

Background information

VULNERABLE ROAD USERS

WHY ARE CHILDREN CONSIDERED VULNERABLE ROAD USERS?

Road-related fatalities are the leading cause of death for children aged between 0 and 12 years and the third highest cause of injuries behind falls and unintentional injuries.

Children 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 ride-on wheeled recreational devices such as skateboards, scooters rollerskates and rollerblades.

Note: Throughout this document, the word 'riding' refers to the use of bicycles and all wheeled recreational vehicles. See also Glossary on page 192).

Fatalities and hospital admitted road crashes casualties by road user group and gender for children aged 0 to 16 years in the Northern Territory, 1999 to 2008

Road User Group	Metropolitan		Rural		Total	
	Male n	Female n	Male n	Female n	Male n	Female n
Driver	20	16	18	14	38	30
Passenger	38	36	101	73	139	109
Motorcyclist	40	26	11	6	51	32
Bicyclist	7	2	2	1	9	3
Pedestrian	35	13	6	3	41	16
Other	6	6	20	20	26	26
Total	146	99	158	117	304	216

WHAT ARE THE MAIN ISSUES FOR CHILDREN?

The main issues for children up to 12 years of age, as passengers, pedestrians or cyclists (including skateboards, scooters and other wheeled recreational devices) are:

PASSENGERS

- wearing an approved restraint for their size and age
- entering and exiting from the rear door closest to the kerb
- using safer behaviours to avoid driver distraction

PEDESTRIANS

- using the systematic search strategy in different locations including designated pedestrian facilities
- checking driveways and other hazards in the traffic environment

ON WHEELS

- wearing a correctly fitting helmet and other protective equipment and clothing
- riding a bicycle suited to the child's height
- riding in safer places away from the road

Background information

PASSENGER SAFETY

WHY ARE PASSENGERS AT RISK?

Passengers in this age group are at risk because they:

- use an incorrectly fitted restraint or do not wear a restraint
- are not seen by drivers when they are entering or exiting cars due to their smaller stature
- may distract the driver or engage in some other inappropriate behaviour while travelling
- do not think about what they are doing or the consequences of their actions
- often do not know how to enter and exit a vehicle safely or how to use a restraint properly.

What are the risks?

- In Australia (from April 2004 to March 2005), 63 passengers aged between 0 and 16 years of age were killed (*ATSB March 2005 Report*).
- Passengers travelling unrestrained in a car are ten times more likely to be killed in a road crash than those wearing a seatbelt (*Data Analysis Australia 2000*).
- Of children and adolescents aged 6 to 16 years killed in car crashes, 54% were found not to be wearing a restraint (when one was available).

- Passengers travelling in the back of a ute or open load space (which is illegal the NT) are more likely to suffer injury or death in a crash or rollover due to non-restraint usage.
- Crash studies indicate that the force of a crash at 40km/h with a power pole or parked car is like being dropped from a two-storey building onto concrete. The force at the point of impact will be equivalent to 20 times the child's own weight (i.e. 600kg if the child weighs 30kg).

PROTECTIVE PASSENGER BEHAVIOURS

➤ How can passengers reduce the risk?

Children can reduce risk by:

- wearing a correctly fitted and adjusted restraint
- sitting in the rear seat of a vehicle
- entering and exiting from the rear door closest to the kerb (the safety door)
- travelling without distracting the driver or other passengers
- keeping all body parts within the vehicle
- acting under adult supervision when entering and exiting a vehicle, and while in places such as car parks.

Fatalities and Hospitalised Motor Vehicle occupants by Restraint Use and Gender for Children Aged 0 to 16 Years in the Northern Territory, 1999 to 2008

Restraint Use	Metropolitan		Rural		Total		
	Male n	Female n	Male n	Female n	Male n	Female n	
Number in accidents drivers or passengers	58	52	119	87	177	139	316
Seatbelt or restraint worn	54	47	57	57	111	104	215
Not worn	4	5	62	30	66	35	101
% not worn	7%	10%	52%	34%	37%	25%	32%

Involved in Accidents
 drivers 68
 passengers 248
 TOTAL 316

(The George Institute, 2009)

RESTRAINTS

► What are some facts about restraints?

- Restraints have been found to be particularly effective at minimising injury in single vehicle crashes (*ARRB Transport Research 1999*).
- In the event of a crash, it is safer to be restrained than to be thrown clear from a vehicle. Serious injuries can result from occupants being thrown from a vehicle and landing on the road or other hard surface. Rates of injury and death are reduced if occupants are held securely by a restraint.
 - A properly fitted and adjusted restraint that is suitable for the size and weight of the child reduces the risk of a serious or fatal injury by an estimated 50%.
 - Restraints are most effective if they are worn properly. A properly fitted restraint is firm fitting and worn flat (without any twists). The sash section of a seatbelt should cross the sternum (or bony section) of the chest. A lap belt should be positioned across the hips below the abdomen.

► Restraint laws for passengers and drivers

- Children under 12 months of age must be restrained by a suitable child car restraint that is properly adjusted and securely fastened.
- Every person travelling in a motor vehicle must use an appropriate Standards Australia approved restraint where one is available.
- Penalties apply for drivers carrying an illegally unrestrained child passenger aged 16 years or under in their vehicle.



► Selecting an appropriate child car restraint

Wearing a restraint that does not fit the child's age or size is a serious issue. Child car restraints are designed to offer crash protection appropriate for the age or size of the child.

• Children birth to 9kg/12kg

For a child of this weight an approved rearward facing baby seat must be used. It is safer to keep a baby in the rearward facing child restraint until they reach its maximum weight limit.

• Children 6 months to 4 years up to 18kg

For a child of this weight an approved rearward or facing safety seat should be used.

