should be the prime advertising time for the ad and should they be limited to adult timeslots? (Refer to the target audience and the nature of the advertisement.)

As a class, discuss the advertisements and how effective they would be in reaching the target audience of young people aged 17 to 25 years.

Talk about the use of scare tactics and fear approaches that have been used in other health campaigns (e.g. smoking and AIDS). Ask students to discuss if showing more graphic images of the effects and consequences of road crashes would change a road user's behaviour.

Influencing road user behaviour

Ask students to select one of the Big 4 issues (speed, drink driving, restraints, and fatigue) to create a road safety message targeting young people. For example:

- a 30 second television commercial
- a radio jingle or rap
- a newspaper advertisement
- bumper stickers, posters or pamphlets.

The advertisement should highlight strategies that road users can use to reduce the level of risk for themselves and others. Suggest that students consider the use of humour, artistic images, lyrics of a song, and research or statistics to support the information.

Have students present their ideas to the class then ask students to decide which of the advertisements would have the most impact on young road users. This decision should be reached after considering:

- the message conveyed
- relevance to target audience
- accurate information presented.

Road user attitudes

Conduct a **choose a corner** (see p282) using the following statement to allow students to discuss their views on road safety campaigns.

Road safety campaigns should:

1. show real crashes and people injured or killed
2. let people know what it's like to become a paraplegic or quadriplegic
3. be created by young people who know how young people think
4. focus on pedestrians, cyclists and motorcyclists, not just drivers and passengers.

Reflection

Ask students to complete a **one minute challenge** (see p269) by reflecting on these activities and writing their thoughts about what young road users need to know and how best road safety experts should present this information to make the greatest impact.

News headlines

Fireworks night crash kills two NT teenagers

An 18 year old P-plate driver involved in a road crash in which two passengers died had a 0.06 BAC, a coroner has found. The head-on crash happened when a 4WD and a delivery truck collided south of the Adelaide River on the Stuart Highway in January.

The victims, Neil White aged 17, an apprentice mechanic from Jabiru, and Gina Rodgers, aged 14, a student, both died at the scene of the crash.

Emergency crew had to cut the driver of the truck from his vehicle. He suffered severe injuries. The truck was a right-off.

The driver of the 4WD, a rising AFL player, suffered facial injuries, a broken pelvis and suspected spinal injuries. He was airlifted to Royal Darwin Hospital and was later transferred to Royal Adelaide Hospital.

Yesterday, Coroner Tracy Mitchell rejected poor weather, mechanical failure, sudden illness of the truck driver or a deliberate act on the part of the truck driver as probable causes of the crash.

Ms Mitchell said the crash was probably caused when the driver fell asleep at the

wheel and the 4WD veered onto the wrong side of the road into the path of the truck.

‘The consumption of alcohol combined with fatigue would have increased the likelihood of crashing,’ said Ms Mitchell. The legal blood-alcohol limit in the Northern Territory is 0.05.

The driver and passengers traveling in the 4WD were returning home after the Australia Day fireworks in Darwin. The driver had borrowed his father’s 4WD and had not driven this type of vehicle before.

Michael Richards, Gina Rodgers’ Principal, said that she was a popular and responsible student, and that the school community was shocked by her death.

‘Unfortunately our school has had to go through this before. We’ve lost two other students due to road crashes. Young people just don’t seem to understand that alcohol and driving don’t mix.’

The driver will appear in the Darwin Magistrates Court on 22 April to face charges of drink driving and manslaughter.

14 year-old pedestrian death

A 14 year-old girl from Tennant Creek was killed yesterday when she was hit by a car near the town.

It is believed the girl had been at a friend’s party for several hours before deciding to walk home.

Police say that the driver of the car swerved to avoid the girl as she stumbled out onto the road. ‘We have been told that the girl had been drinking with some friends and

refused to be driven home.’

Her parents said that they didn’t know their daughter was at the party and blamed her friends for letting her walk home alone.

The 45 year-old driver of the car said that if the street had better lighting he may have been able to see the girl. The teenager was wearing dark jeans and jacket.

News headlines

Cyclist holding onto bus injured

Alice Springs police are investigating a crash involving a 15 year-old cyclist yesterday.

It is believed that the high school student was holding onto the back of the school bus as it moved away.

'She was holding onto the bus with one hand and her friends were hanging out of the bus window encouraging her. The driver must have realised what was going on and braked suddenly.'

The cyclist's front wheel is thought to have hit the back of the bus throwing the girl onto the road where she was hit by a car following the bus. The teenager was not wearing a bike helmet.

The girl received head injuries and a broken pelvis. She was airlifted by the Royal Flying Doctor Service to Darwin where she is reported to be in a critical condition.

Teenager kills friend

A P-plater who crashed her new Porsche, killing one of her friends and seriously injuring two others, will spend at least six months in custody after her sentence was increased on appeal.

The 19 year-old woman from Cullen Bay, lost control of the high powered vehicle in Bayview in July 2009.

Suzie Cato, 18, died on impact while two other girls, both 17, were seriously injured.

Judge Taylor Kenwick said evidence had shown the girl was driving at speeds between 85kmh and 95kmh in a 50kmh zone when she lost control of the car on a roundabout. The car mounted the kerb and traveled 50 metres before slamming into a brick wall.

