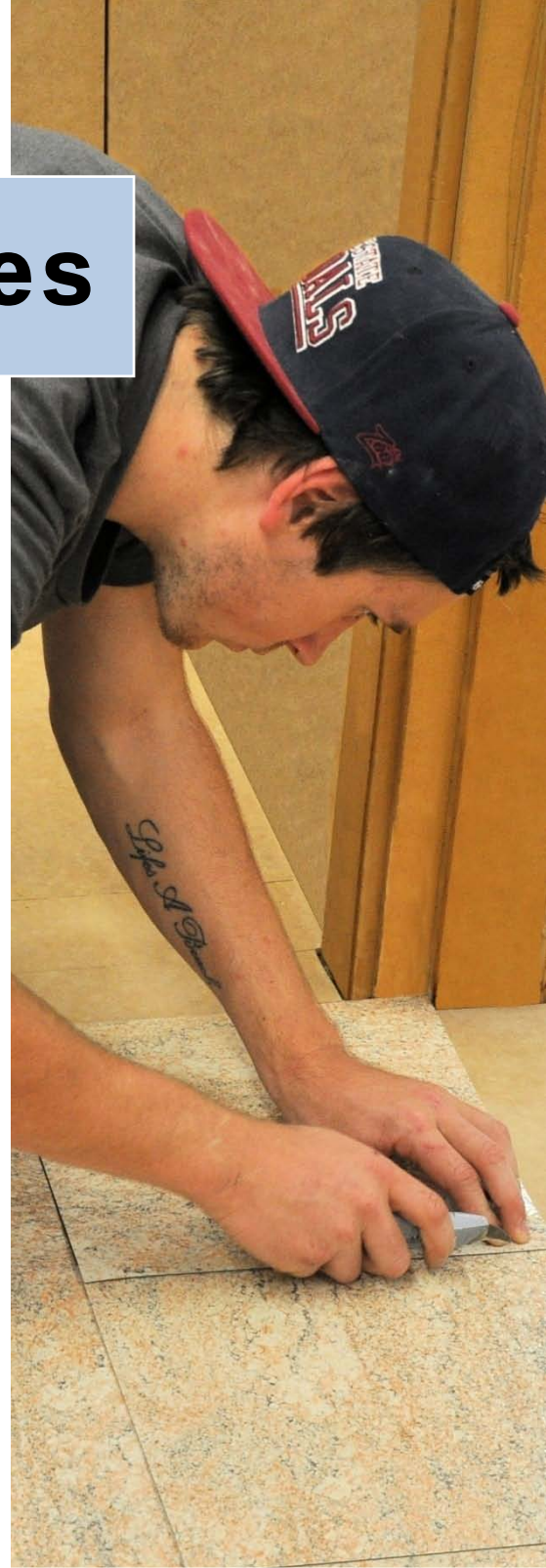


Resilient tiles



Supporting:

***LMFFL2302A: Install resilient
tiles using standard
installation practices***



Workbook

Name:

Resilient tiles

Workbook

Containing learning activities and assignments for the unit of competency:

LMFFL2302A: Install resilient tiles using standard installation practices

The assignment templates are also available in an electronic 'Word' version, downloadable from the Flooring technology website at:

www.flooringtech.com.au



Developed by Workspace Training for the 2012-2013
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Flooring Technology resource development project



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Introduction

Resilient tiles is a 'learning unit' from the Flooring Technology training resource. It supports the following competency from the *Certificate III in Flooring Technology* (LMF31208):

- *LMFFL2302A: Install resilient tiles using standard installation practices*

To be assessed as competent, your assessor will use a range of methods to check your understanding of the concepts presented in the Learner guide for this unit and your practical ability to install resilient tiles.

These may include:

- written assignments
- practical demonstrations
- on-the-job discussions about how you go about particular activities
- learning activities undertaken while you're progressing through the unit
- examples of installations you have undertaken
- log book or work diary.

Literacy, numeracy and computer skills

Literacy is the ability to read and write. To complete this qualification, you will need sufficient literacy skills to produce a range of workplace documents. You will also need the skills to be able to read and understand documents such as order forms, installation instructions, project briefs and safe operating procedures.

