

Health Numeracy Enhanced Plan



This resource is aligned to the New Zealand Curriculum (2007) and provides support for the teaching and learning of literacy and numeracy in preparation for the NCEA Co-requisite. It aims to support those students who are using the NCEA qualification pathway.

Young New Zealanders' use of alcohol

Context

This set of activities relates to youth binge drinking in Aotearoa. You may wish to use parts of these activities or all of these activities to explore alcohol and other drugs within a Year 9 or 10 Health unit

Achievement objectives

Level 5 Health and Physical Education

Processes and strategies

Ākonga will:

- » Investigate societal influences on the wellbeing of student communities.

Numeracy connections

Operations with Numbers

- » Using percentages to make sense of data related to teenage drinking.

Statistics and data

- » Using information in a table and graph to identify trends in binge drinking, including changes over time.

Resources:

- » [Youth19 Rangatahi Smart Survey initial findings: Substance abuse \(2020\)](#)
- » [Victoria University of Wellington media release "New research shows declining alcohol and cigarette use in New Zealand youth" \(August 13, 2020\)](#)
- » [Trends in adolescent drinking in New Zealand - ActionPoint](#)

Kaiako resources:

- » [Alcohol and Other Drug Education Programmes \(2014\)- MoE guide for schools and teachers](#)
- » [Alcohol and other drugs: A resource of teaching and learning activities for teachers of students in Years 9-13](#)
- » [Health and PE on TKI: Critical thinking and critical action.](#)

Prior Learning

Before being introduced to this learning activity, ākonga will have explored:

- » the distinction between alcohol and other drugs
- » impacts of alcohol on hauora
- » values and cultural norms associated with the use of alcohol.

See the refreshed Health and PE website on TKI for a range of [questions that support critical thinking when exploring](#) sensitive issues.

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Activity 1: Sequence of learning

**30 min**

Exploring opinions about teenage drinking in Aotearoa New Zealand

Read the following statements¹ related to binge drinking and/or teenage use of alcohol to ākonga:

- » There is a binge drinking culture in Aotearoa New Zealand
- » Drinking alcohol as a teenager is a normal part of growing up in Aotearoa New Zealand.
- » Many teenagers drink alcohol because they want to fit in.
- » If the alcohol purchase age was raised to 20, alcohol-related harm to teenagers would be reduced.

For each statement, ākonga **decide where they are on a values continuum** that ranges from strongly agree at one end of the classroom to strongly disagree at the other end of the classroom. Ākonga stand where they feel the most comfortable in between these two extremes in response to the statements.

Invite ākonga to **contribute their views from different parts of the values continuum** and begin the conversation on the factors that contribute to binge drinking.

In groups of up to four, ākonga build on the discussion from the values continuum and **brainstorm further factors they think impact teenage binge drinking rates**. This includes social, economic, environmental, cultural, or behavioural factors.

See the [Literacy Pedagogy Guide for Health and PE](#) for further ways to support ākonga with the writing demands of this activity.

¹ This activity, and others, can be found in the [New Zealand Health Education Association \(NZHEA\) Alcohol and Other Drugs](#) handbook.



Exploring data about teenage binge drinking in Aotearoa New Zealand

In this activity, ākonga will use data to discuss what the numbers might tell them about teenage binge drinking rates in Aotearoa New Zealand and what their thoughts are on how this impacts them and society.

Use **think-pair-share** to discuss:

- » Why is it useful to collect data on secondary school ākonga alcohol use?
- » Who could use this data and for what purpose?

Collecting data can help us understand whether there are issues that need to be addressed and how these are changing over time. It can also show positive changes, which can be used to see whether initiatives are working. Data can raise awareness and focus health promotion efforts and funding where it is most useful or most needed.

Ākonga **record their answers** to the following True/False questions:

- » Teenagers living in rural (country) areas are more likely to binge drink than teenagers in urban (city) areas.
- » Male teenagers are more likely to engage in binge drink than female teenagers.
- » Teenage binge drinking rates in Aotearoa are getting worse.

You may wish to discuss with ākonga what “more likely” or “getting worse” means to them.

Activity note: *In this context, “more likely” means that more people in that group will binge drink than the other group. “Getting worse” means that more teenagers are binge drinking. Discussing these words with ākonga can support their understanding of specific terms that can be interpreted differently in other contexts.*

Ākonga **share with a partner** what they based their response on such as their own experiences or observations, general knowledge, or assumptions they hold.

Activity note: *Introduce ākonga to the [Youth19 Rangatahi Smart Survey](https://www.youth19.ac.nz/). This survey was conducted by researchers from a range of universities in Aotearoa as part of a series of health and wellbeing surveys. The Youth19 survey was completed by 7891 young people², who were mostly secondary school ākonga.*

In the Youth19 survey, binge drinking was defined as having five or more alcoholic drinks in one session (within 4 hours). Survey participants were asked how many times they had engaged in binge drinking in the last 4 weeks.

The data collected in the survey included responses from gender-diverse and non-binary rangatahi but this data was not included in the summary table provided in the report, most likely because the sample size was too small.

² <https://www.youth19.ac.nz/>

Activity 2: Sequence of learning (continued)



Provide pairs of ākonga with a copy of Table 1: Use of alcohol (provided below. A printable copy has been provided as a Word doc that sits behind this resource).

