



# The Safe System approach to road safety

Education activity. Published 2024 on the [Education Portal](#)

## Background notes

Keeping people safe on our streets and roads is a priority for Aotearoa New Zealand. Too many people are seriously hurt or killed, which has a lasting impact on whānau and communities.

Many government agencies such as NZ Transport Agency Waka Kotahi, NZ Police, Ministry of Transport, ACC, WorkSafe, as well as local councils are working to create a safe transport system that allows everyone to get to the people and places important to them, no matter how they travel.

As well as these agencies and councils, we can all contribute to making our roads safe by supporting initiatives that are designed to make them safer, travelling at safe speeds, using safe vehicles and making safe choices every time we travel. These are fundamental pillars of what's called the Safe System.

The Safe System is the approach that Aotearoa is taking to address the level of harm on our streets and roads.

It takes into account that we are human and are vulnerable, while also recognising that we make mistakes. It helps us to understand how we can prevent harm by looking across different areas instead of focusing on just one solution.



Under a Safe System we design the whole transport system to protect people from being exposed to high crash forces that lead to death and serious injury.

### **The 4 principles of a Safe System**

1. We promote good choices but plan for mistakes
2. We design for human vulnerability
3. We have a shared responsibility for improving road safety
4. We strengthen all parts of the road transport system

### **The 4 pillars of a Safe System**

1. Safe roads
2. Safe vehicles
3. Safe road users
4. Safe speeds

Each of these parts will be expanded in following activities.

## **NZ Curriculum area: Social Sciences**

### **Level 3**

Understand how people view and use places differently.

Understand how people make decisions about access to and use of resources.

### **Level 4**

Understand how exploration and innovation create opportunities and challenges for people, places, and environments.

Understand that events have causes and effects.

### **Level 5**

Understand that people move between places and how this has consequences for the people and the place.

### **Level 6**

Understand how cultures adapt and change and that this has consequences for society.

## **Glossary**

**Flexible road safety barriers** catch vehicles before they hit something harder – like a pole, tree, or oncoming vehicle. These can be down the middle of the road or alongside the road.

**Raised safety platforms** are designed to encourage people to drive at safer speeds, by making it physically uncomfortable to drive over them.

**Safe System** is about creating a safe transport system; one that recognises humans make mistakes and is designed so that these mistakes do not need to cost us our lives.

**Skid resistance enhancements** are also known as high friction surfacing. This treatment to the road lowers the chances of vehicles losing control on the road.

**Speed humps** are designed to slow traffic speeds on low volume, low speed roads.

**Traffic islands** are designed to reduce driver speed and volume and can include road humps and speed cushions.

# Activity 1: what does it mean to be safe on our roads?

## Preparation

Get 4 A3 sheets of paper and add one of these headings to the top of each sheet: Safe Roads, Safe Vehicles, Safe Speeds, Safe Road Users. Stick the sheets of paper on a wall. Gather some sticky notes and pens.

## Activity

Brainstorm ways that you can keep yourself safe when using our roads. Using sticky notes, ask the students to discuss and write down their ideas of everything that will help keep people safe on our roads and streets.

Think about how different people use roads and streets, such as:

- driving cars, trucks and buses
- riding motorcycles and mopeds
- sitting in cars or other vehicles as passengers
- walking on or around the road
- riding bikes and scooters.

## Discussion

Discuss the 4 pillars of the Safe System:

- safe roads
- safe vehicles
- safe road users
- safe speeds.

Go around the room discussing what has been written on the sticky notes and where they fit within the 4 pillars.

## Activity

Now ask the students to take their sticky notes and stick them on the appropriate A3 sheet on the walls, under the right heading. Discuss what's missing and add any further ideas to the sheets.

*Ask the questions below if you want to continue the discussion with an engaged group.*

What would living in a place where everyone can get to where they want to go safely look like?

- Can transport increase our health and wellbeing?
- Is it possible to have no loss of life on our roads?
- Does everyone have a part to play to make our roads and streets safer?
- People make mistakes and crashes will still happen – but what can we do about this?

We can prevent people being killed or seriously injured in crashes by:

- building and maintaining safe roads
- people making safe choices
- people driving safe vehicles
- people travelling at safe speeds.

## Activity 2: how do we make safe roads?

### Discussion

Discuss what you think roading engineers can put in place to make our roads safe?

