NRMA ROAD TRAVEL REWARDS

Stage 3
E-Bikes and Scooters
Teaching Notes

PROGRAM DESIGN

Part of the Stage 4 NRMA Free Movers Program, This stage 3 adaptation focuses on educating students about the safe and legal use of e-bikes and e-scooters. The module uses active learning strategies such as interactive videos with pop-up questions, real-life scenarios, group discussions, and practical planning tasks to build awareness of laws, risks, and responsible riding behaviours. Students learn key safety considerations including speed management, helmet use, and battery charging practices, while exploring the impact of modifications and fire risks. Aligned with PDHPE Stage 3 outcomes, this unit teaches students how to manage life and physical changes, and practice safe behaviours in various settings, as well as decision-making for wellbeing, personal responsibility, and strategies to manage unexpected changes. Activities encourage critical thinking and communication, helping students understand how to enjoy e-micromobility while prioritising safety in community contexts.

CURRICULUM ALIGNMENT

The module explicitly links to PDHPE Stage 3 outcomes:

- PD4-6: Distinguishes contextual factors that investigate influence health, safety, wellbeing and participation in physical activity which are controllable and incontrollable through scenario-based discussions on e-bike and e-scooter use.
- PD4-7: Proposes and implements actions and protective strategies that promote health, safety, wellbeing and physically active spaces by encouraging students to identify risks related to speed, helmet use, and legal requirements, and choose safer alternatives.
- PD43-9: Demonstrates self-management skills to effectively manage complex situations the through implementing safety strategies to reduce crash risk and impact.

2024 Curriculum:

- Analyse actions and strategies to maintain and enhance safety in the home, school and local environmental contexts.
- Apply road, fire and sun safety behaviours and identify influences that can impact decisions

SUGGESTED LESSON PLAN

Based upon allowing one hour to complete the core content

Task	Activity	Duration
Introduce lesson – NRMA road safety education: E-bikes and scooters	Has anyone had the opportunity to ride an e-bike or scooter? Are they aware of legal rules and safety considerations for this transport?	5 mins
Watch the video (7 minutes 32 seconds)	Teacher to control the video and pause to ask the students the questions on the following page of this document.	15 minutes
Student/Class Discussion	See questions below - Students to answer in small groups and feedback to class.	15 minutes
Extension activities	Details below	10 -15 mins
Lesson conclusion	Summarise the learning - Ask the students how they will ride in the future?	5 minutes

Accessing the content

NRMA Online Programs are accessed in two way

An interactive version is available on **Edpuzzle:** an educational tool that allows you to learn and engage with interactive video lessons.

Videos are also available on Vimeo:

https://vimeo.com/1157081316 Password HELMET2026

SUPPORTING QUESTIONS

Using EdPuzzle these questions will pop up in the video, using Vimeo you will need to pause and pose the questions to the group

Time 1:42	**e-law** What's one key legal difference between e-scooters and e-bikes in NSW?	a. E-scooters can be ridden on all footpaths b. E-bikes must be registered **c. E-scooters are generally restricted to private property** d. E-bikes must be under 100 watts of power	
Time 4:00	Top Speed What's the legal speed cut-off for motor assistance on an e-bike in NSW?	a. 15 km/h **b. 25 km/h**	c. 40 km/h d. No limit
Time 4:33	Tuning If you modify your e-bike to go faster, what might it be reclassified as?	a. A bicycle b. A skateboard	c. A scooter d. **A motorbike**
Time 4:52	Charging Why should you avoid charging your e-bike on soft surfaces like beds or carpets?	a. It's more convenient elsewhere b. Chargers don't work properly on soft surfaces **c. It increases the risk of fire** d. It uses too much electricity	
Time 6:04	Understanding Physics Why are E-Bike riders more likely to cause or experience greater damage in a crash compared to traditional bicycle riders?	**a. E-Bikes are heavier and travel at higher speeds, increasing impact force during collisions** b. E-Bike riders are less experienced and often ignore traffic rules c. E-Bikes are designed with fewer safety features than regular bicycles **d.** E-Bike crashes usually occur in remote areas with limited medical access	
Time 6:27	Responsible Decisions Why is it important to manage your speed while riding an E-Bike? (tick all that apply)	**a. At higher speeds, you have less time to react, increasing the risk of a crash** **b. Greater speed results in higher impact force, which can cause more severe injuries to you and others** c. Riding fast improves battery efficiency and extends range **d. Lower speeds make it easier to navigate obstacles and avoid hazards**	

E-BIKES AND SCOOTERS – STUDENT DISCUSSION

These discussions build awareness of responsibility and safe decision-making, they are listed on the slide at the end of the video - work through them as a class or divide the students into small groups to tackle one conundrum each and feedback.

Describe a situation where slowing down could prevent a serious injury while riding. What would you do differently?	Students identify risk scenarios and apply speed management strategies.
What steps would you take before riding an e-bike on your own for the first time?	Students apply planning and safety strategies for independent travel.
Imagine you're talking to a friend who never wears a helmet. What would you say to help change their mind?	Students practice persuasive communication to promote safety behaviours.
How would you feel if you were to injure someone, either your passenger or a pedestrian, whilst riding your e-bike?	Students reflect on empathy and accountability in road safety.
If you modify your bike what do you think the legal implications could be for you - what might happen if you were to then injure someone?	Students recognise legal consequences and personal responsibility linked to unsafe modifications.