She was initially sentenced to a maximum 18 months, with a non-parole period of two months.

The teenager was re-sentenced yesterday following an appeal by the Director of Public Prosecutions. Judge Kenwick increased her sentence to 20 months in a juvenile justice facility with a six-month non-parole period.

13 year-old trail bike rider killed

A teenager from Daly Waters was killed when his trail bike collided with a Commodore station wagon.

The 13 year-old, whose name has not been released, had been riding in local bush with two other youths from Daly Waters. Witnesses say the boy shot out of the bush and tried to cross the road in front of the station wagon.

The driver of the Commodore tried to avoid the rider but clipped the side of the bike, tossing the teenager onto the road. The driver

was uninjured in the crash.

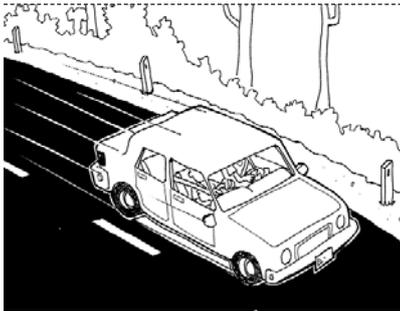
Alcohol is believed to have contributed to the youth's unsafe behaviour as witnesses told police they had seen him drinking with mates prior to the crash.

'The community has been shocked by this latest tragedy,' said local councillor, Jack Stewart. 'We know kids just want to get out there and have fun but these kids should certainly not have been drinking and driving, just doesn't make sense..'

Crash



Passenger scenarios



Passenger 1

Mike and Anne have been going out together for about a month. Anne's parents have just bought her a new car and she is taking Mike for a drive on the highway. Mike asks her how fast it travels so Anne accelerates to 120 km/h. Mike is impressed at first but is soon feeling a bit scared especially when Anne turns off the highway onto a local road and is still speeding.

Mike sees a young child on the side of the road up ahead. He wants to ask Anne to slow down but doesn't want to look like a 'dag'.

Passenger 2

It's a cold winter's night and Tamara has just finished soccer training. A friend's mother has offered Tamara a lift home but her friend Cam has promised to pick her up.

When he arrives he has a car full of friends. He asks Tamara to get in and sit on one of his friends' laps. Tamara likes his friends but doesn't feel comfortable getting in such an overcrowded car where there aren't enough seat belts.



Passenger 3

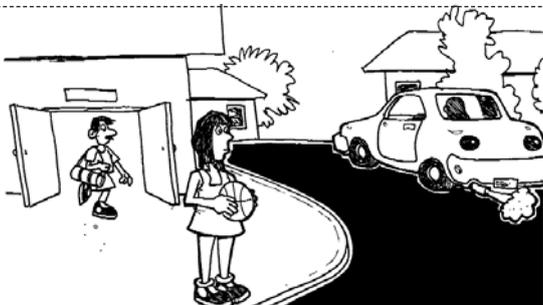
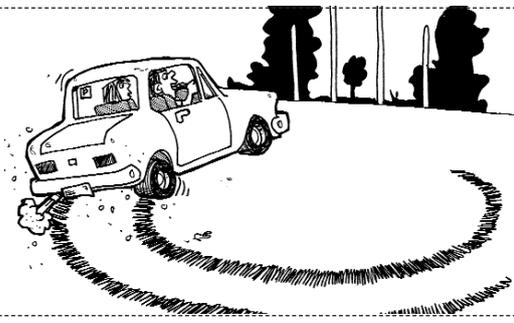
Julia's older sister Jenny has a friend over. The friend has borrowed her parent's new convertible. Jenny and her friend plan to go for a short drive despite the fact that her friend only has a Learner's Permit.

They ask Julia to go along too and tell her to squeeze in the back even though there isn't a seat or seat belt.

Passenger 4

Tim's brother Mal has just got his P-plates. Mal wants Tim to come for a drive around town. Mal stops to pick up a couple of friends.

They've been drinking and urge Mal to lay a few donuts on the football oval just out of town.



Passenger 5

After basketball practice Natasha had an argument with her friend Matt. He drove off leaving Natasha behind, even though he had promised to give her a lift home.

The basketball coach has had a couple of glasses of wine in the clubhouse but has offered to drive Natasha home.

Passenger 6

Jack has driven Tim to a party in a nearby town about 25 kms away. Jack drives a V6 ute. He has agreed to be the 'skipper' for the night.

When it's time to go, Tim finds out that Jack has offered to take four other people home too. They're really happy about the lift because they know Jack hasn't been drinking. Jack tells two people to sit in the cab and Tim and two others to sit in the back of the ute.



Pedestrian scenarios



Pedestrian 1

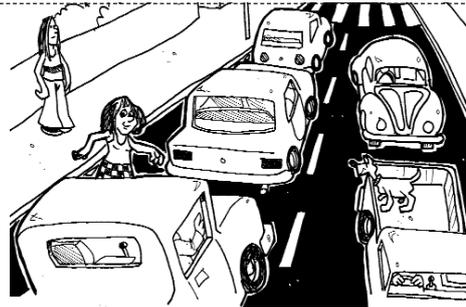
Rick and Jodie are at a party about two kilometres away from Rick's home. Rick has had quite a bit to drink and is having trouble standing up. Jodie has only had two beers all night.

