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Workstation features

The features of an ergonomic workstation are highlighted in the diagram below. Some features of the workstation may vary depending on the type of computer work being performed. Graphic work may require the use of a pen tool, and multiple monitors are commonly used for a variety of digital work.



Top of screen	The screen angle should be adjustable between 85 and 125 degrees to the horizontal.
Centre of screen	Minimise screen reflection and glare by using an anti-glare filter.
Bottom of screen	Place a document holder beneath or beside the screen at the same viewing distance as the screen.
Top line of sight	The viewing distance should be between 400 mm and 700 mm.
Bottom line of sight	A relaxed viewing angle is approximately 35 degrees.
Head	Keep your head erect.
Shoulder	Have your upper arms hanging freely.
Elbow	Have your forearms approximately horizontal.
Above knee	Ensure there is clearance between the lower edge of the desk and your legs.
Below knee	Ensure there is clearance between the front edge of the seat and the lower leg.
Footrest	Use a footrest if needed.
Back of chair	The back support should be adjusted to support the small of your back.
Under chair	Adjust the seat height to suit your furniture and equipment.
Chair legs	Use a chair with a five castor base.

1B

Minimise wastage

Practise conservation techniques

Conserving resources at work benefits not only the organisation by reducing costs, but also the planet by reducing greenhouse gases and the amount of waste sent to landfill. Most organisations have policies and procedures for conserving resources. You can find out what these are by reading your workplace manual or asking your manager or colleagues.

Ways to conserve resources at work include:

- minimising paper wastage
- reducing energy use.



Minimise paper wastage

Wasting paper costs organisations and the planet a great deal. Consequently, many organisations have developed policies for paper usage. These include:

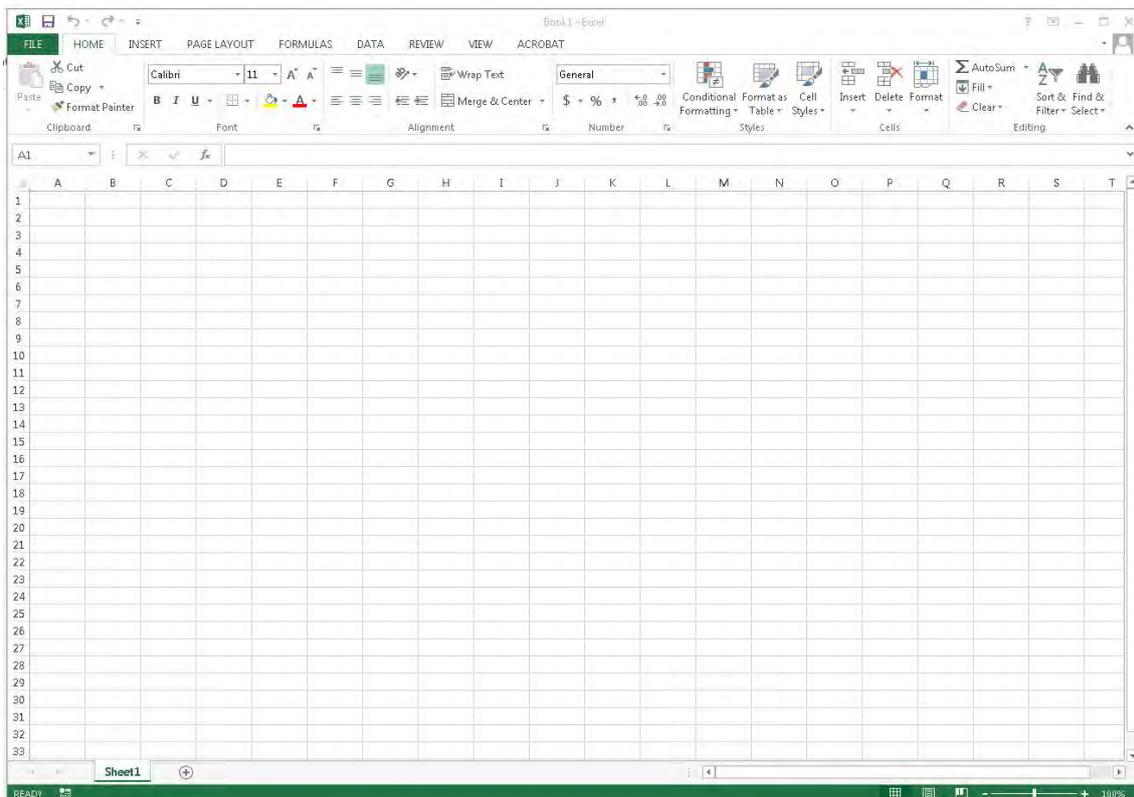
- using both sides of the paper when photocopying
- recycling non-confidential waste paper in recycling bins
- storing email messages in an electronic folder instead of printing
- reducing the volume of printing where possible
- reusing paper by using blank sides for rough drafts and reusing folders and files
- using recycled paper or paper from plantation timber for printed documents
- using a recycling service to collect waste paper.

