

# Budgets, Financial Plans.

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### Differentiate and Assess

Not every student will be ready to investigate this concept at this Level and so we will need to differentiate to ensure every student is learning at their leading edge. Select the Differentiate button on this screen.

### Integrate

Every mathematical concept is integrally related to other mathematical concepts. Teaching and learning related concepts simultaneously develops deep relational understanding. Select the Integrate button on this screen.

### Intervene

Some students may not yet be ready to investigate this concept at any Level, and so we will need to provide some intervention. Select the Intervention button on this screen.

# BUDGETS, FINANCIAL PLANS.

## EXPLICIT TEACHING PLAN OVERVIEW PAGE

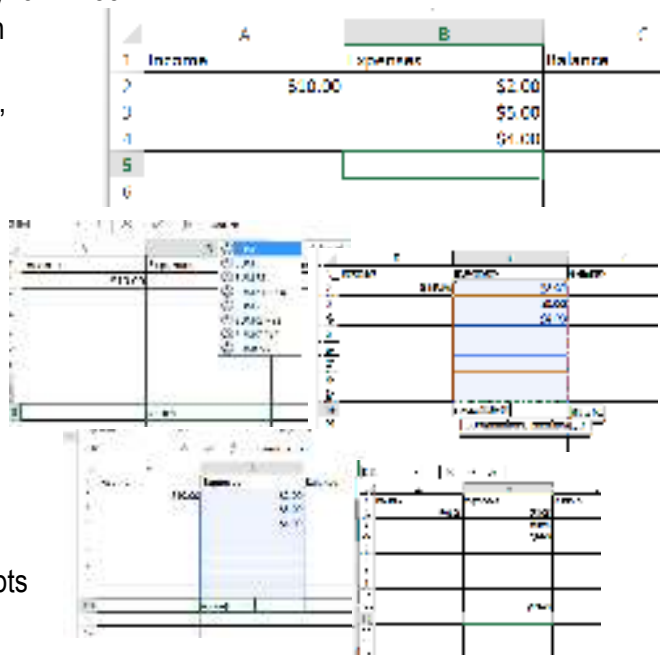
THIS PAGE IS A SUMMARY OF THE EXPLICIT TEACHING PLAN, INCLUDING STRATEGIC QUESTIONS, AND DESCRIBING THE SEQUENCE WHICH WILL OCCUR OVER MULTIPLE LESSONS.

RESOURCES: SPREADSHEET PROGRAM, PENCIL, PAPER

### WHAT COULD WE DO?

Children:

- keep a spending diary for 1 week
- create a financial plan and budget using a spreadsheet program, for example,



- use formulas within the spreadsheet program to add amounts and to subtract to find balance, for example,

- identify GST on receipts

### WHAT LANGUAGE COULD WE USE TO EXPLAIN AND ASK QUESTIONS?

Children

- ask one another questions about financial plans and budgets on spreadsheets programs, for example:
  - What data did we record in our spending diary?
  - How do we navigate around a spreadsheet program?
  - How do we enter data into a spreadsheet program?
  - How do we use a formula to add amounts?
  - How do we use a formula to subtract amounts?
  - What is our balance?
  - If our balance is negative, what does that mean?
  
- What is GST?
- Where is GST recorded on this receipt?

# BUDGETS, FINANCIAL PLANS.

## EXPLICIT TEACHING PLAN

FULL EXPLICIT TEACHING PLAN, EMBEDDING DEEP RELATIONAL UNDERSTANDING, METALANGUAGE, AND QUESTIONS THAT MAY BE USED OVER MULTIPLE LESSONS.

### WHAT COULD WE DO?

Children think about, talk and listen to a friend about, then have the opportunity to share what they already know.

Children have been asked to keep a spending diary for one week, [see example](#),

Pocket money:	\$10
Monday	\$2 chips and drink
Tuesday	
Wednesday	
Thursday	\$5 movie
Friday	
Saturday	\$4 pencils
Sunday	

Have children refer to their spending diary.

Children identify the amount of money that they started the week with, the amount they spent and the amount they ended the week with.

Children identify if they spent more money than they started the week with.

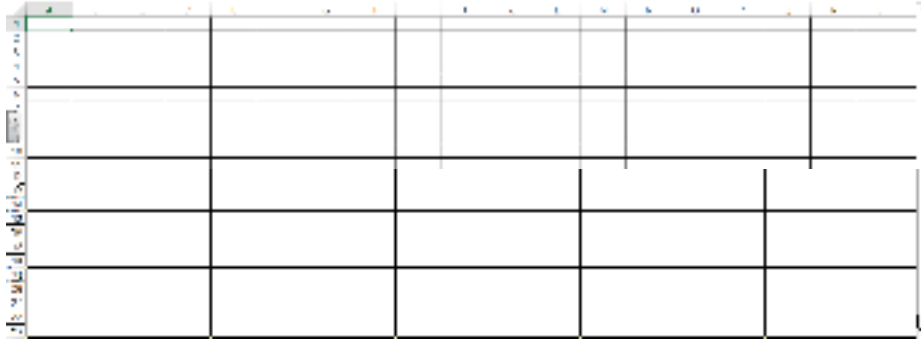
Children identify where they got the extra money from, for example, their parents.

Allow children to suggest what would happen if an adult did not have enough money to last till the end of the week.

### WHAT LANGUAGE COULD WE USE TO EXPLAIN AND ASK QUESTIONS?

- ▶ Today brings an investigation about financial plans and budgets.
- ▶ What do you know about financial plans and budgets?
- ▶ Talk about financial plans and budgets with a friend.
- ▶ Is anyone ready to share what they are thinking about financial plans and budgets?
  
- ▶ **Today brings an investigation into financial plans, budgets and spreadsheets using addition and subtraction**
- ▶ You've been keeping a spending diary for one week.
- ▶ Please look at your spending diary.
- ▶ How much money did you start the week with?
- ▶ How much money did you spend altogether?
- ▶ How much money did you end the week with?
  
- ▶ Did you have enough money for the whole week?
- ▶ If you didn't start the week with enough money, where did you get the extra money from?
- ▶ What would happen if adults did not have enough money to last till the end of the week?

Have children sit at computers with a spreadsheet program such as Microsoft Excel or Google Sheets open, for example,



Allow children to investigate and describe how they moved from cell A1 to cell A2.

- ▶ How could we make sure you have enough money till the end of the week?
- ▶ Could we make a financial plan or a budget? Let's investigate!
- ▶ We could make our financial plan or budget by hand.
- ▶ Or we could use a spreadsheet program.
- ▶ If we make it by hand, we'll have to do the calculating.
- ▶ If we use a spreadsheet program, we can program it to do the calculating for us!
- ▶ So we're going to create a spreadsheet to use as a financial plan and budget.

- ▶ How do we navigate around the spreadsheet? Let's investigate!
- ▶ Do you see the letters at the top of each column?
- ▶ Do you see the numbers at the side of each row?
- ▶ Do these look just like the alpha-numeric references on grid maps?
- ▶ Please select cell A1 by clicking your mouse inside it.
- ▶ How could you move to cell A2?
- ▶ Could we use the down arrow key?
- ▶ Could we select cell A2 by clicking our mouse inside it?
- ▶ Could we use the enter key?
- ▶ When we move from one cell to another after entering data, we need to use the enter key.
- ▶ This is because we will be 'entering' data into a cell, then using the 'enter' key to 'enter' it into the cell.

Allow children to suggest column headings.

Children enter column headings, for example,

	A	B	C	D	E
1	Income	Expenses	Balance		
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

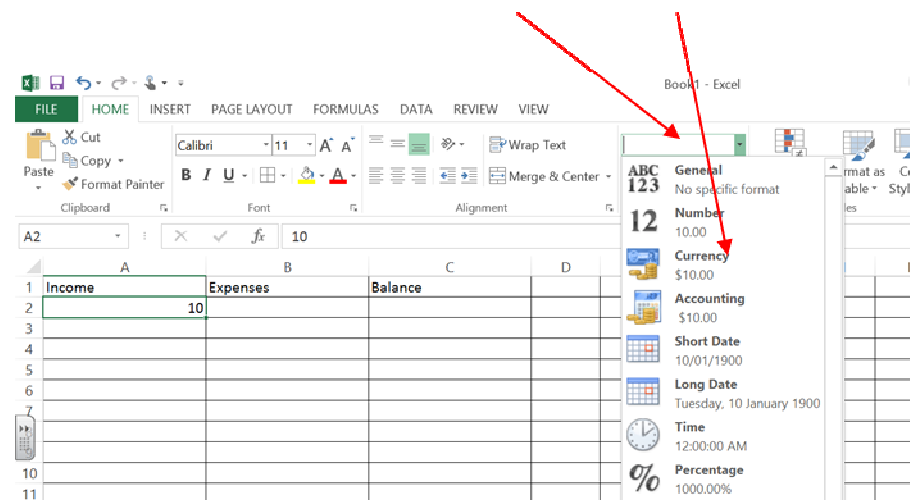
Children enter the number 10 under the heading 'income' in cell A2, for example,

	A	B	C	D
1	Income	Expenses	Balance	
2	10			
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

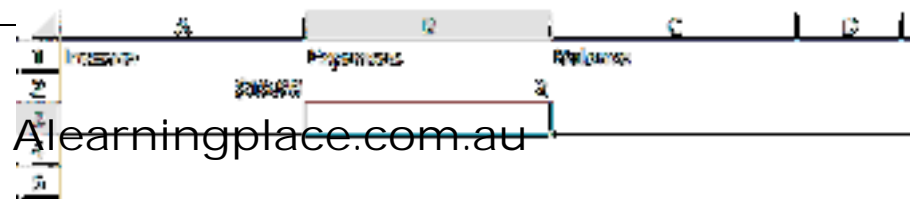
We're going to enter data in columns and rows.

- ▶ What data will we be entering?
  - ▶ Will we be entering the amount of money that we started the week with?
  - ▶ Will we be entering the amount of money that we spent?
  - ▶ Will we be entering the amount of money we have left at the end of the week?
  - ▶ What names could we give these as headings for each column?
  - ▶ When we receive money, we call it income. Could we name the first column 'Income'?
  - ▶ When we spend money, we call it expenses. Could we name the second column, 'Expenses'?
  - ▶ When we work out the difference between our income and our expenses, we call it balance. Could we name the third column, 'Balance'?
- 
- ▶ Let's enter an amount of money that we started the week with under our heading 'income'.
  - ▶ In cell A2, let's all enter the number 10.

Children select the arrow next to the text box in the Number formatting tool to get a drop down menu and select currency, for example,



Children enter the number 2 under the heading 'expenses' in cell B2, for example,



- ▶ Because we want the spreadsheet program to do the adding and subtracting for us, we don't want to enter anything except numbers into each cell.
- ▶ If we enter anything except numbers, the spreadsheet program will treat the data like text and won't be able to add or subtract it.
- ▶ But we do want the spreadsheet program to know that this is money.
- ▶ So we can format the cells to tell the spreadsheet program that it is money.
- ▶ Select cell A2, where we entered the number 10.
- ▶ In the 'Home' tool bar there is a Number formatting tool.
- ▶ Select the arrow next to the text box to get a drop down menu.
- ▶ Select 'currency' and the 10 in cell A2 will change to \$10.00.

Children select cell A2, then hold down the left mouse button, move the mouse to cell C10 to select all of the cells, for example,

	A	B	C	D
1	Income	Expenses	Balance	
2	\$10.00	2		
3				
4				
5				
6				
7				
10				
11				

Children enter 5 into cell B3, for example,

	A	B	C
1	Income	Expenses	Balance
2	\$10.00	\$2.00	
3		5	
4			
5			
6			

- ▶ Let's enter an amount of money that we spent under our heading 'expenses'.
- ▶ In cell B2, let's all enter the number 2.
- ▶ Did the spreadsheet change the 2 to 2 dollars?
- ▶ No?
- ▶ Why not?
- ▶ Have we formatted cell B2 as currency?
- ▶ While we format cell B2, could we format more than 1 cell? Let's investigate!

- ▶ Select cells A2 to C10 by selecting cell A2, then holding down the left mouse button, drag the mouse to cell C10 to select all of the cells.
- ▶ Now go to the Number formatting tool in the Home tool bar.
- ▶ Select the arrow next to the text box to get a drop down menu.
- ▶ Select 'currency' and the selected cells will all be formatted as currency.

- ▶ Let's spend some more money!
- ▶ Select cell B3 under our \$2 expense.
- ▶ How much could we spend this time?
- ▶ Could we spend \$5?
- ▶ Let's enter 5 in cell B3 and let the spreadsheet program convert it to currency.

Children enter 4 into cell B4, for example,

	A	B	C
1	Income	Expenses	Balance
2	\$10.00	\$2.00	
3		\$5.00	
4		4	
5			
6			
7			

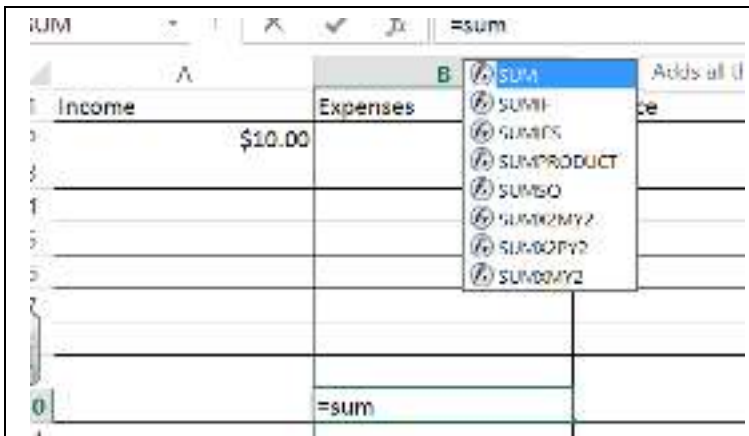
  

	A	B	C
1	Income	Expenses	Balance
2	\$10.00	\$2.00	
3		\$5.00	
4		\$4.00	
5			
6			

- ▶ Let's spend some more money!
- ▶ Let's spend \$4.
- ▶ Let's enter 4 in cell B4 and let the spreadsheet program convert it to currency.

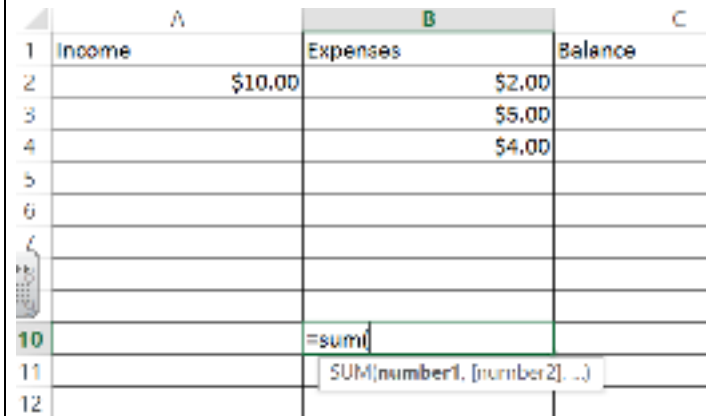
Children select cell B10 and type an equals sign and the word 'sum', for example,





- ▶ How much did we spend?
- ▶ Do you think we could program the spreadsheet program to add up our expenses? Let's investigate!
- ▶ Let's program the spreadsheet program to record the total expenses in cell B10. Let's select cell B10.
- ▶ So that the spreadsheet program knows that we want it to do some maths, we start with an equals sign. Enter an equals sign into cell B10.
- ▶ We want the spreadsheet to find the sum, so type in sum after the equals sign.

Children type an open bracket after the word 'sum', for example,



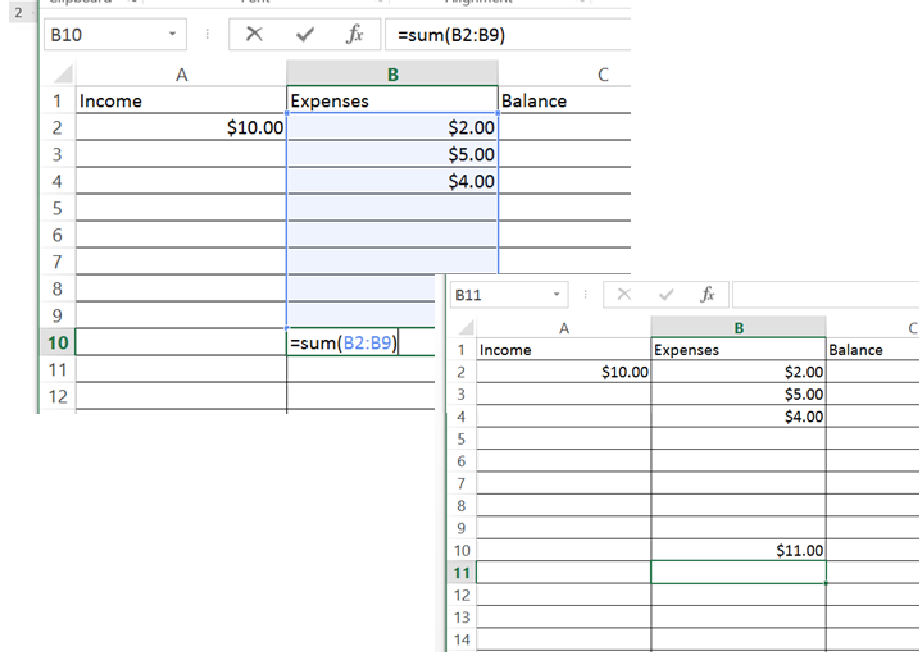
- ▶ We're going to program the spreadsheet program to add the cells from our first expense cell which is cell B2 to our last expense cell which is cell B9.
- ▶ To do this we need to type an open bracket.

Children click in cell B2 and hold and drag to cell B9, for example,



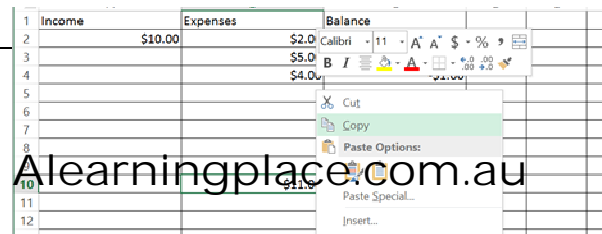
- ▶ Now click in cell B2 (our first expense cell) and hold and drag to cell B9 (our last expense cell) and the spreadsheet program will record 'B2:B9' after the bracket opening.
- ▶ Did B2:B9 appear after the open bracket in cell B10?

Children type a closed bracket and enter the data, for example,



- ▶ Now type a closed bracket.
- ▶ And hit enter to enter the data.
- ▶ Did the spreadsheet program add our income?
- ▶ Did the spreadsheet program enter \$11 in cell B10?

Children select cell B10, copy, select cell A10, paste, for example,



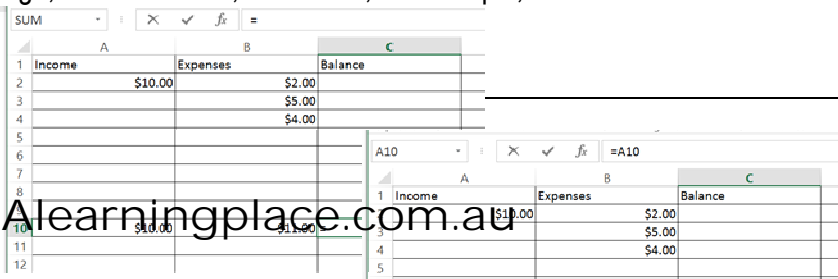
- ▶ Now that we have entered the formula to program the spreadsheet program to add

our expenses, we can cut and paste this formula to add our income.

- ▶ Simply select cell B10 where the spreadsheet adds the expenses.
- ▶ Right click the mouse and select 'copy' or select 'control' and 'c' on the keyboard.
- ▶ Select cell A10 where we want the spreadsheet program to add the income.
- ▶ Right click the mouse and select 'paste' or select 'control' and 'v' on the keyboard.
- ▶ The spreadsheet program will copy the formula into cell A10 and add our income.
- ▶ Did the spreadsheet program add the income?
- ▶ Did the formula change to add the numbers in cells in column A?

