

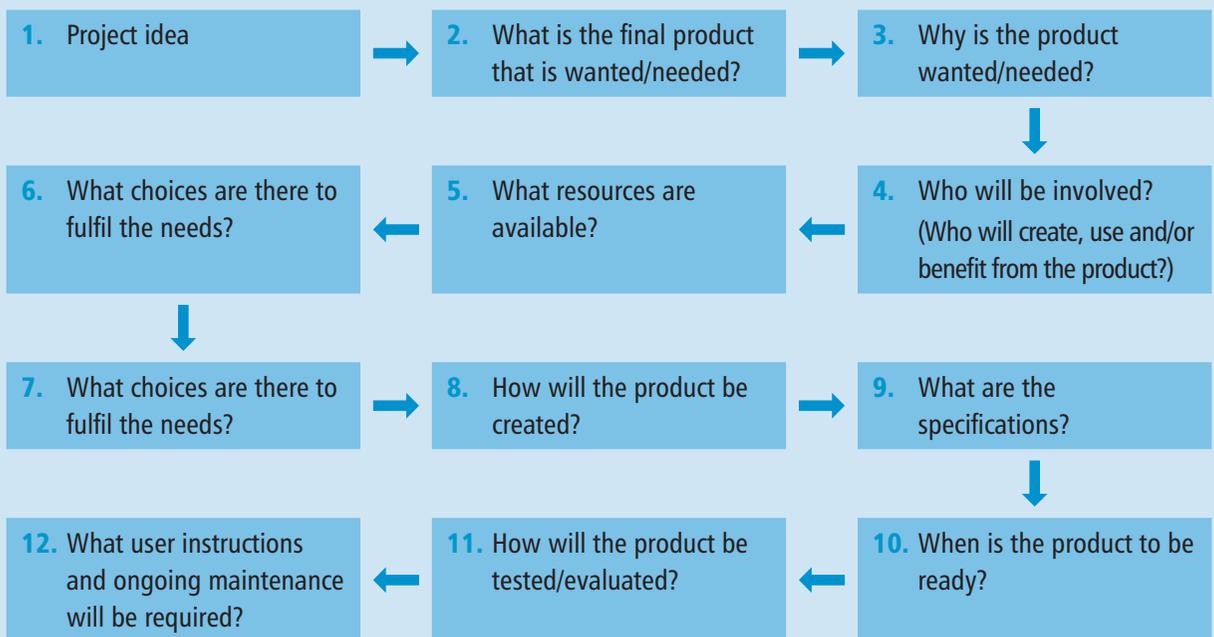
CHAPTER 1 KNOW YOUR TASK

Technological Practice Strand: Brief development

When given a project we need to look carefully at it to see what is required and how we might complete it to the best of our ability. Following the technological process of *Brief development* will ensure that we can take a project idea and clarify it so that we have a better chance of achieving the most successful final product or 'end result'.

Brief development process

The following flowchart illustrates the brief development process.



Benefits of the brief development process

Following the brief development process when you undertake digital technologies activities will help you to achieve a successful **outcome**. A successful outcome is one that meets the requirements of the people who need the project to succeed (they are the **project stakeholders**).

The brief development process also gets you into the habit of thinking about and considering all possibilities and consequences before you act. This will be of benefit to you in your studies in other subjects as well as in your progress through life. Working through the process means that you take the time to consider these questions:

- What is needed?
- What is available to meet these needs?
- When must I have the project completed?
- How will I complete the project?

It also means that you will be less likely to waste time because you have misinterpreted instructions, less likely to make mistakes, and more likely to achieve excellence.