Spreadsheet layout

Before you start entering data you should be familiar with the layout of a spreadsheet.

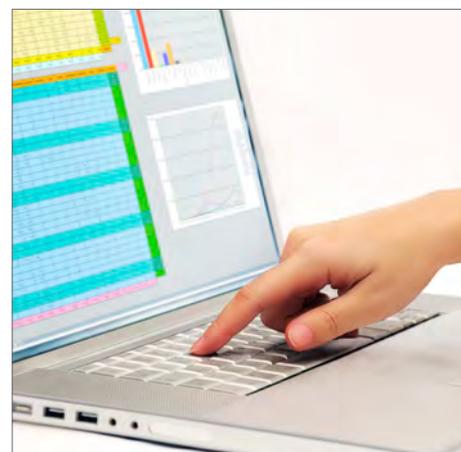
A spreadsheet is a grid of columns and rows. It has numbers down the side and capital letters across the top. There are other items located above and below the grid. You will use these in every spreadsheet you create so it is important you understand what they are and how to use them. The items include:

- Spreadsheet work area
- Title bar
- Ribbon
- The Formula Bar
- The active sheet



Spreadsheet work area

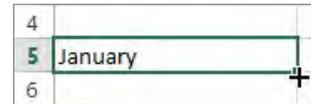
A spreadsheet is called a worksheet. Multiple spreadsheets are called a workbook. A spreadsheet is divided into **columns** and **rows**. The intersection of each column and row is called a **cell**. The current cell is shown by a highlighted rectangle. This is the cell that data can be entered into. To move to another cell, click into the required cell. Each cell has a name. The name is simply the letter above the cell and the number to its left. The cell name is called a cell reference, like a grid reference on a map.



... continued

5. Repeat this process across the row and enter the text **Expenses, Profit** and **Clear Profit** into their own cells (see illustration to guide you).

6. Click into cell A5 and enter text **January**.



7. You can enter the names for the rest of the months in two ways. Type each month into its own cell as shown or you can use the Fill function.

8. To use Fill, move the cursor over the little square in the bottom right-hand corner of the cell with January in it. The cursor will form the shape of a small black cross.

9. While pressing the left mouse button, drag the small black cross (Fill handle) down. You will begin to see the names of other months appearing. Keep dragging until you reach the cell that says December.



10. Release the button and Excel will automatically fill in the months for you.

5	January
6	February
7	March
8	April
9	May
10	June
11	July
12	August
13	September
14	October
15	November
16	December

11. Enter the values as displayed in the example under the relevant headings **Income** and **Expenses**.

12. Save your worksheet in a suitable location on your hard drive and name it **Amy's Booksellers**.

	A	B	C	D	E
1					
2			Amy's Booksellers		
3					
4	Month	Income	Expenses	Profit	Clear Profit
5	January	5332	1232		
6	February	5322	1231		
7	March	6433	435		
8	April	5432	2123		
9	May	2424	522		
10	June	2341	233		
11	July	6322	234		
12	August	7234	242		
13	September	5223	452		
14	October	4223	234		
15	November	9642	522		
16	December	10462	432		
17					
18	Totals	70390	7892		

13. Select one of the numbers you have entered in the Income column. Click into the cell and re-type the new number.

14. Save your changes and close your worksheet.

Practice task 3

Read the case study, then answer the questions that follow.

