

FSKNUM017

Use familiar and routine maps
and plans for work

Release 1



Learner guide

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maps and plans for work**

Release 1

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Aspire Version 1.1



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Postal address (if different):	
Workplace supervisor name:	
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Trainer to complete:

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Before you begin

This learner guide is based on the unit of competency
FSKNUM017 Use familiar and routine maps and plans for work,
Release 1.

How to work through this learner guide

Your trainer or assessor will tell you which parts of the learner guide you need to read, and which activities you need to finish. The learner guide has the following parts.

Part	How you use it
Learning content	Read each topic. If you do not understand something, talk to your trainer.
Examples	This learner guide has examples of completed documents that may be used in a workplace.
Video clips	Where you see a QR code, you can use a smartphone or tablet to access video clips about the content. For information about how to download an app that will read the QR code or for more help, please visit our website: www.aspirelr.com.au/help . 
Learning checkpoints	Complete learning checkpoints to make sure you understand what you have read. Your trainer will tell you which activities to do.
What you have learned	At the end of the learner guide, there is a list of what you have learned. You can use this to check if you are ready for the final assessment.

Words to remember

As you read the learner guide, use this section to write down words you need to remember.

There is a space for you to write the word and a space for you to write down what the word means.

This will help you to learn the words.

Word	What it means



Your story

You have recently been employed as an office assistant in a carpet and flooring business called Fabulous Floors. You work at the company's main office, which has a showroom, a back office for administrative staff and a small warehouse.

Fabulous Floors employs salespeople, flooring installers, a receptionist and three administrative staff. You report to Alice, who is the office manager.

Alice explains that she wants you to learn what everyone does so you can help them during busy times or if someone is ill.

You will be given a few tasks to learn in your first week. Tasks are the things you need to do in your job.

Your tasks

Learn about your tasks below.



Helping sales staff plan their customer visits

- Finding customers' addresses on a map
- Planning the shortest, simplest route



Accompanying sales staff on customer visits

- Travelling with the sales staff
- Giving them directions as needed



Recording measurements

- Drawing floor plans
- Noting measurements



Helping customers to find the showroom

- Giving customers clear directions to the showroom over the phone



Day 1

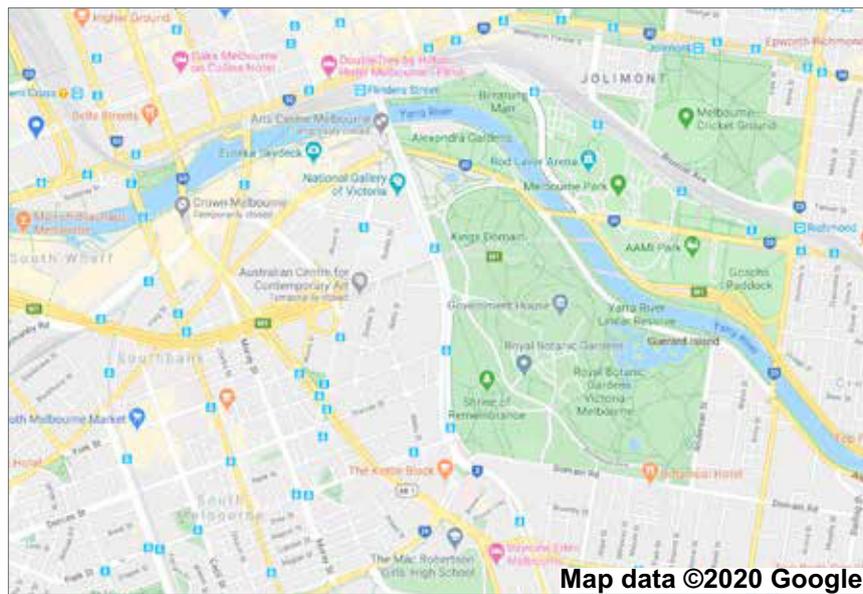
On your first day, Alice shows you around the office and then introduces you to Luka, one of the sales-staff.

Luka helps customers who come into the showroom, but he also visits customers in their homes so he can discuss their needs and take measurements. Alice says you will be joining Luka on his customer visits tomorrow.

Luka shows you a map of his sales territory. He gives you the map and the customers' addresses, so you can plan a route. You will be visiting three customers.

Reading maps

Maps help us to find places and plan travel routes. You will need to use maps to find where Luka's customers are and plan your journey.



