Level One and Level Two

Level 1 and Level 2 workplace competencies are assessed using evidence documented by the apprentice in the Evidence Guide. The table below lists Level 1 and Level 2 compulsory competencies.

IE Code	IE Competency Title	Credit	OAC Ref.
IE102-1WC	Comply with health and safety regulations	2	B2
IE103-1WC	Follow safe working practices in an electrical workplace	2	B3
IE106-1WC	Respond to fire emergencies	1	B3
IE108-1WC	Apply basic knowledge of electrical safety	2	G2
IE114-1WC	Use hand and power tools	4	C1
IE115-1WC	Demonstrate safe and proper use of pneumatic and hydraulic tools	2	C8
IE132-2WC	Install electrical equipment	20	I1
IE146-2WC	Install lighting controls and equipment	5	I1

Assessment

With training and guidance you will acquire the skills and knowledge to enable you to competently demonstrate completion of these tasks to your assessor. You must keep a record, on the diary pages included, of the details of the work done when completing the tasks to help the assessor see the experience you have gained prior to the assessment decision being made.

Evidence

Assessment of this standard requires the following types of evidence be gathered by you and presented by you to your assessor:

- Completed apprentice work diary for each task – add more pages if you need to
- Observation by the assessor of you completing the relevant tasks
- Task verification – another person who has observed you completing the tasks to the appropriate standard
- Copies of work records, where applicable, or reference to work records to show when the tasks were completed.

The specific evidence requirements you must present are listed on the following pages.

SPECIFICATION

People credited with this standard are able to:

- **Interpret and comply with health and safety regulations, standards and guidelines.**

Credit 2

Quality Assurance

Any assessor assessing against this competency standard must be endorsed as occupationally competent by the employer.

Reference

WorkSafeBC Occupational Health & Safety (OHS) regulations.

Task 1: Demonstrate knowledge of and comply with health and safety regulations and procedures applicable to workers in the industrial workplace.

This unit relates to the following competency number and topic in the provincial OAC and Program Outline:

B2 ***Apply WCB standards and regulations***

Task 1: Demonstrate knowledge of and comply with health and safety regulations and procedures applicable to workers in the industrial workplace.

Apprentice Diary (1.1)

Date/s	Describe the purpose and role of WorkSafeBC, Mines Inspector and the National Energy Board, including: • rights and responsibilities of employers and employees • reporting procedures • workplace inspections

Use the following table to:

- identify the health and safety regulations that apply in your workplace.
- describe how your workplace complies with those regulations. (1.2)

Regulations that apply	How your workplace complies

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ The purpose and role of WorkSafeBC, Mines Inspector and the National Energy Board was described including. (1.1)

- ☐ rights and responsibilities of employers and employees
- ☐ reporting procedures
- ☐ workplace inspections

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Knowledge of health and safety regulations was demonstrated and regulations, standards and guidelines were complied with in terms of: (1.2)

- ☐ all regulations applicable in the apprentice's workplace.

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Which manufacturer guidelines were followed when doing these tasks?

Apprentice Signature: _____ ***Date:***_____

Assessor Signature: _____ ***Date:***_____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

SPECIFICATION

People credited with this standard are able to:

- **Follow safe working practices in an electrical workplace.**

Credit 2

Prerequisite

Competency Standard IE102-1WC, Comply with health and safety regulations

Assessment

For assessment purposes, all explanations, descriptions, and activities must comply with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Quality Assurance

Any assessor assessing against this competency standard must be a qualified electrician.

Reference

The Canadian Electrical Code, Part I, Canadian Standards Association, most current edition (CEC), WorkSafeBC Occupational Health and Safety (OHS) regulations.

Task 1:	Identify risk of injury and equipment damage in common industrial work situations, act to minimize risk to self and communicate risks to minimize risks to others.
Task 2:	Apply the use of the Workplace Hazardous Materials Information System (WHMIS) and use proper procedures for personal protection from hazardous materials.