When it comes time to leave Rick doesn't want his parents to know he's been drinking so he asks Jodie to walk home with him. Jodie knows the way there but is worried about getting Rick home safely.

Pedestrian 2

Dee and her friend Lucy are late for school. Lucy starts to cross the road between vehicles that are queued up along the road waiting for traffic signals.

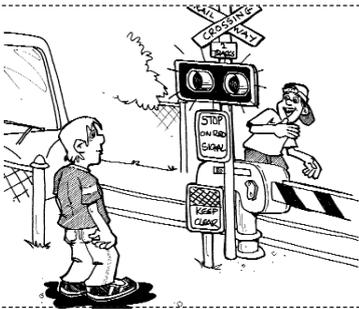
Dee knows there is a pedestrian crossing a little further down the road but Lucy is urging her to do the same.



Pedestrian 3

Kelly and Troy are going to the local footy match. They have to walk a few kilometres to the oval and need to go across the railway lines just out of town.

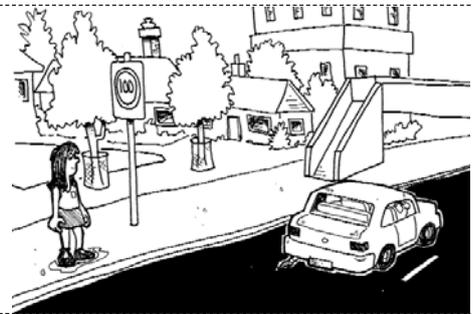
A train goes through the railway crossing just as they get there. The warning bells and lights haven't stopped but Troy doesn't want to be late so he starts to cross, telling Kelly to hurry up.



Pedestrian 4

Claire has a really bad headache and cold. The school has given her permission to walk home. She has taken a couple of cold and flu tablets and is feeling a little sleepy.

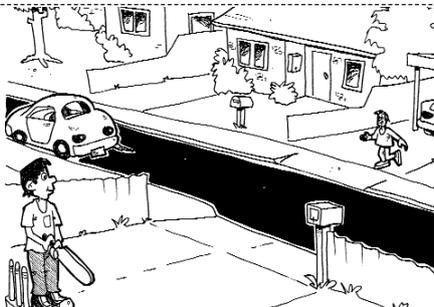
Claire has to cross a multi-lane highway which has a speed limit of 100 km/h. There is a pedestrian bridge about 50 metres down the highway but Claire just wants to get home quickly.



Pedestrian 5

Lee lives just around the corner from a roundabout. He is playing cricket in the driveway of his home with his cousin Josh. Lee decides to start his bowling run-up from across the road.

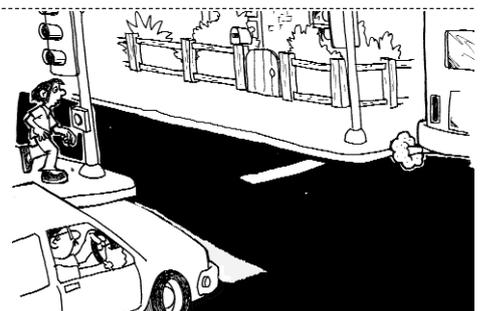
He has to wait for a couple of cars to pass before he starts to run into bowl. Lee starts his run up.



Pedestrian 6

Mark has finished his shift at the local supermarket and is waiting to be picked up by his parents but gets a call to say they can't get there. Mark decides to catch a bus so he heads to the bus stop.

While Mark's waiting for the lights to change he sees his bus is starting to leave. There is still traffic coming through the lights so Mark quickly checks for traffic and runs across the road towards the bus. A car coming around the corner doesn't give way.



Wheel user scenarios



Wheel user 1

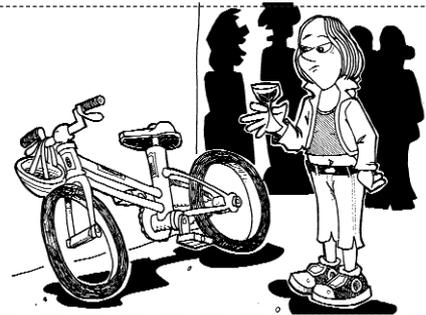
Max's friend Rowan has dropped in for a visit. He tells Max about the bike jumps he and some others made in the local bush. Rowan asks Max to go for a ride and check out the jumps.

Max goes to put on his helmet but Rowan laughs and says, 'You've got to be joking. What are you putting that on for? Only losers wear helmets. Come on.'

Wheel user 2

Tegan rode her bike to a party at a friend's house about 10 minutes away from her home. She wasn't going to stay very long and now it's nearly 10pm. Her bike doesn't have any lights.

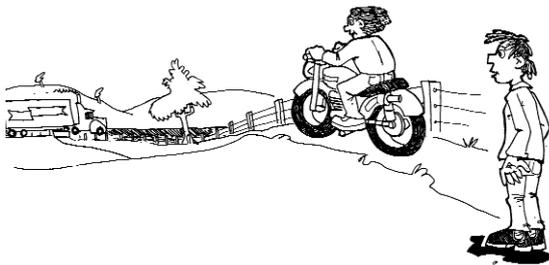
Tegan didn't plan to drink but has had three glasses of wine. Her parents aren't home and she didn't take any money with her for a taxi.



