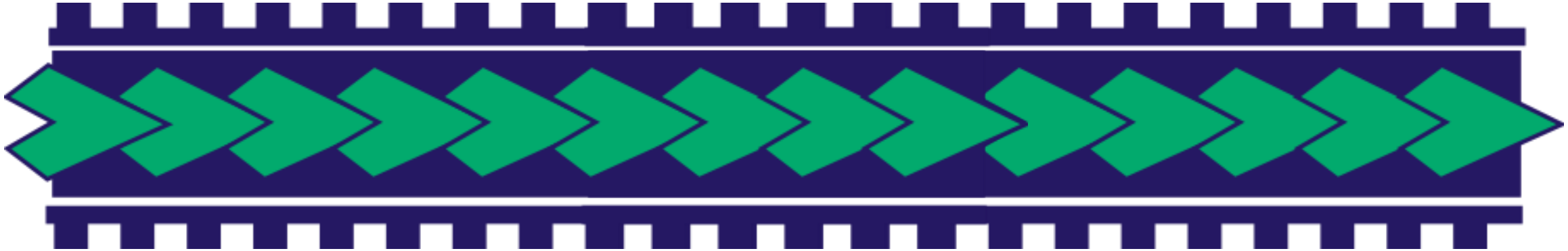
Write good learning resources

This resource supports the development of level 1, stage 1 design capabilities.



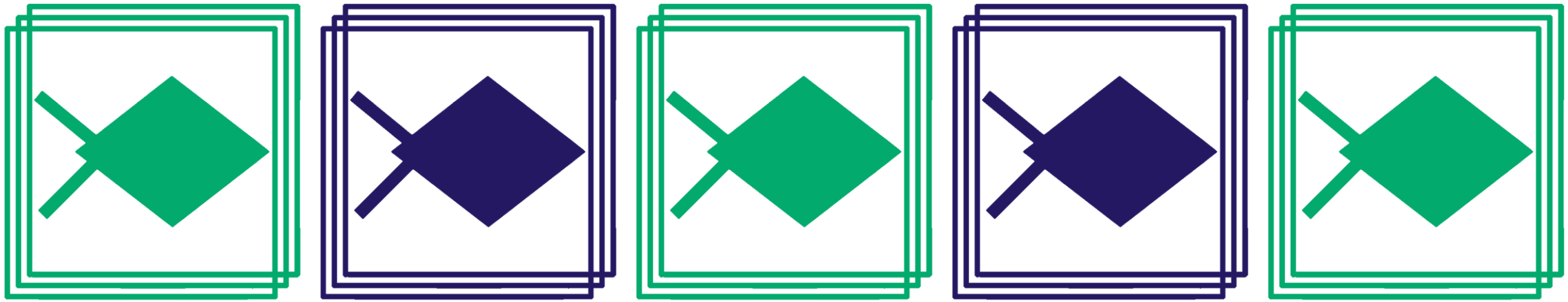
Contents

- Introduction
- 5 key principles for good learning resources
  1. Clear, concise and accurate
  2. Relevant to the learner
  3. Easy to understand
  4. The information has a logical order
  5. It is designed with the learners in mind
- Example

Introduction

- This document will help you learn to create good learning resources.
- Read this document before you start planning a learning resource. Then, review it as you are developing the resource.
- You can use this document as a checklist to make sure you have applied the key principles.

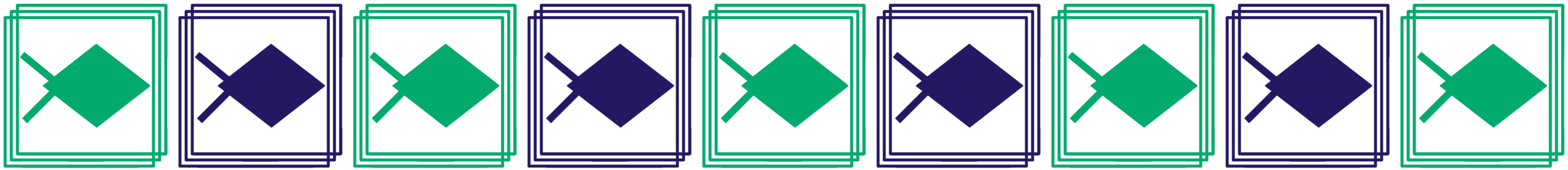
5 key principles for good learning resources