This unit relates to the following competency number and topic in the provincial OAC and Program Outline:
B3 ***Apply safe work practices***

Task 1: Identify risk of injury and equipment damage in common industrial work situations, act to minimize risk to self and communicate risks to minimize risks to others.

Use the table below to record risks in your workplace:

- Assess risks in your workplace and identify how you would minimize their effect.
- Record the risks in the table and categorize the risks accordingly. (1.1)

Risk	Risk category*	Minimizing actions

**Include: environmental risks, slips, trips and falls, injury to others, injury from moving machinery. You may include others too – please specify.*

Apprentice Diary (1.2)

Date/s	Provide details and dates where you have communicated risks and risk situations to others by completing the following diary. Include instances of: • signage • tagging • verbal communications • written communication • safe work cards • risk hazard assessment procedures • accident reporting

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Workplace risks were assessed and minimized including: (1.1)
- ☐ environmental risks
- ☐ slips
- ☐ trips and falls
- ☐ injury to others
- ☐ injury from moving machinery

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

☐ Risks and risk situations were communicated to others including using: (1.2)
- ☐ signage
- ☐ tagging
- ☐ verbal communications
- ☐ written communication
- ☐ safe work cards
- ☐ risk hazard assessment procedures
- ☐ accident reporting procedures

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

Note: If simulation was used for any of the tasks attach a brief description of the exercise to this competency.

Task 2: Apply the Workplace Hazardous Materials Information System (WHMIS) and use proper procedures for personal protection from hazardous materials.

Apprentice Diary (2.1)

Date/s	Identify workplace situations and dates where you have used WHMIS information to determine information about hazards. Include MSDS sheets and material information labelling.

Apprentice Diary (2.2)

Date/s	Identify an emergency spill situation and outline the procedure that you went through to contain the spill and avoid exposure. *Note: a simulated situation may be used if required.*

Apprentice Diary (2.3)

Date/s	Identify a situation where you have handled hazardous materials. Outline the handling precautions that you took - include details of: • breathing protection • eye protection • skin protection *Note: a simulated situation may be used if required.*

Assessor Checklist

☐ WHMIS information was used correctly to safely work with hazardous materials in the workplace including: (2.1)
- ☐ material safety data sheets (MSDS)
- ☐ labelling

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Emergency procedures for dealing with spills of dangerous materials and personal exposure were followed. Knowledge of the procedures was demonstrated. The following elements were included: (2.2)
- ☐ spill containment
- ☐ personal exposure to hazardous materials

Note: this may be simulated for assessment purposes if no workplace opportunity occurs.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Protective equipment was used with hazardous materials: (2.3)
- ☐ breathing protection equipment was used
- ☐ eye protection equipment was used
- ☐ skin protection equipment was used

Note: this may be simulated for assessment purposes if no workplace opportunity occurs.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: If simulation was used for any of the tasks attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

SPECIFICATION

People credited with this standard are able to:

- **Safely respond to fire emergencies.**

Credit 1

Assessment

For assessment purposes, all explanations, descriptions, and activities must comply with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Quality Assurance

Any assessor assessing against this competency standard must be endorsed as occupationally competent by the employer.

Reference

The Canadian Electrical Code, Part I, Canadian Standards Association, most current edition (CEC)
Company insurer regulations and guidelines.

Task 1: Respond to fire emergencies in accordance with organizational requirements.

This unit relates to the following competency number and topic in the provincial OAC and Program Outline:
B3 ***Apply safe work practices***

Task 1: Respond to fire emergencies in accordance with organizational requirements.

Outline your company's fire response plan and a case study example or simulated example: (1.1)
The plan may include details such as:

- sound alarms
- isolation of power
- use of elevators and stairs
- use of fire fighting equipment
- CO_2 Systems
- Halon systems
- emergency shutdown

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ All apprentice's explanations, descriptions, and activities compiled with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

SPECIFICATION

People credited with this standard are able to:

- **Follow procedures for working safely with energized and de-energized electrical circuit and power sources.**

Credit 2

Assessment

For assessment purposes, all explanations, descriptions, and activities must comply with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Quality Assurance

Any assessor assessing against this competency standard must be a qualified electrician.