• Children 4 years to 7 years up to 26kg

For a child of this weight a forward facing child restraint with an in-built harness or an approved booster seat with a lap sash seat belt should be used. As a general rule it is safer to use a rigid booster seat with a back, side wings and a sash guide to keep the belt in place.



• Children 7 years and over 26kg – lap sash belt

For children who have grown to the size where their eyes are at the same level as the top of the back of the booster seat (or 26 kg to 32 kg), a lap-sash belt can be used. The child must be able to place their bottom against the back of the seat and have their knees bent at the edge of the seat.

When using lap sash belts it is important to tighten the belt and remove the slack. A lap sash belt offers more protection than a lap only belt.

► Who checks and installs car child restraints?

There is a network of Authorised Child Car Restraint Fitters throughout the Northern Territory who are qualified to check and install child car restraints. For further information on child car restraints visit the website

www.nt.gov.au/transport/mvr/registration/inspections/index.shtml

Background information

► Which door should children use when entering and exiting a vehicle?

It is dangerous for children to get out of a vehicle on the traffic side as they may be directly in the path of oncoming traffic.

When exiting and entering a vehicle, children should:

- use the rear door on the kerb side (the safety door)
- wait beside the car under adult supervision.

USING PUBLIC TRANSPORT

► What are the risks?

- Between 2005 -2009, 24 children aged 0 to 14 years of age received injuries associated with bus travel (*NTG Vehicle Accident Database, 2010*)
- Child pedestrians are more likely to be involved in crashes at or around bus stops than while travelling by bus.

PROTECTIVE BEHAVIOURS

► What safer behaviours should children demonstrate while travelling on a bus?

Boarding

- Stand well away from the roadside.
- Wait for the bus to stop and for passengers to get off before boarding.
- Move quickly to an available seat.
- If a seat is not available, hold onto straps or handles provided.
- Do not stand near the doorway or lean against the doors.
- Store bags underneath the seat.
- Do not place any part of the body outside of the bus.
- Avoid distracting the driver and other passengers.

Alighting

- When getting off, remain seated until the bus has completely stopped.
- Move quickly to the exit doors.
- Wait on the roadside until the bus has moved away before attempting to cross the road with adult supervision.

► What safer behaviours should children demonstrate while travelling on a train?

- Stand on the platform well clear of the approaching train until it has stopped.

- Wait for all passengers to get off before boarding.
- Choose a seat if one is available.
- Do not stand near the doorway or lean against the doors.
- When alighting, move to the exit doors and wait for these to open when the train has stopped.

PEDESTRIAN SAFETY

WHY ARE PEDESTRIANS AT RISK?

Children are considered vulnerable road users as, up to the age of approximately ten years, they may not be developmentally ready (i.e. they do not have the physical and cognitive skills) to make safer judgments and choices of their own about traffic.

► Child pedestrians are at risk because they have:

• **developing peripheral vision**

Children are less likely to notice objects not directly in front of them because their peripheral vision is still developing. In fact children may have as little as one-third of an adult's field of vision. Unless they turn their heads they may not notice vehicles to their right or left.

• **developing directional hearing**

Children may often have problems working out where sounds are coming from and may expect traffic to come from the wrong direction.

• **a smaller stature**

Because of their size, children may not be visible to drivers especially when they are standing between parked cars.

• **limited sense of perception**

Children have trouble judging how fast a vehicle is coming towards them or just how far away a vehicle is. They may let a slow vehicle pass and then cross in front of a fast one.

• **poor search behaviour and do not take sufficient time to look when crossing the road**

Children like to keep moving! As a result they may not wait for stoplights to change, for cars to stop at crossings or allow enough time to complete a thorough search procedure before they step out onto the road.

• **a short concentration span**

Children think about one thing at a time and ignore other things around them.

- **unpredictable behaviour, and do not consider the consequences of their actions**

Children often have trouble stopping at the kerb especially if they are excited or are chasing a ball, and may dart out onto the road without thinking.

- **a tendency to be easily distracted**

Children tend to focus only on the things that interest them most. They are easily distracted in the company of friends and cannot be relied upon to use safe behaviour consistently.

- **limited ability to respond quickly to a sudden change in traffic conditions**

Children may be able to say when the road is clear and safe to cross but a sudden change in traffic conditions can cause confusion and panic.

- **difficulty seeing a situation from another's viewpoint**

Children often think that if they can see a car approaching them that the driver must be able to see them too.

- **an unwillingness to change from a direct route even if it is dangerous.**

- **Children may also be at risk because of their:**

- lack of knowledge and skills to deal safely with the traffic environment
- responsiveness to peer pressure
- propensity to take risks
- parents or other adults over-estimating their ability
- possible lack of road-side training
- presence on the road not being anticipated by drivers
- lack of experience dealing with different traffic situations (i.e. rural children interacting with city traffic situations).

- **What are the risks for young pedestrians?**

- Between 1999 and 2008, 83 pedestrians aged 0 to 16 were fatally injured or hospitalised in the Northern Territory. Of these, 51 were male and 32 were female; 66 were in the metropolitan area and 17 were rural.
- In Australia, pedestrian injury is the leading cause of death among 5 to 9 year old children (Al Yaman, Bryant & Sargeant, 2002).
- In 1999 – 2000 in Australia, there were 1144 hospitalisations of children aged 0 – 14 years as a result of pedestrian injuries (Al Yaman, Bryant & Sargeant, 2002).

- Among children aged 1 to 14 years, hospitalisation rates decreased with age and were lowest for those aged 10 to 14 years (Al Yaman, Bryant & Sargeant, 2002).

- Males are more likely to be injured as pedestrians than females.

