

SKILLED**TRADES**<sup>BC</sup>

# Personal Record Book

*Plumber*

This is your Record Book!

## **DO NOT SUBMIT TO SkilledTradesBC**

This is not required to achieve certification

- It is a record of your progress towards achieving certification in the trade
- It provides a record of your experience
- It is your responsibility to keep it up-to-date
- Take it with you if you change employers

*Note: Employers and supervisors are not responsible for keeping your Record Book up-to-date. They are responsible for sign-off of hours and sign-off of competencies once you have achieved the required level of skills and knowledge.*

# APPRENTICE IDENTIFICATION

**Trade: PLUMBER**

Legal First Name:		Legal Last Name:	
Suite Number:	Street Number and Name:		
City:		Province:	Postal Code:
Telephone Number: (    )		Email Address:	

## Work Safely!

A safe work attitude contributes to an accident free environment. Accident prevention and safe working conditions are the responsibility of both employers and employees.

Wear the required personal protective equipment, follow safe work practices and follow all safety regulations applicable to specific job activities.

Employer's responsibilities:

- Provide and maintain safety equipment and protective devices
- Ensure proper safe work clothing is worn
- Enforce safe work procedures
- Provide safeguards for machinery, equipment and tools
- Observe all accident prevention regulations
- Train employees in safe use and operation of equipment

Employee's responsibilities:

- Work in accordance with the safety regulations pertaining to job environment
- Work in such a way as not to endanger themselves or fellow workers.

# CONTENTS

APPRENTICE IDENTIFICATION .....	2
CONTENTS .....	3
EMPLOYER INFORMATION.....	4
WORKPLACE HOURS .....	6
DATE (TO-FROM) .....	7
EMPLOYER.....	7
HOURS.....	7
TOTAL HOURS.....	7
RECORD OF COMPETENCIES .....	8
LEVEL 1 .....	9
LEVEL 2 .....	14
LEVEL 3 .....	18
LEVEL 4 .....	23
MISSING COMPETENCIES? .....	28
TECHNICAL TRAINING .....	29
COMPLETION REQUIREMENTS .....	30
CERTIFICATIONS.....	31

# EMPLOYER INFORMATION

## Originating Employer

Start Date:	End Date:
Employer:	
Contact Person:	
Address:	Phone:
	Email:
	Fax:
Supervisor/Journey person 1:	*TWID #:
	Phone:
	Email:
Supervisor/Journey person 2:	TWID #:
	Phone:
	Email:

\*TWID # - Trade Worker Identification Number

*If you have more than one employer during your apprenticeship, record the information for subsequent employers on the following page(s).*

If your job ends or you change employers...

**Before leaving your place of employment:**

- Please have your sponsor update your Work Based Training hours on their [\*SkilledTradesBC Portal account\*](#).
- Update Record of Competencies with your supervisor.
- Confirm with your employer that your workplace hours have been reported to SkilledTradesBC, and if possible get a copy of all Work-Based Training Hours reports submitted.
- Notify SkilledTradesBC of the change in your employment by submitting an [\*Apprentice and Sponsor Registration form\*](#) with your new employer.

When re-employed...

**You must be registered with your new employer before submitting any work-based training hours to SkilledTradesBC.**

## Subsequent Employers

Start Date:	End Date:
Employer:	
Contact Person:	
Address:	Phone:
	Email:
	Fax:
Supervisor/Journeyperson 1:	TWID #:
	Phone:
	Email:
Supervisor/Journeyperson 2:	TWID #:
	Phone:
	Email:

## Subsequent Employers

Start Date:	End Date:
Employer:	
Contact Person:	
Address:	Phone:
	Email:
	Fax:
Supervisor/Journeyperson 1:	TWID #:
	Phone:
	Email:
Supervisor/Journeyperson 2:	TWID #:
	Phone:
	Email:

# WORKPLACE HOURS

## Instructions

Make an entry in this section each time your hours are reported to SkilledTradesBC.