Reference

The Canadian Electrical Code, Part I, Canadian Standards Association, most current edition (CEC)
WorkSafeBC Occupational Health and Safety (OHS) regulations
Arc Flash Assessment requirements – regulatory reference is NFPA 70 E. CSA regulation is forthcoming June 2008.

Sector Reference

Mines Act [RSBC 1996] CHAPTER 293
CAN/CSA-M421-00 (R2005) - Use of electricity in mines.

Definitions

Properly – to CEC rules and in a manner that complies with WorkSafeBC regulations
jumper – temporary hardware link
force – temporary software link.

Task 1: Follow procedures for safe testing of energized electrical circuits and power sources in accordance with CEC rules.

Task 2: Follow safe procedures for de-energizing, tagging, locking out, removing tags and lockouts, testing, and re-energizing equipment; referencing procedures and codes outlined in CEC, Mines Act BC, Use of Electricity in Mines (CSA), WorkSafeBC OHS regulations.

This unit relates to the following competency number and topic in the provincial OAC and Program Outline:
G2 Apply the CEC to installations

Task 1: Follow procedures for safe testing of energized electrical circuits and power sources in accordance with CEC rules.

Apprentice Diary (1.1-1.4)

Date/s	Describe isolation activities that you have carried out and dates including: • tagging • locking • circuit isolation • fuses and links • barriers • and warning signs • permits • back feed awareness • zero energy state test • procedure to energize and de-energize breakers and equipment Include what protective equipment you used (gloves, safety glasses etc), what test equipment, and when and how you used it. Include grounding equipment you installed – portable grounding, ground cable, and perhaps ground chains. Explain any choices you have made. *Note: permits are required according to operational requirements (hot work permits etc).*

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Carried out isolation activities safely in accordance with industry practice. (1.1)
Please specify which of the following were included in the isolated activity.

- ☐ tagging
- ☐ locking
- ☐ circuit isolation
- ☐ fuses and links
- ☐ barriers and warning signs
- ☐ back feed awareness checks
- ☐ zero energy state test
- ☐ procedure to energize and de-energize breakers and equipment.

Permits are required according to operational requirements (i.e. hot work).

Which permit applied?

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Used protective equipment to ensure personal safety, the safety of others, and the safety of equipment in accordance with best practice, including: (1.2)

- ☐ using high voltage protective equipment (where required)
- ☐ wearing gloves
- ☐ wearing safety glasses.

Note: best practice includes minimum standards identified in Arc Flash Assessment requirements – regulatory reference NFPA 74.3 and company requirements, which are often much stricter than regulatory requirements.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Demonstrated safe use of test equipment including: (1.3)

- ☐ using test equipment correctly
- ☐ verifying test equipment was safe to use.

Note: safe use of appropriate test equipment is all that is required here. Competency standard IE128-1TC, assesses use and handling of a range of basic test equipment.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Properly installed grounding equipment including: (1.4)

- ☐ installing portable grounding
- ☐ installing ground cable.
- ☐ installing ground chains (where required).

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Task 2: **Follow safe procedures for de-energizing, tagging, locking out, removing tags and lockouts, testing, and re-energizing equipment referencing procedures and codes outlined in CEC, Mines Act BC, Use of Electricity in Mines (CSA), WorkSafeBC OHS regulations.**

Apprentice Diary (2.1, 2.2)

Date/s	Describe safe procedures you have carried out including dates and job/code reference for the following procedures, explain any choices you have made. • de-energizing • tagging • locking out • removing tags • lockouts • re-energizing equipment

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Followed safe procedures for de-energizing and testing equipment. (2.1)
- ☐ lockout procedure correct and tag locations correct
- ☐ communication with personnel complied with workplace/industry practice and regulations.

Note: company standards may be stricter than regulatory requirements and can be assessed as such.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Followed procedures for testing and re-energizing equipment. (2.2)
- ☐ ensured that equipment is safe to re-energize
- ☐ communication with personnel complied with workplace/industry practice and regulations
- ☐ removed tags and lockouts.