Table 1: Youth use of alcohol (2019) adapted from [Youth19 Rangatahi Smart Survey initial findings: Substance abuse](#) (2020, p. 6)

	Percentage that drink alcohol at least once a week	Percentage binge drinking at least once in past 4 weeks
Total	9.1	21.8
Age		
13 and under	2.0	4.1
14	3.4	7.7
15	8.3	19.4
16	11.7	29.3
17 and over	17.7	42.1
Urban/rural indicator		
Urban	8.2	19.2
Small towns	10.5	26.1
Rural	10.6	25.8
Gender		
Female	8.1	20.8
Male	10.2	22.9

Check that ākonga understand:

- » the terms urban (city) and rural (country)
- » that data in the table is percentages and that percentage means “out of one hundred”.

Activity note: This [visualise percentages tool](#) can support ākonga to make sense of the relative size of different percentages. You can click on the people icons in the grid to display the corresponding percentage.

Activity 2: Sequence of learning (continued)



Give ākonga questions they can use in pairs or small groups to think, reason, and make sense of the data, for example:

» What do you notice?	Ākonga might respond: <i>Youth binge drinking rates are higher in small towns and rural areas than they are in urban areas.</i>
» What evidence can you provide that supports what you are noticing?	<i>26.1 % of students in small towns said they had engaged in binge drinking in the past four weeks, and 25.8 % of students in rural areas. For students in urban areas, the percentage was 19.2 %.</i>
» What questions does this data raise for you?	<i>I wonder why binge drinking rates are higher in rural areas</i>

Ākonga to **share their findings with another group** and then invite ākonga to share their findings with the class.

Keep a class record of questions ākonga raise about the data and consider together whether these could be used as the basis for further inquiry.

Numeracy connection: *Providing opportunities for ākonga to share their statistical ideas with others provides opportunities for them to respect and respond to the thinking of others.*

Return to the first two True/False questions used at the beginning of the activity and ask ākonga to check whether their answers were correct based on the information in the survey results.

Teenagers living in rural (country) areas are more likely to binge drink than teenagers in urban (city) areas	True
Male teenagers are more likely to engage in binge drink than female teenagers	True



Youth drinking rates over time

Use think-pair-share for ākonga to share their ideas or prior knowledge about whether teenage binge drinking rates have increased, decreased, or stayed the same over the past 20 years.

Provide pairs of ākonga with a copy of [Binge drinking trends \(2001–2019\)](#) (shown below but also provided as Word document).

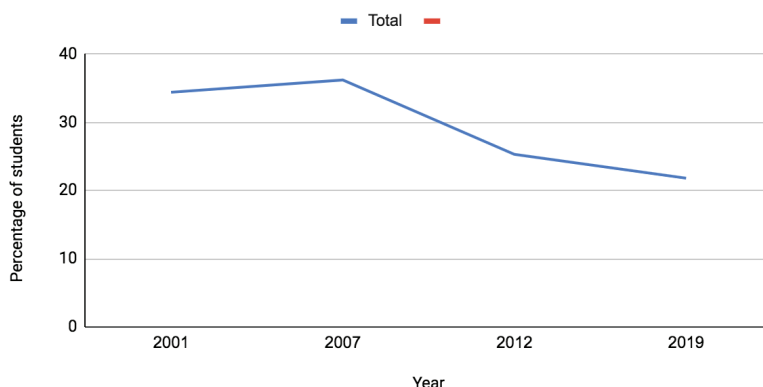
Table 2: Binge drinking trends (2001–2019) adapted from [Youth19 Rangatahi Smart Survey initial findings: Substance abuse](#) (2020, p. 6)

Percentage binge drinking at least once in past 4 weeks

Year	2001	2007	2012	2019
Total	34.4	36.2	25.3	21.8

Youth binge drinking rates (2001 - 2019)

Percentage of secondary school students that reported binge drinking in last 4 weeks



Ask ākonga to work in pairs to make sense of the data using the following questions:

» **What trend can you see in the data?**

Ākonga might respond:

Binge drinking rates of secondary students have decreased in the past 18 years.

» **What evidence can you provide that illustrates this trend**

I can see this because in 2001, around 34.4% of young people surveyed had engaged in binge drinking in the last 4 weeks, while in 2019 the percentage was 21.1% (around one in five).

» **What questions does this data raise for you?**

I wonder whether the decrease has been similar in both urban and rural areas.



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Activity 3: Sequence of learning (continued)

Circulate while ākonga are analysing the data, supporting them to reflect on it more deeply by asking questions such as:

- » How might this data be different if we were just looking at 14-year-olds?
- » What do you think the data two years from now might show? Why do you think this?
- » What other aspects of this data interests you?

Return to the third True/False questions used in Activity Two and ask ākonga to check whether their answer was correct based on the information in the survey results.

Teenage binge drinking rates in Aotearoa are getting worse	False
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Ask ākonga to share their ideas about why drinking rates have declined in Aotearoa New Zealand, pointing out that this is a trend that has been observed in many countries around the world. Ākonga may like to use this question as the basis of further research, for example, into attitudes and values related to drinking among teenagers.

Next steps in Numeracy learning

To build on this learning, ākonga could:

- » explore other statistics related to [drinking patterns and attitudes about alcohol among New Zealand adolescents](#)
- » explore and make comparisons with trends in the use of cigarettes and/or vaping
- » explore findings of another Youth19 report.

See the [Numeracy Pedagogy Guide for Health and PE](#) for additional ideas on how to integrate Numeracy learning into your teaching practice.