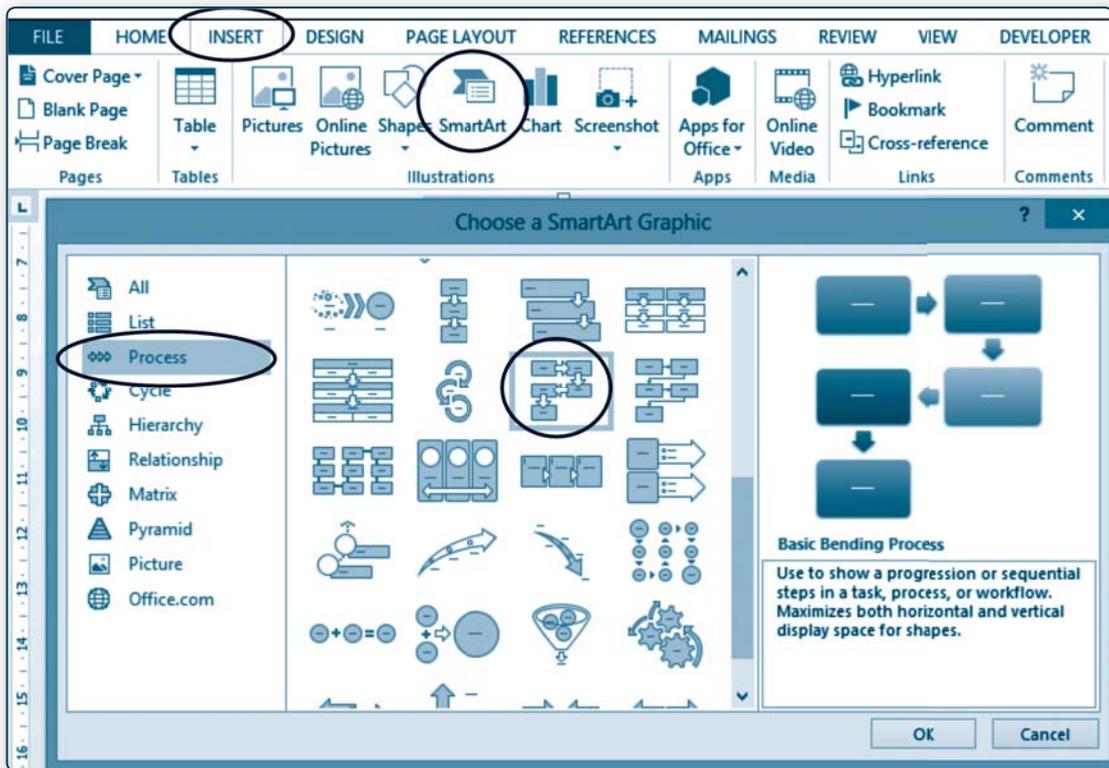
Activity 1A – Create a SmartArt process flowchart

Key competency:

The student will use a variety of language, symbols and texts to communicate the brief development process effectively.

Follow the instructions and create a copy of the brief development process flowchart on page 1.

1. Open a blank document in MS Word™.
2. Save it into your Digital Technologies folder with the filename *Brief Development Process*.
3. Key *Brief Development Process* as the main heading. Enhance the heading by increasing the font size and applying bold.
4. Insert a process SmartArt. The example uses the 'Basic Bending Process' flowchart. You may wish to choose another process flowchart.



5. Recreate the brief development flowchart shown on page 1.
6. Click into each shape to add the text.
7. You can reduce the font size by selecting the text and using the *Decrease Font Size* button which is located on the *Home* ribbon.





Extension tasks

Listed below are two more scenarios. You can download from [RESOURCES](#) and complete a *Brief Development Form* for them followed by a *Conceptual Statement*.

You might then create a slide show, wiki, video or other digital technologies presentation to meet the requirements of the brief.

Extension scenario 1: Cyberbullying

There is concern within the school and wider community about the increasing incidence of **cyberbullying**. Students at the school have been sending texts and posting messages on social networks that have upset other students, teachers and parents. You have been asked to create a presentation, booklet or other digital media communication outlining what cyberbullying is and its potential consequences. The media communication must inform students what cyberbullying is; warn about possible consequences of cyberbullying (for the offender, victim and community); and should encourage students to use digital technologies for positive rather than negative communication.

URL

The following websites provide information about cyberbullying.

<http://www.cyberbullying.org.nz/>

<http://www.netsafe.org.nz/cyberbullying-advice-for-young-people-parents-and-teachers/>

<http://stopcyberbullying.org/>

<http://www.dosomething.org/tipsandtools/11-facts-about-cyber-bullying>

If these sites are no longer active, newer sites can be located by keying 'Cyberbullying information for kids' into a search engine.

Extension scenario 2: Digital technologies piracy

New Zealand recently increased the penalties for **digital technology piracy**. Your school has asked you to prepare a presentation, booklet or other digital media communication outlining what digital technology piracy is and its potential consequences. The media communication must inform students what digital technology piracy is; the various forms of digital technology piracy (music, video, software theft); warn about possible consequences of piracy (for the offender, victim and community); and should encourage students to respect copyright laws.

URL

The following websites, active as at February 2014, provide information about digital technology piracy.