Note: company standards may be stricter than regulatory requirements and can be assessed as such.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

SPECIFICATION

People credited with this standard are able to:

- **Demonstrate proper use, application and handling of hand tools, portable power tools and machine tools.**

Credit 4

Assessment

For assessment purposes, all explanations, descriptions, and activities must comply with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations and industry practice.

Note: Proper use includes safe working conditions - such things as sources of ignition, environmental factors etc.

Quality Assurance

Any assessor assessing against this competency standard must be a qualified electrician.

Reference

WorkSafeBC Occupational Health and Safety (OHS) regulations.

Task 1: Demonstrate proper use of non-powered hand tools.

Task 2: Demonstrate proper use, application and handling of portable power tools.

Task 3: Demonstrate proper use, application and handling of stationary power tools used by electricians.

This unit relates to the following competency number and topic in the provincial OAC and Program Outline:
C1 Use hand tools

Task 1: Demonstrate proper use of non-powered hand tools

Select a suitable assessment date range (for example a couple of days) when a variety of **hand tools** typical to your work type are used, in the table below, record information demonstrating their use.

- Identify the tools used, tool function and safety and maintenance requirements to be followed.

Apprentice Diary – Non-powered hand tools (1.1, 1.2)

Date/s	Hand tools used	Tool function/task	Safety requirements	Maintenance requirements

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Correctly selected and used hand tools for common electrical maintenance and installation tasks. (1.1)

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Maintained common electrician's hand tools in proper working condition: (1.2)

- ☐ maintained to be operable
- ☐ maintained to be safe and to be identifiable as being safe to use.

Note: standards vary widely between journeyperson and company maintenance departments. The tool is to be kept useable and safe. For this to occur, maintenance of some sort is required.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Task 2: Demonstrate proper use, application and handling of portable power tools.

- Select a suitable date range (for example a few days/weeks) that covers a variety of portable power tools typical to your work type and, in the table below, record information demonstrating their use.
- Tools that must be included are electric drill, grinders, saws and threaders.
- Identify the tools used, tool function and safety and maintenance requirements to be followed.
- Identify blade/bit/cutters, guards and personal safety equipment.

Apprentice Diary – Powered hand tools (2.1, 2.2)

Date/s	Hand tools used	Tool function/task	Safety requirements	Maintenance requirements

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Selected and used portable power tools. (2.1)

- ☐ electric drill
- ☐ grinders
- ☐ saws
- ☐ threaders
  - other specify _____
  - other specify _____
  - other specify _____
- ☐ blades were selected and changed (kept sharp and appropriate to material)
- ☐ bits and cutters were selected and changed/fitted (kept sharp and appropriate to material)
- ☐ personal protection equipment was selected and worn appropriately
- ☐ guards were set up and used where appropriate
- ☐ working conditions were safe.

Note: there is a very wide selection of power tools in use, which vary by application. Assessment must take this into account and not restrict assessment to the list above.

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

☐ Maintained common portable power tools in proper working condition. (2.2)

Note: maintain is to leave the tool in good working order but not to perform repair and refurbishment of the tool.

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Task 3: Demonstrate proper use, application and handling of machine tools used by electricians.

Note: selection of tools varies by application and should be appropriate to the situation.

- Select a suitable date range (for example a few days/weeks) that covers a variety of electrical machines typical used in your workplace, in the table below, record information demonstrating their use.
- Identify the machines used, tool function and safety and maintenance requirements to be followed.
- Typical machines that may be included are: drill press, bench grinder, circular saw, table saw, radial arm saw. (3.1, 3.2)

Dates	Tool function	Safety requirements	Day to day maintenance

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Demonstrate proper use of stationary power tools and equipment used by electricians. (3.1)

- specify machine tool used _____
- specify machine tool used _____
- specify machine tool used _____

☐ checked and changed blades
☐ checked and changed bits and cutters
☐ wore and used personal safety equipment correctly
☐ used and setup guards correctly.