1. Get a copy of the *Workplace Hours Report* from your employer.
2. Fill in the dates of the reporting period and the hours reported.
3. Enter your employer name, address and phone number.
4. Keep your Record Book in a safe place.

### Workplace Hours

**Workplace hours** must be submitted to SkilledTradesBC by your employer on a regular basis. Your hours should be reported at least every six months; however, every three months is preferred.

At the beginning of your apprenticeship discuss the frequency of reporting with your employer.

Keeping Workplace hours up-to-date in your Record Book gives you the tools to better manage your apprenticeship. It provides you with the opportunity to:

- Follow up with your employer each reporting period to ensure your hours are reported on a regular basis.
- Discuss your progress with your direct supervisor/journeyperson on a regular basis.

DATE (TO-FROM)	EMPLOYER	HOURS
<b>TOTAL HOURS</b>		



# RECORD OF COMPETENCIES

## Instructions

The Record of Competencies is filled out and signed-off by the journeyperson supervising your work.

1. Know what skills are expected at each level of the program.
2. Ask the journeyperson to sign off on the competency when you have acquired the skills and are able to perform the task without supervision.
3. If the journeyperson agrees that you have the required skills, he/she will:
  - Record the date that the competency was achieved
  - Sign off on the competency
  - Enter his/her Trades Worker Identification Number (TWID #)

### What is a Record of Competencies?

The Record of Competencies lists all competencies you should be knowledgeable in prior to receiving your certification. Keeping this section up to date will allow you to track your progress towards certification and demonstrate proficiency in the skills within the scope of your trade. Completion of the entire program should result in you becoming a skilled and knowledgeable journeyperson.

- Refer to this section periodically to ensure you are getting the work experience you need.
- Use the competencies as a guide to ensure work tasks are assigned so that you acquire the skills and knowledge required to be successful in the trade.

Review the Record of Competencies on a regular basis with your direct supervisor/journeyperson to ensure they have been completed.

### Program Outline

The Program Outline provides detailed information on the scope of knowledge and skills expected at each level of the program, further defining the competencies listed in the Record Book. The Program Outline is a great resource for developing a training plan.

Download from: <https://skilledtradesbc.ca/plumber>

### Apprenticeship Toolkit

For general information on apprenticeship and tips for navigating the apprenticeship system in BC visit SkilledTradesBC's website to learn about the [apprenticeship basics](#).

# LEVEL 1

## **IMPORTANT!**

Download the Program Outline!

<https://skilledtradesbc.ca/plumber>

Read the competency tables

Some competencies are taught in many levels

For detailed information about that competency, go to the Program Outline

## THEORY

### LINE A: PERFORM SAFETY RELATED FUNCTIONS

- Identify and use lock-out and tag-out procedures
- Identify classes of fires

### LINE B: USE TOOLS AND EQUIPMENT

- Describe crane procedures
- Identify common welding types, positions, joints, symbols and equipment

### LINE C: PERFORM ROUTINE TRADE ACTIVITIES

- Apply formulas
- Interpret information found on a set of drawings
- Identify codes, standards and organizations

### LINE D: PREPARE PIPING AND COMPONENTS

- Describe piping and tubing
- Describe valve types
- Describe the installation of valves
- Describe structure penetration

## LINE F: USE COMMUNICATION TECHNIQUES

- Describe effective communication practices

## LINE O: APPLY ELECTRICAL CONCEPTS

- Describe electrical concepts
- Solve simple problems using Ohm's and Kirchhoff's laws
- Describe single phase and three phase power
- Identify transformers

# PRACTICAL

## LINE A: PERFORM SAFETY RELATED FUNCTIONS

- Manage workplace hazards
- Use WHMIS
- Use and maintain personal protective equipment (PPE) and safety equipment
- Select fire extinguishers for class of fire and relevant condition

## LINE B: USE TOOLS AND EQUIPMENT

- Use hand, portable and stationary power tools
- Use measuring and leveling equipment
- Inspect and maintain tools and equipment
- Use leveling equipment to establish elevations
- Select and use ladders and elevated platforms
- Use hoisting, lifting and rigging equipment
- Secure loads for rigging removal
- Use air-fuel and oxy-fuel equipment to braze and solder
- Use oxy-fuel cutting equipment
- Use a grinder