- **When are young pedestrians involved in crashes?**

Research has found:

- children are more likely to be hit by a car when crossing mid block
- studies show that children as pedestrians are most vulnerable when they are tired: 'Children are more likely to be involved in a road accident after 3pm' (George Institute, 2009).
- most child pedestrian crashes are the result of errors made by the child.

PROTECTIVE PEDESTRIAN BEHAVIOURS

- **How can pedestrians reduce the risk?**

To reduce the likelihood of injury while a pedestrian, children should:

- always use the systematic search strategy (described below)
- select safer places to cross
- use designated crossings (e.g. crosswalks, pedestrian phase signals, railway crossings)
- be supervised by an adult whenever possible
- use a footpath when available.

- **Systematic search strategy**

Step 1 Choose the safest place to cross.

Step 2 Ask a trusted adult for help to cross the road.

Step 3 Stop back from the kerb and road.

Step 4 Look in all directions for traffic.

Step 5 Listen for traffic.

Step 6 Think about when it is safe to cross.

Step 7 When the road is clear and all traffic has come to a complete standstill, walk straight and quickly across the road.

Step 8 Keep checking the road by looking, listening and thinking about the traffic while crossing.

Background information

► Where are safer places to cross?

Children have difficulty identifying and selecting places to cross the road safely. They tend to assume that all places are safe as long as no vehicles are visible nearby.

► Pedestrian facilities

It is important that children use a pedestrian facility when there is one available, even if it means walking some extra distance. If a pedestrian facility is not available, encourage children to cross where they have a clear view of traffic in every direction and drivers can see them waiting to cross.



Pedestrian facilities include:

- traffic lights with pedestrian phasings
- children's crossings
- pedestrian footbridge
- pedestrian crossings
- traffic lights with parallel pedestrian crossing
- underpass or overpass
- roads with a median strip in the middle

► Railway level crossings

Pedestrians should:

- always use the maze crossing or pedestrian facility
- use the systematic search strategy, looking and listening for trains

- not cross until the lights have stopped flashing, the bells have stopped ringing and the boom barriers are raised or open, even if a train cannot be seen approaching
- wait until the train has moved away before crossing.

► Crossing at traffic lights

It is safer to use the systematic search strategy described previously when the green 'walk' figure is illuminated. However, children should be reminded not to presume that traffic will stop and to check the traffic before stepping onto the road.

► Crossing between parked cars

It is dangerous for children to cross between parked cars, however, when this is the only choice, they should be taught to:

- select a gap between two cars which have no drivers
- make sure the gap is not big enough for a car to park
- walk to the outside corner of the car and stop where drivers can see them and they can see the traffic (i.e. in line with the outside edge of the cars)
- use the systematic search strategy to cross the road.

► In a car park

A car park can be a dangerous place for pedestrians as drivers are usually focused on driving into or out of parking bays and do not always look out for pedestrians, especially children. Children should:

- stay close to an adult whenever possible
- select the safest route (e.g. using footpaths, crosswalks, pedestrian phase lights)
- be aware of sights (e.g. exhaust smoke, reversing lights) and sounds (beepers, slamming doors)
- look and listen for vehicles driving in and out of parking bays.

► Walking where there is no footpath

When a footpath is not available, pedestrians should:

- walk on the road verge as far away from the road as possible
- walk on the edge of the road if no verge is accessible and face oncoming traffic
- move off the road edge until the oncoming vehicle has passed.

► Boarding a bus

Pedestrians waiting to board a bus should stay on the footpath or road verge until the bus has stopped and then move.

► Crossing after a bus has left

Pedestrians should wait until the bus has moved away and the road is clear before crossing and use the systematic search strategy.

► How can pedestrians increase their visibility in the traffic environment?

Drivers involved in crashes with child pedestrians frequently report that:

- they did not see the child
- the child rushed out and there was no time to stop.

The height of a child makes it difficult for drivers to see them especially when driving some larger models of cars, 4 wheel drives or vehicles with a poor reversing visibility index. For further information on vehicle visibility ratings refer to the ANCAP website at www.ancap.com.au/

► What to wear

There are several ways to increase visibility of pedestrians in the traffic environment including:

- wearing light, brightly coloured or reflective clothing (e.g. a jacket, cap or sneakers) especially at times of poor visibility (i.e. dusk or wet weather)
- carrying a bag that has reflective strips or stickers.

SAFETY ON WHEELS

WHAT ARE THE RISKS FOR CHILDREN RIDING BICYCLES AND WHEELED RECREATIONAL DEVICES?

Children derive great enjoyment and satisfaction from cycling and using other wheeled recreational devices. It gives them a sense of pride and achievement when they become proficient in their skills.

Behavioural, physical, sensory and cognitive abilities of children develop continually through childhood. Children under ten years of age generally have not developed the necessary cycling and traffic skills to safely ride in the traffic environment. They are at risk because they:

1. may not have the necessary physical skills to handle a bicycle

2. lack knowledge and skills to deal with the traffic environment
3. do not always think about the consequences of their actions
4. have not developed an effective search behaviour and may not look for long enough when scanning traffic
5. give in to peer pressure to act unsafely
6. over-estimate their ability
7. are still developing the ability to discern the speed of an approaching vehicle, the ability to judge distance depth cues, and the sensitivity to sounds and being able to determine where sounds are coming from. (These skills may take up to age 12 to fully develop).

For young cyclists who have mastered balance and keeping course, the additional mental effort required to apply road rules can interfere with the motor tasks.

► Peer pressure

Children aged 8 to 14 years often find themselves in situations where there is pressure to indulge in risk taking behaviour. Risk taking is normal behaviour for children and an essential part of their learning and personal development. Students, however, need to be aware of the reasons underlying their choice to engage in risky behaviour and realise they must take responsibility for the consequences of such behaviour.