Note: selection of tools varies by application and should be appropriate to the situation.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Maintained common stationary power tools in proper working condition. (3.2)

Note: maintain is to leave the tool in good working order but not to perform repair and refurbishment of the tool.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

SPECIFICATION

People credited with this standard are able to:

- **Safely and properly use pneumatic and hydraulic tools (for electricians).**

Credit 2

Assessment

For assessment purposes, all explanations, descriptions, and activities must comply with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations and industry practice.

Note: Proper use includes safe working conditions - such things as sources of ignition, environmental factors etc.

Quality Assurance

Any assessor assessing against this competency standard must be a qualified electrician.

Reference

WorkSafeBC Occupational Health and Safety (OHS) regulations.

Task 1: Demonstrate proper use, application and handling of pneumatic tools used by electricians.

Task 2: Demonstrate proper use, application and handling of hydraulic tools used by electricians.

This unit relates to the following competency number and topic in the provincial OAC and Program Outline:
C8 Use pneumatic and hydraulic tools

Task 1: Demonstrate proper use, application and handling of pneumatic tools used by electricians.

Complete the following work diary table to record the completion details for Task 1.

- Tools may include: impact drill, impact wrench, air grinder, air lance, air gun and air chisel.
- Proper use may include changing and setting bits, blades, guards, aligning parts of the tool, setting pressure and lubrication of the tool. When completing the table, state which of these processes are used.

Apprentice Diary – Demonstrate proper use of pneumatic tools and attachments (1.1, 1.2)

Date/s	pneumatic tools used	Tool function/task	Safety requirements	Maintenance requirements

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Demonstrated proper use of pneumatic tools and attachments: (1.1)

- ☐ air safety procedures were demonstrated
- ☐ safe working conditions were kept
- ☐ personal protection equipment was worn and used correctly
- ☐ guards were used correctly/ appropriately.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Maintain pneumatic tools in proper working condition. (1.2)

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Task 2: Demonstrate proper use, application and handling of hydraulic tools used by electricians.

Complete the following work diary table to record the completion details for Task 2.

- Tools used may include pullers, presses, benders, crimpers, cutters, shears, jacks, knockout punches.
- Proper use may include changing and setting bits, blades, guards, aligning parts of the tool, setting pressure and lubrication of the tool. State which of these processes are used when completing the table.

Apprentice Diary – Demonstrate proper use, application and handling of hydraulic tools (2.1, 2.2)

Date/s	hydraulic tools used	Tool function/task	Safety requirements	Maintenance requirements

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Selected and safely used hydraulic tools and relevant attachments: (2.1)
- ☐ hydraulic safety was observed and carried out appropriately
- ☐ working conditions were safe
- ☐ appropriate personal protection equipment was worn/used
- ☐ guards were used safely and correctly.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Hydraulic tools were maintained in proper working condition. (2.2)

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

SPECIFICATION

People credited with this standard are able to:

- **Install distribution panels, cable trays, cable conduit and explosion proof equipment to CEC rules and manufacturer specifications. They are also able to install and maintain grounding circuits, binding circuits and protect circuits using cathodic protection.**

Credit 20

Prerequisite

Competency Standard IE131-1TC, Demonstrate knowledge of installing electrical equipment

Assessment

For assessment purposes, all explanations, descriptions, and activities must comply with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations and industry practice.

Quality Assurance

Any assessor assessing against this competency standard must be a qualified electrician.

References

The Canadian Electrical Code, Part I, Canadian Standards Association, most current edition (CEC)
WorkSafeBC Occupational Health and Safety (OHS) regulations.

Definitions

Properly – to CEC rules and in a manner that complies with WorkSafeBC regulations.

Task 1:	Install distribution panels to CEC rules, which are easily serviced and accurately match design specifications.
Task 2:	Install equipment for use in hazardous locations to CEC specifications and standards.
Task 3	Properly install conduit and cable tray to safely route cable to designed specification and CEC rules.
Task 4:	Install and maintain grounding, bonding and cathodic protection circuits to CEC rules.
Task 5	Install cable and protection to CEC requirements, neatly and efficiently, ensuring protected circuits can withstand environmental stresses.
Task 6:	Terminate conductors factoring environmental requirements, and to CEC rules and those set by applicable regulatory codes.
Task 7:	Label and document wiring to CEC rules and those set by applicable regulatory codes.
Task 8	Splice wiring to CEC rules.