Clear, concise and accurate

Principle 1

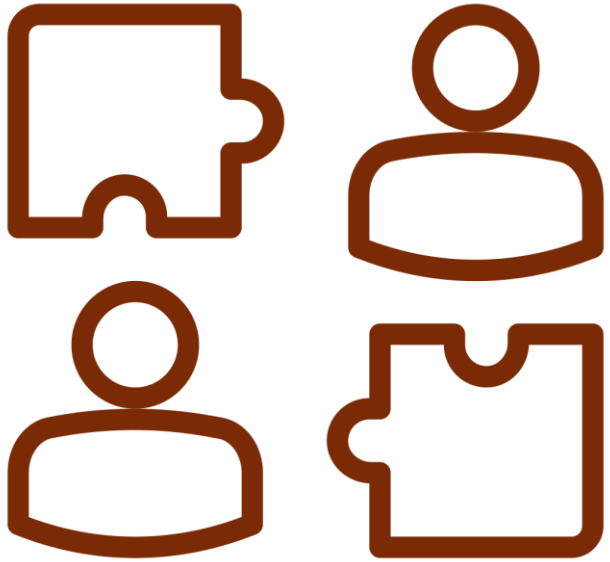
- The purpose of the learning resource is clear.
- The content relates to the learning outcomes.
- Information is up-to-date and relevant to the topic.
- Critical information is highlighted or made obvious to the learner.
- The learning resource is reviewed and checked for accuracy by subject matter experts.



Relevant to the learner

Principle 2

- The learners' skills, knowledge and experience are considered.
- Real workplace examples are used to help learners connect their learning to their own roles or situations.



Easy to understand

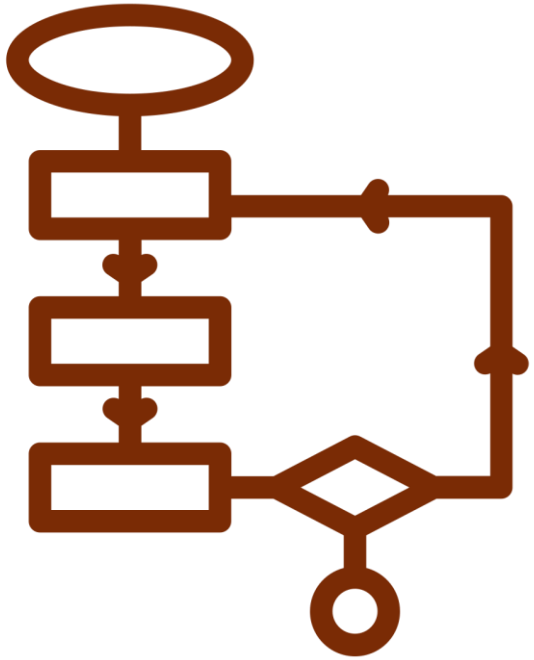
Principle 3

- Instructions are clear and use simple language.
- The content supports learners to understand concepts and integrate them into their roles.
- Technical terms and acronyms are explained and used appropriately.
- Graphics are used to compliment learners' understanding.

- See the resource Communicate Clearly in the TVET Toolkit.

Information has logical order

Principle 4



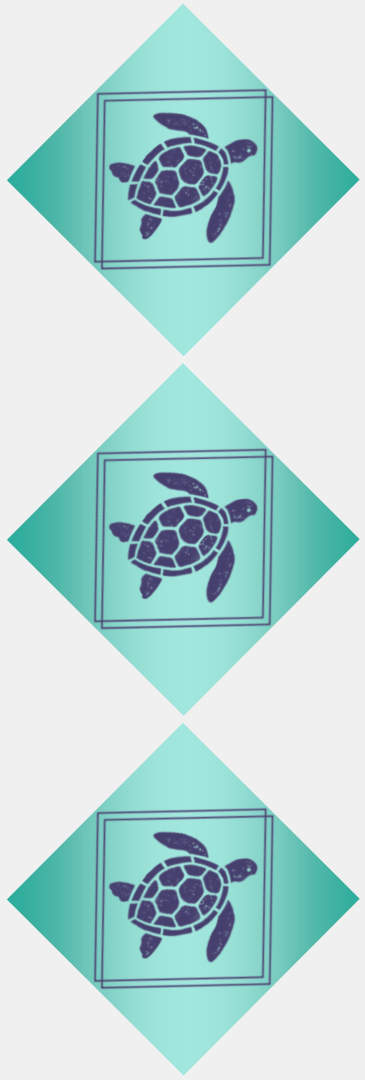
- The learning resource is well-structured and appropriate for its purpose.
- Similar content is grouped together.
- The content is displayed in a logical order that allows the learner to understand the process.