Raising students' awareness of the effects of risk taking behaviour on themselves and other road users can encourage responsible behaviour. Parental and community support is necessary to assist the development of knowledge, skills, values and attitudes that will evoke responsible behaviours while cycling and riding wheeled recreational vehicles.

► What are the risks for child cyclists?

A significant number of injuries to children happen as a direct result of using bicycles. Children and adults need to understand that cycling skills develop over time with practice in a safe environment. It is safer for children under 12 years of age to ride on footpaths, as allowed under the Australian Road Rules, or in other off-road locations such as shared pathways or parks.

- Between 1999 and 2008, 57 cyclists aged between 0 and 16 years of age were killed or hospitalised (*George Institute 2009*)
- Males in the 6 to 12 and 13 to 16 years age group have the highest rates of hospital admission.

Background information

- The majority of riding injuries occur on public roads and don't involve another vehicle but occur when children fall off their bikes after crashing into a pole, kerb or fence (*Kidsafe Bicycle Safety*).
- In Australia, injuries through scooter riding are on the increase. Two out of three of those injured are under 14 years of age. The most common serious injuries are fractures to the arm/wrist usually as the rider puts out a hand as they fall (*Kidsafe WA, Bicycle Safety, 2003*).
- Injuries to the face and head are less frequent but are potentially more serious (*Kidsafe WA, Bicycle Safety, 2003*).

► What injuries occur through skateboards, roller blades, roller skates and in-line skates?

- The most common injuries associated with these boards and skates are to the hand, wrist and elbow, the knees and to the head.
- Head injuries occur when riders, not wearing helmets, hit objects or are unable to break their fall. They are less common than other injuries but are usually the most serious.
- Injuries are most common in riders who are young and just learning.
- Children most at risk are those 6 to 14 years old.
- Most falls are the result of simple loss of control.
- The majority of injuries occur either at home, on the roads or on a footpath/bike path, not in a skating or recreation area.

► What are the risks for children riding in rural areas?

Children riding in rural areas:

- are just as likely to lose control of their bicycles as city children
- have to deal with a range of road conditions such as gravel, potholes and slippery surfaces
- often have to ride on roads as there are no footpaths
- have to deal with traffic travelling at greater speeds.

► Skateboards, roller blades and scooters

Using skateboards, roller blades and scooters can lead to crashes which result in serious injuries. Many of these are caused by user error such as losing control or acting in an unpredictable way.

Children are most likely to be injured when first learning to use these small wheeled toys or when

learning a new skill. Children and adults need to understand that the skills necessary for using a skateboard, rollerblades or scooter develop over time and with practice in a safe environment.

Children should know safer places to skate such as skating rinks or bowls, parks, playgrounds and shared or cycle paths.

PROTECTIVE RIDING BEHAVIOURS

► How can children reduce the risk when riding?

The risks associated with cycling and riding wheeled recreational vehicles can be reduced if children:

- avoid roadways, paths or other areas that are used by motor vehicles
- wear an approved helmet at all times
- avoid large hills, kerbs, cobblestones, grates and other rough or discontinuous surfaces
- never ride with more than one person on a bicycle or scooter (unless the bicycle is specifically designed to carry more)
- before each use, check that there are no loose or missing parts.

► What is a shared path?

In the Northern Territory, all paths are shared paths unless signs indicate otherwise. When riding on a shared path you must keep to the left and give way to any pedestrian. They are sometimes referred to as bike paths or cycle paths. Shared paths are designed to cater for all potential users, including bikes, and are generally wider and built to a better standard than footpaths.

Children should be encouraged to ride on the footpath and shared paths as they are generally off-road and away from traffic. When the shared path crosses a road, those on the path need to give way and watch out for oncoming and turning traffic.

► Courtesy on shared paths

When riding on shared paths there are rules that need to be followed:

- keep to the left
- don't ride too fast or do anything unexpected
- use a bell when approaching others
- give way to pedestrians
- obey signs
- ride in single file unless the path is wide enough and it is safe to ride in pairs.

HELMETS

► How can young riders reduce the risk?

Studies have shown that bicycle helmet use decreases the risk of head injury by 85% and brain injury by 88% (*Henderson, M.1996*). The protective effect of a helmet during a crash or fall is increased by the:

- helmet being properly worn (sitting at the front of the head)
- retention straps being tight and fastened. This prevents the helmet from moving or coming off and the risk of head injury being reduced during a crash
- helmet being fitted properly. Improperly fitted helmets can double the risk of head injury.

► What safety features do helmets have?

- Look for the Australian Standards Mark AS 2063.2 or AS/NZS 2063 certification label. This is usually displayed on and in the helmet. The label ensures that the helmet has passed safety tests and meets the standard required by Australian state road laws. Not all helmets meet this standard.
- Young children require a helmet that provides extra neck support. For this reason, an approved helmet that weighs under 350gms is best.
- Where possible, a bright or fluoro coloured helmet should be selected to increase visibility in the traffic environment.
- Ensure the helmet has adequate venting to keep the child's head cool.



► How to select and fit a helmet?

Helmets are designed to protect the wearer against possible impact. For maximum protection a helmet must be a good fit (i.e. snug to the head) and securely fastened. If a helmet is too small it will not give adequate coverage and protection. If a helmet is too large it may move on the head and not provide the protection intended.

• **Correct size**

Check head size by using a tape measure around the head just above the eyes and ears. Match this with

the helmet sizes listed on the display box to find a helmet that covers this measurement.

