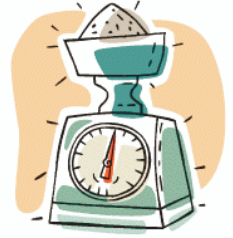


Sugar Guzzlers

It was recently reported that an average New Zealand child guzzles almost 6kg of sugar a year in sweetened drinks. Can you imagine what 6kg of sugar would look like?

Is this true?



Problem



Is the amount of sugar drank in a year by an average student in your class or from CensusAtSchool likely to be 6kg?

Plan



- How would you answer the question now, before you gather the data? YES / NO. If you answered NO, what do you predict the amount of sugar drunk in a year by an average student to be? _____Kg.
- Can you remember all the drinks you have had in the last year? YES / NO Assume that yesterday was an average day. What did you drink? Fill in the table below.

Cups/glasses of each type of drink I had yesterday	Water	Fruit juice	Cordial	Fizzy Drink	Diet Fizzy drink	Sports drinks	Milk-not flavoured	Smoothie or shake	Tea or Coffee	Chocolate or Milo	Hot Other	Total
ME												

- Later on a chart is used to show how much sugar each type of drink has.

Why do you think it is important to know how much sugar each drink contains? _____

- It is always important to state where the data has come from. Complete the sentence: The data for this statistical investigation was obtained from _____

Data



Statisticians often use a table like this to organise their data. Why do you think it is important to have organised data? _____

Drinks in a day	Water	Fruit juice	Cordial	Fizzy drink	Diet fizzy drink	Sports drink	Milk –not flavoured	Smoothie or shake	Tea/coffee	Hot Chocolate Milo	Other	Total
Me												
A	1	3	0	0	0	0	1	0	0	0	0	
B	3	0	0	0	0	0	2	0	0	0	0	
C	1	1	0	1	0	0	0	0	0	0	0	
D	0	0	0	2	0	0	4	1	0	2	1	
E	2	0	0	2	0	0	1	0	1	1	0	
F	3	0	0	0	2	0	1	0	1	1	0	
G	1	0	0	2	0	0	0	0	0	0	3	
H	2	2	0	0	0	0	2	2	1	1	1	
I	0	0	4	0	0	0	0	0	1	0	0	
J	3	0	2	1	2	0	0	0	0	0	0	
K	5	0	0	0	0	0	2	0	0	0	0	
L	2	0	0	0	1	0	0	0	0	0	0	
M	1	0	0	0	0	0	3	0	0	3	0	
N	5	1	0	0	0	0	2	0	0	1	0	
O	4	0	0	2	0	0	0	2	0	0	0	
P	12	0	0	0	0	0	0	0	0	0	0	
Total												

Analysis



1. Have a look at the table of data (the big one) on the first page. What do you notice? _____
2. Who drank the most? _____
3. Which drink was the least popular? _____
4. Which drink was the most popular? _____
5. How many glasses/cups did the students drink of **this popular drink** in total? _____
6. Create a graph that shows the information from the table.

Title: _____

Number of glasses/cups of each type of drink

Type of drink

How many drinks did these students drink in total? _____

If another student was asked what they drank yesterday, what drink do you think they would have drank the most? _____ Why? _____

Look at the 'Amount of Sugar in Drinks' Chart below:

7. Which drink has the most sugar? _____
8. What drinks have no sugar? _____
9. A teaspoon of sugar is 4g. Why do you think Tea or coffee have 0+4? _____

Amount of Sugar in Drinks											
Type of Drink	Water	Fruit juice	Cordial	Fizzy Drink	Diet Fizzy drink	Sports drinks	Milk –not flavoured	Smoothie or shake	Tea or Coffee	Hot Chocolate or Milo	Other
Sugar per cup/glass in grams	0	26	25	27	0	24	11*	22	0+4	4+4	20**

* The sugar content in milk is an average of popular milk types (green, blue, light green etc.)

** The sugar content of Other is the average amount of other types of drinks.

10. Each drink contains a certain amount of sugar which is measured in grams (g).
 A student who drank 2 cordial drinks yesterday guzzled how much sugar? _____g
 What if they also had 5 cups of water and 1 glass of milk? What would their new total be? _____g
 Can you estimate the amount of sugar the student would guzzle in a year? _____g
 Divide the total by 1000 to find the answer in kilograms of sugar guzzled in a year = _____kg
11. Use the tables/charts and your own investigative knowledge to estimate how much sugar an average student 'guzzles' in a year. _____kg

Complete the table to find out how much each student drank.

	Water	Fruit juice	Cordial	Fizzy drink	Diet fizzy drink	Sports drink	Milk - not flavoured	Smoothie or shake	Tea or coffee	Hot Chocolate or Milo	Other	TOTAL for yesterday	TOTAL for the year
Sugar in grams	0	26	25	27	0	24	11*	22	0+4	4+4	20**		
Me												g	kg
A												g	kg
B												g	kg
C												g	kg
D												g	kg
E												g	kg
F												g	kg
G												g	kg
H												g	kg
I												g	kg
J												g	kg
K												g	kg
L												g	kg
M												g	kg
N												g	kg
O												g	kg
P												g	kg

Analyse the table:

12. Which student 'guzzled' the most sugar? _____
 13. How much sugar did they drink? _____kg.
 14. Which student 'guzzled' the least sugar? _____
 15. How much sugar did they drink? _____kg.

Which average is the best to use in the conclusion? To answer this, investigate each type of average.

Find the mean. (*hint: add up all the kg's in your total for year and divide by how many students there were in your sample, including yourself*)

Mean =

Find the mode (*hint: is there a most frequently occurring kg total?*)

Mode =

Find the Median. (*hint: Order the total kg's from smallest to largest and find the middle*)

Median =

Look at each of the averages you found and look at the table. Which average do represents the data the best? _____

How did you decide? _____

Therefore, the average amount an average student from my class or from a sample from CensusAtSchool 'guzzles' is _____kg.

Record your thoughts about your **graph** using these sentence starters:

I noticed ... _____

I wondered ... _____

Record your thoughts about your **averages** using these sentence starters

I noticed ... _____

I wondered ... _____

Conclusion



Answer the question from the start of the sheet:

Is the amount of sugar drank in a year by an average student in your class or from CensusAtSchool likely to be 6kg?

Remember to give reasons based on what you found out in your investigation. You might like to use some statistical language in your conclusion.

Who would be interested in your conclusion?

