



## Be safe, be seen – what do road users see?

Science-based activities and discussions for school students to explore how visible road users are to each other. If you can see the driver of a vehicle, does that mean they can see you?

### NZ Curriculum area: Science

Nature of science – Investigating in science.

#### Level 1 and 2

Extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models.

#### Level 3

Build on prior experiences, working together to share and examine their own and others' knowledge.

Ask questions, find evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.

#### Level 4

Build on prior experiences, working together to share and examine their own and others' knowledge.

Ask questions, find evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.

#### Level 5

Develop and carry out more complex investigations, including using models.

Show an increasing awareness of the complexity of working scientifically, including recognition of multiple variables.

Begin to evaluate the suitability of the investigative methods chosen.

## Discussion points – peripheral vision

Being able to see other road users is not as straightforward as it might seem. Just because you can see the person driving the car does not mean that they have seen you.

When travelling on our roads and streets, road users focus most of their visual attention directly ahead (in a 60° cone of vision).

When you can't see properly because of rain, fog, or bright sunlight or when there is lots of traffic, you focus more on what's in front of you (i.e. narrowing the cone of vision).

For example, people walking and riding bikes are often outside the direct line of sight of a person driving and often they are in the driver's peripheral vision ('out of the corner of my eye').

The eye finds it harder to detect objects seen in peripheral vision because there are fewer light detecting cells in these areas of the retina.

## Activity for your group: test your peripheral vision

### All ages (5-10 mins)

Watch the video.

[Brain Games – Peripheral Vision and Motion](#)

### Up to Year 4

Ask students to do the first part of the video activity with their own hands.

### Year 5 and above

Ask students to do the whole activity in the video, then test their own peripheral vision using an object in their outstretched hands so they can identify when they can see it.

## Activity for your group: be safe, be seen

### All ages (10 mins)

How can we as road users keep ourselves safe and be seen? Write ideas on a white board.

Some of the key ideas are:

- wearing bright or light clothing – why is this? Try and show an example with the group you are with.
- making eye contact with other road users when you are crossing the road or moving out on the road on your bike. If you have made eye contact, you know they have seen you. You can use the 'Making eye contact' activity to help students understand what this feels like.
- signalling if you are on a bike.
- using lights when you are on a bike, scooter and even walking. Do this when the light is poor, for example on a foggy or cloudy day, or when it's dark.
- wear reflective clothing.
- use light-emitting diode (LED) clothing.

### How can road infrastructure help us be seen?

- raised walkways.
- traffic islands.
- pedestrian barriers
- traffic calming devices, for example road humps, speed cushions.

# Activity for your group: making eye contact

## All ages (10 mins)

This activity can be used with any road safety discussions, including walking, scootering, cycling and 'Be safe, Be seen' programmes.

The learning outcome of this activity is to allow students to understand what making eye contact means – how does it feel? How do you know the other person is looking at you and has seen you?

## Discussion

*Why is it so important to make eye contact with other road users?*

It's important to make eye contact with other road users when you are crossing the road, or a driveway or moving out on the road on your bike. If you have made eye contact, you know they have seen you.

Without making eye contact, you cannot be sure they have seen you.

## Games

### Silent ball game

Students stand in a circle. There is one ball. They must throw the ball to someone but first they must make eye contact. If they throw the ball to someone that they haven't made eye contact with, the thrower is out and must sit down. This game is played silently.

### Eyes down, eyes up game

Have the group walk around the room with their eyes lowered. At the signal, they must stop and look up and make eye contact with someone in the room. Once they have made eye contact, they keep looking until the signal is given to start moving again. Try and do this in silence (if possible!). The signal can be '3-2-1 look' or have them moving to music and when the music stops, they need to make eye contact with someone else.

If you want to make a game of it, the students who have not made eye contact sit down, until you have 2 winners left.

**Note:** *some cultures are not comfortable looking directly into another person's eyes, so use these games with consideration.*

## Glossary

**Peripheral vision:** the ability to see things where you are not directly looking – “out of the corner of your eye.” Even in young people with normal vision, peripheral vision is poor.

**Road humps:** a raised band across a road, designed to make people driving reduce their speed, especially in built-up areas.

**Roading infrastructure:** physical assets like roads, as well as everything associated with them, for example bus stops, signage, drainage, cycle lanes, shared pathways, and structures such as bridges or tunnels.

**Road users:** People who use the road network, including people who walk, scooter, cycle, and drive.

**Speed cushions:** A speed cushion is a short, raised, rounded device, normally in the centre of a road lane. Speed cushions are designed to be slightly wider than a car, so people driving need to slow down and drive over the centre of the speed cushion to reduce discomfort. Buses and trucks are wider than cars, so they can drive over speed cushions without passengers feeling anything.

**Traffic calming:** Changes to the road environment to reduce driver speed and volume. Such as: road humps and speed cushions.

**Traffic islands:** Islands in the middle of the road. These reduce traffic space which reduces speed and can offer a safer crossing option for people walking.