Designed with the learners in mind

Principle 5

- Learners' needs and existing knowledge are considered
  - Their learning environment
  - Their literacy and numeracy skills
  - Their digital literacy skills
  - Their existing vocational knowledge and skills
  - Their life experience.
- Relevant activities are included to reinforce learning.

Example



- The following slides show a learning resource about electrical subcircuits.
- It uses screenshots from the MS Word version.
- To access this example in an accessible format, refer to the MS Word version. You can access the MS Word version from the TVET Toolkit.

The example resource has 3 pages

Electrical isolation

Electrical isolation prevents an electrical current from flowing and is a **key safety measure** used by electrical workers. Before you begin work on a circuit, it is important to isolate the circuit correctly to eliminate the risk of receiving an electric shock. One of your first tasks as a trainee working with electricity is therefore to learn how to carry out electrical isolation reliably and safely.

Learning Objective

At the end of this module, you will be able to:

- Isolate electrical circuits from the supply of electricity
- Apple safety tags, padlocks and/or disconnection isolators, and verify they have been used correctly
- Explain safety measures, including the use of test-before-touch and prove-test-prove methods.

Unit standard

30657: Isolate low-voltage electrical subcircuits and perform basic tests and checks to confirm isolation.

Word list

If you are new to working in an electrical environment, you may find it useful to learn the words in this list.

Circuit
A circuit consists of conductors, protective devices, associated switchgear, and accessories.

Circuit breaker
A switch that automatically opens a circuit when an overload occurs to stop the current from flowing.

Fuse
A device that protects electrical equipment against excessive current by melting and opening the circuit.

Load
An electrical component or device that consumes electrical energy. for example, a fan.

Isolated
If a circuit is isolated, it is separated from all sources of energy so that it cannot be energised unintentionally.

Isolator
A device that prevents the current from flowing through part of a circuit when the device is open.

Subcircuit
A circuit that originates at a switchboard and which only consuming devices or points will be connected to. Examples include socket outlets, lighting circuits, and fixed wired appliances.

Submains
A circuit originating at a switchboard to supply another switchboard.

Electrical wire colours in Fiji
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What to do if the test shows the circuit is not isolated

If the isolation test shows the circuit is alive, check for one or more of the following errors:

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When in doubt, ask your supervisor or employer for help. Do not make a guess.

Testing for Isolation

Once you have used a safety tag/lock out system or equivalent methods on the circuit being tested, you must test the circuit to make sure it is not still energised.
Carry out the testing with a voltage tester, using the prove-test-prove method.

Test before touch

The test before touch principle means that you assume ALL conductors are energised until you have proven that they are not energised. You cannot rely on equipment indicator lamps to indicate that a circuit is "dead". The circuit must be tested.

Testing equipment before you start working on it is known as test-before-touch. This is crucial for safety because it ensures that the equipment is de-energised before you start to work on it. Although you may be confident that you have successfully isolated the circuit, you must always test this before you begin work.

Prove-test-prove

The prove part of prove-test-prove refers to proving the test instrument before and after the test to make sure that it works properly. There are many reasons why a test instrument could give a reading of zero volts when there is a hazardous voltage present:

- Some test instruments have fused leads. They may give a false indication of isolation if the fuse has operated.
- The test leads may open circuit or break, causing a false indication of isolation.
- The instrument may also be set for the wrong range or type of voltage (AC or DC).

Proving the test instrument therefore makes sure that the testing you carry out is valid.

Exercise 1

There are actions you must take before working on a circuit. These will ensure your safety. Provide one reason why each of these actions is important.