Numeracy is the ability to work with numbers. Flooring installers need to do lots of measure-ups and calculations, so there will be many opportunities for you to learn and practise your numeracy skills.

When it comes to completing the written assignments for this qualification, a certain level of literacy ability is required to read the questions and write down your answers. There will also be times when you are asked to generate documents on a computer.

Obviously, it's important that you clearly understand what the assignment is asking you to do, and that your work is a good reflection of what you really know. So if you're having trouble reading the questions, writing down your answers, or using certain computer programs, make sure you speak to your trainer before you hand the assignment in.

There are various ways your trainer can help you. For example, they may be able to ask the assignment questions verbally and help you to write down your answers.

They may also be able to show you sample answers to similar questions, which will let you look at the way they're written and give you hints on how to write your own. You may also be allowed to do the assignment with the assistance of another person.

Applying for RPL

RPL stands for **Recognition of Prior Learning**. It is a form of assessment that acknowledges the skills and knowledge you have gained through:

- on-the-job experience
- formal training in other courses
- life experience, through your hobbies or other outside activities.

If you believe that you are already competent in some or all of the skills covered in this unit, ask your assessor about how to apply for RPL.

Using this workbook

All of the lessons in the Learner guide for this unit have learning activities at the end. Their purpose is to provide discussion points and questions to help reinforce your understanding of the concepts being presented.

There are also a range of assignments, which appear at the end of each section. These are designed to test your knowledge of the subject matter and ability to submit written responses in an acceptable format.

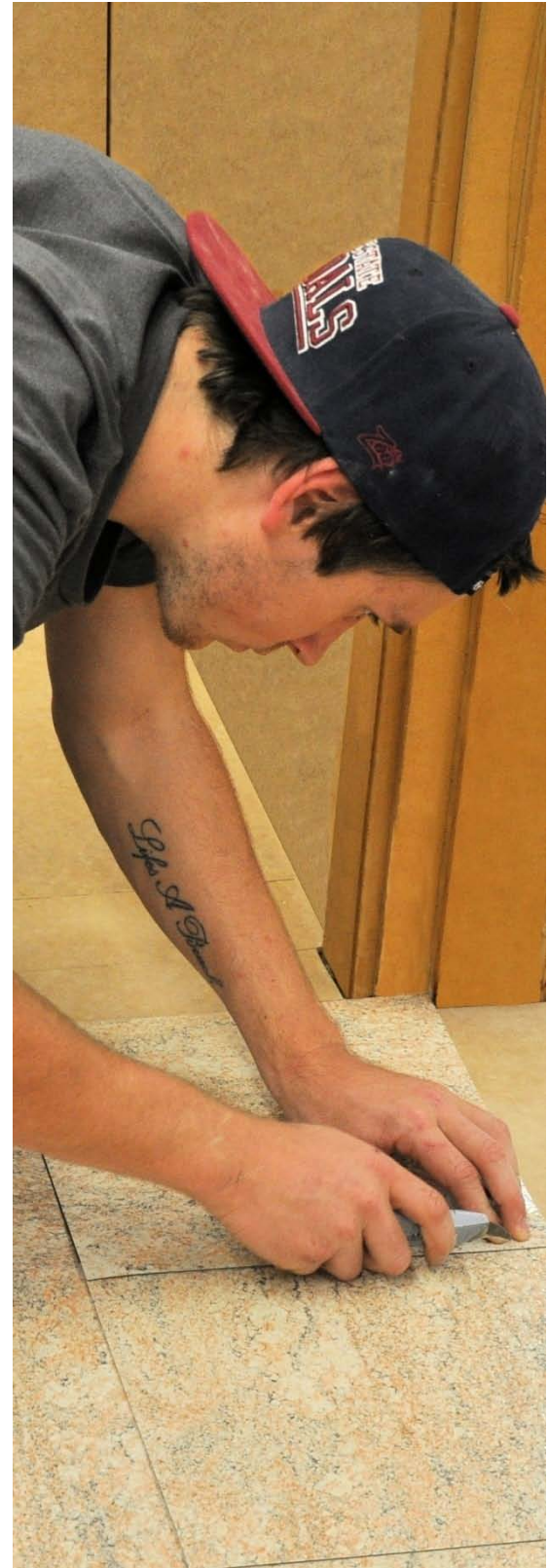
This workbook reproduces all of the learning activities and assignments in a format that lets you handwrite your answers to the questions.