• **Fitting a helmet**

Helmets will come with fitting instructions however the following points will be appropriate for most styles:

1. Place the helmet on the child's head, using the pads supplied, ensure it is a snug fit.
2. Test the fit by grasping the helmet and attempting to move it to the front and back of the head.
3. Adjust the straps so that the side adjustor forms a 'Y' shape below the ears and the buckle is positioned well under the chin.
4. Attempt to move the helmet backwards and forwards once the straps have been fastened correctly.
5. Make further adjustments if necessary, a loose helmet can increase the risk of injury.

• **Helmet care**

Extreme heat can damage the shell and weaken the helmet. This is usually visible when 'bubbling' occurs on the surface of the helmet shell. Avoid leaving the helmet outside in the weather, near a heater or on the back ledge of the car.

Substances (i.e. petrol, paint adhesives and cleaning agents) can damage helmets. Clean helmets with mild soap and water, rinse then dry with a cloth not in front of heater or in the sun.

• **Replacing helmets**

Helmets are essentially manufactured for single impact protection. They absorb the impact and protect the head. When a helmet has been subjected to a severe blow it should be replaced even if it appears undamaged.

Replace a helmet when it shows obvious signs of wear or no longer fits the head correctly.

BICYCLES

► How to select a correct sized bicycle?

- Riding a bicycle that is too big or too small may cause a child to lose control.
- Choosing a bicycle for a child to 'grow into' is dangerous.
- There should be about 3cms clearance between the crossbar of the frame and the rider when they are standing with feet flat on the ground.
- On BMX and mountain bikes the clearance should be 5 – 10cms.

Background information

- When seated, the riders arms should be slightly bent when holding the handle grips and their knees should not hit the handlebar.
- The child should be able to reach and operate the brake levers.

► Bike care

A simple safety check should be carried out regularly. Brakes and tyres should be checked each time before riding.

The seat

- This should sit flat and be in line with the frame of the bicycle.
- It should not tilt up or down or move from side to side.
- Look for damage such as cracks or broken springs.
- The seat stem should not be above the maximum height mark.

Brakes

- Apply the brakes and check that the wheels do not turn.
- Check that there is a gap between the brake levers and the handlebar.

Wheels and tyres

- Look for loose wheel nuts or broken spokes.
- Check that wheels spin freely.
- Check tyres are not worn and are fully inflated. The correct tyre pressure is usually written on the tyre wall.

Bell

- A bell is a legal requirement and should be loud and in working order.

Lights

- Check reflectors are fitted at the front and rear and on pedals and wheels.
- Check that the white headlight and red tail light are working.

Pedals

- Check for wear and damage and make sure they spin freely.
- Check the crank is tight.

Chain

- The chain should be kept clean and lightly oiled.
- It should be able to move freely.

Handlebars

- Handlebars should be covered and the handgrips secure.
- The handlebar should not be loose.
- When seated, the rider should be able to reach the handlebars.

► Mini motor-bikes, quad bikes and off-road vehicles

Riding these vehicles can result in crashes leading to serious injuries as children up to 16 years of age may not have the necessary sensory, physical and cognitive skills to safely ride these vehicles. They are also likely to be injured when first learning to ride or when learning to operate a new vehicle.

It is safest to choose a bike of a suitable size and with an engine capacity no greater than 80cc. It is important for children to be aware of the power of the bike and potential hazards when riding.

ROAD RULES AND SIGNS

ROAD SIGNS, SIGNALS AND MARKINGS

Children encounter many different signs and road markings in the traffic environment. Most of these are designed to inform drivers of their responsibilities. However, it is important that children develop an understanding of the meanings of these signs and road markings, and the safety reasons why they must be obeyed.

Stop

Stop signs are placed at intersections where it may be difficult to see approaching traffic. It is important to come to a complete stop at the stop line, or the edge of the intersecting road if there is no stop line. Give way to any vehicle approaching from any other direction before continuing.



Speed limit

These signs show the maximum speed limit on a road however sometimes, due to pedestrian activity, other traffic, weather and road conditions, it is safer to travel at a slower speed.



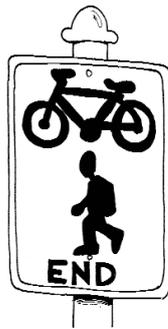
Cycle path

These paths are for use by bicycles as shown on signs or markings. However, riders of rollerskates, rollerblades and wheelchairs may use them provided they give way to cyclists.



Shared path

This sign is designated for use by both cyclists and pedestrians and is placed at the path beginning and ending of the path.



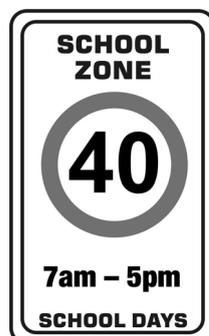
Give way sign

Give way signs are installed at intersections to clarify which traffic has right of way. Slow down or stop and give way to any vehicle approaching from any other direction before continuing.



School zone sign

These signs are installed at the beginning and end of a school zone. Drivers must not exceed the 40km/h speed limit during the stipulated times.



School crossing

These signs are located near each end of a school crossing.

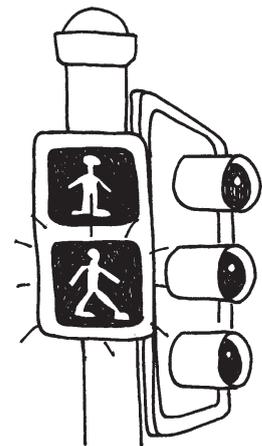
Pedestrian crossing

These signs are located near each end of a pedestrian crossing.



Pedestrian phasing

Pedestrian phasing lights are designed to illuminate at different times. For example, a flashing red pedestrian and/or the words 'don't walk' indicate that pedestrians should not proceed. An illuminated green pedestrian and/or the word 'walk' indicates that pedestrians may proceed across the intersection or road.