<http://www.stuff.co.nz/dominion-post/culture/9407875/The-cost-of-piracy-to-New-Zealand>

<http://www.webroot.com/us/en/home/resources/tips/ethics-and-legal/the-societal-costs-of-digital-piracy>

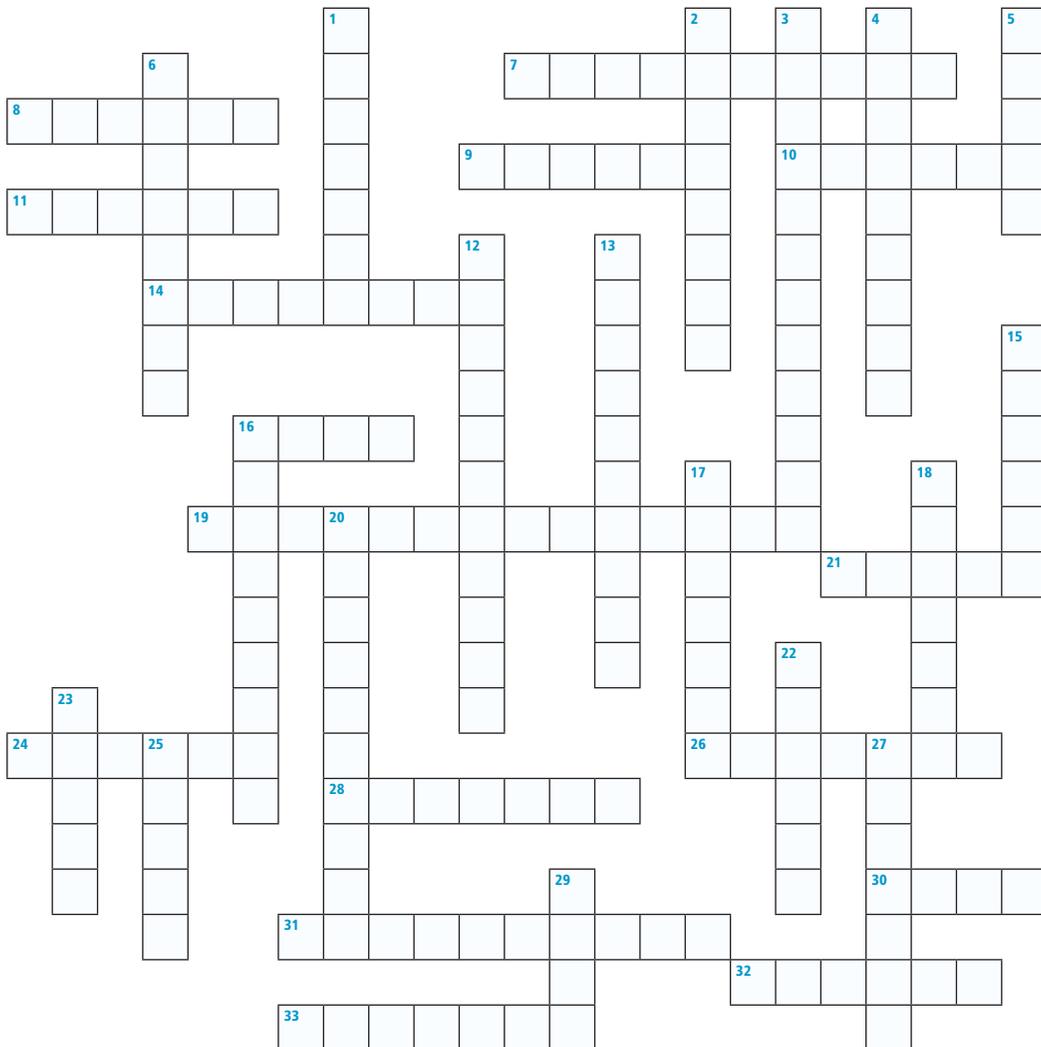
<http://internetsafety.trendmicro.com/what-to-tell-your-kids-about-online-piracy>

<http://digitallydaunted.com/2011/06/15/talking-to-your-kids-about-digital-piracy-2/>

If these sites are no longer active, newer sites can be located by keying 'Digital piracy information for kids' into a search engine.

Know your task: Terminology revision crossword

Completing the following crossword will remind you of digital technologies terms used throughout this chapter.