Note that your trainer may ask you to produce a computer-generated document for all of the formal assignments, either printed out in hard copy or submitted electronically. To do this, go to the website version of the unit and look for the *Assignment* link in each section. This will allow you to type your answers into the 'Word' document and then either print it out or email it direct to your trainer as an attachment.

You may also be asked to share your learning activity answers electronically, especially if you are undertaking this unit by distance learning and are linked up with fellow students in other locations. This might be done through group emails or via a social networking site such as Facebook. In these cases, you should use the website resource rather than this workbook.

Part 1

Learning activities



Section 1: Tile basics

Types of tiles

Use the table below to answer the following questions:

- What are the brand names of one VCT and one LVT?
- Who are the manufacturers?
- Where are they designed to be installed – that is, what are their typical applications?

Example	VCT	LVT
Brand name		
Manufacturer		
Typical applications		

Types of adhesives

Choose one example each of an acrylic adhesive and a pressure sensitive adhesive.

Get the brochures and answer the following questions in the table provided:

- What types of substrates are they designed for?
- What types of resilient tile products are they most suitable for?

Adhesive type	Recommended substrates	Recommended tile products
Acrylic		
Pressure sensitive		

Applying an adhesive

Go to the video clip called 'Marmoleum tile installation' at:

<http://www.youtube.com/watch?v=UfYMJBu4HI0>

Watch the clip and then answer the following questions.

1. What happens to Marmoleum tiles if they are installed onto adhesive that has already 'flashed off'?

2. When should you roll the tiles with a floor roller?

Layouts and bonds

Go to the video clip called 'Quality luxury vinyl tiles from Polyflor' at:

<http://tv.polyflor.com/video/quality-luxury-vinyl-tiles-from-polyflor?current-channel=luxury-vinyl-tile>

Watch the clip and then answer the following questions:

1. Write down the names of the different types of bonds you recognise.

2. Are there any bonds shown in the clip that you don't recognise? Write down their names below if you can find them out, or draw the pattern if you don't know what they're called.

Preparing the tiles

Manufacturers often specify the recommended temperature range and humidity levels for their products using abbreviations like this:

Temperature: $21^{\circ}\text{C} \pm 5^{\circ}$

Relative humidity: $50\% \pm 10\%$.

These 'plus or minus tolerances' show the range of measurements allowed by indicating the middle reading and specifying how much higher and lower it is allowed to go.

1. If the temperature range for a flooring product is listed as $21^{\circ}\text{C} \pm 5^{\circ}$, what are the actual upper and lower readings?

2. If the relative humidity is listed as $50\% \pm 10\%$, what are its upper and lower readings?

Section 2: Square layout techniques

Finding the starting point

Go to the Armstrong Floors instruction videos at:

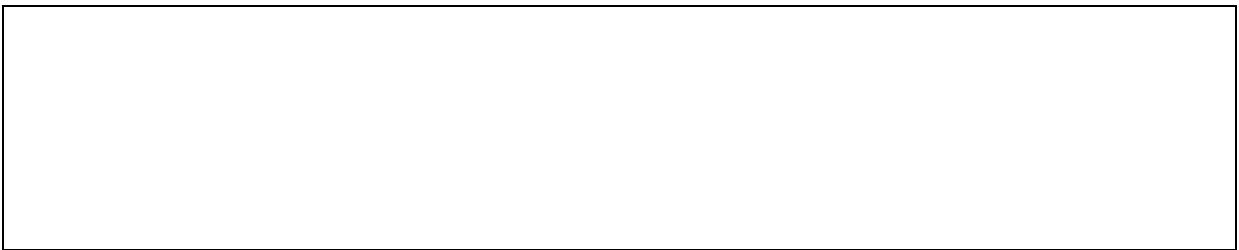
http://www.armstrong-aust.com.au/commflrpac/aus/ep/au/vinyl_video_library.html#

Select the 'Vinyl tile installation' tab under the media player and then click on 'Vinyl tile installation video Part 3'.