Types of maps

Maps have traditionally been printed on paper. Some are printed on a single large sheet that you can unfold and spread out. Others are printed in books. A street directory is a book of maps that shows every street in a particular city. An atlas is a book of maps that shows different countries around the world.

Interactive maps are maps you can use on your phone or computer. They allow you to search for specific places, zoom in, rotate the map and add pins. Google Maps is a well-known example.

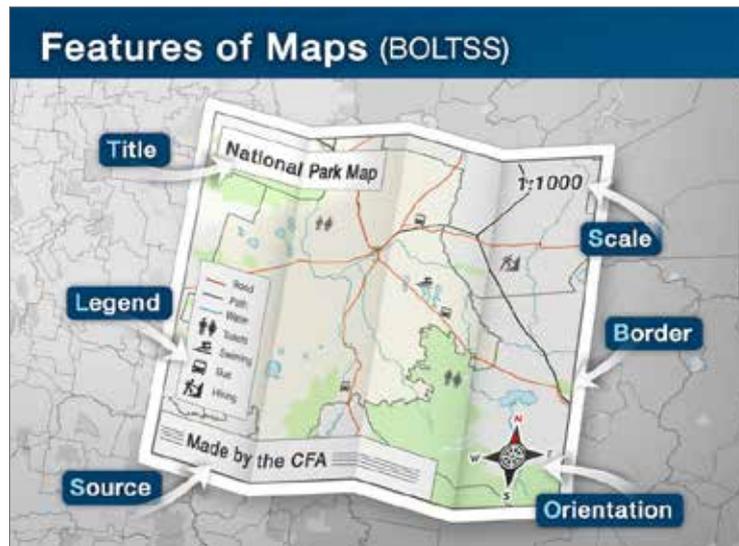
You can also use the Global Positioning System (GPS) on your phone or in your car to plan a route. GPS uses information from a network of satellites to determine where you are and the direction you are travelling in. Some well-known brands using GPS are Garmin, TomTom and Navman.

Features of maps

Maps often have a:

- Border
- Orientation
- Legend
- Title
- Scale.

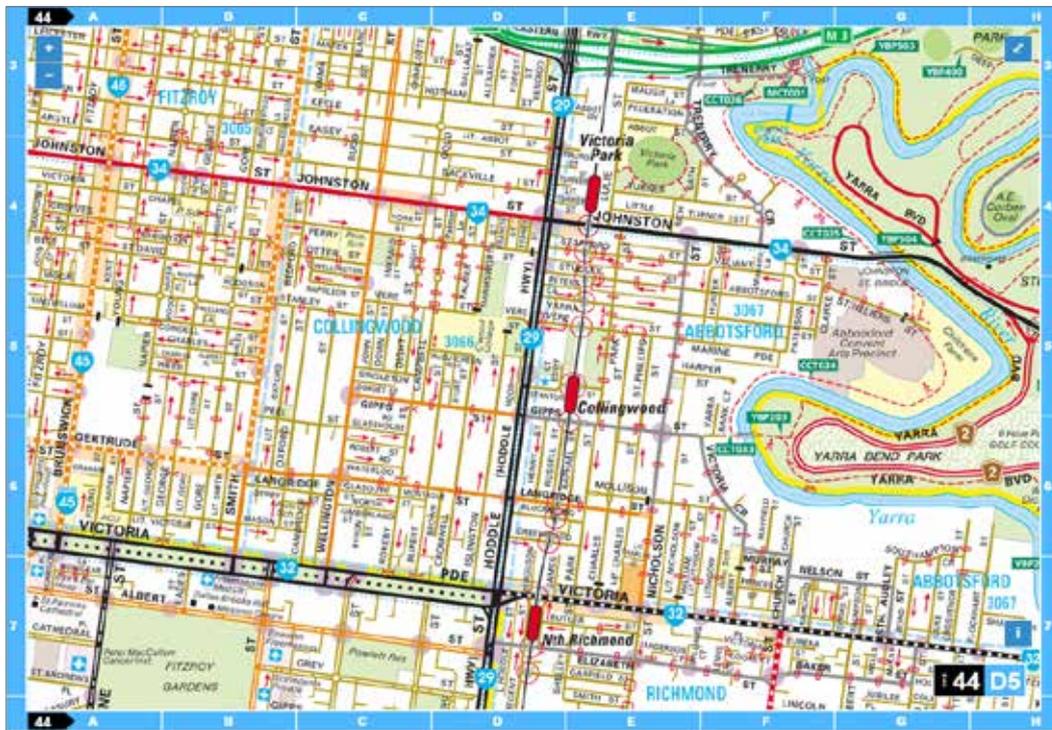
A good way of remembering this is by using the acronym BOLTSS.