ROAD LAWS

Road laws have been designed in the interests of promoting a safer community. The Northern Territory Traffic Act clearly defines the responsibilities of all road users. Fines and penalties apply for failure to comply with road laws. Further information about traffic regulations is available on the NT Road Safety website www.transport.nt.gov.au.

PASSENGERS AND THE LAW

► Restraints

- Every person travelling in a motor vehicle must use an appropriate Standards Australia-approved restraint where one is available.
- Children under 12 months of age must be restrained by a suitable child car restraint that is properly adjusted and securely fastened.
- Penalties apply for drivers carrying an illegally unrestrained child passenger aged 16 years or under in their vehicle.

► Travelling in open space vehicles

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

Background information

PEDESTRIANS AND THE LAW

► Using the footpath

- Pedestrians should use the footpath or nature strip where possible as it is an offence not to (unless it is impractical to do so).
- Pedestrians can only travel on the right side of the road facing oncoming traffic if there is no footpath, useable path or nature strip.
- Pedestrians cannot walk more than two abreast on the road unless overtaking.
- Motorists, when entering or exiting a driveway, must give way to pedestrians and cyclists travelling on the footpath.
- If a driver is turning left or right or making a U-turn, the driver must also give way to any pedestrian at or near the intersection on the road or part of the road the driver is entering.

► Crossing the road

- Pedestrians should use and obey pedestrian signals and crossings.
- Pedestrians must use a marked crossing if they are within 20 metres of the crossing.
- Pedestrians must follow the directions of a traffic attendant while crossing.
- Pedestrians must cross intersections using the shortest and most direct route (i.e. no jaywalking).

For further information refer to www.nt.gov.au/transport/safety/road/crossings

CYCLISTS AND THE LAW

- Bicycles are classified as vehicles. Cyclists have the same rights and responsibilities as the drivers of other vehicles.
- Cyclists may ride on the footpath provided they keep to the left and give way to pedestrians.
- Cyclists under 17 must wear a properly adjusted and fastened, approved safety helmet carrying the Australian Standards Mark (AS2063).
- Cyclists must warn pedestrians when riding past on a shared path or footpath by using a bell.
- Cyclists must walk their bikes across pedestrian crossings and at traffic signal crossings (unless there is a bicycle crossing light).
- On a path dedicated for the exclusive use of bicycles – cyclists have the right of way.

- Drivers must give way to pedestrians and cyclists on the footpath when entering or exiting a driveway. However pedestrians and cyclists should look and listen for cars and cross all driveways with caution.

For further information refer to www.roadsafety.nt.gov.au

WHEELED RECREATIONAL DEVICES

► What is a scooter?

The definition of a wheeled toy includes child's pedal car, tricycle and scooter. A wheeled recreational device is a wheeled vehicle that has been built to transport a person, is propelled by human power or gravity and is ordinarily used for recreation or play. In addition to scooters, it includes in-line skates, skateboards, rollerskates, rollerblades and unicycles.

► Where can you legally ride, skate or scoot?

You can ride a scooter or skate on footpaths and shared paths, provided you keep to the left and give way to pedestrians. The following laws apply:

- riders or skaters must give way to pedestrians on a shared path
- scooters are not permitted to be ridden on any road
- keep to the left and give way to pedestrians when passing on a footpath or shared path
- if riding on a permitted road which has a separate section for pedestrians and bicycles and is marked accordingly, you must ride on the section dedicated for bicycles, give way to cyclists and keep to the left
- if riding on a separated footpath, you must not ride on the side dedicated for pedestrians unless you are crossing it by the shortest and quickest route
- for further information on local skating restrictions contact your local council.

► Helmet use and protective gear

While not compulsory when riding wheeled recreational vehicles (other than bicycles), helmets are highly recommended. Protective gear such as elbow, wrist and knee pads are also recommended.

► What kinds of behaviour are not allowed when riding a scooter or skating?

- Games such as jumping off kerbs are not allowed on any part of a road.
- Scooter riders cannot be towed by another vehicle (including a bike). This applies to both the scooter rider attaching themselves to a vehicle and the driver (rider) of the vehicle allowing them to do so.

► Rules relating to wheeled recreational devices with motors

Under the *Traffic Act* and regulations (*Road Traffic Code 2000* and *Vehicle Standards Regulations 2002*) any vehicle with a motor over 200 watts needs registration in accordance with relevant vehicle standards to be allowed on the roads. As there are no standards for motorised scooters it is unlikely that they will be eligible for registration and hence it is illegal to use small-motorised scooters on the road. Any vehicle with a motor is also not to be ridden on paths.

It is currently legal to use un-registered 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 motorbike racers.



► Mini motor-bikes, Quad bikes and off-road vehicles

The rider or driver of any motor vehicle or motorbike must be aged 16 years or over and hold the appropriate driver's licence or permit. However, some children younger than 16 years have access to mini-bikes, trail bikes and other off-road vehicles which may be driven on off-road tracks with adult supervision and appropriate safety equipment.

