

Rethink Your Drink

LESSON PLAN

RECOMMENDED FOR YEARS 3 - 6

Lesson summary

In this lesson, students use Nutrition Information labels to calculate the amount of sugar different types of beverages contain. By the end of this lesson, students will be better at reading Nutrition Information labels to choose healthier beverage options and explain why consuming too much sugar is bad for our bodies.

Learning objectives

Students can read Nutrition Information labels to work out how much sugar a drink or food contains.
Students can identify some health problems related to excessive sugar consumption.

Possible Australian Curriculum links

Maths / Measurement and Geometry / Using units of measurement
Health and Physical Education / Personal, Social and Community Health / Being healthy, safe and active

STARTER

1. Ask students to bring in empty packets of their favourite snack food from home. At the front of the classroom, draw a line or use masking tape to make a line, and explain to students that the line represents a sliding scale – from snacks that contain a high amount of sugar, to those that contain no sugar at all.
2. Explain to students that almost everything we eat or drink contains sugar. Invite students to take turns bringing their empty packaging to the front of the class and predict how much sugar they think is in their snack by placing it somewhere along the sliding scale. Tell them not to look at the Nutrition Information labels yet (you could cover them up using post-it notes). Ask students to discuss why they have made those predictions – Was it because of how sweet something is? Or because it is considered a healthy or unhealthy snack? Or how big or heavy it is?
3. Now explain to students that we can find out how much sugar is in any food or drinks by looking at the Nutrition Information table. Have students find this table and record how much sugar is in their snack (per 100 gram) using a marker and in big letters on the packaging. Repeat the sliding scale activity again, but this time have students use the actual sugar content to place their snack packaging along the scale accordingly.
4. Discuss with students whether any of the actual amounts surprised them – Is there anything they would think twice about eating now? Discuss what too much sugar does to your body and ask students to identify some health problems that could be related to consuming too much sugar (e.g. tooth decay, obesity, and diabetes).

Resources

- Empty snack packaging students bring from home
- Permanent markers
- A selection of various drinks (e.g. juices, flavoured waters, soft drinks, flavoured milk, high energy drinks)
- Digital scale
- Clear plastic cups
- Sugar
- Sugar cubes (optional)
- Hydrometer for measuring sugar content (saccharometer) (optional)
- Measuring cylinder (optional)

Health and safety

Ensure students clean up any spills immediately to avoid accidents.



BODY

1. Explain to students that one of the easiest ways we can consume too much sugar is through what we drink. You could have students work in groups or conduct this activity as a whole class. Provide students with a selection of different types of single-serving drinks (about 8 – 10) or you could just have the labels printed out for each group.
2. On the activity sheet, have students record the brand name and type of drink (e.g. whether it is a soft drink, a type of fruit juice etc). For each drink, ask students to predict how many grams of sugar they think the drink contains per serving, before checking the actual amount on the Nutrition Information label and recording this in the next column.

Question prompts

How much sugar is in the food and drinks we consume?
How do we find out how much sugar a food or drink contains?
Were you surprised by any of the results? Is there anything you would think twice about drinking now?
Why is consuming too much sugar bad for you?
How could we improve our eating and drinking habits?



3. Ask students to use the digital scale and plastic cups to measure out how much sugar each drink contains per serving. You could conduct this part as a whole class or assign each group a different drink to measure its sugar content. The cups of sugar give a visual representation of how much sugar each drink contains.
4. Have students complete the last part of the activity sheet and share their responses with a partner or the whole class. Ask students to identify whether certain drinks are better to drink than others and have them explain why they think that is.



