



LESSON PLAN

Lesson 9: Road safety explainer (application)

UNIT TITLE: Safer by Design - Investigating Forces, Motion and Road Safety



LEVEL

Years 9-10



LESSON NUMBER

9 of 9



LESSON LENGTH

60 minutes



VICTORIAN CURRICULUM 2.0 CONTENT DESCRIPTIONS

- **Science inquiry:** communicating and justifying scientific ideas, findings and arguments for diverse audiences involves the selection of appropriate presentation formats, content, scientific vocabulary, conventions, models and other representations, and may include the use of digital tools. (VC2SI0I08).
- **Physical sciences:** Newton's laws of motion can be used to quantitatively analyse the relationship between force, mass and acceleration of objects. (VC2SI0UI7).
- **Physical sciences:** the Law of Conservation of Energy can be analysed in systems, including Earth systems, by assessing the efficiency of energy inputs, outputs, transfers and transformations. (VC2SI0UI5).



VICTORIAN CURRICULUM 2.0 ACHIEVEMENT STANDARDS

- **Science inquiry:** Students select and use appropriate presentation formats, scientific content, vocabulary, models, conventions, formulas and other representations to achieve their purpose when communicating and justifying their ideas, findings, arguments and proposals to diverse audiences. (Level 9 & 10).
- **Physical sciences:** Students use Newton's laws to describe and predict the motion of objects in a system. (Level 9 & 10).
- **Physical sciences:** Students analyse and represent energy conservation, including efficiency, in systems, and model how different forms of energy are transformed into electrical energy. (Level 9 & 10).

LESSON PLAN

Lesson 9: Road safety explainer (application)

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KEY VOCABULARY

- **communicate** – to share information, ideas or findings clearly with others
- **audience** – the people a message or product is intended for



MATERIALS REQUIRED FOR THE LESSON

Student

- Road Safety Explainer Poster Worksheet (Resource 9.1)
- Suitable materials for creating the poster, either in hardcopy or digitally

Teacher

- Supporting Slide Deck – as needed, display on screen or use a document camera or write on whiteboard
- Teacher Workbook – as needed for reference, including for display on screen or with a document camera



LEARNING OBJECTIVE

- We will communicate the case for a specific road safety feature to a general audience.

SUCCESS CRITERIA

- I can explain the key details of a chosen safety feature.
- I can explain how the feature improves safety and connect this to the safe system.
- I can test the resource and reflect on potential improvements.



TEACHING CONSIDERATIONS

- This lesson could be extended over more time to enable greater detail in the posters and more opportunities to test and reflect. It could also be adapted to make the communication element more formal or extensive – such as presenting the poster to an audience.
 - Further resources: The following may be useful to supplement the material in this lesson:
 - [How Safe is Your Car website](#)
 - [ADAS Assist website](#)
 - [ANCAP website](#)
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LESSON PLAN

Lesson 9: Road safety explainer (application)

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Structure of lesson:

1

INTRODUCTION



TIMING: 5 mins

Activate prior knowledge

- **Ask** students access their copy of the Safe System Worksheet (or if using the Workbook, direct students to page 2).
- **Instruct** students to spend 5 minutes adding additional examples and details to their copy. **Explain** that they should first add things they can recall from memory, then look over their workbook and notes to add additional information and finally compare with a partner to add more information.

Introduce learning objective

- **Show** the learning objective.
 - **Explain** how students can achieve this through the success criteria.
 - **Emphasise** that this is the final lesson in this sequence, and the focus is on applying what students have learnt to communicating key ideas about road safety to a general audience.
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CREATING POSTER



TIMING: 30 mins

Explanation and modelling

- **Distribute** the Road Safety Explainer Poster Worksheet (Resource 9.1) to students (or if using the Workbook, direct students to page 57).
- **Ask** students to read over the details in Part 1 individually.
- **Model** the process of working through unpacking the information in Part 1 with students using a think aloud. **Instruct** students to follow along and annotate their worksheet with additional information that may assist them. **Check for understanding** by asking students to summarise key aspects of what the task requires in their own words. Support students to ask any clarifying questions they may have or to identify anything that is unclear.
- **Explain** to students that they can use all the resources from this unit to complete their poster. Emphasise that the focus is on explanation and communication rather than finding additional information.
- **Ask** students to look at the list of suggested topics at the end of the Road Safety Explainer Poster Worksheet (Resource 9.1). Instruct them select a topic from the list or allocate topics randomly to students.

Guided and independent practice

- **Instruct** students to spend the allocated time preparing their poster. Emphasise that the focus is on communication over appearance.
 - **Monitor** student progress by circulating as they create their poster. Use questioning to support students to elaborate on their thinking. **Respond** to any errors or misconceptions that arise.
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LESSON PLAN

Lesson 9: Road safety explainer (application)

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3

TESTING AND REFLECTION



TIMING: 20 mins

Explanation and modelling

- **Ask** students to read over the details in Part 2 of the Road Safety Explainer Poster Worksheet (Resource 9.1).
- **Explain** that they are to test out their poster with their peers, obtain constructive feedback, and reflect on ways it could be further improved. Emphasise that the focus is on being as constructive as possible and learning as much as possible from the experience.

Guided and independent practice

- Form students into suitable pairs for providing feedback. Ensure pairs do not include students working on the same topic.
- **Instruct** students to work through Steps 1 and 2 of the reflection process. Emphasise that the timing is very strict.
- **Monitor** student progress by circulating as students work through the steps. **Prompt** students to move to the next step in the process to keep up with the timing.

Reflection on learning

- **Instruct** students to work through the Step 3 self-reflection.
 - **Monitor** student progress by circulating around the class. **Prompt** students to ensure that they respond to the final two prompts.
 - **Check for understanding** by asking students to share their highlights and next steps. Use questioning to support students to elaborate on their thinking and maintain a constructive focus.
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CONCLUSION



TIMING: 10 mins

Reflection on learning

- **Instruct** students to respond to the prompts on slide 40 in the Supporting Slide Deck.
 - **3 most relevant things that you learnt** about road safety in this unit
 - **2 things that effect road safety** that you'd like to know more about
 - **1 top tip for being safer** that you'd share with people that have not done this unit
 - **Check for understanding** by sampling all student notes using sticky notes, areas on the whiteboard, or a digital tool.
 - **Respond** by summarising and acknowledging key themes in the students' responses, connecting the reflections to the importance of road safety and the many ways in which we can use our knowledge to make decisions that help to keep roads safer.
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