Case study

Josh works as an administrative assistant in a large organisation. One of his duties is to create spreadsheets to his manager's specifications. One day Josh is asked to create a spreadsheet containing the monthly sales figures of a selection of products the organisation sells. The spreadsheet has to calculate the total takings for each product and then work out a 10 per cent taxation charge for each amount calculated.

The spreadsheet must be formatted to organisational requirements and then saved to the server in the shared folder for sales. Josh's manager tells him to name the spreadsheet Product Totals.

As well as entering the monthly sales figures in one column, Josh has to create two more columns of information.

1. Describe the information to be held in the two new columns.

2. Decide on names for the two new columns.

3. How does Josh have to format the data?

4. What is the name of the spreadsheet and where will it be stored?

continued ...

Practice task 4

Read the case study, then answer the questions that follow.

Case study

Helen has recently taken up a position as an administrative officer with a government department. Her manager has asked her to compile a spreadsheet report analysing the number of people who have travelled overseas in the past year, as well as information on countries visited. She has also been asked to ensure that she follows standard guidelines for producing the report such as colours, font type and size and the department logo. The report from the spreadsheet is to be distributed to media outlets. A graphical representation showing the top-10 locations for travel is also required.

1. Who is the audience for the spreadsheet?

2. What is the purpose of the spreadsheet?

3. What are the information requirements?

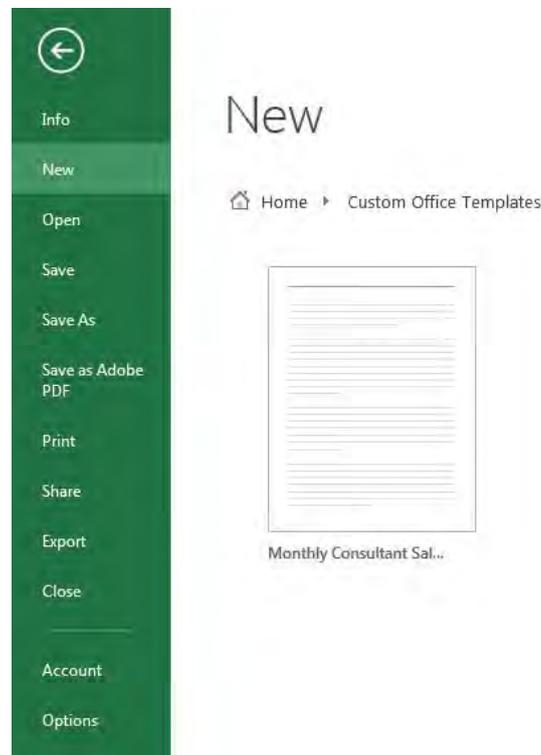
4. What are the elements of spreadsheet design that Helen needs to consider?

Practice task 6

1. Create the following spreadsheet and save it as a template named **Monthly Consultant Sales Report**.

Consultant Sales Report		
Month=		
Andrew		
Gary		
George		
Lisa		
Mary		
Taylor		

Practice using the template. Select the **File** tab, choose **New**, and select **My Templates**. The Monthly Consultant Sales Report template should be available for your use, as below.



Here are some of the features you can incorporate into your style sheets:

- borders
- page numbers
- alignment
- typeface styles and point size.

continued ...

3B Format a spreadsheet

There are numerous techniques for improving the appearance of spreadsheets. Here are some examples of how formatting can change the appearance of a spreadsheet. Compare the two examples: the first has not been formatted and the second has.