Switching off the load

_____

_____

Test-before-touch

_____

_____

Prove-test-prove

_____

_____

An introduction provides context

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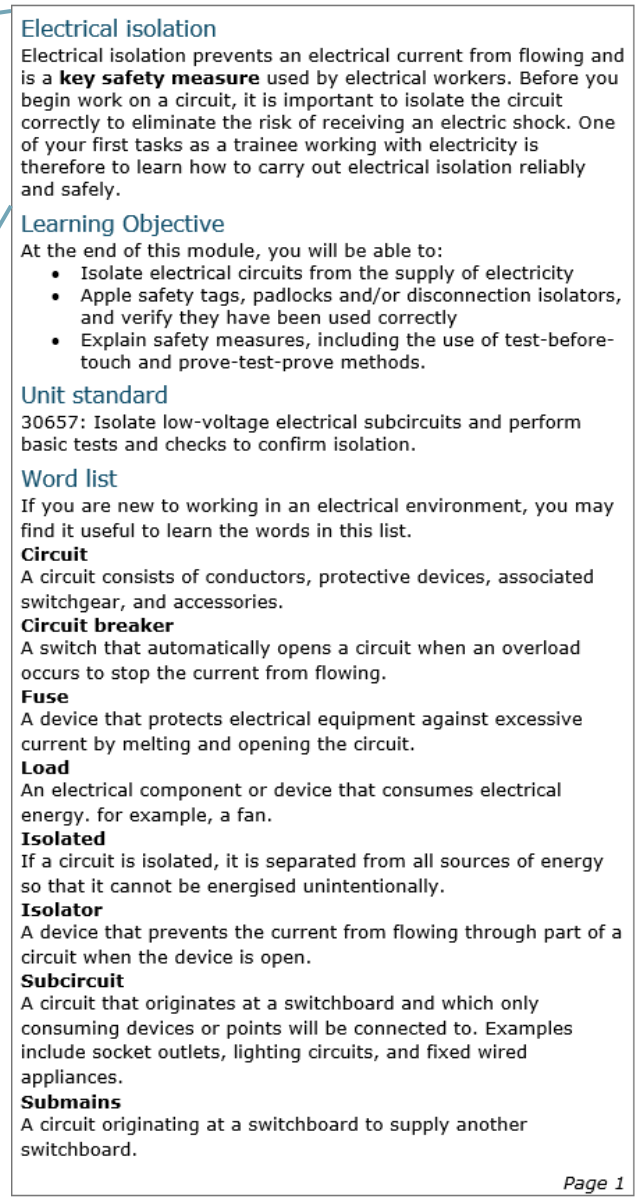

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Page 1

Clearly written learning objectives explain the purpose and key concepts

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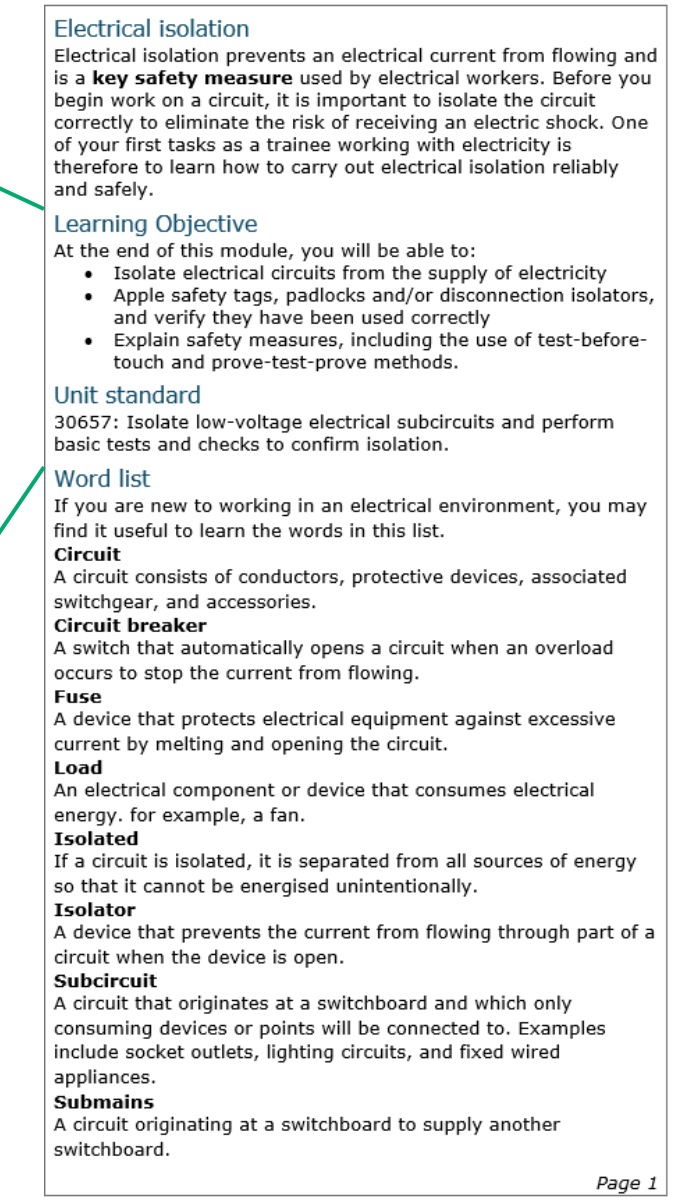