Border

Printed maps often have borders. Sometimes the border is a simple line, but some maps have borders marked with numbers or letters to help you find places on the map. These numbers and letters are known as map references.

This is the map of Luka's sales territory. The customers you are going to visit live in Richmond, Collingwood and Fitzroy. The map references are:



© OpenStreetMap contributors

Richmond: E7

Collingwood: B5

Fitzroy: C3

Orientation

Orientation means finding out where you are and what is around you. When you first start a job, you are often given an orientation tour of your new workplace, so that you know where things are.

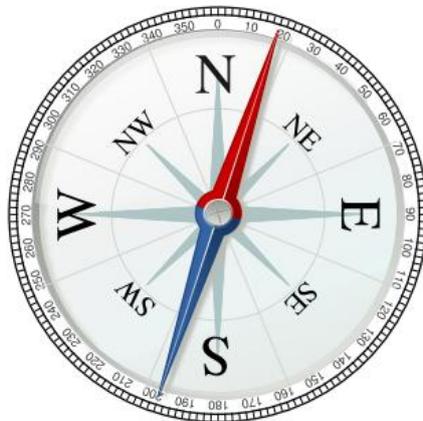
When you're reading a map, orientation means matching what you see on the map to what you see around you.

North, south, east and west are known as the cardinal points. Cardinal means 'most important'. Most maps are drawn with north at the top. That means south is at the bottom, east is on the right and west is on the left. On an interactive map, north is automatically at the top, but you can often rotate the map if you want to. Some maps also have an arrow pointing north. The arrow is may be labelled with the letter N.

If you know where north is on the map, but don't know which way you should be facing, you can use a compass to check. Most smartphones have a compass app.

Other maps include landmarks, such as train stations or town halls, to help you establish where you are.

Luka's sales territory map is called 'Southern Sales Territory', which suggests his area is in the south. Look at the showroom and at the customers' houses to plan your route. You may need to give Luka directions.



Legend

A legend is a list of symbols, colours and lines used on a map. It is a kind of key, telling us what the symbols, colours and lines mean.

For example, blue is often used to represent water, and green usually represents parks or bushland. Crosses often represent hospitals. Lines are used to show roads and train tracks.



Title

A map's title tells you what you are looking at. Without a title, it might not be obvious which city or country the map shows.

Scale

One centimetre on a map might represent a metre on the ground, or a kilometre, or even hundreds of kilometres. To find out, you need to look at the scale.

The scale may be shown as a ratio. For example, if the ratio is 1: 100,000, it means that one centimetre on the map is equal to 100,000 centimetres – or one kilometre – on the ground.

You will also see map scales that look like this:



This scale is divided into units of one centimetre. Every centimetre on the map is equal to 10 kilometres in real life.

When you're looking at a map and planning a journey, you can use the scale to work out how far you have to travel. The easiest way is to use a ruler to measure the route you'll take. Say your route measures 3.5 cm on the map. If the scale tells you that 1 cm is equal to 10 km, you would multiply 10 km by 3.5 to find out how far you have to travel.

Multiplying 10 km by 3.5 gives you 35 km, so that's how far you have to go.

Look at the scale above.

Using a ruler, you can work out that every centimetre represents ten kilometres on a map. Therefore, if the distance between Point A and Point B was 6 cm on a map, the distance in real life would be 60 km.

On interactive maps, the scale is usually found in the bottom right-hand corner. As you zoom in or out, you will see the scale change.

Take a look at Luka's territory map now. You'll see all the features you've just learned about on the map.

What has happened on Day 1

On your first day of work at Fabulous Floors, you have learned about:

- Reading maps
- Common features of maps
- Meanings of symbols on maps
- Using map references to find an address
- The cardinal directions: north, south, east and west
- Using a scale to estimate distance.

