

Exploring financial identity through mathematics and statistics

This resource encourages students to apply mathematical skills and knowledge in a financial context. Students explore their financial identity and behaviours when managing their money, spending, saving and taking on debt.

This is an integrated, cross-curricular resource, supporting the theme, **Identity**. It can be used in multiple ways. Related resources are available for English, social sciences, and technology (digital technologies).

References:

- [Financial identity resource introduction](#)
- [Pedagogy and methodology overview](#), for the frameworks underpinning the development of this resource.

Mathematics and statistics achievement objectives

In a range of meaningful contexts, students will be engaged in thinking mathematically and statistically. They will solve problems and model situations that require them to:

Level Four

- understand addition and subtraction of fractions, decimals, and integers
- find fractions, decimals, and percentages of amounts expressed as whole numbers, simple fractions, and decimals
- apply simple linear proportions, including ordering fractions
- know the equivalent decimal and percentage forms for everyday fractions
- know the relative size and place value structure of positive and negative integers and decimals to three places
- form and solve simple linear equations.

Level Five

- reason with linear proportions
- understand operations on fractions, decimals, percentages, and integers
- use rates and ratios
- know commonly used fraction, decimal, and percentage conversions
- know and apply standard form, significant figures, rounding, and decimal place value
- Form and solve linear and simple quadratic equations.

Learning experiences and formative assessment tasks are aligned to [SOLO Taxonomy](#) to ensure cohesiveness, constructive alignment and cognitive stretch for all students. This gives both teachers and students choice throughout the learning and teaching process.

NEED IT/KNOW IT	LINK IT/THINK IT	EXTEND IT/DEFEND IT
Activate your prior knowledge. This is the starting point for new learning about your financial identity .	Link your ideas and make connections to build new knowledge and understandings about your financial identity . Learn about the perspectives and insights of others.	Extend your learning by applying it to new contexts. Find evidence, validate sources, and summarise your thinking. Present your findings to clarify your financial identity .
Understanding financial identity		
<p>Define financial identity. What are your values, attitudes, behaviours, and skills regarding money?</p> <p>Describe your money personality. How do you react to sales and advertising? Do you have any strategies you use before you buy something? Are you an impulse buyer?</p> <p>Take the Sorted Money Personality test. Describe your profile. Do you agree or disagree with it? Give reasons for your answer.</p> <p>Define needs and wants.</p>	<p>Analyse the strengths and weaknesses of your money personality. What areas do you need to improve on and what areas are you managing well?</p> <p>Compare and contrast the differences between needs and wants.</p> <p>Read Needs and wants – Shopping decisions and discuss whether each item is a need or a want.</p> <p>Complete the spending diary. Enter your last 10 purchases in the diary (or ten purchases from your household) and complete the table. Use the diary to identify areas for goal setting or possible savings.</p> <p>Justify your decisions and show evidence that you can undertake a plan of goal setting or saving for an agreed period.</p> <p>Analyse factors that might affect your ability to manage your money.</p> <p>Consider fluctuations in your income, the time frames you set for your goals, and life events that might get in the way of your goals.</p>	<p>Explore ideas about identity</p> <ul style="list-style-type: none"> • What do your spending habits reveal about your identity? • Is spending a way to achieve happiness? • Brainstorm your ideas. and share with your classmate.

Setting goals

Define goal setting. View the [goal setting](#) PowerPoint. After viewing, expand your explanation to include any new information you have learnt.

Read the [SORTED Goals booklet](#) and answer these questions:

- What details make our goals more achievable?
- What details make managing your money more achievable?
- When would you find it useful to have a plan to manage your money?

Select six activities, events, or items you would like to work towards. Categorise them into short-, medium-, or long-term goals. Upload your selections as images into [Decide what to save for – How, when, and how much?](#)

Read this [blog post](#) and use it as a discussion starter to explore class and whānau stories about the decisions they have made and their consequences. **Investigate** the question “What is a good financial decision?”.

Read [Needs and wants – The supermarket shop](#) and discuss whether each item is a need or a want.