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Headings and subheadings help with the flow and location of content

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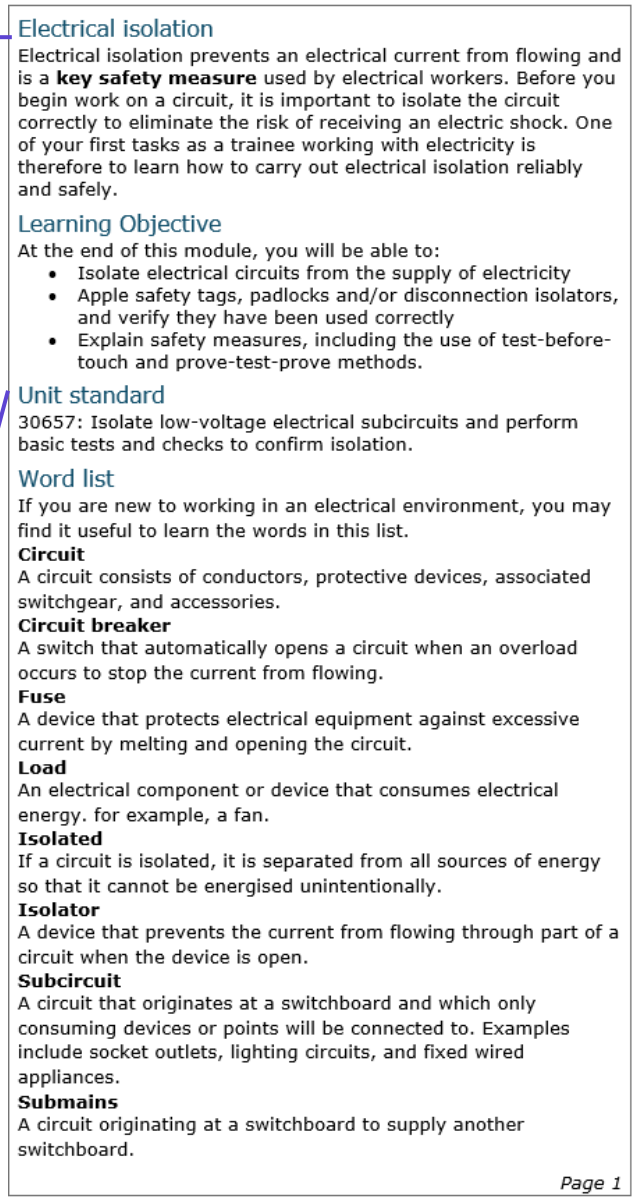

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Word lists help learners to understand unfamiliar terms