## LINE C: PERFORM ROUTINE TRADE ACTIVITIES

- Use drafting symbols, lettering and line conventions
- Calculate piping measurements and offsets
- Perform conversions and heat load calculations
- Convert between orthographic and isometric projections
- Create an isometric drawing of a basic orthographic piping arrangement

## LINE D: PREPARE PIPING AND COMPONENTS

- Prepare pipe for jointing and installation
- Join piping and tubing
- Install carbon steel piping
- Select fittings
- Install fittings

## LINE O: APPLY ELECTRICAL CONCEPTS

- Solve simple problems using Ohm's and Kirchhoff's laws

Supervisor Signature

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# NOTES FROM LEVEL 1

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## LEVEL 2

### **IMPORTANT!**

Download the Program Outline!

<https://skilledtradesbc.ca/plumber>

Read the competency tables

Some competencies are taught in many levels

For detailed information about that competency, go to the Program Outline

## THEORY

### LINE B: USE TOOLS AND EQUIPMENT

- Describe pressure measuring tools
- Interpret pressure readings

### LINE C: PERFORM ROUTINE TRADE ACTIVITIES

- Describe methods of combustion air supply
- Describe draft
- Describe the building as a system
- Identify types of drawings
- Interpret codes and standards for the national plumbing code (NPC)
- Interpret codes and standards for the B149.1 gas code series
- Describe manufacturer and supplier documentation

### LINE E: INSTALL PLUMBING FIXTURES AND APPLIANCES SYSTEMS

- Describe the installation of fixtures and trim
- Describe the installation of appliances

### LINE H: INSTALL DRAINAGE, WASTE AND VENT (DWV) SYSTEMS

- Interpret the national plumbing code (NPC) for DWV systems
- Interpret code requirements for parts of storm drainage systems
- Describe the installation storm drainage systems

- Describe the testing of sanitary and storm drainage systems

## LINE L: INSTALL HYDRONIC SYSTEMS

- Describe the operation of residential forced air systems
- Describe the operation of hydronic heating systems
- Describe low pressure steam piping systems
- Describe the installation of hydronic heat generating systems
- Describe the installation of hydronic cooling generating systems
- Describe hydronic transfer units
- Describe the installation of hydronic transfer units

## LINE P: PLAN GAS-FIRED APPLIANCE SYSTEM INSTALLATIONS

- Describe gas-fired appliances



# PRACTICAL

## LINE B: USE TOOLS AND EQUIPMENT

- Use U-tube manometers
- Use electrical testing meters to test voltage, amperage, resistance, and continuity

## LINE C: PERFORM ROUTINE TRADE ACTIVITIES

- Calculate air requirements and products of combustion
- Create a drainage, waste and vent (DWV) isometric projection to code requirements
- Plan residential take-offs
- Source manufacturer documentation
- Layout piping systems

## LINE H: INSTALL DRAINAGE, WASTE AND VENT (DWV) SYSTEMS

- Plan the layout of a commercial or institutional DWV system
- Install piping and components for interior DWV systems
- Plan the layout of a storm drainage system

## LINE L: INSTALL HYDRONIC SYSTEMS

- Calculate volumetric thermal expansion
- Install piping for a hydronic system

Supervisor Signature

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## NOTES FROM LEVEL 2

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## LEVEL 3

### IMPORTANT!

Download the Program Outline!