Wheel user 3

Brayden lives on a farm and has invited Rikki to visit. He has offered to take Rikki for a ride on the farm motorcycle when he's finished rounding up the sheep.

Rikki has become impatient and has gone back to the shed. Brayden notices Rikki riding the motorcycle, without a helmet, along the gravel road that leads to the main highway into town.



Wheel user 4

Niamh puts her helmet on and rides over to Chad's house about 15 minutes away. She loses track of time and gets a text message from her dad saying that tea is ready and to get home straight away.

When she goes outside it's just on dusk and starting to rain. To make matters worse, the light on Niamh's bike isn't working and she is wearing her dark school uniform.



Wheel user 5

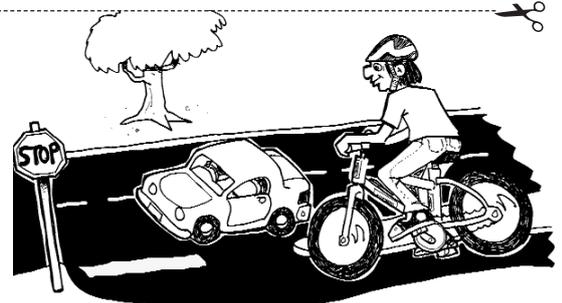
Liam and his friends have been watching a DVD when Billy rings and invites them over for a swim. Billy only lives a couple of blocks away so they decide to ride their skateboards and scooters. Liam and his friends put their gear on. Liam has only just got his skateboard for Christmas.

On the way over Liam's friends decide to take a short cut that has a steep hill. It has a T-intersection at the bottom. The road is uneven and has a few potholes. There is a footpath all the way down the road.

Wheel user 6

Shelby is riding to work. He's running late and it's starting to rain. He has to go through several intersections.

The first is a T-intersection. Shelby can't see any traffic coming so he turns left and keeps on going. The second T-intersection approaches and Shelby checks for traffic on his right and turns the corner. The last intersection has a stop sign at the bottom of a hill. Shelby races towards the intersection and takes a quick look.



Future driver scenarios



Future driver 1

Driving on the freeway with his brother Will's best friend, Quentin senses that Todd is doing more than the 100 km/h limit. He has been moving from one lane to another to try and get through the heavy traffic.

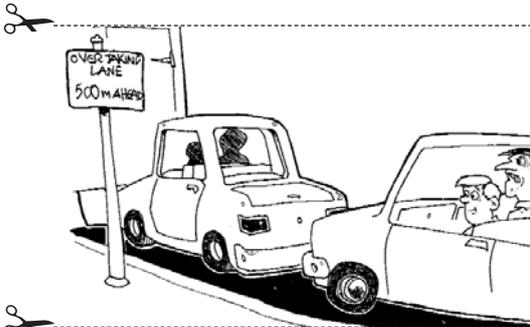
Will asks Todd what the speed limit is on the highway but he just says, 'Whatever, don't worry about it. No-one ever gets booked along here.' Todd starts to look for a CD in the centre console of the car.



Future driver 2

Danni, Kristy and Marie are heading off to a hockey match in another town about 3 ½ hours away. They throw all the hockey sticks and bags in the back and leave just before dark. Danni intends to do all of the driving as she is reluctant to let Marie drive her car.

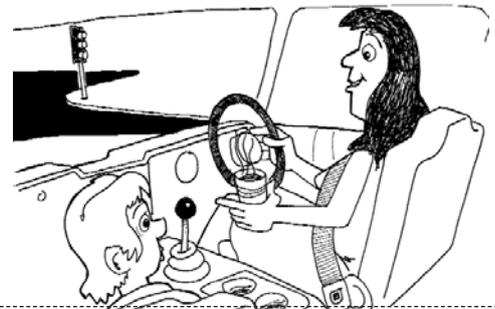
Danni is feeling a bit tired after staying up late studying. Kristy notices that Danni isn't joining in the conversation and is rubbing her eyes a lot.



Future driver 3

Mark's family is heading down the track for the long weekend. It's about 8pm and it has started to rain. There is a line of traffic and Mark notices that his father has been getting closer and closer to the car in front of them.

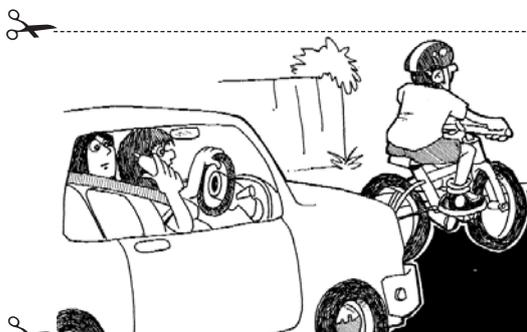
From his side of the car, Mark sees a sign indicating that there is an overtaking lane about 500m ahead but his father looks like he is getting impatient. Mark goes to say something but sees the look on his father's face.



Future driver 4

Driving home after a weekend away, Steve's mum decides to stop and buy a coffee and drink it along the way. Steve offers to hold it for her but she places it in the console.

Steve notices that his mum has to take her eyes off the road to find the coffee cup each time. It's still a fair way home and there are two roundabouts and 4 sets of traffic lights to go through.