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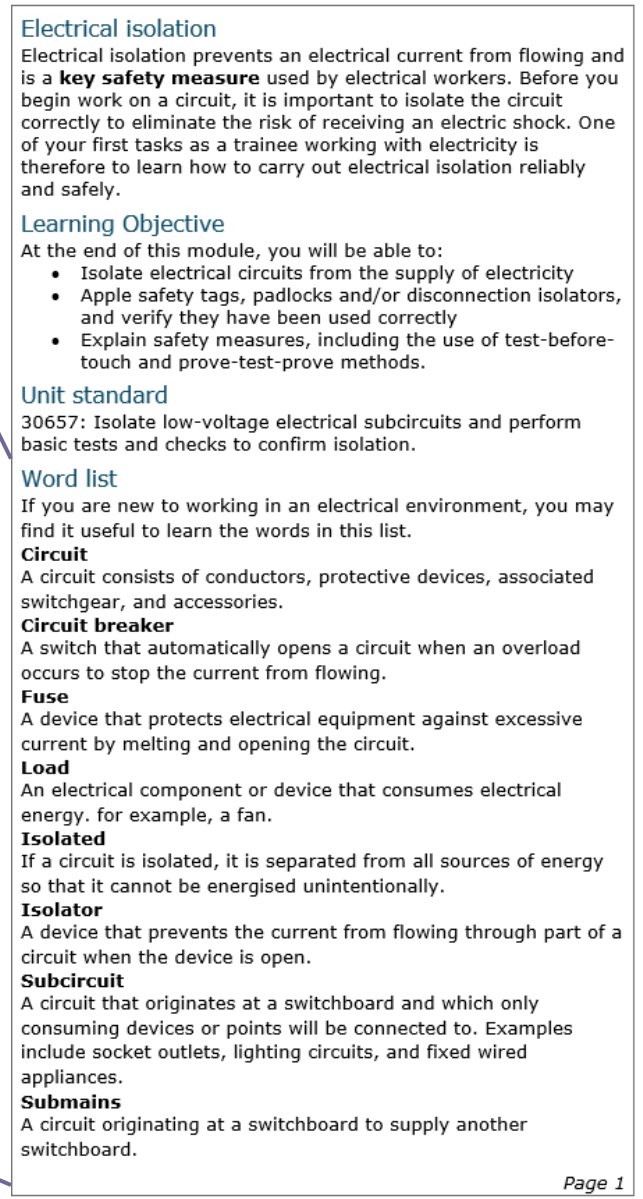

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Images and diagrams help learners to visualise concepts and provide context for the learning

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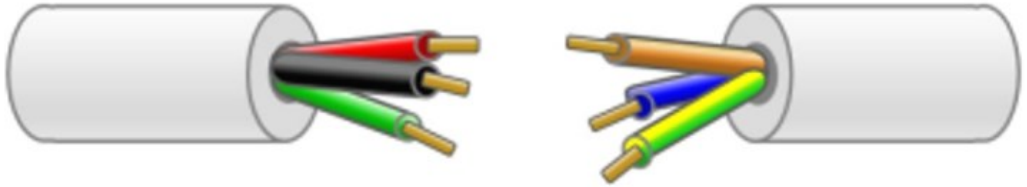

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Page numbers make it easy for the learner to reference the information

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Bullet lists highlight key points and draw attention to important information

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- The isolating switch is not in the phase conductor.
- When in doubt, ask your supervisor or employer for help. Guesswork is a very bad idea when working with electricity!

Activities help learners engage and reinforce their learning

- Activities can include reflective questions, open text questions, multi-choice questions, or practical tasks.

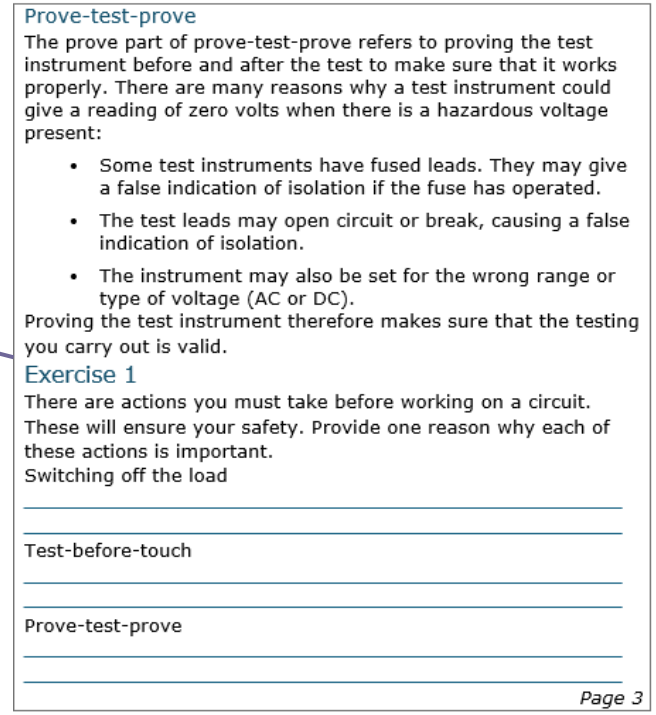
Exercise 1

There are actions you must take before working on a circuit. These will ensure your safety. Provide one reason why each of these actions is important.

Switching off the load

Test-before-touch

Prove-test-prove



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