Learning checkpoint: Day 1

1. Which of these things are likely to appear on a map? There are **three (3)** correct answers. Tick the correct answers.
 - A scale
 - Symbols
 - A legend
 - Directions
 - Instructions
2. How are map references used? Tick the correct answer.
 - To help you find places on a map
 - To tell you who created the map
3. What colour is water on most maps? Tick the correct answer.
 - Green
 - Blue
 - Purple
4. Which of the following words describe the direction of travel? There are **two (2)** correct answers. Tick the correct answers.
 - North, west
 - Moon, sun
 - South, east
 - Circle, square
5. You tell someone to travel east. What type of direction is this? Tick the correct answer.
 - The wrong direction
 - A cardinal direction
 - A map direction

6. What is a scale on a map used for? Tick the correct answer.

- To estimate distance
- To weigh things
- To show which way is north

7. Maps are usually shown with north at the top of the page or screen. Tick the correct answer.

- True
- False



Day 2

Luka tells you that he has to visit three customers today. He asks you to use Google Maps to plan your travel route so he can call the customers to confirm when you'll be arriving. He wants to leave at 10am, and each visit should take 30 minutes.

Luka also gives you a pad of paper with grid lines marked on it. He promises to show you how to draw a floor plan of a house and record measurements on it. Luka explains that he needs this information to prepare quotes for customers.

Choosing the right process

Luka has asked you to work out when you will arrive at each customer's house. To answer this question, you will need to:

- Plan the most logical route
- Estimate the distance from one town to the next
- Calculate how long it will take you to travel this distance.

You could use a ruler to measure the distance between each town and then use the scale to calculate how far you'll have to travel. You would then need to calculate the time to travel each distance by multiplying it by the speed you are likely to travel.

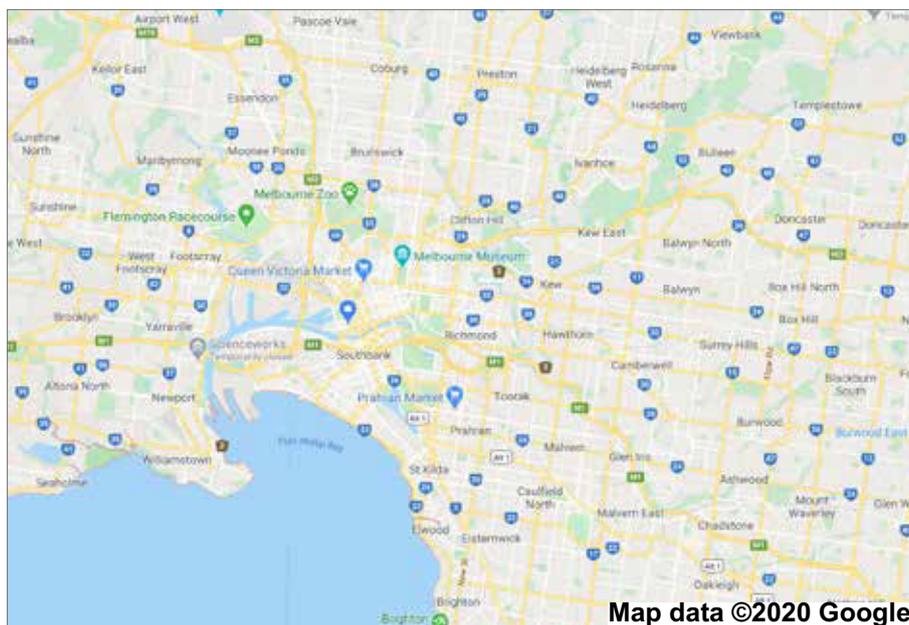
Fortunately, online maps make it much easier to plan a route, estimate distances and calculate travel times. Luka suggests that you use Google Maps to complete this task.



Using Google Maps

Google Maps is one of the most popular interactive maps. You can use it on your computer or install it on your phone for free.

To plan the route you will take with Luka today, open Google Maps in your browser (www.google.com.au/maps) or launch the app on your phone.



1. In the search bar, type in the address of the first customer and click on the magnifying glass symbol. The map will then load.
2. Find the directions icon and click on it. You will need to add the showroom address as your starting point.
3. The map will then automatically show you the possible routes, including time and distance.
4. Click on the plus sign in the directions panel to add your next destination. Keep adding each customer and then add the showroom address as your last destination.

Take note of the total time and distance, then try changing the order of the addresses you'll be visiting by dragging the icon next to each place in the directions panel. This will show you if visiting the customers in a different order will make your trip longer or shorter.

You can then send the directions to Luka's phone, or print them out to show him. Keep them saved on your phone too, or print out a copy for yourself. You will need to refer to them when you set out on your journey.

Creating floor plans

When you arrive at the first customer's house, Luka asks you to help him take the measurements. He explains that first you need to draw a floor plan of the house.