Explain why it is important to have goals that cover different time frames. Give examples of a short-term, a medium-term, and a long-term goal you could set for yourself.

List and explain some factors that could affect your short-term, medium-term and long-term goals. Consider how you manage your money, your spending habits, and life events. You may find the [financial planning tool](#) helpful.

Research the cost of Simon's food choices through online websites, such as the [Countdown](#) or [New World](#) apps.

People often choose to buy products made by a specific brand. **Consider** how people's perceptions affect their brand choices. Find the total cost of all the items on Simon's list and analyse how brand choices could affect the total costs.

Show **evidence** of some financial goals you have set for yourself.

Evaluate the importance of setting goals and **justify** why it is important for individuals to set personal financial goals.

Examine how products may have different prices depending on brand choices. Choose two products and record their different brand prices. Calculate the percentage differences in prices between brands. Suggest possible items Simon could recommend his family purchases for the picnic in [Planning a family picnic](#)

Consider how your decisions could affect others who are going to the picnic, and their impact on the budget of \$30.

Managing your money

Explain what it means to manage your money.

Complete [Planning your financial future](#).

Read, analyse, and **discuss** the infographic [managing your money](#).

Explore ideas about setting goals and how to achieve them through generating a budget. Use the [Sorted budgeting tool](#) to help explore different categories of expenses. (You will need an understanding of percentages and fractions).

Define the time frames for short-term, medium-term, and long-term goals. **Describe** times when you have set any short-term, medium-term, or long-term goals for yourself.

Explain how plans for managing money help individuals, whānau, organisations, and governments to reach their goals.

Compare needs and wants. **Write** a statement differentiating between the two. In pairs, discuss the following items and classify as a need or a want.

- Car
- Food
- Phone

Read [planning a family picnic](#) and **identify** Simon's choices as needs or wants. **Justify** your decisions to a classmate.

Select and **apply** money management tools to manage your money (ie: formalised budget).

Read [Planning your financial future](#).

On [Decide what to save for – How, when, and how much?](#), go to “Your turn to explore setting goals and making a budget”.

Compare foreign currencies and discuss taxes on goods purchased from overseas.

Prioritise [Simon's needs and wants](#) and **explain** how to rank these.

On [Decide what to save for – How, when, and how much?](#) go to “Explore setting goals and managing your money”. **Explain** possible impacts on your financial plan.

Consider any relevant short-term, medium-term, and long-term factors that may impact on your plan and **explain** why these are relevant by hyperlinking to your plan.

Read [Planning your financial future](#). **Explain** any commitments and outgoings that will impact on the financial plan.

On [Planning your financial future](#), go to the extension activity. **Justify** your choices of ratio amounts for the different categories, linking them back to Leoni's overall goals.

Describe aspects of your spending that are more a want than a need. Give an example(s).

Create a plan to manage money for an event such a family gathering. **Evaluate** this plan.

Create [a budget](#) for your identified short-, medium-, and/or long-term goals. Describe how you are going to budget from your income and/or savings. Make sure you show your calculations and communicate the logic behind your problem solving.

Create a [plan](#) for Leoni to manage her money so that she can reach her goal of owning a car in a shorter amount of time. Suggest some different pathways she could explore.

Using the prompting questions below reflect on how needs and wants shape your identity

- Does your identity depend on having certain labels to wear?
- Are wants enablers or barriers to your identity?

Explain how your ideas about what is a need and a want have changed after this learning.

Spending and saving

Explain what is meant by saving and some ways to save. Discuss how you save.

View the [saving](#) PowerPoint.
After viewing, expand your explanation to include any new information you have learnt.

Read, analyse, and **discuss** the infographic about [saving](#).

Explain how saving helps individuals, whānau, organisations, and governments to reach their goals.

Read the Sorted booklet on [Saving in English](#) or in [te reo](#).

Describe your saving ability.

Read [Identify goals](#) and describe your saving goals.

Take the Sorted [Money Personality Quiz](#). Did it accurately predict your money personality?