Ans. p. 255

Created on TheTeachersCorner.net Crossword Maker

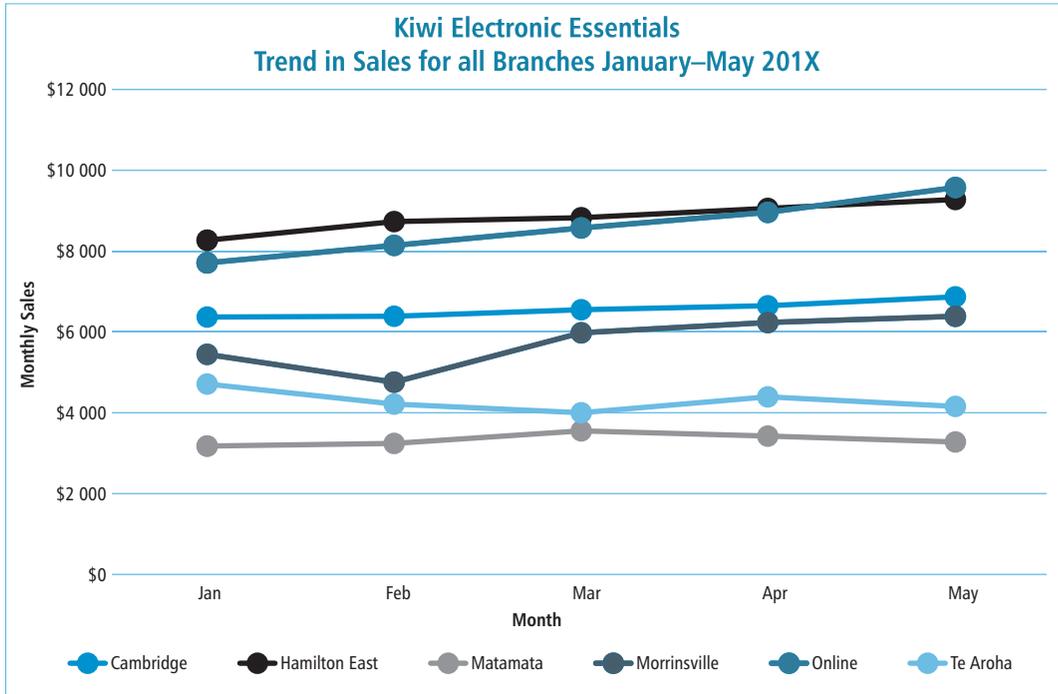
Down

1. Online place
2. Open, download a file
3. People who have an investment in the outcome
4. Ownership
5. Another word for a graphic or picture
6. Document identification
12. Ease with which something can be read
13. Checking that all requirements have been met
15. Values
16. Moves viewer to another place
17. Discuss progress
18. Task, assignment
20. Type of statement describing what is needed
22. Improve the look of a document
23. Can corrupt or delete data
25. Basic outline of what is needed
27. To add movement
29. A back-up of data provides this

Across

7. Data needs this so that it is safe
8. Change
9. Top of the page
10. Typing
11. Add
14. The end user of the product
16. Printed copy of a document
19. Compulsory requirements
21. Software features that help complete the task
24. The menu of choices that runs across the top of your screen
26. Events that endanger electronic data
28. Making sure the product works as desired
30. Shows choices available
31. Digital copy of a document
32. Bottom of page
33. Personal right