A floor plan is similar to a map: it shows where things are, but at a size that is useful to you. Your floor plan should show all the rooms of the house, and you will add the measurements of each room so that Luka can work out how much flooring is needed for each room.

Luka shows you a floor plan of a similar flat as an example.



Luka explains that he draws a rough sketch first, then measures the rooms and fills in the measurements. He uses a scale of 1: 100 (1cm: 1m) . This helps him draw the flat accurately.

Luka measures the living room, kitchen and bedroom and asks you to record the length and width of each room.

Living room – length 3.38m, width 3.3m

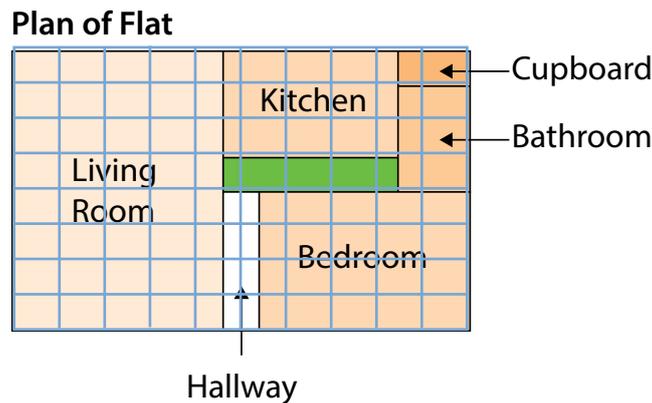
Master bedroom – length 3.38m, width 3.54m

Balcony – length 3.3m, width 1.3m

Using a simple scale

After you have left, another customer calls and asks if you can include flooring for the hallway in your quote. Luka didn't measure the hallway, but he says he can estimate what is needed because he drew the floor plan to scale. For the estimate, Luka calculates the area of each room or floor in square metres using the area calculation: length \times width.

To estimate the length and width of the hallway, Luka divides the hallway into two rectangles. They are shown in green and white on the plan below.



Using the scale, you can count the grid squares to work out the length and width of the green rectangle.

$$\text{Length} = 4\text{m}$$

$$\text{Width} = 1\text{m}$$

The area of a rectangle is its length multiplied by its width. For the green rectangle, that's $4\text{m} \times 1\text{m}$ so the total area is 4m^2 .

The white rectangle is also $4\text{m} \times 1\text{m}$, so its total area is also 4m^2 .

The total area of the hallway is the area of the green rectangle plus the area of the white rectangle: $4\text{m}^2 + 4\text{m}^2 = 8\text{m}^2$.

You can use a calculator to help you with these measurements.

Giving directions

On the way to the next customer, Luka spots a traffic sign that warns of roadworks on the southbound lane of the highway. Luka asks if the planned route will take you south.

Open Google Maps on your phone. The blue dot will show you where you are. You can move the map to check if your route will take you southbound. Remember the north direction arrow will appear if you rotate the map in different direction.

You can also use Google Maps to look for alternative routes to avoid traffic problems. Another free app you could use is called Waze. Both apps give you live traffic updates and will change your route to avoid traffic problems. Sometimes it is worth travelling a longer distance if it helps you to avoid slow traffic areas.

When providing directions to a driver, you should give clear instructions and listen for when they need assistance. Once the journey is complete, think about the route you chose. Was it the quickest and most direct way to reach your destination? Were the directions you gave suitable?



What has happened on Day 2

On your second day of work at Fabulous Floors, you have learned about:

- Choosing the right process for completing work tasks
- Using Google Maps
- Creating floor plans
- Using a simple scale
- Giving directions.

Learning checkpoint: Day 2

1. What did Luka ask you to work out? There are **two (2)** correct answers. Tick the correct answers.
 - The time it will take to get to each customer
 - The best route to visit all customers
 - Where to stop for lunch
2. How can Google Maps help with directions? There are **three (3)** correct answers. Tick the correct answers.
 - Show more than one route to get somewhere
 - Show you the time and distance to get somewhere
 - Plan routes that have more than one stop
 - Show north, west, east and south cardinal directions
3. What does a floor plan show? Tick the correct answer.
 - The layout of a home
 - Where the house is located
 - How to get to the house
4. A scale for a floor plan can be used to estimate the size of rooms not yet measured. Tick the correct answer.
 - True
 - False
5. When using Google Maps to find an address, you don't need to know which way is north. Tick the correct answer.
 - True
 - False

6. Why should you check the route and directions you gave?

Tick the correct answer.