View the [Foodbank New Zealand](#) website.
Contact or visit a local foodbank to find out information about the needs in your local area.

- What is the purpose of the Food Bank?
- What are some of the reasons that people visit a Food Bank?

Discuss your impressions of Brian and the Food Package project with a classmate.

Explain [compound interest](#) and give an example of how it works.

Compare the [current saving options and interest rates](#) banks offer clients.

Explain the different saving options that banks offer.

Compare the interest rates on these different saving options.

Calculate interest payments relevant to a prepared saving plan.

Compare the different rates of interest that banks offer lenders and borrowers.

Explain what is meant by saving and some ways to save. Discuss how you save.

Complete the [spending diary](#).

Analyse your weekly spends and **calculate** the amounts you spend in a day, a week, and a month. Include money spent on things that are “invisible”, like a bus card, apps, or paywave.

Share your spending diary with a classmate and discuss what this tells you about your spending.

Discuss:

- What your spending habits reveal about your financial identity
- Does spending lead to happiness?

Show **evidence** of saving over a short period of time and **justify** the money made in the process.

Monitor saving and **evaluate** how successful you were at the end of a given time.

Evaluate the best options for money saved for a short term or medium term, and for long-term saving/investments.

Using the SOS package created in the previous task (Link it/Think it) **Evaluate** ways to decrease the cost of your package but not alter the food choices. Read [Supporting savers](#) and discuss, analyse and evaluate the different ways you can save.

Analyse ways to decrease the cost of the SOS package without altering the food choices.

- What would be the minimum cost of your S.O.S. package?
- What are some ways to cut costs while still providing a bag filled with nutritious choices?

Design a food package. You can choose who you would like to be the recipients of your Food Package (a whānau group, friends, a couple). You will need to list your choices of food, and their cost, and generate a [meal plan](#) on the template.

The bag must include enough food for 3 meals a day, for 3 days, and must be non-perishable (able to be stored without refrigeration).

You may find it helpful to use online sources such as the [Countdown](#) or [New World](#) apps to find the costs of your selections for the package.

Consider your choices and make changes where necessary:

- Which category took up most of the package?
- Was there anything that surprised you about the cost of items in the package?
- Who included items of personal hygiene in their package? If you didn't, why?

Share your package design (including items and costs) with your class. Make a quick calculation of the cost of the food package.

Classify items in your food package into categories:

- dry food
- canned or bottled food
- other

Estimate the total cost of each category (showing your working). Estimate the percentage of the total cost for each category (showing your working).

Managing debt

Explain what debt is.

View the debt [PowerPoint](#).

Read, analyse, and **discuss** the [infographic](#) about debt.

Read the Sorted booklet, [Debt in English](#) or [te reo](#).

Explain what is meant by “getting into debt is easy”. **Describe** how Joe got on top of his debt.

List any debts you have. Include debts to whānau members and friends. Do you have any debt?

List factors that could impact on your credit rating in the future.

Explain the concept of credit.

Read [Credit cards – credit card debt and management](#).

Describe how credit cards work.

Write a list of tips for how to manage credit cards.

Describe what a penalty is.

Explain why borrowing can be risky if your circumstances change.

Compare a range of interest rates from a range of different lenders.

Explain the difference between “good” debt and “bad” debt

Read [Credit cards – credit card debt and management](#).

Describe how credit cards work.

List some advantages and disadvantages of credit cards.

Explain why students are sometimes encouraged to get credit cards when they leave school.

Complete “Exploring debt – Brainstorm” in [Managing Debt: Is credit the way to go?](#) and share your findings with a classmate or group.

Reflect on what you have learnt and what you need to investigate further to gain a full understanding of credit cards and debt.

Complete the activity “Calculating simple and compound interest” in [Managing Debt: Is credit the way to go?](#)

Evaluate how good debt can contribute to your financial identity.

Read [Managing Debt: Is credit the way to go?](#) and **evaluate** payment plans for managing debt on a credit card. **Analyse** the differences between payment arrangements Jill can make to manage her debt.