Use a floating hydrometer to measure the actual sugar content in each drink. A hydrometer is a scientific instrument used to measure the density of liquids based on the concept of buoyancy. It is used in the production of wine and beer as well as in processes for creating sugar solution. If measuring the sugar content in carbonated drinks, ensure you remove the carbon dioxide by pouring the liquid back and forth between two containers until you can't see any bubbles. Use a measuring cylinder to measure 100ml of each drink, before placing the hydrometer in the liquid and measuring how much sugar it contains. Depending on the hydrometer you use, it might be helpful to create and measure some pure sugar solutions to use as a guide for conversion (for example, having a mixture of 100ml water with 10g of sugar to make a 10% sugar solution and measuring this with the hydrometer can help you convert the readings into grams). Does the reading match up to its label? If not, why do you think that is?

WOW Lesson!

Extension Challenge!

Tell students that one sugar cube contains around 4 grams of sugar. Have students calculate how many sugar cubes each drink approximately contains per serving (rounding to the nearest cube/half cube), by dividing the total amount by 4. You could then ask students create a bar graph to represent their findings or build towers using actual sugar cubes.

This extension challenge links to outcomes in Maths / Statistics and Probability / Data representation and interpretation.

PLENARY

Using information they have gathered from this activity, ask students to create posters or a diorama to encourage others to 'Rethink Your Drink'. This plenary activity would make a great project for a science fair or a whole school assembly, where students can take on the role of educating the school community about the amount of sugar certain types of drinks contain and why we should be trying to make healthier beverage choices.

THE SCIENCE BEHIND THE ACTIVITY

The impact of sugary drinks on our health and the health of our children is the subject of much research for our scientists and researchers at the Telethon Kids Institute. [Many of our studies](#) have uncovered significant health risks associated with the consumption of high sugar drinks. One study showed that around 80% of Australian children drank sugary drinks, including soft drinks, energy drinks, juices with added sugar, cordial, sports drinks, milkshakes and flavoured milk. It also found that 77% of these drinks were purchased in supermarkets and 60% were consumed at home, suggesting that parents have a key role in moderating their child's sugar intake.

Study author Kate Hafekost says the research not only revealed a high intake of sugary drinks in Aussie kids, but also some interesting habits as well. "Older kids leaned towards more of the soft drinks and sports drinks, while younger children in particular were consuming high quantities of sweetened juice and flavoured milk, which many parents don't realise have very high sugar content." said Ms Hafekost. "Whatever the choice, parents need to be aware that high intake of these drinks contribute to both obesity rates as well as nutrition-related chronic disease."

In fact, research from the long-term Raine study at the Telethon Kids Institute showed teenagers who drank more than one standard can of sugary drinks a day are putting themselves at higher risk of developing Type 2 diabetes and cardiovascular diseases such as heart disease or stroke later in life. The study found that teenagers who drank around a can of soft drink a day had lower levels of 'good cholesterol' and higher levels of the 'bad' triglyceride form of fat in their blood.

Another similar study from the Telethon Kids Institute also showed that sugary drinks have a role to play in the increased risk of liver disease in teenagers. The research, headed by leader of Nutrition Studies Professor Wendy Oddy, looked at the dietary patterns and liver ultrasounds of almost 1000 teens and found a Western style diet was associated with an increased risk of non-alcoholic fatty liver disease (NAFLD) at 17 years of age. Professor Oddy said this study showed that greater intake of sugary drinks could put young people on a path to the early development of serious health problems and that water is always the better option for young children and adolescents.

Have you checked out the **Telethon Kids Discovery Centre**? Enrich this lesson with an excursion to our interactive Discovery Centre, full of fun games designed to get kids excited about science, health and research. Check out [our website](#) or [send us an email](#) for more information and to book your next school visit!

Rethink Your Drink



TELETHON
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Name: _____ Date: _____

In this activity, we are going to look at a variety of different beverages that we sometimes drink and see how much sugar is actually in each of them. Use the table below to record your predictions and answers. You may be surprised at some of your findings!

Name of drink	Type of drink	My prediction	Amount of sugar in grams (per serving)

The drink that contains the *most* amount of sugar is _____.

The drink that contains the *least* amount of sugar is _____.

I was most surprised by the amount of sugar in _____
because _____

I should avoid consuming too much sugar because _____

How could you change your eating and drinking habits? I could consume less sugar by:

