

6.1 Record your costs

In this lesson

You will learn:

- how to enter values into a spreadsheet
- how to format values as currency.

Spiral back



In Student Book 4 you learned how to use spreadsheet functions and formulas. In this unit you will learn how to use the results of formulas to help a business make decisions about its products.

Values and labels

Imagine that you own a pizza snack bar. The snack bar sells slices of pizza and desserts to customers. In this lesson you will use a spreadsheet to calculate the costs and the income of your pizza snack bar.

Spreadsheets contain two types of data:

- **Values** – these are numbers. Values are used in calculations.
- **Labels** – these are text. Labels are used to show what the values mean, so the spreadsheet is easier to understand.

A spreadsheet is divided into cells. In this spreadsheet cell C4 is selected.



Look at the spreadsheet 'My pizza snack bar'. The first worksheet lists the ingredients for a recipe called 'Pizza Napoli'. It only has labels. In this lesson you will enter the costs of the ingredients.

How to enter data into a spreadsheet

Click on a cell with the pointer to select it.

Type the data you want to enter. Then press 'Enter' to add the data to the cell.

Now the spreadsheet includes labels and values. They are shown in different ways.

- Labels are **left-aligned** – they are at the left of the cell.
- Values are **right-aligned** – they are at the right of the cell.

	A	B	C	D
1	My pizza snack bar			
2				
3	Recipe	Ingredients		
4	Pizza Napoli	500g flour		
5		2 cans tomato		
6		100g cheese		
7		10g oregano		
8		10g salt		
9		5g yeast		

	A	B	C	D
1	My pizza snack bar			
2				
3	Recipe	Ingredients		
4	Pizza Napoli	500g flour	0.75	
5		2 cans tomato	1.2	
6		100g cheese	1	
7		10g oregano	0.05	
8		10g salt	0.01	
9		5g yeast	0.1	
10				

You can also change the **format** of the values. Format means the style of something or how it is organised. In a spreadsheet use the 'Number Format' to choose the way values are shown. There are many different number formats such as decimal number, date and time, percentage, currency.

The currency format shows values as amounts of money. In this lesson you will change the costs of the ingredients to currency values.

Change cells to a currency format

1 Drag the mouse over the cells to select them.

2 Click this button to choose a currency format. This spreadsheet uses dollars, but you can choose another currency.

3 The selected cells change to currency.

Recipe	Ingredients	Cost
Pizza Napoli	500g flour	0.75
	2 cans tomato	1.2
	100g cheese	1
	10g oregano	0.05
	10g salt	0.01
	5g yeast	0.1

Ingredients	Cost
500g flour	\$ 0.75
2 cans tomato	\$ 1.20
100g cheese	\$ 1.00
10g oregano	\$ 0.05
10g salt	\$ 0.01
5g yeast	\$ 0.10



Activity

Open the spreadsheet 'My pizza snack bar'.

On the 'Pizza Napoli' worksheet, enter the number values shown in this lesson.

Format the values as currency.

Save your work.



Extra challenge

Your spreadsheet only shows the costs of the ingredients for your recipe. A real snack bar has lots of other costs too. Write down the other costs you can think of.

Think again

To make a profit, a business must keep costs low and income high.

- How do businesses try to keep costs low?
- How do businesses try to keep income high?
- Think of a successful business where you live. What do you think makes the business successful?

6.2

Calculate your costs

In this lesson

You will learn:

- how to use the AutoSum function to add up a column of values
- how to use a formula to calculate results.

Calculate the cost of one portion of pizza

You will use two spreadsheet functions to find out the cost of one portion of Pizza Napoli:

- AutoSum – add up the total cost of the recipe.
- A divide formula – find the cost of one portion by dividing the total cost of the recipe by the number of portions.

Use AutoSum

Sum is a mathematical term that means 'add a group of numbers together'. In a spreadsheet, AutoSum adds together a group of values. This is the AutoSum button.



	A	B	C	D
1	My pizza snack bar			
2				
3	Recipe	Ingredients		
4	Pizza Napoli	500g flour	£ 0.75	
5		2 cans tomato	\$ 1.20	
		100g cheese	\$ 1.00	
		10g oregano	\$ 0.05	
		10g salt	\$ 0.01	
		5g yeast	\$ 0.10	
11		TOTAL COST	=SUM(C4:C10)	
12			SUM(number1, [number2] ...)	

2 Select the cell where you want the total to appear. Make sure the cell is in the same column as your values. Click the AutoSum button.

1 Enter the label 'TOTAL COST'.

3 Press 'Enter'. The spreadsheet adds together the values in the highlighted cells.

Calculate the cost of one portion

In this example, one pizza makes eight portions. You can enter a different number if you want larger or smaller portions.

TOTAL COST	\$ 3.11
Number of portions	8
Cost per portion	

1 Enter these labels.

2 Enter the number of portions.

Now you will enter a **formula**. A formula is an instruction that tells the spreadsheet application to do a calculation. Every formula begins with an equals sign.

3 Select cell C14 and type an equals sign: '='.

	TOTAL COST	\$ 3.11
13	Number of portions	8
14	Cost per portion	=C11

4 Click on cell C11. The cell reference goes into the formula.

5 Next enter the divide operator: '/'.

	TOTAL COST	\$ 3.11
13	Number of portions	8
14	Cost per portion	=C11/C13

6 Click on cell C13 and press 'Enter'.

The finished formula looks like this: `=C11/C13`

The formula means: 'the value in cell C11 divided by the value in cell C13'.

It is important to use **cell references** and not numbers in formulas. A cell reference tells the spreadsheet to take a value from a cell. If you change the value in the cell, the result of the formula changes too.

Activity

Use the spreadsheet functions shown in this lesson to calculate the cost of making one portion of the Pizza Napoli recipe. Save your work.

Think again

You have learned that changing the values in a spreadsheet changes the result of calculations. What other values can you see on your spreadsheet? What would happen if these values changed?

Extra challenge

The number in cell C13 shows the number of portions. If you change this number, the cost of each portion changes too. Try entering different values in this cell. What happens to the cost per portion if you make more portions from your recipe?

6.3

Calculate your profit

In this lesson

You will learn:

- more ways of making spreadsheet formulas
- how to use your spreadsheet to calculate business profits.

What is profit?

Profit is the money that a business makes from selling a product to a customer. Profit = income – costs.

In this lesson you will calculate the profit from selling one portion of pizza. First decide the selling price of one portion of pizza. To make a profit, the selling price must be more than the cost of the ingredients. In this example the price is \$1.00. You can choose any value you like.

Prepare the spreadsheet structure

Enter more labels into the spreadsheet as shown in this picture.

13		Number of portions	8
14		Cost per portion	\$ 0.39
15		Selling price	\$ 1.00

Enter the selling price for one portion. Format the value as currency.

Enter a spreadsheet formula to calculate profit

Select cell C17. The profit per portion will be shown in this cell.

Now enter your formula.

- 1 Type an equals sign.
- 2 Select the cell with the selling price of one portion. Check that the cell reference has appeared in your formula in cell C17.
- 3 Type the subtract sign.
- 4 Select the cell with the cost per portion. Check that the cell reference has appeared in cell C17.
- 5 Press 'Enter'.

You can also look at this box to check that your formula uses the correct cell references.

SUM			=C15-C14
10			
11		TOTAL COST	\$ 3.11
12			
13		Number of portions	8
14		Cost per portion	\$ 0.39
15		Selling price	\$ 1.00
16			
17		PROFIT PER PORTION	=C15-C14
18			