<https://skilledtradesbc.ca/plumber>

Read the competency tables

Some competencies are taught in many levels

For detailed information about that competency, go to the Program Outline

## THEORY

### LINE C: PERFORM ROUTINE TRADE ACTIVITIES

- Interpret the National Plumbing Code (NPC) section 6 and related appendix

### LINE G: INSTALL SEWERS AND SEWAGE TREATMENT SYSTEMS

- Describe the installation of piping for sewers
- Describe the installation of manholes and catch basins

### LINE I: INSTALL WATER SERVICES AND DISTRIBUTION SYSTEMS

- Describe sizing for water service piping
- Describe the installation water services
- Interpret the National Plumbing Code (NPC) section 6, potable water systems
- Describe the installation of piping for potable water service and distribution systems

### LINE J: INSTALL CROSS CONNECTION CONTROL DEVICES AND ASSEMBLIES

- Describe the installation of cross connection control devices and assemblies
- Describe the troubleshooting and repair of cross connection control assemblies

### LINE L: INSTALL HYDRONIC SYSTEMS

- Describe switches

## LINE N: INSTALL SPECIALIZED SYSTEMS

- Describe irrigation, compressed air and green systems
- Describe the installation of piping for compressed air systems
- Describe the installation of equipment for irrigation, compressed air and green systems
- Describe the testing of irrigation, compressed air and green systems
- Describe the servicing of irrigation, compressed air and green systems
- Describe the commissioning of irrigation, compressed air and green systems

## LINE O: APPLY ELECTRICAL CONCEPTS

- Identify electrical diagrams
- Analyze simple circuits
- Describe appliance circuits
- Describe wiring components
- Describe conductor installation
- Describe wire termination

## LINE P: PLAN GAS-FIRED APPLIANCE SYSTEM INSTALLATIONS

- Describe piping, tubing and hoses
- Describe flame detectors
- Describe the operation of standing pilot/thermocouple systems
- Describe burners
- Describe the operation of atmospheric burners
- Describe burner orifices

## LINE Q: INSTALL GAS-FIRED SYSTEMS

- Describe the installation of piping, tubing and hoses for fuel gas applications

# PRACTICAL

## LINE C: PERFORM ROUTINE TRADE ACTIVITIES

- Design drainage, waste and vent (DWV), water distribution and fuel gas distribution systems
- Use gas regulations

## LINE G: INSTALL SEWERS AND SEWAGE TREATMENT SYSTEMS

- Size pipe for sewers

## LINE I: INSTALL WATER SERVICES AND DISTRIBUTION SYSTEMS

- Size pipe for potable water service and distribution systems

## LINE J: INSTALL CROSS CONNECTION CONTROL DEVICES AND ASSEMBLIES

- Test cross connection control assemblies

## LINE L: INSTALL HYDRONIC SYSTEMS

- Size piping and components for hydronic systems
- Design a residential hot water radiant floor heating system
- Install relays
- Install controls for hydronic systems

## LINE O: APPLY ELECTRICAL CONCEPTS

- Sketch a series and parallel circuit
- Sketch a ladder diagram

## LINE P: PLAN GAS-FIRED APPLIANCE SYSTEMS INSTALLATION

- Size piping and tubing systems

Supervisor Signature

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## NOTES FROM LEVEL 3

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# LEVEL 4

## IMPORTANT!

Download the Program Outline!

<https://skilledtradesbc.ca/plumber>

Read the competency tables

Some competencies are taught in many levels

For detailed information about that competency, go to the Program Outline

## THEORY

### LINE C: PERFORM ROUTINE TRADE ACTIVITIES

- Describe contractual documents and record management

### LINE E: INSTALL PLUMBING FIXTURES AND APPLIANCES

- Describe the commissioning of fixtures and appliances
- Describe the servicing of fixtures, trim and appliances

### LINE G: INSTALL SEWERS AND SEWAGE TREATMENT SYSTEMS

- Describe the testing of manholes, catch basins and piping for sewers
- Describe the servicing of manholes, catch basins and piping for sewers
- Describe the installation of sewage treatment systems and components
- Describe the testing of sewage treatment systems and components
- Describe the servicing of sewage treatment systems and components

### LINE H: INSTALL DRAINAGE, WASTE AND VENT (DWV) SYSTEMS

- Describe the servicing of drainage, waste and vent (DWV) systems

### LINE I: INSTALL WATER SERVICES AND DISTRIBUTION SYSTEMS

- Describe the testing of water service and distribution systems
- Describe the servicing of water service and distribution systems
- Describe the commissioning of water service and distribution systems