Future driver 5

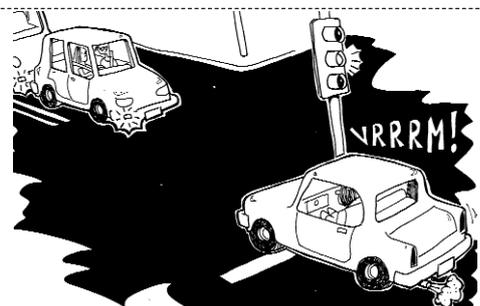
Cara's best friend Dee is a very poor driver but she has offered her a lift to the shopping centre where they both work. Cara thinks Dee doesn't know her way around very well as she often has to change lanes quickly to make a turn or get onto the freeway.

On the way Cara answers a call on her mobile phone. Dee sees a bike up ahead but Cara is too busy talking on the phone.

Future driver 6

Eva notices her dad is travelling over the speed limit and is too close to the car in front. Her dad is always running late and never leaves enough time to get to places. He says it's just his luck that he gets stuck behind slow cars.

Eva's dad sees the light ahead has changed to amber and speeds up to get through before it turns red. There are two cars waiting at the lights to do a right hand turn.



Crash scene

You are the **19 year old driver of one of the vehicles**. The vehicle, a van, belongs to your father. You really need your driver's licence for work and don't want to lose it.

You've been at a party and smoked a couple of joints.

You are the **intoxicated friend of the 19 year old driver** travelling as a passenger in the vehicle.

You were meant to be home before 1am but it's nearly 4.30am. Your parents don't like you drinking.

You are the **pedestrian walking home** after having a few drinks at a party in a nearby street. The crash happened just as you turned the corner.

You tried to help the injured passenger but didn't know what to do.

You are the **ambulance driver** who has been called to attend the crash scene.

You have been given a report that one person is injured. It's your first night on the job and you have two teenagers in your family.

You are the **passenger in the other car** that was hit by the 19 year old driver.

You can't move your legs and there is blood all over your face. You play footy for an AFL team.

You are the **driver of the other car**. You and your friend were driving to the airport to catch a flight overseas.

Your car is very new and has been extensively damaged. It isn't insured.

You are the **father of the 19 year old driver** waiting at home.

You run a delivery business and need to start work early in the morning.

You are the **owner of the house right near the crash scene**.

You saw the crash and have run over to help.

Unit 3.5

Unit 3.5 Road user rules and the law

The activities in this focus area are designed for Year 7 and 8 students.

For students:

Key understandings

- Road laws apply to all road users and in particular drivers, pedestrians and cyclists.
- There are penalties for non-compliance with road laws.
- Each individual can make a difference to the level of safety in the traffic environment by taking a pro-active and positive approach to road safety issues in the community.
- Safety initiatives for passengers, pedestrian and drivers will make little impact on safety unless all road users are prepared to recognise and act on the need for personal responsibility.
- Road users have a personal and civic responsibility to ensure their own and the safety of others.
- Road safety is a shared responsibility between friends, families and communities.

Key skills

- Identify a range of effective strategies for personal safety and have a plan for traffic-related situations.
- Practise the road rules as a cyclist and pedestrian.
- Share and listen to others' attitudes and opinions about compliance with road rules.

Activity 1: Identifying road rules



RESOURCES:

- Photocopy and cut out the cards on *Resource Sheet 1: Future driver questions and statements* – one set.
- Photocopy and cut out the cards on *Resource Sheet 2: Pedestrian questions and statements* – one set.
- Photocopy and cut out the cards on *Resource Sheet 3: Riding questions and statements* – one set.
- Photocopy and cut out the cards on *Resource Sheet 4: Passenger questions and statements* – one set.

HOW:

Discuss with students why they believe it is necessary to have road rules (e.g. so that all road users can be safe, maintain traffic flow or avoid crashes).

Explain to students that there are many rules that

drivers, passengers, pedestrians, cyclists and riders of wheeled recreational devices (e.g. skateboards, scooters and rollerblades, quad and trail bikes) should know and understand. Some of these have been common understanding for a long time (e.g. driving on the left hand side of the road) however, rules continue to be developed and changed (e.g. roundabouts are a recent traffic control measure) to increase road users' safety.

Photocopy the resource sheet for one road user group (or use all, depending on students' prior knowledge and the number of students in the class).

Conduct a **question partners** (see p269) using the resource sheets which explain the rules related to road user groups (i.e. drivers, passengers, pedestrians and riders of bikes and other wheeled recreational devices).

Distribute one card to each student. Explain to students that there is another person in the room who has the matching question or answer to their card. Ask students to move around the room, interacting and discussing their cards with other students until they find their partner. When partners meet they should sit down together.

When all students are seated ask each pair to read their question and answer. Clarify any questions related to the information raised.

Discuss

- Were any of the road rules for motor vehicles and bikes similar? Why?
- How important is it for young people to know road rules?
- Which road rules are most often followed by people your age? Why?
- Which road rules are not followed by people your age? Why?
- How are road rules promoted in the community?
- Do these processes need to be improved and if so, how?