This unit relates to the following competency number and topic in the provincial OAC and Program Outline:

I1 ***Install lighting and electrical equipment***

Task 1: Install distribution panels to CEC rules, which are easily serviced and accurately match design specifications.

Apprentice Diary – Installing panels (1.1)

Date/s	Describe panel and component installation Include dates and details of: • fittings • terminate conductors • overcurrent protections • fault current calculations • fuse sequencing and selection • documentation used • explain any choices you have made. Attach supporting documentation/calculations in the supporting evidence section

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Properly installed panels and components: (1.1)

- ☐ installed fittings properly
- ☐ terminated conductors properly
- ☐ installed overcurrent protections
- ☐ carried out fault current calculations
- ☐ determined fuse sequencing and selected fuses correctly
- ☐ documented the panel installation in accordance with workplace practice and CEC rules.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence – Installing panels

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:***_____

Assessor Signature: _____ ***Date:***_____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

Task 2: Install equipment for use in hazardous locations to CEC specifications and standards.

Note: The processes may be simulated if installation of explosion proof equipment is not carried out in the apprentice's workplace. (2.1)

Date/s	Describe the details and dates of the installation including: • termination types used • enclosures • pressure venting • describe explosion proof equipment classes used • hazardous areas • explain any choices you have made.

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Explosion-proof equipment was properly installed**:** (2.1)

- ☐ terminations were installed properly
- ☐ enclosures were installed properly
- ☐ pressure venting installed properly
- ☐ classes of explosion proof equipment were identified and were correct
- ☐ hazardous areas requiring explosion proof equipment were identified

Note: this may be simulated for assessment purposes if no workplace assessment opportunity occurs. If simulation is used attach a brief description of the exercise used for this competency.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Additional Supporting Evidence – Installing panels

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

Task 3: Properly install conduit and cable tray to safely route cable to designed specification and CEC rules.

Apprentice Diary – Installing conduit, cable tray and cable (3.1 – 3.4)

Date/s	Describe the details and dates of: • drawings and standards/specifications involved • bending and shaping of conduit – include bending tools used and calculations of lengths and bends • routing and attaching/installing conduit – include fasteners and attachment details • installing/attaching cable trays – include fasteners and considerations • environmental considerations • explain any choices you have made.
	As built drawings: provide details and dates of adherence to drawings and adjustments made to drawings after installing the cable tray/conduit.

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Bent and shaped conduit: (3.1)
- ☐ appropriate bending tools were selected
- ☐ calculation of lengths and bends were carried out correctly

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Routed and attached conduit: (3.2)
- ☐ appropriate fasteners and supports were used
- ☐ appropriate attachment methods were selected
- ☐ conduit was routed to take into account the surrounding conditions and environment.

☐ Installed conduit: (3.3)
- ☐ conduit was installed taking into account wire fishing techniques and hazards
- ☐ conduit was installed taking into account conductor vulnerability

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Installed cable tray according to design and specification: (3.4)
- ☐ correct tools were selected and used
- ☐ types of hangers and trays were considered
- ☐ suitable tray/hanger was selected
- ☐ consideration was given to future expansion requirements (requiring space in the tray)
- ☐ tray was installed to allow service and troubleshooting access
- ☐ hardware supports were suitable

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Adjusted drawings to be as built. (3.5)

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

Task 4: Install and maintain grounding, bonding and cathodic protection circuits to CEC rules.

Apprentice Diary – Grounding and bonding (4.1)

Date/s	1. Describe the details and dates of <u>installation</u> of grounding and bonding circuits 2. Describe the details and dates of <u>maintenance</u> of grounding and bonding circuits. Include circuit design and modification, testing process and installation tools used, ground fault indicators and ground grids and explain any choices you have made.

Apprentice Diary – Cathodic protection of circuits

Note: installation of Cathodic Protection can be carried out in plants that have such systems.