The first two minutes of this video clip shows the process of setting out the room using the standard technique we've described in the Learner guide.

You'll notice the narrator says that the floor will fit 7 full tiles across the width and 11 full tiles along the length. However, he decides to change the set-out so that there's only 6 full tiles widthwise and 10 full tiles lengthwise.

- Why does he change the layout?



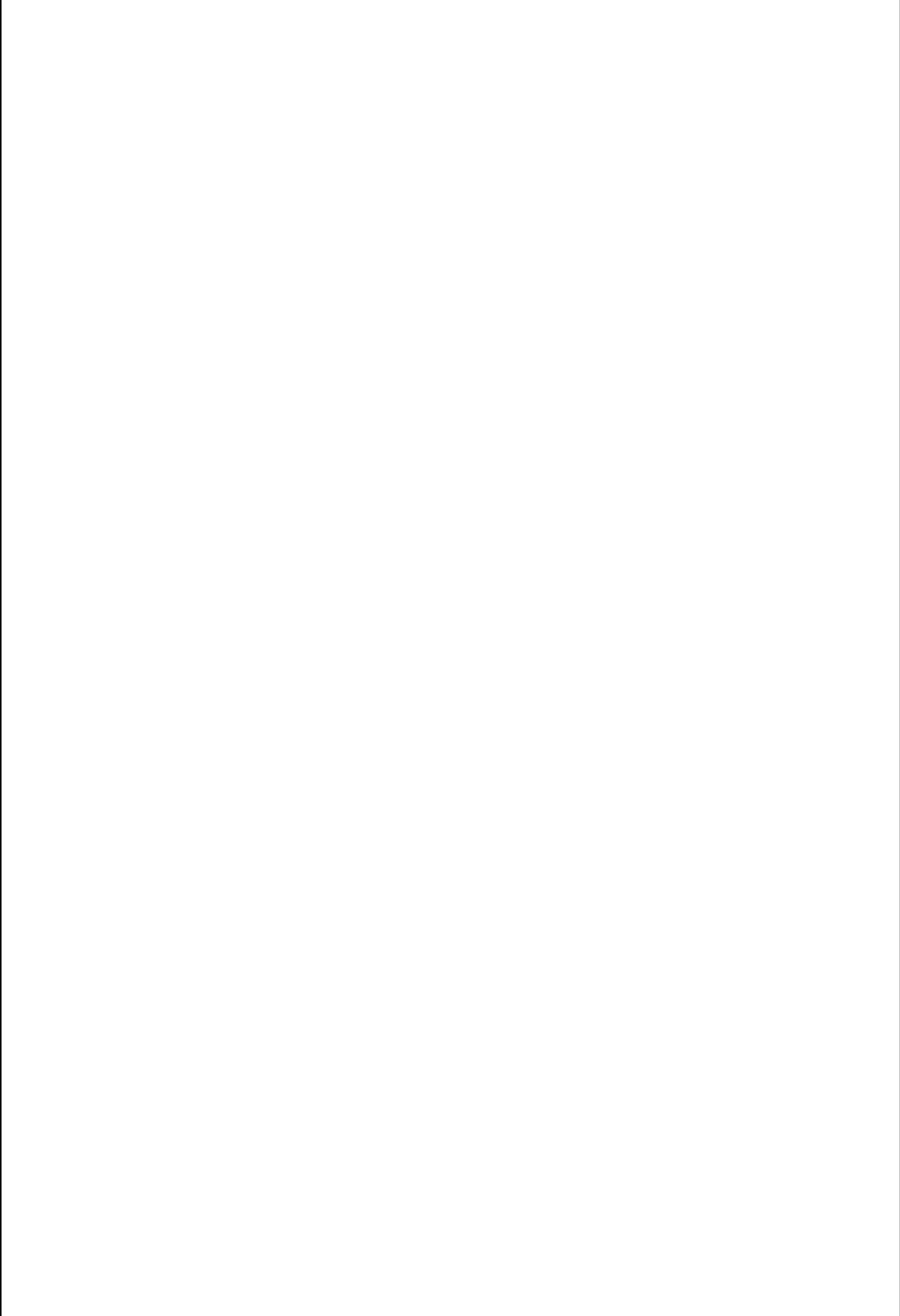
Making working lines

Watch the first 2 minutes of the Armstrong 'Vinyl tile installation' video (Part 3) again, at:

http://www.armstrong-aust.com.au/commflrpac/aus/ep/au/vinyl_video_library.html#

Now draw a diagram on the following page like the ones shown in this lesson in the Learner guide. Mark in the two working lines and show their lengths either side of the starting point. Also show the width of the cut piece at each perimeter.

You may put all this information on one drawing if you can fit it on clearly, or use one drawing to show the full floor plan and a second drawing to show the border tile measurements.



A large, empty rectangular box with a thin black border, occupying the majority of the page below the header and above the footer. It is intended for drawing or writing.

Laying field tiles

Pick up where you left off with the Armstrong 'Vinyl tile installation' video (Part 3) video at:

http://www.armstrong-aust.com.au/commflrpac/aus/ep/au/vinyl_video_library.html#

Watch the video from 2 min 10 secs to 3 min 10 secs. Then answer the following questions.

1. What size notches does the narrator say is best for spreading adhesive for VCT tiles?

2. How is the drying time for pressure sensitive adhesive different from drying time allowed for sheet vinyl products?

3. You'll notice that the tiles are laid in a slightly different order from the procedure described in the Learner guide. The pattern being demonstrated is called a 'pyramid' layout. How is it different from the method described in the Learner guide?

Laying border tiles

Watch the remainder of the Armstrong 'Vinyl tile installation' video (Part 3) video at:

http://www.armstrong-aust.com.au/commflrpac/aus/ep/au/vinyl_video_library.html#

Start at 3 min 10 sec and watch the video through to the end. Then answer the following questions:

1. The narrator uses another name for the 'trace cut' method of measuring and cutting border tiles. What does he call this method?

-
2. What marking instrument does the installer use to draw the circle for the pipe cut-out?

3. How does he make the tile more 'pliable' – that is, softer and easier to cut?

4. The installer doesn't use dividers or a bar scribe to mark out the lines for the architrave cut-out. How does he get the spacing right when he draws the lines with a pencil?

5. What sized floor roller does the narrator recommend for rolling out the tiles?

Section 3: Other layouts and techniques

Diagonal layouts

Go to the Armstrong 'Vinyl tile installation' videos at:

http://www.armstrong-aust.com.au/commflrpac/aus/ep/au/vinyl_video_library.html#

Select Part 2 to see the diagonal layout techniques. Watch the video and then answer the following questions:

1. How wide is the square piece of sheet material that's cut to size to form a marking template?

2. What material does the installer use as a template for scribing corners and architraves?

3. What tools does the installer use to mark the guidelines for the corners and architraves on the template?

Corridors and columns

Go to the video produced by Armstrong Commercial Flooring at:

<http://www.youtube.com/watch?v=vGIFnUKDUkg&list=PL713C504C52DB1B16>

Watch the clip and then answer the following questions.

1. Why does the installer 'back roll' the adhesive on the subfloor after spreading it with a trowel?

-
2. Why does he take special care when positioning the first row of planks?

3. How long does he wait after laying the first two rows of planks before proceeding with the remainder of the planks? Why does he wait for this length of time?

Common problems with tiles

Go to the Forbo video clip on the correct use of adhesives at:

<http://www.youtube.com/watch?v=mvmIm1bFOHs>

Watch the clip and then answer the following questions:

1. What conditions will affect the 'open time' and 'working time' of an adhesive?

2. What does 'fully wet' mean?

3. What does 'semi-wet' mean?

4. What does 'flushed off' mean?

-
5. At what stage of the drying process should you lay the product into the adhesive?