Variation

Students can use the following websites to research road rules then devise their own set of question and answer cards to use in the above activity.

www.ntc.gov.au/viewpage.aspx?documentid=00794

(National Transport Commission-Traffic Code and Australian Road Rules)

www.roadsafety.nt.gov.au (NT Department of Lands and Planning – Road Safety Division)

Reflection

Write the following road user scenarios on the board.

- A young cyclist, riding along a country road and is dinking with his mate.
- A distracted driver, who doesn't know how to enter a roundabout.
- A pedestrian who is jaywalking near a busy intersection.
- A 16 year old male riding a quad bike recklessly in the bush with no helmet on with his friends.

Ask students to predict what might happen in each of these situations; the rules that are not being followed; and then write what could be done to reduce the risk for the road user.

Activity 2: Road rules for cyclists and other wheeled recreational devices



RESOURCES:

- Photocopy and cut out domino cards on *Resource Sheet 5: Riders rule!* – one set per group.

- Cards labelled 'agree' and 'disagree' – one set.
- Photocopy *Parent and Student Information Sheet: Scooters, roller skates and skateboards* – one per student.
- Access to suggested internet sites – optional.

HOW:

Explain to students that there are road rules applicable to cyclists. These relate to cyclists interacting with traffic and the legal requirements for a bicycle (e.g. head light, reflectors and brakes in working order) as it is classified as a vehicle. Some road rules also apply to riders of other wheeled recreational devices such as skateboards, scooters and roller skates.

Place students in groups and give each group a set of cards to play **quiz dominoes** (see p270). Explain that students should deal out the cards then nominate one student to read the question on one of their cards. This student places their card on the table. The student who has the matching answer places their card so that the question and answer are touching, similar to dominoes. Ask students to discuss the riding rules and safety ideas as each matching card is placed. Groups continue playing until all cards have been placed.

Suggest that students review the *Road User's Handbook: Driving in the Northern Territory* (2009) or visit: www.roadsafety.nt.gov.au (NT Department of Lands and Planning – Road Safety Division) for further information.

Discuss

- Which road rules aim to increase the safety of cyclists?
- Should riders of skateboards and scooters have to follow the same rules as cyclists (i.e. wear a helmet and maintain their wheeled recreational device)? Why or why not?
- Which road rules are most often followed/not followed by people your age? Why?
- What could be done to encourage cyclists your age to follow road rules?

Variation

Students research rules relating to cyclists and riders of other wheeled recreational devices to create their own domino cards or place students in groups and run a quiz using the resource sheet questions.

Unit 3.5 Road user rules and the law

Identifying attitudes towards road rules

Set up a **values continuum** (see p283) with the 'agree' and 'disagree' cards. Ask students to consider one of the following statements and place themselves on the continuum.

- *Cyclists my age would have fewer crashes if they knew the road rules.*
- *Teenagers are old enough to decide whether they should wear a helmet or not.*
- *Fines for not wearing a helmet are a waste of time.*
- *Young riders would act differently if they knew about acquired brain injury.*
- *If young people ride dangerously and do stupid things on a bicycle, scooter, quad or trail bike, they're probably going to do the same when they get their driver's licence.*
- *Young people wouldn't be injured riding skateboards and scooters if councils built more skate rinks or bowls.*
- *There should be more laws and stricter controls for people riding quad bikes to reduce the number of fatalities and severe injuries.*
- *Too many young people (mainly males) are being killed or severely injured on quad bikes because they don't wear any safety gear such as helmets or protective clothing, haven't taken any lessons on use beforehand, and drive recklessly – often on outback roads, beaches or in the bush.*

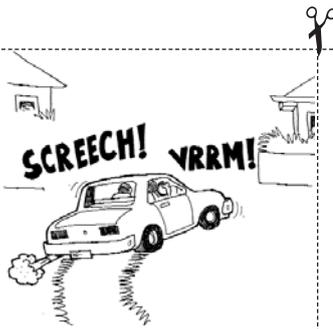
Invite students to share their opinion with others standing nearby then open the discussion to the group. Allow students to change their position on the continuum after hearing others' opinions.

Repeat this procedure with some of the other statements.

Future driver questions and statements

Question

Under the 'anti-hooning' legislation, drivers and motorcyclists who endanger lives through reckless behaviour can have their vehicles impounded or confiscated.

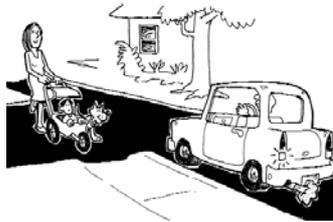


True

People caught hooning can lose their vehicle for up to 48 hours. If you are caught hooning again within a two year period the court can impound your car for up to 6 months. A third offence can result in your vehicle being confiscated, a fine and possible imprisonment.

Question

Drivers turning left or right or making a legal U turn must give way to any pedestrian at or near the intersection on the road or part of the road the driver is entering.



True

Motorists must give way to pedestrians before proceeding to turn left or right or while making a legal U turn.

Question

Do drivers and riders need to carry their licence with them at all times?



True

All drivers and riders must carry their licence with them at all times whilst driving or riding, and supervising drivers must also carry their licence. Failure to produce your licence on demand is an offence and may result in a fine.

Question

It is legal for a driver to make or receive calls using a 'hand held' mobile while their vehicle is stopped in traffic.