► Traffic Act 2010

Further clarification of the code can be obtained by using the following website - www.roadsafety.nt.gov.au or search *Northern Territory of Australia Traffic Act 1 July 2010*

Background information

ROAD SAFETY AGENCIES

AGENCY	CONTACT DETAILS	INFORMATION AVAILABLE
Transport Safety	8924 7019 www.nt.gov.au/transport	Provides: <ul style="list-style-type: none"> • a link to the Safer Roads, School Road Safety Education, curriculum resources • access to community road safety issues and advice • NT road safety reports and statistics • Road Safety Officers school visits • general information about transport policies, licensing and registration.
TravelSmart (NT Department of Lands and Planning)	(08) 89247965 www.travelsmart.gov.au/schools/index.html	Program encouraging primary and secondary students to reduce their car dependency, thereby increasing physical activity.
Australian Red Cross Northern Territory	(08) 8924 3900 www.redcross.org.au	First aid courses, first aid health and safety, services in the community.
St John Ambulance	Call: 1300 360 455 or (08) 8922 6200 www.stjohnnt.com.au	First aid courses, first aid kits and information.
Health Promotion Centre (Edith Cowan University)	(08) 9273 8207	Research on a range of road safety issues e.g. child pedestrian safety, school bike safety, role of parents in road safety.
AANT (Automobile Association of the Northern Territory)	(08) 8925 5901 www.aant.com.au	Motoring safety magazine NT Motor

WEBSITES

AUSTRALIAN WEBSITES	INTERACTIVE	FOR CHILDREN	FOR PARENTS	FOR TEACHERS
www.nt.gov.au/transport/ Information for parents and teachers on road safety. Interactive site for kids to use at home and school.	✓	✓	✓	✓
www.nt.gov.au/transport/safety/road Information for parents and teachers on road safety. Interactive site for kids to use at home and school.	✓	✓	✓	✓
www.nt.cycling.org.au		✓	✓	✓
www.sdera.wa.edu.au Information for parents and teachers on road safety. Interactive site for students to use at home and school.	✓	✓	✓	✓
www.kidsandtraffic.mq.edu.au Information for parents and teachers on road safety including resources, fact sheets, information for families, FAQs and useful links.	✓	✓	✓	✓
www.healthinonet.ecu.edu.au/related-issues/road-safety Provides quality information and resources about Indigenous road injury.				✓
www.giddygoanna.org Resources covering a variety of safety issues for parents and teachers to order.	✓		✓	✓
www.kidsafent.com.au Fact sheets covering a variety of safety issues including road safety.	✓	✓	✓	✓
www.roadsafety.net Interactive web-based resource covering all issues of road safety including games for children and fact sheets for parents/teachers.	✓	✓	✓	✓
www.officeofroadsafety.wa.gov.au Fact sheets on road safety issues.	✓		✓	✓

Background information

INTERNATIONAL WEBSITES	INTERACTIVE	FOR CHILDREN	FOR PARENTS	FOR TEACHERS
www.roadsense.co.nz Interactive web-based resource covering road safety issues for New Zealand primary schools.	✓	✓	✓	✓
www.talesoftheroad.direct.gov.uk/ Interactive web-based resource covering road safety issues and current programs for UK schools.	✓	✓	✓	✓
www.safekidscanada/ Information for parents and teachers about various safety issues for primary and secondary school aged children.	✓	✓	✓	✓
www.bmweducation.co.uk Interactive web-based resource covering road safety issues for UK primary schools.	✓	✓	✓	✓
www.kidstravelfun.com/games Interactive web-based resource for parents, teachers and children. Games available for children to play on-line.	✓	✓	✓	✓
www.dft.gov.uk/think/?whoareyou_id= Interactive web-based resource	✓	✓	✓	✓
www.roadsense-southland.wikispaces.com.interactive+sites	✓	✓	✓	✓
www.healthychildren.org/English/safety-prevention/at-play/Pages/Bicycle-Helmets-What-Every-Parent-Should-Know.aspx? Information about use of bicycles and encouraging children to wear helmets. Minimal games for older primary school children.			✓	✓

Parent information sheet

Dear family

Your child is about to begin a road safety education program called *Safer Roads* which aims to promote healthy safer lifestyles by:

- developing an understanding of the importance of health and safety issues and practices
- developing skills necessary to make decisions that may affect children's health and safety
- fostering positive health and safety attitudes and behaviours that can enhance the quality of their own and other people's lives
- involving and supporting parents and community agencies in health and physical education to reinforce the same health and safety messages.

The program involves school-based lessons and take-home activities. At school your child will be learning how to be a safer and responsible passenger, pedestrian and cyclist.

To help your child learn road safety skills, it is important that you encourage your child to think and talk about road safety issues, especially when you are both on or near roads. Talk to your child about what you do when crossing roads and explain why. This will help your child to learn to identify potential hazards and recognise safer procedures to use in different traffic situations.

As you undertake the take-home activities, you and your child will be able to talk about the particular safety issues while practising safety skills.

It is very important to understand that children of this age are still learning road safety skills. They are often inconsistent in their behaviour and may behave safely today and unsafely tomorrow. Involvement in this program will not mean that your child will immediately have good skills or will always use them. Please continue to supervise your child closely and to teach them about road safety.

If you have any questions about this program, please contact me. I look forward to working in partnership with you on this important learning program.