Student name



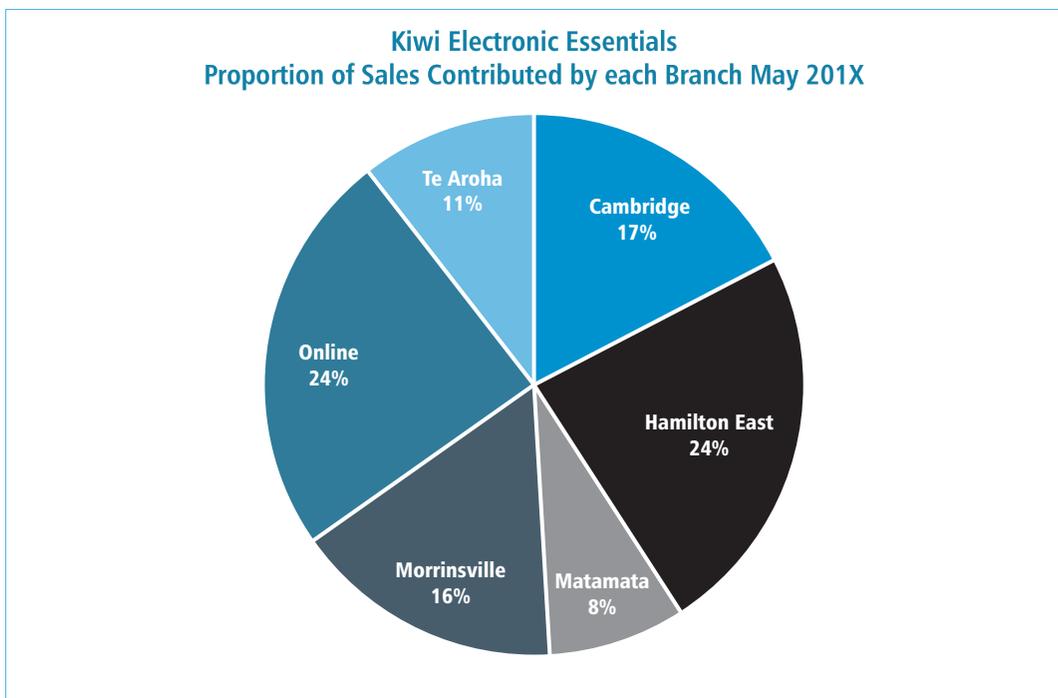
Kiwi Electronic Essentials Sales 201X

10:45 p.m. 25/06/2014

2. A pie graph showing the proportion of sales contributed by each branch for the month of May 201X. Include branch name and percentage labels on the graph and delete the legend.

Your completed May sales pie graph should appear as shown in the print screen capture below.

Student name



Kiwi Electronic Essentials Sales 201X

10:41 p.m. 25/06/2014

Project 2C – Staff wages

Brief: Jayden has been impressed by how easily the sales figures can be monitored using a worksheet. He asks you if a worksheet could be used to calculate the weekly wages of the store managers. They have agreed to receive \$15 an hour for the hours that their store is open. As they need to keep in close communication with one another, they will be paid \$25 a week towards their smartphone costs. They are all taxed at 23% and have opted to be responsible for paying their own ACC levies. Jayden would need to know the Gross Pay, Tax Amount Net Pay, and Final Pay as well as the average, highest and lowest for hours and final pay.

Jayden is hopeful that you will be able to design a worksheet that can be reused each week, although he warns that he must keep an electronic file copy for each week's pay details. To facilitate the testing of designs, Jayden has provided you with the hours worked by each store manager for the last two weeks.

Data:

Store manager	Store	Week 1 hours	Week 2 hours
Kimberley Zuppichich	Cambridge	25	23
Sean Hart	Hamilton East	35	36
Kyle David	Matamata	18	15
William Judson	Morrinsville	22	20
Jayden Berry	Online	28	30
Rhys Compton	Te Aroha	20	22

You show Jayden the following model layouts and formulas.

Project 2C – Model 1: Layout and formulas

	A	B	C	D	E	F	G	H
1	Kiwi Electronic Essentials							
2	Wages summary for the week ended 7 July 201X (Week 1)							
3	Store manager	Store	Hours worked	Gross pay	Tax amount	Net before allowance	Phone allowance	Final pay
4	Berry, Jayden	Online	28	=C4*\$15	=D4*23%	=D4-E4	\$25	=F4+G4
5	Compton, Rhys	Te Aroha	20	=C5*\$15	=D5*23%	=D5-E5	\$25	=F5+G5
6	David, Kyle	Matamata	18	=C6*\$15	=D6*23%	=D6-E6	\$25	=F6+G6
7	Hart, Sean	Hamilton East	35	=C7*\$15	=D7*23%	=D7-E7	\$25	=F7+G7
8	Judson, William	Morrinsville	22	=C8*\$15	=D8*23%	=D8-E8	\$25	=F8+G8
9	Zuppichich, Kimberley	Cambridge	25	=C9*\$15	=D9*23%	=D9-E9	\$25	=F9+G9
10	Total		=SUM(C4:C9)					
11	Average		=AVERAGE(C4:C9)					
12	Maximum		=Max(C4:C9)					
13	Minimum		=Min(C4:C9)					

Homework

Activity 4B – Collecting printed media examples

Key competencies:

The student will be able to

- relate to others as they seek examples of print media in the local community
- manage self as they use personal time to complete the activity.

Task: Collect two or three examples of printed media available in your local community; for example, an advertising brochure/flier delivered to your mail box (also known as ‘junk mail’). The two other examples should be sourced from the wider community; for example, a banking promotion booklet, a fast-food pamphlet, a veterinary clinic newsletter. Consider the examples you listed in Activity 4A.

Place your examples in the back of this Learning Workbook. You will analyse them when you complete Activity 4C.

Many of the ‘**hard-copy**’ information documents that we see every day are printed on white paper with black font and little formatting. These documents are often a method of communicating essential information such as:

- medical supplies needed
- banking details to accompany a deposit
- instructions on how to use an appliance, or
- a list of food that can be ordered over the telephone.