Questions in lieu of performance evidence may be used by the assessor to determine competence in environments where cathodic protection is not used. (4.2)

Date/s	1. Provide design details and detail and dates of installation of a cathodic circuit 2. Provide detail and dates of modification/troubleshooting of a cathodic circuit 3. Provide detail of corrosion measurement in cathodic circuits 4. Provide detail and dates of grounding and bonding of cathodic circuits 5. Explain any choices you have made

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Installed and maintained grounding and bonding circuitry: (4.1)

- ☐ designed grounding and bonding circuits
- ☐ modified grounding and bonding circuits to resolve problems
- ☐ installed and maintained ground fault indicators
- ☐ installed and maintained ground grids
- ☐ used testing meter to test ground
- ☐ used installation tools correctly

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

☐ Installed and maintain cathodic protection equipment and circuits: (4.2)
OR

☐ Provided answers to demonstrate knowledge to the assessor's satisfaction where (4.2) cathodic protection is not used in the workplace.

- ☐ designed circuits with cathodic protection
- ☐ modified cathodic circuits to resolve corrosion problems
- ☐ measured corrosion in cathodic protected circuits
- ☐ bonded and grounded cathodic circuits

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

Task 5: Install cable and protection to CEC requirements, neatly and efficiently, ensuring protected circuits can withstand environmental stresses.

Apprentice Diary – Installing cables (5.1)

Date/s	Outline below in a dated diary the following: • design/specification of cable installation • sizing details • details of the cable installation • securing methods • armouring and protection of the cable • note any special environmental issues that affect the choice of cable type • explain any choices you have made.

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Installed cable: (5.1)
- ☐ hangar devices selected and used
- ☐ cable selected and installed in accordance with environmental considerations (to CEC specs)
- ☐ cable sized correctly
- ☐ stapling and strapping carried out correctly
- ☐ routing and design carried out correctly
- ☐ design specifications followed correctly
- ☐ special usage cable was selected/used where appropriate

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Secured cable protection: (5.2)
- ☐ cable protection secured as specified
- ☐ cable protection was appropriately armoured
- ☐ cable protection was appropriately weatherproof

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

Task 6: Terminate conductors appropriate to the environment and to CEC rules and those set by applicable regulatory codes.

Note: regulatory requirements include company and manufacturer standards.

Apprentice Diary – Terminating conductors (6.1)

Date/s	Outline below in a dated diary the processes that you have carried out of terminating conductors. • Include the processes of crimping, stripping wire, soldering, using torque wrench, sizing the wire correctly to the terminal, using terminal blocks, wire markers and heat shrink. • Explain any choices you have made.

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Terminated conductors in accordance with regulatory requirements and CEC rules: (6.1)

- ☐ used crimpers
- ☐ used wire strippers
- ☐ soldered
- ☐ used torque wrench
- ☐ sized the wire correctly according to terminal
- ☐ used terminal block
- ☐ used wire markers
- ☐ used heat shrink to finish terminal

Note: regulatory requirements include company and manufacturer standards.

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

Task 7: Label and document wiring to CEC rules and those set by applicable regulatory codes.

Note: regulatory requirements include company and manufacturer standards.

Apprentice Diary – Labelling and documenting wiring (7.1)

Date/s	Outline below in a dated diary the processes that you have carried out of labelling and documenting wiring. • what labelling and numbering standards have you used? • what documentation systems do you use? • describe the wire marker system that you use. • identify the colour coding system that you use. • explain any choices you have made.

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Labelled and documented wiring: (7.1)
- ☐ labelling and numbering standards were used correctly
- ☐ wiring was documented correctly
- ☐ wire markers were installed correctly
- ☐ colour coding systems were adhered to

Note: regulatory requirements include company and manufacturer standards.

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name: _____ ***Signature:*** _____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

Task 8: Splice wiring to CEC rules

Apprentice Diary – Splice wiring (8.1)

Date/s	Outline below in a dated diary the processes that you have carried out of splicing wiring. • outline voltages involved (you must splice low voltage wiring and may also splice high voltage) • outline the techniques used • outline safety considerations to take into account and observe • explain any choices you have made.