## LINE K: INSTALL PRESSURE SYSTEMS

- Describe the installation of piping for pressure systems
- Describe the installation of equipment for pressure systems
- Describe the testing of pressure systems
- Describe the servicing of pressure systems
- Describe the commissioning of pressure systems

## LINE L: INSTALL HYDRONIC SYSTEMS

- Describe testing procedures for hydronic systems, components and controls
- Describe the servicing of hydronic systems, components and controls
- Describe commissioning procedures for hydronic systems, components and controls

## LINE M: INSTALL WATER TREATMENT EQUIPMENT

- Describe the sizing and installation of water treatment equipment
- Describe the servicing of water treatment equipment

## LINE N: INSTALL SPECIALIZED SYSTEMS

- Describe the installation of medical gas piping systems
- Describe process piping systems
- Describe the installation of medical gas equipment
- Describe testing for medical gas systems
- Describe the servicing of medical gas systems
- Describe the commissioning of medical gas systems

## LINE O: APPLY ELECTRICAL CONCEPTS

- Describe single phase motors
- Describe three phase motors
- Interpret the Canadian Electrical Code Part 1
- Interpret the Electrical Safety Regulations

## LINE P: PLAN GAS-FIRED APPLIANCE SYSTEM INSTALLATIONS

- Describe the operation of gas valve trains for appliances rated at 400 MBH or less
- Describe the purpose and operation of gas pressure regulators

## LINE Q: INSTALL GAS-FIRED SYSTEMS

- Describe manual shut-off valves installation
- Describe gas pressure regulator installation
- Describe installation of passive air supply systems
- Describe testing and purging procedures for pipe under 4 inch diameter

## PRACTICAL

### LINE F: USE COMMUNICATION TECHNIQUES

- Use mentoring techniques

### LINE K: INSTALL PRESSURE SYSTEMS

- Size pressure systems and select a pump

### LINE M: INSTALL WATER TREATMENT EQUIPMENT

- Test and commission water treatment equipment

### LINE P: PLAN GAS-FIRED APPLIANCE SYSTEM INSTALLATIONS

- Select valves
- Plan a residential piping installation

Supervisor Signature

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## NOTES FROM LEVEL 4

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## MISSING COMPETENCIES?

To develop the best journeyperson possible employers should attempt to provide training in all competencies for the trade. This is not always possible.

If your employer is unable to provide training in any competency required for your trade, note that competency below. Competencies listed here will remain unsigned until your employer can provide training in that area or until you find an alternate way to gain the experience needed.

Competency:	Date:
Reason:	
Alternate plan:	

Competency:	Date:
Reason:	
Alternate plan:	

# TECHNICAL TRAINING

## Instructions

Keep a record of each level of technical training completed.

### Level 1

Date Completed:	Training Provider:
Mark:	Instructor:

### Level 2

Date Completed:	Training Provider:
Mark:	Instructor:

### Level 3

Date Completed:	Training Provider:
Mark:	Instructor:

### Level 4

Date Completed:	Training Provider:
Mark:	Instructor:

# COMPLETION REQUIREMENTS

## Instructions

Keep a record of each program completion requirement achieved.

## PLUMBER

- Level 1 - Technical Training
- Level 2 - Technical Training
- Level 3 - Technical Training
- Level 4 - Technical Training
  
- 6,300 Work-Based Training Hours
  
- Interprovincial Red Seal Examination
- Recommendation for Certification signed by sponsor

Note: After all other completions requirements have been met, SkilledTradesBC sends a Recommendation for Certification form to the sponsor requesting signoff.

# CERTIFICATIONS

## Instructions

Keep a record of the credentials and endorsements you have earned, including the certification number and date of issue.

CREDENTIAL EARNED	NUMBER	DATE OF ISSUE

*If you have any questions, please contact SkilledTradesBC  
Customer Service at [customerservice@skilledtradesbc.ca](mailto:customerservice@skilledtradesbc.ca)  
778-328-8700 or toll free (within BC) at 1-800-660-6011*