- ▶ Now we are ready to work out our balance.
- ▶ Balance means how much money we have left.
- ▶ We could do the maths, but do you think we could program the spreadsheet to do the maths for us? Let's investigate!
- ▶ We want the spreadsheet program to work out our balance in cell C10, next to where it added our expenses and our income.
- ▶ Select cell C10 under the heading 'balance'.
- ▶ We want to tell the spreadsheet program to subtract our expenses from our income.
- ▶ So that the spreadsheet program knows that we want it to do some maths, we start with an equals sign. Enter an equals sign into cell C10.
- ▶ Now click in cell A10 and the spreadsheet program will record 'A10' after the equals sign.
- ▶ Now type in a subtraction symbol after the 'A10'.

Into cell C10, children enter an equals sign, select cell A10, enter a subtraction sign, select cell B10, then enter, for example,



- ▶ Now click in cell B10 and the spreadsheet program will record 'B10' after the subtraction sign.
  
- ▶ Now enter the data by typing enter and the spreadsheet program will subtract the \$11 in cell B10 from the \$10 in cell A10.
  
- ▶ Did minus \$1.00 appear in cell C10?
- ▶ Why do think the \$1 has a minus sign before the \$1.00?
- ▶ Do you think the minus sign means we spent more money than we had?
- ▶ Do you think the minus sign means our expenses were more than our income?
- ▶ Do you think the minus sign means we owe somebody some money?
- ▶ Did we overspend?
- ▶ How much did we over spend?
- ▶ Did we have an income of \$10?
- ▶ Did our expenses add to \$11.00
- ▶ So our income was \$10, ad our expenses were \$11.
- ▶ Is that why our balance is minus \$1?
  
- ▶ Do we need to earn some more income?

Children add \$4 into cell A3, for example,

	Income	Expenses	Balance
1			
2			
3	4		
4			
5			
6			
7			
8			
9			
10	50.00		54.00
11			
12			

Children select enter while watching the total income in cell A10 and also watch the balance in cell C10.

	Income	Expenses	Balance
1			
2			
3	4		
4			
5			
6			
7			
8			
9			
10	54.00		58.00
11			
12			

Display a receipt from a retail transaction that identifies the GST component.

- ▶ Let's imagine we washed the car and earned \$5.
- ▶ Let's add \$5 into our income column in cell A3.
- ▶ What do you think will happen to our total income in cell A10?
- ▶ Do you think the spreadsheet program will add the \$4? Let's investigate!
- ▶ Let's type 4 in cell A3.
  
- ▶ When we hit enter, watch the total income in cell A10 and also watch the balance in cell C10.
- ▶ Let's hit enter.
  
- ▶ Did the total income in cell A10 change?
- ▶ Did the spreadsheet program add the \$4 to the total income?
- ▶ Why?
- ▶ Did we program the spreadsheet program to add the \$4?
  
- ▶ Did the balance change?
- ▶ Did the spreadsheet program add the \$4 to our balance?
- ▶ Why?
- ▶ Did we program the spreadsheet program to add the new income to our balance?

Children identify the amount of GST on the receipt.

- ▶ **Here we have a receipt from a shop.**
- ▶ What do you notice at the bottom of the receipt?
- ▶ Do you notice where it says 'GST'?
- ▶ What does GST stand for?
- ▶ Does GST stand for Goods and Services Tax?
- ▶ Is GST a tax?
- ▶ What is a tax?
- ▶ Is a tax a payment made to the government?
- ▶ Why do we pay tax?
- ▶ Do we pay tax so that the government can pay for things like roads, schools, hospitals, police?
- ▶ Goods and Services Tax is a tax that we pay when buy goods or services.
- ▶ Some goods are GST free, for example, fresh food.
- ▶ How much GST did this receipt include?

Spending diary sample, ([back](#))

Pocket money:	\$10
Monday	\$2 chips and drink
Tuesday	
Wednesday	
Thursday	\$5 movie
Friday	
Saturday	\$4 pencils
Sunday	