

Critical Numeracy Teaching Activity

Tragic Toll



How can we reduce road accidents?

Grade: 9/10 Stage: 10/11

with emphasis on:

Maths Concepts: Number

Context: Health and Wellbeing, Science

Critical Numeracy: De-coding, Meaning-making, Using

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[Student Worksheet](#)

[Student worksheet answers](#)

Teacher Guidelines:

This article looks at the significant increase in Tasmania's road toll. Despite advertising campaigns people still speed significantly. Prime causes of fatalities or serious injury are speeding, inattentive driving (mobile phone use), drink driving or drugs, and lack of restraints. Further details of crash statistics can be found at www.transport.tas.gov.au/safety/crash_statistics and [police annual report](#).

Orienting Questions

How can we reduce road accidents?

Why do people have road accidents? What is "at-risk" driving? Why do people drive inappropriately? What is being done to try to reduce "at-risk" driving and what can be done? Is there really a problem?

De-coding and Meaning-making

The worksheet helps students make sense of the article by manipulating some of the numbers using percentages to explore whether the increase in road fatalities is actually significant.

Using

Students are asked to think about the development of a mechanical device that can limit the speed of the car despite the driver's efforts to speed. What percentage above the speed limit would you put as your cut-off speed?

Debriefing

What did you learn? How has your thinking on this topic changed? What new maths skills have you developed? What thinking strategies have you found useful?

What investigation would you like to consider now?

Extension

Students could research the different strategies that police have used to try to reduce road accidents and fatalities (eg. advertising, preventative road campaigns such as radar testing and drink driving testing). The class could consider inviting a policeman or traffic investigator to talk about the issues, their strategies and what they learn from accident investigation. The class could consider who are most "at-risk" by looking into the statistics of those who are involved in accidents and then thinking about a strategy that targets these people directly.