6. What is one of the most common causes of installation failure in Marmoleum?

Finishing the job

Go to the Armstrong Flooring videos page at:

http://www.armstrong-aust.com.au/commflrpac/aus/ep/au/vinyl_video_library.html

Click on the 'Vinyl tile installation' tab and select: Part 6 (maintenance). Watch the video and then answer the following questions.

1. What colour pad should you use on the rotary machine after carrying out the first wet scrub and before applying polish?

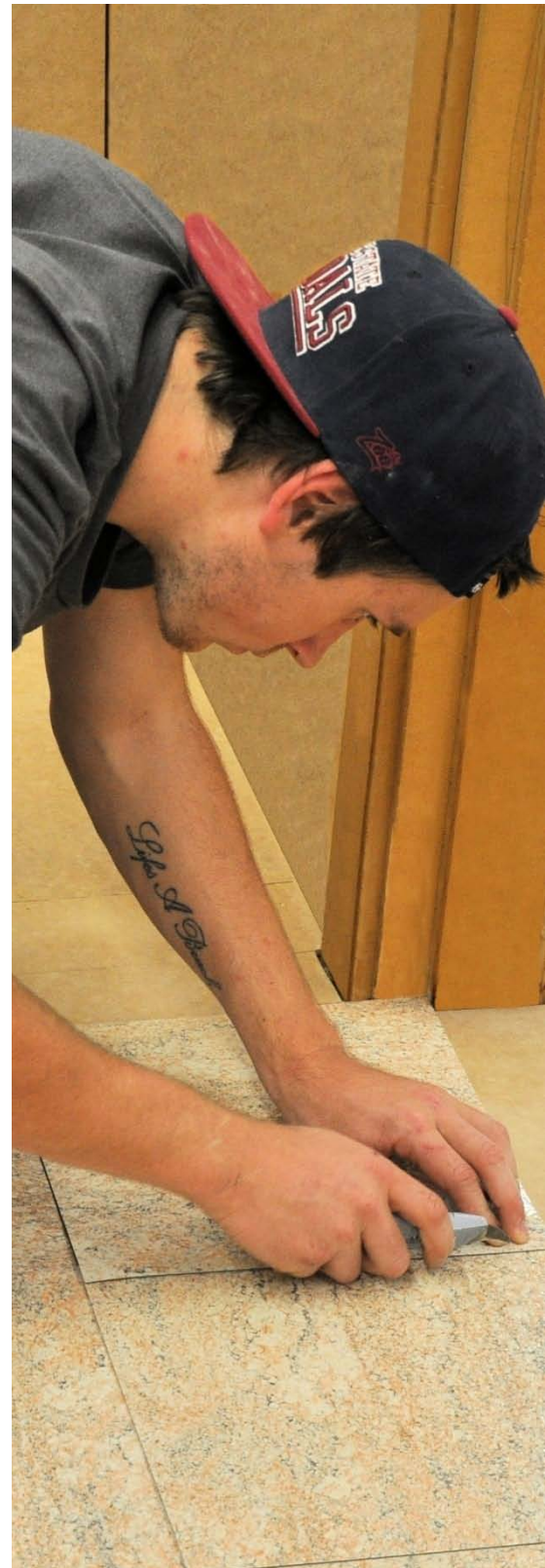
2. What is the best type of broom to use to remove dust?

3. How would you ensure an even coverage of the polish when it's applied with a mop?

4. What colour pad should you use for buffing the floor once the polish has dried?

Part 2

Assignments



Assignment 1

Name		Date	
------	--	------	--

1. Choose one brand-name product for each of the following types of resilient tile and answer the questions listed in the tables provided below:

- Vinyl composition tile
 - Luxury vinyl tile
 - Rubber
 - Linoleum
- (a) What is the product name and who is the manufacturer?
 - (b) What types of end uses is it most suitable for?
 - (c) What are its main features – that is, what characteristics would clients be looking for when they choose this product?
 - (d) What advice is given by the manufacturer on how the product should be conditioned before installation?
 - (e) What brand of adhesive is recommended for the product, and what type of adhesive is it?
 - (f) How is the adhesive applied? If it requires a notched trowel, state the trowel notching size.

