Teenage Boss - Susan

**ABC ME screening details: Tuesday** 5 May, 2020 at 2:20pm

This episode can also be viewed on [ABC iView](https://iview.abc.net.au/show/teenage-boss) after the scheduled screening time.

**Key learning areas:** mathematics

**Level:** secondary

**About:** With a massive party for her mum's birthday to pay for as part of her monthly expenses, can 15-year-old Susan still save enough money for the awesome headphones she dreams of buying?

## Before the episode

1. How much pocket money do you get a week?
2. Is this enough to cover all your needs?
3. If you were the boss, how much pocket money would you give yourself? Justify why you need this much.

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## During the episode

1. What is the difference between a fixed and variable cost?
2. List at least 3 variable costs for Susan’s family.
3. How much does Susan's family spend on groceries for a month?

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## After the episode

1. How does your family's food bill compare to Susan's?
2. What are your family's fixed and variable costs?
3. Plan out meals for your family for a week (breakfast, lunch, dinner and snacks)
4. Using catalogues, accessing supermarket websites or by visiting a supermarket, calculate your food bill for your week's worth of meals.
5. The average hourly wage for an Australian adult is $18.29 per hour. How many hours per week would you have to work for to pay for your week's worth of meals?
6. How much does the average Australian adult earn per week if they work 38 hours?
7. What percentage of the average weekly wage, is your week's worth of meals?

**Follow up activity:** Investigate one of the following:

**Earning money**

* Survey as many friends and family as you can to determine how much they earn per week either through pocket money or their part-time jobs.
* Record your data in a suitable format.
* What is the average amount earnt per week? Is there a difference between the mean, median and mode?
* Is it different for different age groups?
* Draw a suitable graph to show your findings.

**Public transport vs running a car**

* Determine how many kilometres your family travel in a week.
* Find out the cost of petrol/diesel in your area.
* Find out the fuel economy for your family car (km/L).
* Calculate the cost of fuel for the number of kilometres you travel per week.
* Investigate the cost of public transport.
* Determine your public transport costs for your weekly travel.
* How does this compare with a car?
* What other things would you need to consider when deciding between taking public transport and the car?

**Note**: If there is no public transport in your area, you may like to consider travelling from a nearby town to your nearest capital city via public transport vs car.

## NSW teacher notes

This is an optional standalone resource that could supplement student learning. The activities align with syllabus outcomes across stages and can be modified to meet the needs of your students. Students can complete the activities while learning at home and in the classroom. All activities can be completed without access to the internet or a device. Teachers could collect student work to offer feedback and as evidence of learning.

### Learning intentions

* To understand the difference between fixed and variable costs
* To compare a family’s expenses with their weekly earnings

### NSW Mathematics K-10 Syllabus outcomes

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| Outcome | Stage 3 | Stage 4 |
| Financial Maths |  | MA4-6NA solves financial problems involving purchasing goods |
| Fractions, Decimals and Percentages |  | MA4-5NA operates with fractions, decimals and percentages |
| Ratio and Rates |  | MA4-7NA operates with ratios and rates, and explores their graphical representation |
| Data | MA3-18SP uses appropriate methods to collect data and constructs, interprets and evaluates data displays, including dot plots, line graphs and two-way tables | MA4-19SP collects, represents and interprets single sets of data, using appropriate statistical displays |
| Working mathematically | MA3-1WM describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions  MA3-2WM selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations | MA4-1WM communicates and connects mathematical ideas using appropriate terminology, diagrams and symbols  MA4-2WM applies appropriate mathematical techniques to solve problems |

[NSW Mathematics K-10 Syllabus](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/mathematics/mathematics-k-10) © NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales 2012.