	A		A
1	Profit	1	Profit
2	123	2	<i>123</i>
3	234	3	<i>234</i>
4	768	4	<i>768</i>
5	675	5	<i>675</i>

Alignment on page

When creating spreadsheets, it is best practice to begin your spreadsheet at the start of the spreadsheet in A1. What occurs, however, is that when you print the spreadsheet, the information begins at the upper left of the page. This is reasonable for presentation of a longer report but if it is a shorter report, the spreadsheet will seem to be crammed into one corner. Look at the following example of page alignment:

	A	B	C	D	E	F	G
1		End of year STUDENT RESULTS					
2		Results (each assess = 2.5% of overall result)					
3	Student name	Assess 1	Assess 2	Assess 3	Assess 4	Total	
4	Mary Jones	23	21	19	21	84	
5	Jon Youga	12	14	16	15	57	
6	Keon Rasimi	24	18	20	21	83	
7					MINIMUM RESULT	57	
8					MAXIMUM RESULT	84	
9					AVERAGE RESULT	74.7	
10							
11							
12							

... continued

- Press the Enter key to perform the calculation. Fill the calculation down the column.
- Select F4, the first empty cell under End Profit. Enter the following formula **=D4-E4**. This calculation subtracts Tax from Profit, giving you an End Profit value.

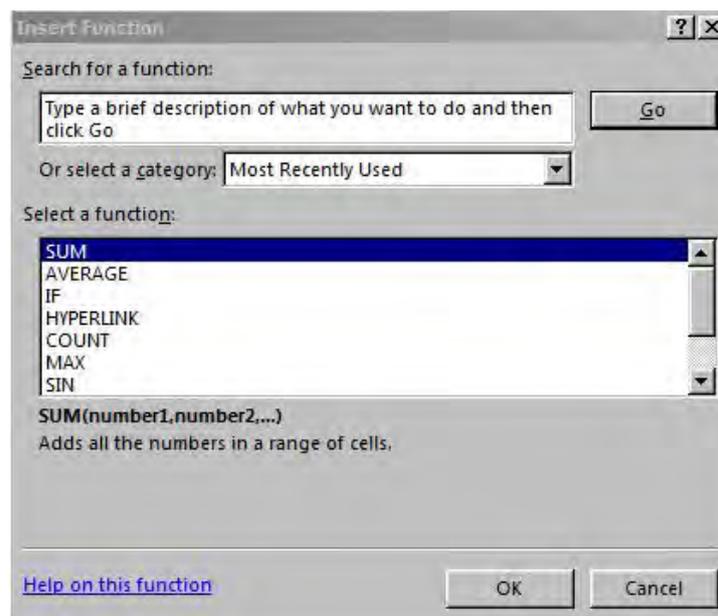
Use the following example to help you.

Month	Income	Expenses	Profit	Tax	End Profit
January	5221	523	4698	469.8	=D4-E4

- Press the Enter key to perform the calculation. Fill the calculation down the column.
 - **Save** your work.
3. Enter the following data into a new spreadsheet.

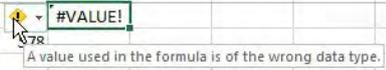
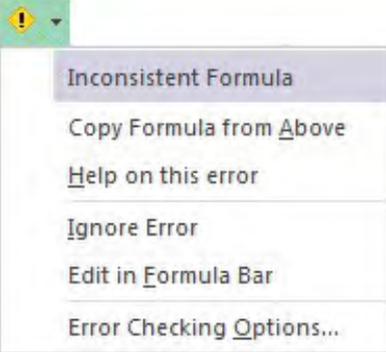
	A	B	C	D
1	January - sales commissions			
2	Name	Total sales	% commission	January commission
3	Mary	\$34,050	10%	
4	Henry	\$29,881	15%	
5	Jay	\$9,837	10%	
6	Esther	\$19,884	12%	
7	Ali	\$12,098	12%	

- Calculate the January commission. Remember to use the cell references in your formulas and not the actual numbers (so use B3 and not 34,050 for example).
 - **Save** the file as January sales commissions.
4. In this exercise you are going to use a function to calculate totals.
- Open your Warehouse Profit spreadsheet. You are now going to use the SUM function to add totals for each column of your worksheet that has a numeric value.
 - Select cell B10. From the Formulas tab select the Insert Function button . You will see the following Insert Function dialog box. Highlight SUM and click OK.



continued ...