False

It is illegal for a driver to make or receive calls using a 'hand held' mobile phone while the vehicle is moving or stopped in traffic. This includes SMS texting or using other phone functions (e.g. playing games).

Question

Does a Learner Driver need to observe a zero blood alcohol level?



True

Learner drivers must observe zero blood alcohol requirements at all times whilst driving.

Question

If you have a passenger who is up to the age of 16, it is their responsibility to wear a restraint (i.e. seat belt).



False

Drivers are legally responsible for ensuring that children up to the age of 16 are suitably restrained in a vehicle.

Pedestrian questions and statements

Question

Pedestrians must give way to vehicles entering or exiting a driveway.



False

Motorists entering or exiting a driveway must give way to pedestrians walking on the footpath.

Question

You may walk along the road, even if there is a footpath available, providing you do not obstruct traffic.

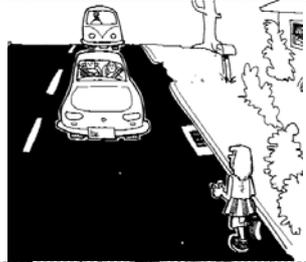


False

You must not travel on a road if there is a footpath available for you to use.

Question

When there is no footpath and you have to walk on the road, you should walk on the right-hand side facing the oncoming traffic.



True

Walking on the right-hand side facing the oncoming traffic lets you see approaching traffic and enables you to make sure that drivers have seen you.

Question

You can cross a road near a pedestrian crossing if the road is clear or the traffic has stopped.



False

You must use a pedestrian crossing if one is available and you are within 20 metres of the marked crossing.

Question

It's okay to start crossing if the *don't walk* signal is still flashing.

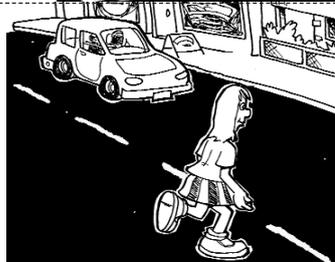


False

Pedestrians should not begin to cross if the *don't walk* signal is flashing. Signals are designed to give pedestrians enough time to cross from the start of the *walk* signal to the end of the *don't walk* signal.

Question

Pedestrians are not allowed to jaywalk.

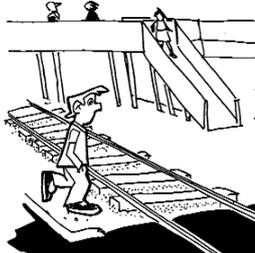


False

Pedestrians must cross by the shortest route and not stay on the road longer than needed to cross safely.

Question

Pedestrians should not cross a railway line at a level crossing if there is a path, bridge or other structure within 20 metres designed for the use of pedestrians at the crossing.



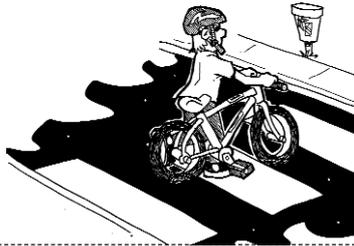
True

Pedestrians must always cross a railway line using a path, bridge or other structure within 20 metres of a level crossing.

Riding questions and statements

Question

A cyclist must get off their bike and walk it across a crosswalk or at a pedestrian signal crossing.



True

Bikes must be wheeled across crosswalks and pedestrian signal crossings (unless there is a bike crossing signal).

Question

Cyclists must hold onto the handlebars and not carry other passengers.



True

Cyclists must ride with at least one hand on the handlebars, and not carry more persons on the bicycle than it is designed to carry.

Question

Cyclists can ride on the footpath.



True

In the NT all paths are shared paths unless otherwise stated. Cyclists can ride on a shared path, but must keep to the left, unless it is impractical to do so, and give way to any pedestrian.

Question

When riding at night your bike must have a front light and rear reflector.



False

When riding at night your bike must have a white front light (visible up to 200 metres ahead), a rear red light (visible up to 200 metres to the rear) and a red reflector that is visible for at least 50 metres from the rear of the bike.

Question

A cyclist, scooter rider or skater has 'right of way' over pedestrians on a shared path.



False

Cyclists and other riders should give way to pedestrians on shared paths. However a pedestrian does not have the right to intentionally obstruct a cyclist on a shared path.

Question

Cyclists need to know the different types of traffic signs installed along our roads and what each sign indicates to road users.



True

There are four categories of road signs. Regulatory (e.g. give way, stop, speed limit), warning (e.g. T-junction, pedestrian crossing), guide (these give distances and directions) and road work signs (e.g. detour).

Question

Cyclists can ride 'two abreast' or beside another cyclist on the road.



True

You can ride in pairs, however, it is safer to ride in single file when the road is narrow or there are vehicles approaching from behind.

Passenger questions and statements

Question

It is okay to travel in the open space of a vehicle.



False

It is against the law to travel in the open space of a vehicle where restraints are not provided (e.g. the back of a van, ute or wagon).

Question

All vehicle occupants must wear a restraint.



True

Every person travelling in a motor vehicle must wear an appropriate restraint (seat belt).

Question

If there aren't enough seat belts you can 'double up' or fasten a seat belt around two people.



False

Seat belts are designed to be used by only one person at a time. 'Doubling up' is both illegal and unsafe.