For example:

- passing lanes
- flexible road safety barriers
- raised safety platforms
- speed humps
- cycle lanes
- separated walking and cycling pathways
- pedestrian platforms
- traffic islands
- lower speed limits
- roundabouts instead of traffic lights
- skid resistance enhancements.

**Note:** Why roundabouts? Roundabouts are the safest option for intersections because if people are going to crash, in general they will do so at slower speeds. If they're designed right, roundabouts can also be safer for people who walk, cycle and ride motorbikes.

### Activity

How can road design help improve safety?

Watch this video and note what improvements were made to the road and how that has impacted on people travelling at safer speeds and having fewer crashes.

[Raising the standard for intersection safety](#)

## Activity 3: what is a safe speed?

### Discussion

Discuss and write down what you think a safe speed is and why. Is it: 30km, 50km, 70km or 100km?

Consider what factors make a difference. Does it depend on the road, the environment, the car, or the driver? Below are some suggestions for how to get the ideas flowing.

- Should there be differences between urban and rural roads?
- Why is it important that there are flexible road safety barriers down the middle or alongside the road?
- What are the differences if the road is straight or windy?
- Should there be a different speed limit on roads around schools, kura and marae, and why?
- How does speed affect different road users, for example people in cars, trucks or on bikes?

Watch the following video – tick off what you have already mentioned above and add in anything you have missed.

[The Sign of a Safe Speed](#)

**Note:** For more information on flexible road safety barriers watch these videos:

[Median barriers – how they work](#)

[Flexible median barrier stops a head on crash](#)

## Activity

Try this simple stopping activity:

[Stopping distances](#)

Discuss why it took you longer to stop when you were running fast.

What would that scenario look like if someone driving a car on the road was going fast and needed to stop suddenly?

## Activity 4: what makes a vehicle safe?

### Discussion

With your group, make a list of all the safety features you know that might be in a vehicle. Some examples are:

- air bags
- antilock braking system
- reversing cameras
- blind spot monitor
- seat belts
- adaptive cruise control
- lane departure warning system
- electric stability control
- tyre pressure monitoring
- automatic emergency braking
- pedestrian and obstacle detection
- high speed alert systems.

### Activity

Visit:

[RightCar](#)

Look at the different things that vehicles are rated by, including overall safety, driver safety, other road user safety, carbon emissions, fuel economy and air pollution.

Visit:

[Turners Cars](#)

Find a range of vehicles of different ages, sizes, and prices and write down what's on their number plates.

Put those number plate details into the RightCar website to find out their safety ratings. Discuss what you find interesting or surprising about what you learn.

## Activity 5: what makes a driver safe?

### Discussion

Drivers are human and humans make mistakes. Factors that can make a driver safe or unsafe include:

- **Restraints.** Drivers and any passengers should always wear a seat belt. Children should be in the correct child seats for their age. Animals should always be restrained inside a vehicle.
- **Impairment.** Impaired driving is when someone's body or emotions have been affected in a way (usually temporarily) that makes them an unsafe driver. This can be caused by someone taking drugs, drinking alcohol, or using medications.
- **Distraction.** People should never use mobile phones while driving, they should limit talking to passengers, avoid eating and drinking and always restrain animals inside vehicles.
- **Speed.** People should drive to the conditions, stay under the speed limit and leave plenty of time to get to their destination.
- **Fatigue.** People should take regular breaks, pull over if they're feeling tired, share driving when on a long trip and only drive when well rested.

### Activity

Brainstorm the things that people can do to be safe drivers. In small groups or pairs design a poster focusing on one of the ways to be a safe driver.

## Activity 6: how many deaths should we accept on our roads?

**For students in Year 9 and above.**

The video below shows that no number of deaths is acceptable on our roads. This video was made in the state of Victoria, Australia. The figure they use in the video is for the State of Victoria.

The number of road deaths in Aotearoa for 2022 was 378.

### Activity

Ask your group what number of deaths on roads is reasonable each year? Record the groups answers, then play the below video.

[There's no one someone won't miss – Man on the street – Towards Zero video](#)

Ask your group again – what is an acceptable number of deaths on Aotearoa roads?

**The message from the video:** 70 deaths on our roads might sound reasonable compared to 378 – but what does 70 people look like? What if amongst those 70 people were your family and friends?