Title	**Test and select batteries used in electronic applications and select suitable chargers**		
Level	**3**	**Credits**	**4**

Purpose	This unit standard is for people who are required to maintain batteries for battery operated equipment in good order. It covers testing and selection of a variety of batteries for use in electronic products or equipment, and selection of suitable battery chargers. People credited with this unit standard are able to: – test batteries used in electronic applications; – select batteries for given electronic applications; and – select battery chargers for given batteries.

Classification	Electronic Engineering > Core Electronics

Available grade	Achieved

Guidance Information

1 References
Electricity Act 1992;
Electricity (Safety) Regulations 2010;
Electrical Workers Registration Board (EWRB) Rules of the Board and Teaching Guidelines available at www.ewrb.govt.nz;
Health and Safety at Work Act 2015 and associated regulations,
and all subsequent amendments and replacements.

2 Definition
Industry practice – those practices that competent practitioners within the Electronic Engineering industry recognise as current industry best practice.

3 Range
a Batteries may include but are not limited to – Carbon Zinc, Zinc Chloride, Alkaline Manganese Dioxide Zinc, Lithium Manganese Dioxide (Li/MnO_2), Lithium Polymer, Lithium iron phosphate, Lithium-ion (Li-ion), Silver Oxide Zinc, Alkaline Zinc Air, Nickel Metal Hydride (NiMH), Nickel Cadmium (NiCd), Lead-Acid.
b Electrical, radiation, and workshop or laboratory safety practices are to be observed at all times.
c All activities and evidence presented for all outcomes and performance criteria in this unit standard must be in accordance with:
i legislation;
ii policies and procedures;
iii ethical codes;

iv Standards – may include but are not limited to those listed in Schedule 2 of the Electricity (Safety) Regulations 2010;
v applicable site, company, and industry practice;
vi where appropriate, manufacturer instructions, specifications, and data sheets.

Outcomes and performance criteria

Outcome 1

Test batteries used in electronic applications.

Performance criteria

1.1 Test batteries to establish the state of battery charge.

Range three different types of batteries with different states of charge.

1.2 Test batteries to identify faulty rechargeable batteries.

Range two different types of rechargeable batteries.

1.3 Test batteries in accordance with manufacturers' guidelines, standards, and legislation.

Outcome 2

Select batteries for given electronic applications.

Range five applications requiring a range of different primary and secondary batteries.

Performance criteria

2.1 Select batteries to meet the given application requirements and give reasons for selection.

Range may include – voltage, current, physical size, capacity, cost, absence of memory effect.

Outcome 3

Select battery chargers for given batteries.

Range selection of battery chargers for two given batteries from a range of battery charger specifications.

Performance criteria

3.1 Select charger to meet battery charging requirements with respect to voltage, current, and charge time.

Planned review date	31 December 2025

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	29 October 1996	31 December 2011
Revision	2	3 April 2001	31 December 2011
Review	3	24 November 2003	31 December 2011
Rollover and Revision	4	22 August 2008	31 December 2012
Review	5	21 July 2011	31 December 2022
Review	6	24 June 2021	N/A

Consent and Moderation Requirements (CMR) reference	0003

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact The Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.