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Problem	Example	Action to take to correct the problem										
Green error alert		<ul style="list-style-type: none"> Click on the green alert – a message will appear to explain the possible problem  <ul style="list-style-type: none"> Investigate error, and make necessary corrections Use the warning menu to make appropriate choices 										
Investigation into possible errors in results needed	<table border="1" data-bbox="432 1111 904 1167"> <thead> <tr> <th>Student name</th> <th>Assess 1</th> <th>Assess 2</th> <th>Assess 3</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Mary Jones</td> <td>23</td> <td>42</td> <td>12</td> <td>65</td> </tr> </tbody> </table>	Student name	Assess 1	Assess 2	Assess 3	Total	Mary Jones	23	42	12	65	<ul style="list-style-type: none"> Use the Formula Auditing tools to track the formula – this can only be used if the formula has been input using cell references such as =A1+A2 
Student name	Assess 1	Assess 2	Assess 3	Total								
Mary Jones	23	42	12	65								

Help resources you can use

Working with computer applications can be quite complex. There may be times when you need to seek assistance. Excel has a built-in help function, but if you cannot find the answer there you may need to seek the advice of an experienced Excel user.



Learning checkpoint 3 Create a spreadsheet

This learning checkpoint allows you to review your skills and knowledge in creating a spreadsheet.

Part A

Create the following two spreadsheet reports. Save them to an appropriate location and name them as shown. Use appropriate formulas and functions to create the summary figures. Use the various software functions to assist you to produce them. Use any help resources available to you as needed.

No.1 Bird Watch Club														
Monthly Spot Statistics														
Bird species														
Bird Watcher name	Stubbie Quail	Australian Pelican	Darter	Little Pied Cormorant	Hoary-headed Grebe	Black Swan	Maggie Goose	Chestnut Teal	Pink-eared Duck	Spotless Crake	TOTAL	AVERAGE	MINIMUM	MAXIMUM
Ali	23	26	23	12	6	9	23	3	12	12				
David	2	12	42	23	2	23	42	2	1	32				
Esther	45	23	41	52	4	12	2	1	1	12				
Gowrie	65	52	52	5	1	4	4	0	5	12				
Helen	45	52	5	87	0	7	21	0	6	5				
Lee	12	52	6	2	0	21	4	0	2	6				
Malcolm	2	6	7	23	3	5	65	0	5	6				
Shari	4	6	7	65	12	6	3	2	7	2				
Trudi	1	21	8	23	1	7	2	2	10	1				
Yousef	1	2	3	5	2	0	6	1	3	0				
TOTAL														
AVERAGE														
MINIMUM														
MAXIMUM														

Bird watcher awards for month				
Bird watcher name	Target spots for month	Actual spots of month	% of actual to target	Actual over / under target
Ali	67		=C24/B24	=C24-B24
David	322			
Esther	34			
Gowrie	98			
Helen	322			
Lee	52			
Malcolm	123			
Shari	340			
Trudi	213			
Yousef	45			

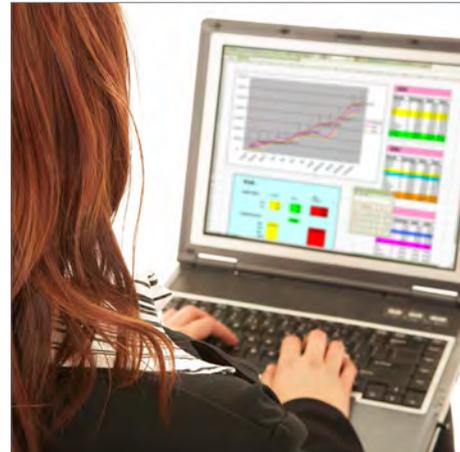
Choose and design a chart

The kind of chart you choose and its design should reflect your organisation's needs. In this section, you will look at different types of charts and consider some of their most appropriate uses.