Question

Babies and young children can be held by an adult if a child car restraint is not available.

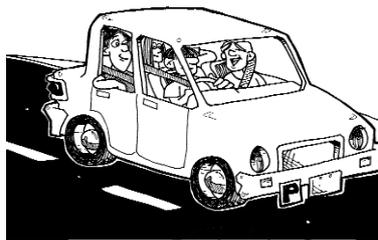


False

National laws state that children up to the age of seven years must be in an approved child car restraint.

Question

It's okay to have your arm out of the window of a bus or car.

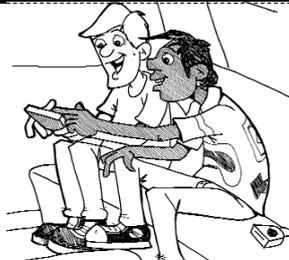


False

Passengers and drivers must not place any part of their body outside of the vehicle.

Question

Seat belts don't have to be worn in the back seat.

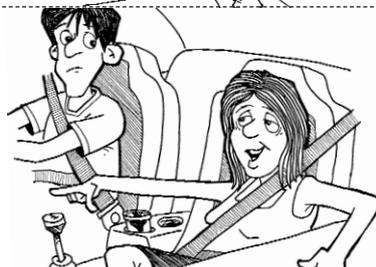


False

It is compulsory to wear a seat belt whether you are in the back or front seat of a vehicle. In a crash, a seat belt can keep you from hitting some part or other people in the vehicle, or from being thrown out.

Question

It is illegal for passengers to have a BAC over 0.05.



False

There is no BAC limit for passengers. However, passengers should be aware of their behaviour as driver distractions may cause a crash.

Riders rule!

Question

Cyclists can ride on any road or path.



Answer

Cyclists must not ride on a road or path if a 'no bicycles' sign or road marking applies.

Question

You may ride close behind or hang onto another vehicle while riding your bike or scooter providing you don't exceed the speed limit.



Answer

Cyclists and scooter riders must travel at least 2 metres away from the vehicle in front and must not hold another vehicle or be towed.

Question

If you are over 17 you don't need to wear a bicycle helmet.



Answer

If you are over 17 and riding on a public place or path which is separated from the road you do not have to wear a bicycle helmet, but for safety reasons it is advisable to wear a properly fitted and fastened helmet at all times.

Question

Cyclists must not cause traffic hazards.



Answer

Cyclists must not cause a traffic hazard by moving into the path of a driver or pedestrian.

Question

Wheeled recreational devices such as roller blades and skateboards are only permitted on paths and local roads



Answer

Wheeled recreational devices must not be ridden on roads with line marking or median strips, or with a speed limit of more than 60 kph.

Question

Do the brakes on a bike have to be in working order?



Answer

A bike is defined as a vehicle and therefore must be roadworthy.

Riders rule!

Question

Scooter riders do not need to be licensed



Answer

All scooter riders need to have an appropriate and current licence.

Question

The distance it takes a bike to stop in the rain is twice the distance when dry.

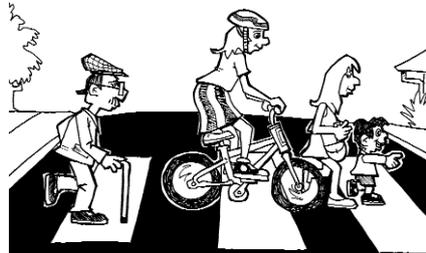


Answer

The distance it takes a bike to stop in the rain or on wet roads is up to four times further than when it is dry. This means cyclists should ride slower and allow a greater distance when following behind other cyclists or vehicles in the rain.

Question

You can ride your bike across a crosswalk so long as you give way to pedestrians.

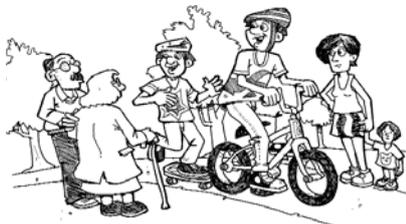


Answer

Cyclists must walk their bikes across all crossings except where a bike crossing signal is installed.

Question

Motorcycle riders and passengers must wear helmets.



Answer

Both motorcycle rider and any pillion or sidecar passenger must wear a safety helmet that complies with Australian Standards or a type approved by the Registrar of Motor Vehicles.

Question

How old do you need to be to drive a motor vehicle or ride a motorbike?



Answer

The driver or rider of any motor vehicle or motorbike must be 16 years or older and hold the appropriate driver's licence or permit. Children younger than 17 years of age have access to mini bikes, quad/ trail bikes, and other off road vehicles which may be driven off road with adult supervision and appropriate safety equipment.

Question

Is it legal to use unregistered motorised scooters of any output on private property in the NT?



Answer

It is currently legal to use unregistered motorised scooters of any output on private property in the NT. This ruling also applies to other wheeled recreational devices such as skateboards that have motors attached as well as bicycles with motors of greater than 200 watts and pocket motor bike racers.

Question

Where can you legally ride a skateboard or scooter?



Answer

You can ride a scooter or skateboard on footpaths and shared paths, provided you keep to the left and give way to pedestrians. It is illegal to ride on any road that has a dividing line or median strip, or on a one-way street with more than one marked lane or any road with a speed limit of more than 50 km/h.