Yours sincerely

Class Teacher

Date

Glossary

Glossary

ABS	Australian Bureau of Statistics
Air bag	A large nylon bag which inflates and deflates rapidly during certain types of collisions.
ATSB	Australian Transport Safety Bureau, a division of the Commonwealth Department of Transport and Regional Services
Bicycle/tricycle	A two or three-wheeled vehicle designed to be propelled solely by human power, or two or three wheeled vehicle that is a power assisted pedal cycle.
Casualty	A person killed, admitted to hospital or injured and requiring medical attention as a result of a road crash. Excludes injured persons who do not require medical attention.
Child car restraint	A device used for restraining a child travelling in a motor vehicle (e.g. baby capsule, baby seat, booster seat etc.)
Crash	Any apparently unpremeditated collision reported to the police which resulted from the movement of at least one road vehicle on a road open to and used by the public, and involving death or injury to any person or damage to property. Any one crash can involve more than one road vehicle and result in more than one death or injury.
Crash severity	Derived from the most serious injury in a crash, or if no injury, from the dollar value of property damage. The six levels are: 1 fatal crash 2 injury crash requiring hospitalisation 3 injury crash requiring medical treatment 4 injury crash requiring no medical treatment (i.e. minor injury or extent of injury unknown) 5 major property damage – over \$1,000 6 minor property damage – under \$1,000.
Cyclist	A person riding a bicycle including passengers.
Driver	Any person in control of a car, truck, tractor or bus. Includes person in control of a motorised wheelchair. Does not include persons in control of a motorcycle, moped or bicycle (see Rider).
Fatal crash	A road crash where at least one person died within 30 days of a crash as a result of injuries sustained in the crash. The crash must occur on a road open to and used by the public and involve a vehicle which was in motion. It cannot be an 'act of God', an act of deliberate intent, or as a result of prior event such as heart attack.
Fatality	A person who dies from injuries sustained in a road crash within thirty days of the road crash.
Helmet	A protective device worn on the head to prevent injuries in the event of a crash. Child cyclists under the age of 17 are required by legislation to wear a helmet that meets Australian Standards.
Hospitalisation	A person admitted to hospital as a result of a road crash and who does not die from injuries sustained in the crash within 30 days of the crash.
Killed	A person who died from injuries sustained in a road crash within 30 days of the crash.
Lap sash belt	See Restraint
Passenger	A person, other than the driver, travelling in or on a car, truck or bus. Does not include motorcyclists or cyclists.
Pedestrian	A person on foot or a person on skates, child's tricycle, wheelchair, rollerblades, scooter, or other unpowered vehicles (not including bicycles). Includes a person who has just alighted from a vehicle. Does not include a skateboarder.
Restraint	A device designed to hold a person within the body of a vehicle and limit movement during a crash, thereby reducing severity of injury. Includes inertia-reel and fixed-lap or sash seat belts, and child car restraints such as a rearward facing baby seat, forward facing toddler seat, booster seat or normal car seat. The device must meet the relevant Australian Vehicle Design Rules and Australian Standards. Drivers and passengers of vehicles must wear restraints.
Rider	Any person in control of a motorcycle, moped, bicycle, skateboard or animal.
Road toll	Count of fatalities resulting from road crashes.
Road user	Includes driver, passenger, motorcyclist, cyclist and pedestrian.
Seatbelt	See Restraint
Serious casualty	A person killed or hospitalised as a result of a road crash.
Serious crash	A road crash which results in a fatality or hospitalisation.
Vehicle	Device upon which any person or property may be transported or drawn upon a road. Includes motor vehicles, bicycles, skateboards and animal transport such as horses.
Wheeled device	Device other than a bicycle e.g. scooter, skateboard, inline skates.

REFERENCES

Adams C, Cercarelli R (2003). *Crash involvement of children aged 0 – 20 years, 1996 – 2000*. Injury Research Centre, School of Population Health, University of Western Australia.

Al Yaman, F M Bryant, et al. (2002). *Australia's Children: Their Health and Well-being 2002*. Canberra, Australia Institute of Health and Welfare.

ARRB Transport Research. 1999., *Increasing Seatbelt/Restraint Wearing On Remote Area Roads*. Austroads.

Ashwell M, Pinder T, and Thomson N *An overview of injury in Western Australia: 1985 – 1994*. 1996, Health Department of Western Australia.

Data Analysis Australia. 2000., *Analysis of Road Crash Statistics, 1990 – 1999*. Road Safety Council of Western Australia.

Foot H, Tolmie A, Thomson J, McLaren B, and Whelan K. *Recognising the Hazards from The Psychologist*. August 1999 Vol 12 No 8

Henderson M, *The effectiveness of bicycle helmets – a review*. New South Wales, Australia: Motor Accidents Authority of NSW, 1996.

Legge M, Gavin A.L., et al. (2004). *Reported road crashes in Western Australia 2001*. Perth, Injury Research Centre, University of Western Australia.

Pettit F (1996). *Children's Competence as Road Users: The Relevance of Child Development Theory and Research*. Roads and Traffic Authority, NSW. Road Safety and Traffic Management Directorate Research Note RN7/94.

Rivara F.P., et al., *Fit of bicycle safety helmets and risk of head injuries in children*. *Injury Prevention*, 1999.5:p. 194-197

School Drug Education and Road Aware, *Challenges and Choices, Middle Childhood Resource for resilience, drug and road safety*, Government of Western Australia.

School Drug Education and Road Aware (SDERA) (2009), *Getting it together, A whole-school approach to road safety education*, Government of Western Australia.

Thomas S, et al., *Effectiveness of bicycle helmets in preventing head injury in children: a case-control study*. *British Medical Journal*, 1994. 308:p. 173-176.

Child Development and the aims of road safety education. Executive summary. Department for Transport. (23.2.2000)

WEBSITES

www.roadsafety.nt.gov.au

www.det.wa.edu.au/sdera

www.roads.dft.gov.uk/roadsafety/aims/1.htm

www.nrma.com.au/reversing

www.kidsafewa.com.au/factsheets/Safety_in_the_Driveway_SGIO_2003.pdf

www.atsb.gov.au/road/stats/pdf/mrf032005.pdf (ATSB Road Deaths Bulletin March 2005)

www.kidsafewa.com.au/factsheets/Bicycles%20&%20Helmets.pdf (Kidsafe WA, Bicycle and helmet safety, 2003)

www.kidsafewa.com.au/factsheets/Skateboarding%20Rollerblading%20&%20Rollerskating.pdf (Kidsafe WA, Skateboarding, roller blading and roller skating, 2003)

www.nrma.com.au/reversing (Reversing visibility index)

www.roadwise.asn.au (RoadWise, Western Australian Local Government Association)

www.darwin.nt.gov.au

www.nt.gov.au/transport/public/policies/index.shtml

www.consumersearch.com/bicycle-helmet-reviews/review