Area chart

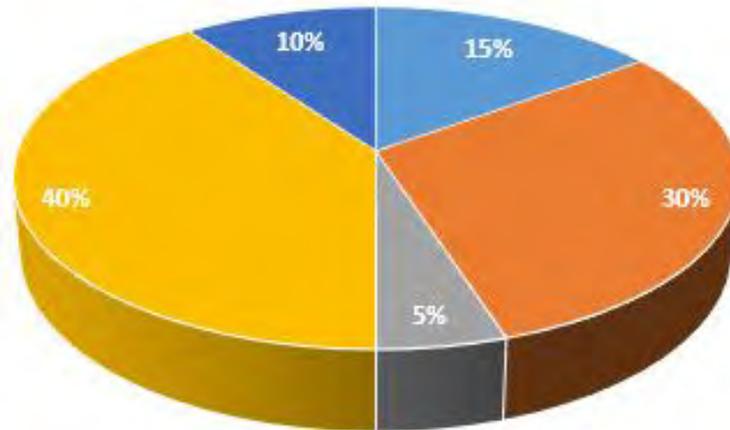
Area charts are used to demonstrate changes over time. For instance, they may be used to show and compare changes to sales over a given time. Area charts highlight total values across a time line.

The following example shows how yearly real estate sales figures vary for different outlets.



3-D pie chart

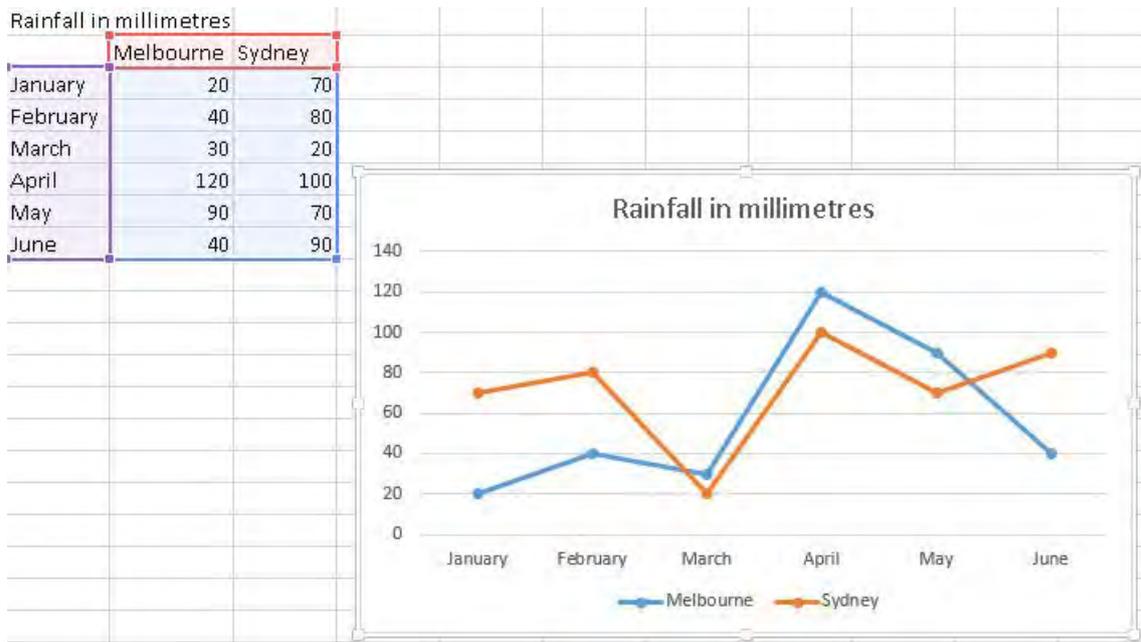
If you prefer the 3-D look for your pie chart, choose 3-D when making your chart selection.



Line chart

A line chart shows the movement of values in a data series using single or multiple lines. It is useful for showing how the values of a data series can change over a period of time.

The following example uses a line chart to show rainfall in Melbourne and Sydney.