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Spliced low voltage wiring: (8.1)

- ☐ apprentice demonstrated correct splicing technique
- ☐ safety considerations were correctly observed

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:*** _____

Assessor Signature: _____ ***Date:*** _____

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.

SPECIFICATION

People credited with this standard are able to:

- **Determine lighting installation requirements and select and install lighting equipment and controls in accordance with CEC and manufacturer guidelines.**

Credit 5

Prerequisite

Competency Standard IE145-2TC, Demonstrate knowledge of lighting systems and design Assessment

For assessment purposes, all explanations, descriptions, and activities must comply with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations and industry practice.

Quality Assurance

Any assessor assessing against this competency standard must be a qualified electrician.

Reference

The Canadian Electrical Code, Part I, Canadian Standards Association, most current edition (CEC)
WorkSafeBC Occupational Health and Safety (OHS) regulations.

Definitions

CSA – Canadian Standards Association
ULC – Underwriters Laboratories of Canada
Properly – to CEC rules and in a manner that complies with WorkSafeBC regulations.

Task 1: Select and install lighting equipment and controls appropriate for the application and in accordance with CEC and manufacturer standards and guidelines.

This unit relates to the following competency number and topic in the provincial OAC and Program Outline:

I1 Install lighting and electrical equipment

Task 1: Select and install lighting equipment and controls appropriate for the application and in accordance with CEC and manufacturer standards and guidelines.

Apprentice Diary – Selecting the equipment and controls (1.1)

Date/s	Outline the selection processes and dates – selection must include: • emergency lighting • code requirements • ULC and CSA applicable codes • light colour required • ambient temperature • environmental requirements • size of illuminated space • wall light refractance • explain the choices you made

Apprentice Diary – Installing the equipment and controls (1.2)

Date/s	Outline the installation processes and dates – installation must include: • hang lighting fixtures • wire • shield and ballast • bulbs and bulb handling considerations • starters and breakers • access equipment catalogues and parts orders • low voltage control • explain any choices you have made. *Installation may also include photoelectric cells and timers and infrared detectors.*

Assessor Checklist

I verify the apprentice is able to perform the following task(s) to the standard outlined and attest to his/her competence.

☐ Selected light equipment in accordance with industry practice: (1.1)

- ☐ emergency light equipment selected
- ☐ code requirements were adhered with (CEC, ULC, CSA as applicable)
- ☐ correct light colour required was selected
- ☐ equipment selected was compatible with the temperature and environment
- ☐ equipment selected was appropriate to the size of the space to be illuminated
- ☐ equipment selection accounted for wall light refraction (where appropriate)

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

☐ Installed lighting equipment and controls in accordance with industry practice (1.2)

- ☐ lighting fixtures were installed
- ☐ wiring run and connected
- ☐ lamp shield and ballast were installed correctly
- ☐ bulbs were installed and handled correctly during installation
- ☐ starters and breakers were installed correctly
- ☐ equipment catalogues were referenced and parts ordered appropriately
- ☐ low voltage control was installed correctly

☐ All apprentice's explanations, descriptions, and activities complied with current legislation, including the Canadian Electrical Code, WorkSafeBC or other applicable regulations, and industry practice.

Assessor/ verifier name:_____ ***Signature:***_____ ***Date:*** _____

Note: if simulation was used for any of the tasks, attach a brief description of the exercise to this competency.

Additional Supporting Evidence

(To be completed by the apprentice and signed by the assessor)

Describe what workplace records are available to verify you performed this work.

Describe where a moderator can locate these records to verify your work when doing a quality check.

Name and describe the CEC rules required when you performed these tasks.

Name applicable manufacturer guidelines that were followed when doing these tasks.

Apprentice Signature: _____ ***Date:***_____

Assessor Signature: _____ ***Date:***_____

Electrical

Additional Questions

Attach written notes of any additional questions asked of the apprentice and answers given. Ensure they are signed and dated by both the apprentice and assessor.