‘Hard’ copies that are colourful and contain **graphics** are referred to as ‘print media’. Most are created to catch our eye and to encourage us to spend money – to consume. Poor design technique and spelling errors grab attention and distract readers from the message that the creator intended. When planning **printed media** documents you should remember the following design tips.

Design tip 1

Keep the purpose of the document and your **target audience** – that is, the people who will read your document – in mind. The document creator is not the target audience. All print media are created with the aim that they will be read by a specific group of people. The purpose and target audience are top priority.

Design tip 2

Overuse of the following tools and formatting features make print media documents appear unprofessional:

- WordArt – especially when the letters are distorted.
- Fancy fonts such as, *Bradley Hand TTC*, *Forte*, **Bauhaus 93**, *Edwardian Script*, **Matern M7 Script Capitals**, *Old English Text*.
- Graphics – especially lots of tiny or poor-quality graphics that are difficult to decipher.
- **Bold** – bold should be reserved for headings, since when **headings** are in bold and text is in regular font (no bold), changes in topic are signposted to the reader, and the document information flows better.
- Borders – most text boxes do not need a border. Print media can be ‘framed’ with one outer border applied by using a rectangle shape (adapted to have no fill). Tables normally need gridlines applied so that the data is better grouped.

Project 4B – Colours and their meanings

Activity 4F – Create a booklet about colours and their meanings

Key competencies

The student will be able to:

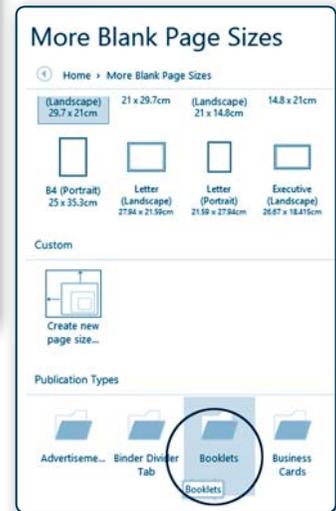
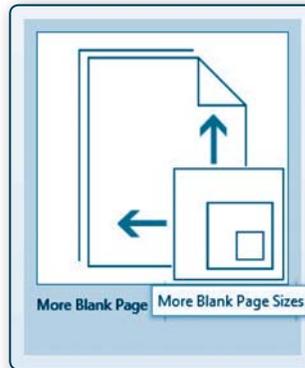
- use language, symbols and texts to manipulate the desktop publishing software effectively
- think creatively as they select colour combinations and graphics
- manage themselves to select appropriate information and complete the tasks instructed.

Note: The following instructions and print screen captures use the MS Publisher™ 2013 desktop-publishing software.

Instructions

1. Creating the booklet

- Go to the first window of MS Publisher and select the *More Blank Pages* option with one mouse click.
- The *More Blank Page Sizes* window opens.
- Select the *Booklets* folder.
- The *Built-in Templates* window appears.



- Select the first option *1/2 A4 Booklet 14.5 × 21 cm*.
- A dialogue box opens, asking if you wish to automatically insert 4 pages.

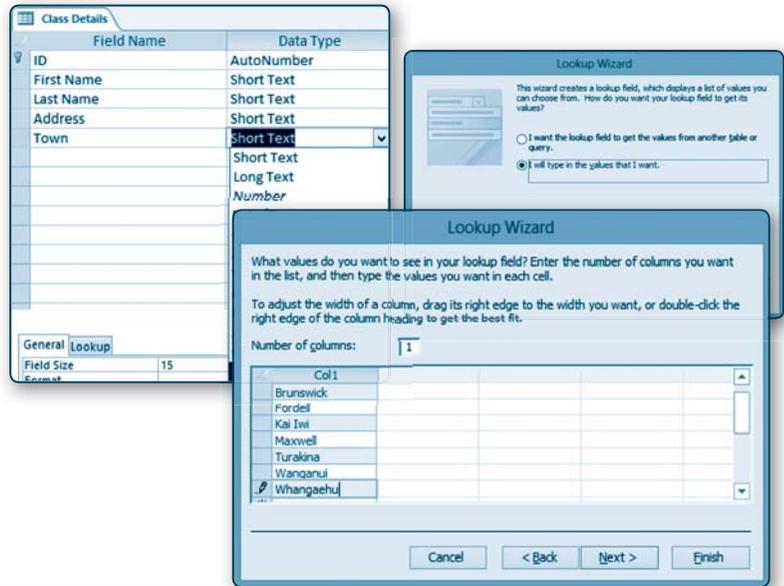


- You do need four pages.
 - Select Yes.
 - The navigation pane on the left of your screen shows the layout of the 4-page booklet. You are on page 1, the title page.
- ##### 2. Format page 1 (the title page)

- Go to the *Page Design* ribbon and apply *Grid and Baseline Guides* of two columns and four rows.
- Insert a rectangle shape to create a border.
- Remove the shape fill and enhance the shape outline (the border) with a colour that you like. Thicken the weight of the shape outline.
- Insert the title 'Colours have Meaning' using the WordArt tool.



2. To enter the town names, mouse-click on the *Lookup Wizard*.
3. The *Lookup Wizard* dialogue window appears.
4. Mouse click into the bullet *I will type in the values that I want*.
5. Mouse click the *Next* button.
6. Key in the town names in alphabetical order, as shown in the print screen capture alongside.
7. Ask the person next to you to check the names for accuracy and sign the *Peer check slip* below.

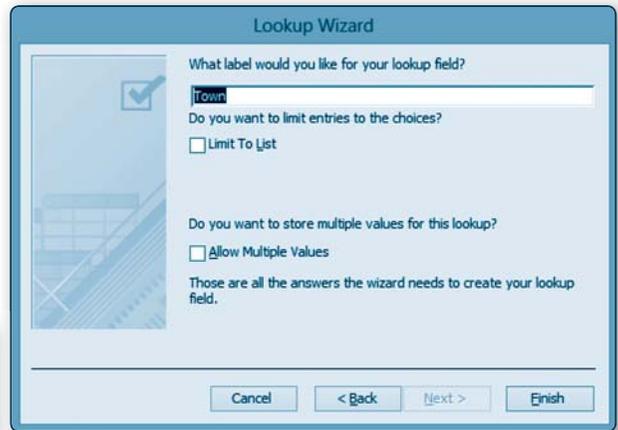


Peer check sign-off.

Name: _____ Date: _____

8. Mouse-click the *Next* button.
9. The *Town* label is appropriate for this *Lookup Wizard*.
10. Mouse-click the *Finish* button.
11. Enter the remainder of the field names, data type and field sizes.
12. When you have finished, your design view of the table should appear as shown in the print screen capture below.

Field Name	Data Type
ID	AutoNumber
First Name	Short Text
Last Name	Short Text
Address	Short Text
Town	Short Text
Email	Short Text
Food	Short Text
Sport	Short Text



Datasheet View Button

13. Click on the *Datasheet View* button that appears under the *File* tab.
14. You will be asked if you wish to save the table. Select *Yes*.
15. The datasheet view appears. You are now ready to enter the first ten records.



Entering the first ten records

Instructions

1. Enter each record by tabbing across or down the datasheet. The ID number will automatically appear as you start entering each first name.
2. You can drag the fields with a lot of data open in the same way that you drag open columns in MS Excel worksheets. This will let you read what you have typed and you can check for accuracy as you go along.
3. MS Access does not automatically capitalise the first letter of the first word in a field so you must establish a good relationship with your *shift* key. Your little fingers should hold the left or right key down depending on whether the letter is on the left or right side of the keyboard. Using the *caps lock* or other fingers will only slow your speed of data entry. It is worth exercising your little fingers.

Important hint: When you are retrieving your database, a message will appear on your screen that says *Enable Content*. You **must** click this message and answer Yes to the *Security Warning* that then appears. If you do not do this then any additions you make to your database will not be saved.

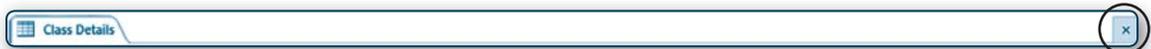


First name	Last name	Address	Town	Email	Food	Sport
Caelan	Locke	54 Key Street	Wanganui	c.locke54@key.co.nz	Apple	Hockey
Casey	Randell	62 Suitcase Place	Whangaehu	c.randell62@suitcase.co.nz	Ice Cream	Netball
Dallas	Tapper	12 Faucet Street	Brunswick	d.tapper12@faucet.co.nz	Sushi	Netball
Hamish	Vollebregt	8 Tennis Lane	Turakina	h.vollebregt8@tennis.co.nz	Pineapple	Basketball
Jacob	Olsen	16 Green Street	Wanganui	j.olsen16@green.co.nz	Enchiladas	BMX
Jamie	Bright	9 Spark Road	Maxwell	j.bright9@spark.co.nz	Smoked Fish	Rugby
Jenna	Olding	15 Ancient Place	Wanganui	j.olding15@ancient.co.nz	Gummy Bears	Polo
Kaleb	Cleary	21 Pure Way	Whangaehu	k.cleary21@pure.co.nz	Chips	Ice Hockey
Mohammed	Faiz	3 Confuse Place	Kai Iwi	m.faiz3@confuse.co.nz	Butter Chicken	Motor Cross
Nevada	Dennison	6 Club Road	Turakina	n.dennison6@club.co.nz	Subway	Skateboarding

4. Your datasheet view should now appear as shown in the print screen capture below.

ID	First Name	Last Name	Address	Town	Email	Food	Sport	Click to Add
1	Caelan	Locke	54 Key Street	Wanganui	c.locke54@key.co.nz	Apple	Hockey	
2	Casey	Randell	62 Suitcase Place	Whangaehu	c.randell62@suitcase.co.nz	Ice cream	Netball	
3	Dallas	Tapper	12 Faucet Street	Brunswick	d.tapper12@faucet.co.nz	Sushi	Netball	
4	Hamish	Vollebregt	8 Tennis Lane	Turakina	h.vollebregt8@tennis.co.nz	Pineapple	Basketball	
5	Jacob	Olsen	16 Green Street	Wanganui	j.olsen16@green.co.nz	Enchiladas	BMX	
6	Jamie	Bright	9 Spark Road	Maxwell	j.bright9@spark.co.nz	Smoked Fish	Rugby	
7	Jenna	Olding	15 Ancient Place	Wanganui	j.olding15@ancient.co.nz	Gummy Bears	Polo	
8	Kaleb	Cleary	21 Pure Way	Whangaehu	k.cleary21@pure.co.nz	Chips	Ice Hockey	
9	Mohammed	Faiz	3 Confuse Way	Whangaehu	m.faiz3@confuse.co.nz	Butter Chicken	Motor Cross	
10	Nevada	Dennison	6 Club Road	Turakina	n.dennison6@club.co.nz	Subway	Skateboarding	

5. Close the table with a mouse-click on the cross that is on the right, in line with the *Class Details* table heading.



6. A dialogue window will appear asking if you wish to save the changes to the *Class Details* table.
7. Mouse click Yes.

Chapter 2: Reusable worksheets

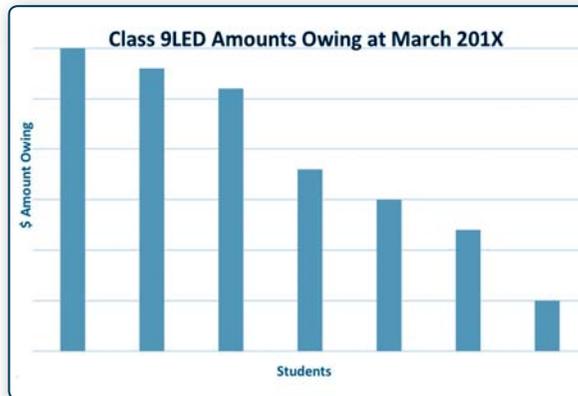
Activity 2A – Worksheet uses and users (page 56)

Use	User
Experiment findings	Scientist
Sports team statistics	Coach
Student grades	Teacher
Family holiday budget	Mother
Income and Expenditure Statements	Accountant
Invoices to be sent to clients for car repairs	Mechanic
Record of money earned	Teenager
Records of Stock Market Share prices	Investor
Staff rosters	Supermarket supervisor
Stock sales and purchases	Farmer

Activities 2B, 2C and 2D – Using MS Excel™ basic worksheet tools; sorting and editing the worksheet (pages 57–64)

Fun College Candyland Trip Expenses and Payments						
Class 9LED, March 2017						
Student name	Travel	Entrance	Lunch	Total expenses	Paid	Owing
Mohring, Alex	\$8	\$15	\$15	\$38	\$8	\$30
Green, Vincent	\$8	\$15	\$15	\$38	\$10	\$28
Watson, Todd	\$8	\$15	\$15	\$38	\$12	\$26
Dasent, Angel	\$8	\$15	\$10	\$33	\$15	\$18
Glidden, Cullum	\$8	\$15	\$12	\$35	\$20	\$15
Price, Samantha	\$8	\$15	\$12	\$35	\$23	\$12
Williams, Zoe	\$8	\$15	\$12	\$35	\$30	\$5
	\$56	\$105	\$91	\$252	\$118	\$134
			Check Total	\$252		\$134

Activities 2E and 2F – Creating and formatting a column graph and re-sorting the data (pages 65–66)



Activity 2G – Creating and formatting a pie graph (page 67)