4B Create charts

To create charts in your spreadsheet, the first thing is to know what data you want to present. The second is to know what you want to do with it – the purpose of the chart. Then you can choose the most appropriate type of chart to use. The data to be presented in the chart is known as the data range. This information may include text and numeric data. The numeric data is what is represented in the chart and the text relates to the series (or group) of data.

Before you start to produce charts, become familiar with the terms used when referring to parts of a chart.

The following information explains the meanings of terms you need to know.



Axes

An axis is a line that labels the information in a chart according to the labels in the columns and rows of your spreadsheet. Axes (the plural of axis) provide a reference for measurement or comparison of the data in the chart. Most charts have a vertical axis (known as the Y axis) and a horizontal axis (known as the X axis).

Categories

Categories are the names that are placed along the X axis of a chart and are determined by the labels in your spreadsheet.

Data range

The data range is the selection of values you choose from a worksheet to place in a chart; for example, all the numbers in one row or one column of data.

Legend

The legend is the key used to identify the various data series. If you include the series labels from your worksheet, Excel will add these to the legend. Otherwise the legend will display series 1, series 2 and so on.

Practice task 12

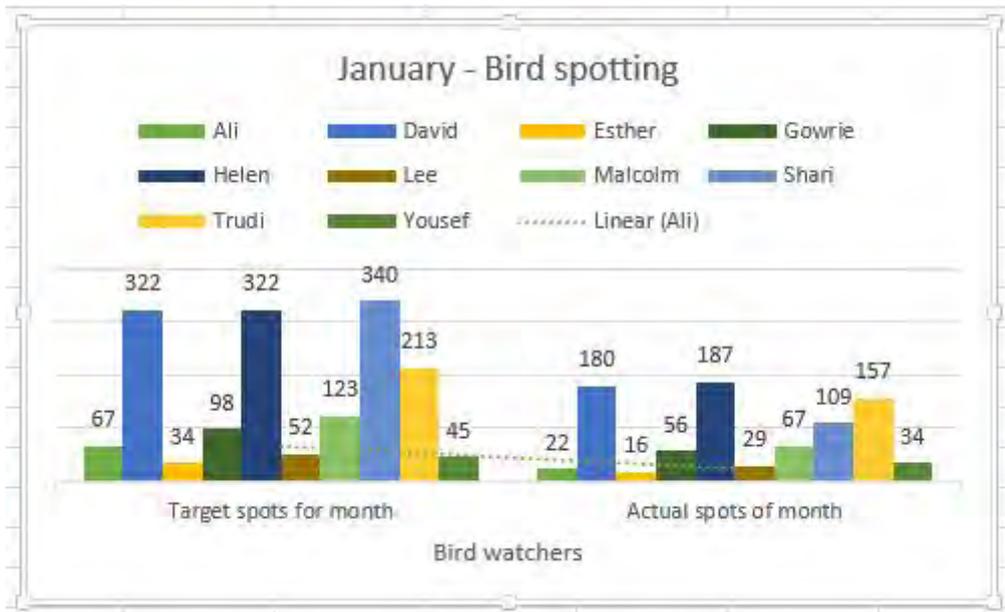
Create a spreadsheet, with the data below for Hemline Miller, showing sales, customer numbers and quantities sold.

Hemline Miller			
January report			
<i>Store</i>	<i>Sales</i>	<i>Customer numbers</i>	<i>Quantity sold</i>
<i>Chadstone</i>	78009	567	1298
<i>Bundoora</i>	95080	892	2098
<i>Wangaratta</i>	120708	927	1792
<i>Seymour</i>	110920	828	1777
<i>Newport</i>	102787	998	2143

1. Create a column chart that compares the sales data.
2. Create a scatter chart that compares customer numbers with quantity sold.
3. Create pie charts for sales, customer numbers and quantity sold.
4. Save your file as **Hemline Miller January Report**.

Analysis tools

Use the **Analysis** tools to add a straight line to compare individual results to the average.



Background tools

Use the **Background** tools to format the plot area (right-click on area and select **Format Plot Area**).