EXTENSION ACTIVITIES

ON THE MOVE – Transport for NSW

E-bike safety

This activity will help students understand the rules and laws surrounding e-bikes, exploring the differences between power-assisted pedal cycles, electrically power-assisted cycles, and the prohibition of petrol-powered bicycles.

Rules Update

Legislation is catching up with E-bikes and Scooters in NSW - Students to undertake research to uncover the most up to date information.

https://bicyclensw.org.au/e-bike-safety-tips/
https://www.transport.nsw.gov.au/roadsafety/bicycle-riders/road-rules-for-bicycle-riders

VIDEO TRANSCRIPT

Slide	Script
Content	Hi there! I'm Deb, I work at the NRMA. We help people stay safe when they're out and about, whether they're walking, riding, or driving. In this module, we'll learn about electric bikes and scooters, how they work, the rules for riding them, and how to stay safe. E-mobility means using small electric vehicles like e-bikes and e-scooters to get around. They're great for short trips like going to school, sport, or a friend's house. They're quiet, fast, and better for the environment than cars. Lots of people use them now, and they're becoming more popular every year.
E-mobility and the law	There are rules in NSW and the ACT about where and how you can ride. **E-scooters:** In NSW you can only ride your own scooter on private land unless you're in a trial area. They are permitted in the ACT limited to 15 km/h on footpaths and high pedestrian areas. **E-bikes:** You can ride them on roads, bike paths, and footpaths if you're under 16. Only pedal-assisted e-bikes are permitted. Throttle-only e-bikes are illegal. The laws are being developed in this space and it would be wise to keep up with any changes. Always check the rules before you ride!
Cyclist Road Rules	E-bikes follow the same rules as regular bikes. That means: • Keep left on paths • Watch out for people walking. Pedestrians have right of way always! • Walk over crossings unless there is a cycle path or green bike symbol • Use your bell to let others know you're coming And don't forget your helmet! You also need lights and reflectors if you're riding in the dark. You don't need a licence to ride your own e-bike. You cannot use a hired one until you are at least 14 and even then, have permission from a parent or carer. Even if it's fun, riding safely is super important.

E Scooters	A quick word on e-scooters. They might seem like a fun and eco-friendly way to get around, but in NSW, it's currently illegal to ride your own e-scooter in public places. That means no roads, footpaths, or parks, and if you do, you could face a big fine. They are permitted in the ACT, limited to 25 km/h on shared paths, bike paths and 15 km/h on footpaths or in high pedestrian areas. There are some trial areas where shared e-scooters are allowed in NSW. The government is using these trials and data from the ACT to learn how e-scooters might be used safely in the future. Even in these trial zones, you still must be at least 16 years old to ride. Many people have been hurt crashing e-scooters because their small wheels and high speeds make them quite risky, so if you do ride now or in the future, limit your speed, always wear a helmet and watch out for bumpy ground!
Infinite Power	Why is that a fun fact you ask? E-bikes make you feel like a superhero on wheels! You pedal, and the motor gives you a boost like a secret power helping you make light of headwinds and uphill climbs! But once you hit 25 km/h, the motor steps back and says, “You’ve got this!” It’s fun because it mixes your own effort with a little tech magic. It is possible to still go faster, but only by pedalling harder or going downhill, but think about whether that’s the best choice! Pedalling is the key. If you are using a throttle and not pedals, you are breaking the law.
Maintenance and Modifications	Some people try to change their e-bike to make it go faster. That’s called “tuning,” and it’s not safe. It can break the bike, but more importantly it could also turn it into a motorcycle, for which you need a licence, insurance and to pay road tax therefore you’ve made your bike illegal to ride. So, while it’s fine to personalise your e-bike with things like lights and colour, and to tune up your gears and brakes, tampering with the speed is not okay. Stick to the rules—ride smart and stay safe.
Battery Safety	E-bikes and scooters use special batteries. If they’re not made properly or charged the wrong way, they can catch fire. Always use the right charger and never charge near beds, couches, or anything flammable. Charge in a safe spot like a garage and unplug when it’s full.
Responsible Riders	Coming off an e-bike really hurts. I know—I’ve done it! E-bike crashes are more serious than regular bike crashes because e-bikes go faster and weigh more leading to harder impacts. In NSW, crashes have gone up a lot in the last year.

	Even in places like the Netherlands, where bike riding is super common, serious e-bike crash numbers are rising. This graph shows that almost twice as many people are dying in e-bike crashes compared to regular bike crashes each year due to more severe injuries. That's why riding safely matters.
Why?	Follow through this flow diagram—a heavier bike and a faster speed can double the impact of a crash and how badly you or someone else is hurt. You probably weigh about 30 kg and an e-bike weighs about the same again. First of all, it's hard to handle something that weighs the same as you. Add that together and being hit by 60 kg travelling at 25 km/h is like taking a full-force punch from a heavyweight boxer, or falling headfirst off a tall fridge! Going just a little slower can make a big difference. Even 5 km/h less might mean you have time to react to a child on the path, have more time to stop and reduce the impact if you do crash… without making you late for school! It's only about 30 seconds longer per km! So take it easy, especially when you're learning.
Risky to Righteous!	Always wear your helmet. Follow the road rules, remembering pedestrians have right of way! Don't ride with a friend on the back—even if they fit! Learn how to ride safely—ask your parents about road rules or even take a bike safety course. Being safe means protecting yourself and others. AUTO PLAY VIDEO Thanks for listening. With a partner, in a small group or even as a class, work through these questions to help you show your understanding of responsible riding.