Vinyl composition tile

Product name and manufacturer	
Most suitable end uses	
Main features	
Conditioning advice provided	

Recommended adhesive and type	
Adhesive application and trowel notching size	

Luxury vinyl tile

Product name and manufacturer	
Most suitable end uses	
Main features	
Conditioning advice provided	
Recommended adhesive and type	
Adhesive application and trowel notching size	

Rubber

Product name and manufacturer	
Most suitable end uses	
Main features	

Conditioning advice provided	
Recommended adhesive and type	
Adhesive application and trowel notching size	

Linoleum

Product name and manufacturer	
Most suitable end uses	
Main features	
Conditioning advice provided	
Recommended adhesive and type	
Adhesive application and trowel notching size	

2. What on-site conditions can affect the duration of an adhesive's open time and working time? Name three factors.

1.
2.
3.

Assignment 2

Name		Date	
-------------	--	-------------	--

Your trainer will give you a room to measure up for a resilient tile installation. You will also be given a specific tile size to work with. Your task is to produce the following two drawings on a separate sheet of paper.

1. Basic proportional sketch of the room, showing all measurements required to calculate and set out the working lines for the tiled floor.
2. Second sketch showing the following set-out details:
 - chalk lines required to find the centre point of the room
 - additional chalk lines required to move the starting point away from the centre point (if needed)
 - finished size of the cut border tiles against all four walls
 - lengths along the working lines between the walls and the starting point.

The sketches do not need to be drawn perfectly to scale. However, they should be well set out with straight lines and information that's clearly marked and easy to read. You will probably need to produce a rough version first and then re-draw it when you have worked out the details.

Assignment 3

Name		Date	
------	--	------	--

1. Briefly describe how you would scribe tiles around a door jamb and architrave using the direct scribe method. Write your answer in the table below. You may use drawings if you wish to illustrate your answer. Also list the tools required for the job.

Description	Tools required

2. Briefly describe how you would scribe tiles around a toilet pedestal using a template. You may use drawings if you wish. Also list the tools required for the job.

Description	Tools required

3. Name two problems that could occur in a tiled floor as the result of adhesive failure. For each one, state what steps you could take during installation to avoid the problem in the first place.

Problem 1	
How to avoid it	

Problem 2	
How to avoid it	

4. Give two reasons why a tiled floor may creep out of bond during installation. For each one, state what steps you could take during installation to rectify or avoid the problem.

Reason 1	
How to avoid it	

Reason 2	
How to avoid it	

-
5. What advice would you give to the client about protecting and cleaning their new floor immediately after installation?



Practical demonstrations

Your trainer may ask you to keep a log book or diary of the work you do on-the-job that relates to the practical components of this unit. This will help them to determine when you've had sufficient hands-on practice in these tasks to undertake the assessment events.

When you're ready to be assessed, your assessor will ask you to complete a range of practical demonstrations, including at least one example of each of the following:

- homogeneous resilient tile installation using a single direction pattern
- heterogeneous resilient tile installation using a single direction pattern.

In each case, you will need to install the appropriate trims and accessories as part of the demonstration. The subfloor surface will either be timber or concrete.

Make sure you talk to your trainer or supervisor about any of the details you don't understand, or aren't ready to demonstrate, before the assessment events are organised. This will give you time to get the hang of the tasks you'll need to perform, so that you'll feel more confident when the time comes to be assessed.

As part of the demonstrations, you will be asked to use of the following tools:

- utility knife and napping shears
- straight edge, square, chalk-line, tape measure
- hammer, hacksaw
- notched trowel.

Other tools may also include:

- roller
- airless spray gun
- tile scrubber
- knee kicker.

In addition to assessing your ability to physically install resilient tiles, your assessor will also be checking that you can:

- follow all work, health and safety requirements and environmental care procedures
- correctly interpret company documents and work instructions
- complete work records

-
- communicate and work effectively with customers and other workers
 - prevent damage to goods, equipment and products
 - work productively and produce a high quality job
 - clean up, recycle and dispose of waste products correctly
 - modify activities and techniques used to suit different sites and working conditions.