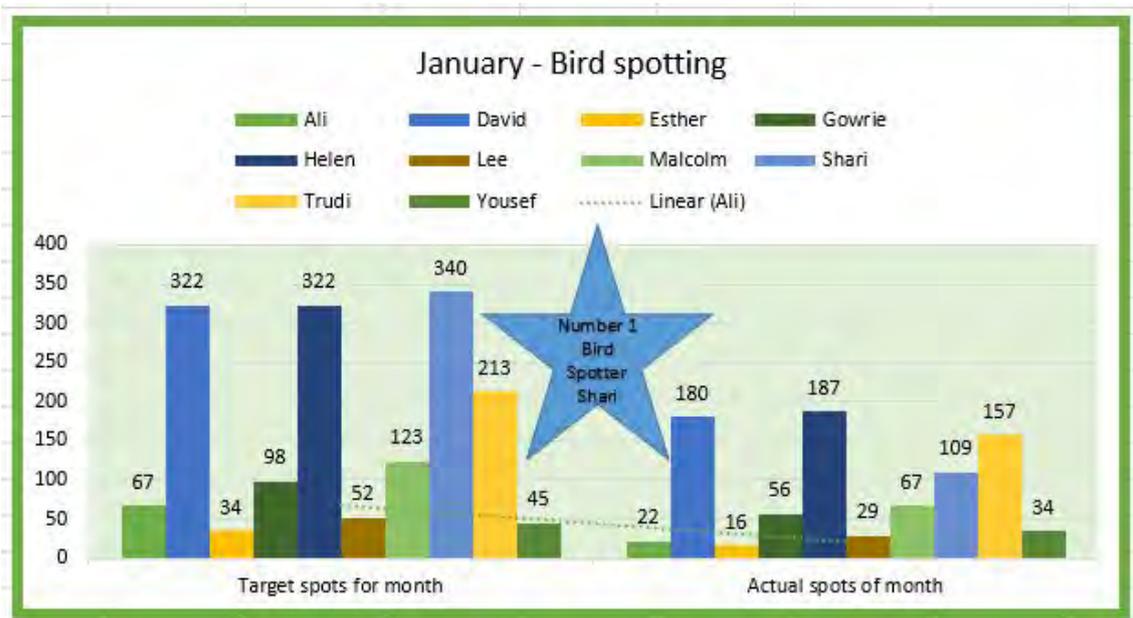
WordArt styling

WordArt Styles tools can be used to add effects to the labels within the chart.



Shape styling

The Shape Styles group can be used to change the border image of objects in the chart.



Topic 5

Finalise spreadsheets

You must ensure you are producing quality spreadsheets and charts that adhere to organisational and task requirements. The final spreadsheet and chart must be thoroughly checked and proofed before completion to ensure the correct message and company image are delivered to the audience. Print previewing your spreadsheet and chart before printing can save time and ensure the necessary adjustments are made before you print.

When preparing spreadsheets and charts you must comply with the required time lines and job instructions. If you believe that either the time line or job instructions need to be altered, you should discuss this with your supervisor or the person who has requested the work. Many businesses have strict deadlines for completing tasks. Failing to meet deadlines can have an impact on other tasks and teams within the organisation.

It is easier to access spreadsheets that have already been created by using appropriate file referencing and saving options. Saving files in the correct location is important as it ensures all interested parties can access the spreadsheet quickly and easily. It also saves time and improves on business efficiency.

In this topic you will learn how to:

- 5A Preview, adjust and print spreadsheets
- 5B Meet data input time lines and quality requirements
- 5C Name and store spreadsheets and exit applications safely

Print the active worksheet

1. Open a spreadsheet file.
2. Go to the File tab and select Print.
3. From Page Setup select Scaling of 135 per cent. Scaling allows you to adjust the size of the print-out, making it larger or smaller on the printed page.
4. The first drop-down menu under Settings identifies what is to be printed and will show active sheets. From the drop-down menu you can choose to print the entire workbook or a selection of cells. Alter the printer that you are printing to if needed, and select how many copies you want to print. It is also possible to alter how the multiple printed copies are collated. When you are ready to print, click the Print button.