- To check if you took the quickest and most direct route, and that the directions you gave were suitable
- So someone else can do it next time.



Day 3

On your third day, Alice asks you about your day out with Luka. She is pleased that you have been learning about maps, plans and scales.

Alice asks you look at the 'How to find us' page on the company website and see if you can suggest how to improve the directions to the showroom.

You will need to make a list of any changes you think are required, and then present these ideas to Alice for discussion.

Identifying the work task

Alice has set you a problem to solve. You need to outline the process for completing the task. To work out what problem you are trying to solve, write down the things you need to do in order to identify the problem. These should include the following:

- Look at the 'How to find us' webpage
- Test the directions for accuracy
- Identify any missing or wrong information
- Consider what additional information might be useful to customers.

You read the directions provided to customers on the website. You also look at the simple map and the information about parking and the closest public transport stops.

The map only shows the closest intersection and marks the car dealer next door. It has no scale, no way of telling where north is and does not indicate where customers should park.

You compare the simple map to an online map. You note that several highly populated towns are within 20 km of the showroom. Customers are likely to be travelling to the showroom from these towns. You also spot several key landmarks nearby that customers are likely to know which would help them to find the showroom.

Having investigated the problem, you are now ready to document and report on your findings to Alice.

Documenting and reporting your ideas

When reporting your findings to Alice, it is important that you use the right tools and words to describe the features you are suggesting should be included on the website.

On your first day, you learned about map symbols, scales and cardinal directions. You will need to explain in writing how these should be included on the 'How to find us' page on the company's website.

Making a rough drawing or sketch of what you think should be on the map would be a good way to share your ideas with Alice.

From your research, you have decided that the following should be included on a larger, more detailed map:

- Scale
- Symbols for nearby landmarks
- Cardinal directions
- Nearby towns, with distances and travel times to the showroom
- Legend.

You decide to suggest to Alice that the map is professionally redrawn to incorporate the features in your sketch, or that they include an image from Google Maps so customers can click on it to find their own route to the showroom.

Google has tools you can use to create your own map and add places, lines and shapes to it. You can learn how to use these tools at: aspirelr.link/create-google-map.

You also want to include another sketch showing the available parking in front of and behind the showroom, so customers know where to park when visiting.

Your report to Alice should:

- Identify the problem you were trying to solve
- List the improvements you'd like to suggest
- Include sketches illustrating your ideas.

A report should always use formal language, and you should use the correct mapping terms you have learned since you started work at Fabulous Floors.



Presenting your ideas

When you've completed your report for Alice, she asks you to present your ideas for her so you can discuss them together. Alice doesn't expect a PowerPoint presentation; she just wants you to explain how you identified the problem and the process you went through to reach your recommendations.

You will need to ensure you can explain the mapping terms you have used in your report. For example, many people won't be familiar with the term 'cardinal directions', but they will understand that maps are usually oriented north. The formal term is not useful in this situation.

You also need to express mathematical terms in spoken language. For example, if the scale on your map was 1:200,000, you would explain to Alice that one centimetre is equal to two kilometres.

Follow the same structure as your report to explain your ideas. Check to see that Alice can understand what you're explaining and listen carefully when she asks questions.



What has happened on Day 3

On your third day of work at Fabulous Floors, you have learned about:

- Identifying the work task
- Documenting and reporting your ideas
- Presenting your ideas.

Learning checkpoint: Day 3

1. How can you improve a map? Tick the correct answer.
 - Replace it with a Google map
 - Draw a sketch of it
2. What should you do when reporting on workplace directions? There are **three (3)** correct answers. Tick the correct answers.
 - Use a problem-solving process
 - Plan a logical structure for your report
 - Use the right language for the report
 - Provide a printout of directions from Google
3. What is the correct way to read out 1:5000? Tick the correct answer.
 - One dot dot five thousand
 - One centimetre is equal to fifty metres

What you have learned

Well done. While working at Fabulous Floors, you have learned about:

- Reading maps
- Common features of maps
- Meanings of symbols on maps
- Using map references to find an address
- The cardinal directions: north, south, east and west
- Using a scale to estimate distance
- Choosing the right process for completing work tasks
- Using Google Maps
- Creating floor plans
- Using a simple scale
- Giving directions
- Identifying the work task
- Documenting and reporting your ideas
- Presenting your ideas.

You are now ready for the Final Assessment.