



## PROGRAM OUTLINE

### Painter and Decorator

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# **PAINTER AND DECORATOR PROGRAM OUTLINE**

**APPROVED BY INDUSTRY  
JANUARY 2013**

**BASED ON  
NOA 2011**

**Developed by  
SkilledTradesBC  
Province of British Columbia**

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# **Section 1**

## **INTRODUCTION**

### **Painter and Decorator**

## Foreword

The revised Painter and Decorator Program Outline is intended as a guide for instructors, apprentices, and employers of apprentices as well as for the use of industry organizations, regulatory bodies, and provincial and federal governments. It reflects updated standards based on British Columbia industry and instructor subject matter experts.

Practical instruction by demonstration and student participation should be integrated with classroom sessions. Safe working practices, even though not always specified in each operation or topic, are an implied part of the program and should be stressed throughout the apprenticeship.

The Program Outline includes the minimum shop requirements needed to support instructors.

The Program Outline was prepared with the advice and assistance of the Painter and Decorator Review Committee, and will form the basis for further updating of the British Columbia Painter and Decorator Program and learning resources by the Construction Industry Training Organization (CITO) on behalf of SkilledTradesBC.

Each competency is to be evaluated through the use of written examination in which the learner must achieve a minimum of 70% in order to receive a passing grade. The types of questions used on these exams must reflect the cognitive level indicated by the learning objectives and the learning tasks listed in the related competencies.

Achievement Criteria are included for those competencies that require a practical component. The intent of including Achievement Criteria in the program outline is to ensure consistency in training across training institutions in British Columbia. Their purpose is to reinforce the theory and to provide a mechanism for evaluation of the learner's ability to apply the theory to practice. It is important that these performances be observable and measureable and that they reflect the skills spelled out in the competency as those required by a competent journey person. The conditions under which these performances will be observed and measured, as well as the criteria by which the learner will be evaluated, must be clear to the learner. The learner must also be given the level of expectation of success.

The performance spelled out in the Achievement Criteria is a suggested performance and is not meant to stifle flexibility of delivery. Training providers are welcome to substitute other practical performances that measure skills and attainment of the competency. Multiple performances may also be used to replace individual performances where appropriate.

### **SAFETY ADVISORY**

Be advised that references to the WorkSafeBC safety regulations contained within these materials do not/may not reflect the most recent Occupational Health and Safety Regulation (the current Standards and Regulation in BC can be obtained on the following website: <http://www.worksafebc.com>). Please note that it is always the responsibility of any person using these materials to inform him/herself about the Occupational Health and Safety Regulation pertaining to his/her work.

## Acknowledgements

The Program Outline was prepared with the advice and direction of an industry steering committee convened initially by the BC Construction Industry Training Organization (CITO). Members include:

- Chico Albino
- Don Bauer
- Stuart Guilbault
- David Holmes
- Brian Mosby
- Mike Mousseau
- Clinton Pazdzierski
- Joseph Racanelli
- Mark Tenbroek
- Jon Walker

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- Chico Albino
- Stuart Guilbault
- Alan Naval
- Brian Mosby
- Mark Tenbroek

SkilledTradesBC would like to acknowledge the dedication and hard work of all the industry representatives appointed to identify the training requirements of the Painter and Decorator occupation.

## How to Use this Document

This Program Outline has been developed for the use of individuals from several different audiences. The table below describes how each section can be used by each intended audience.

Section	Training Providers	Employers/ Sponsors	Apprentices	Challengers
<b>Program Credentialing Model</b>	Communicate program length and structure, and all pathways to completion	Understand the length and structure of the program	Understand the length and structure of the program, and pathway to completion	Understand challenger pathway to Certificate of Qualification
<b>OAC</b>	Communicate the competencies that industry has defined as representing the scope of the occupation	Understand the competencies that an apprentice is expected to demonstrate in order to achieve certification	View the competencies they will achieve as a result of program completion	Understand the competencies they must demonstrate in order to challenge the program
<b>Training Topics and Suggested Time Allocation</b>	Shows proportionate representation of general areas of competency (GACs) at each program level, the suggested proportion of time spent on each GAC, and percentage of time spent on theory versus practical application	Understand the scope of competencies covered in the technical training, the suggested proportion of time spent on each GAC, and the percentage of that time spent on theory versus practical application	Understand the scope of competencies covered in the technical training, the suggested proportion of time spent on each GAC, and the percentage of that time spent on theory versus practical application	Understand the relative weightings of various competencies of the occupation on which assessment is based
<b>Program Content</b>	Defines the objectives, learning tasks, high level content that must be covered for each competency, as well as defining observable, measureable achievement criteria for objectives with a practical component	Identifies detailed program content and performance expectations for competencies with a practical component; may be used as a checklist prior to signing a recommendation for certification (RFC) for an apprentice	Provides detailed information on program content and performance expectations for demonstrating competency	Allows individual to check program content areas against their own knowledge and performance expectations against their own skill levels
<b>Training Provider Standards</b>	Defines the facility requirements, tools and equipment, reference materials (if any) and instructor requirements for the program	Identifies the tools and equipment an apprentice is expected to have access to; which are supplied by the training provider and which the student is expected to own	Provides information on the training facility, tools and equipment provided by the school and the student, reference materials they may be expected to acquire, and minimum qualification levels of program instructors	Identifies the tools and equipment a tradesperson is expected to be competent in using or operating; which may be used or provided in a practical assessment



# **Section 2**

## **PROGRAM OVERVIEW**

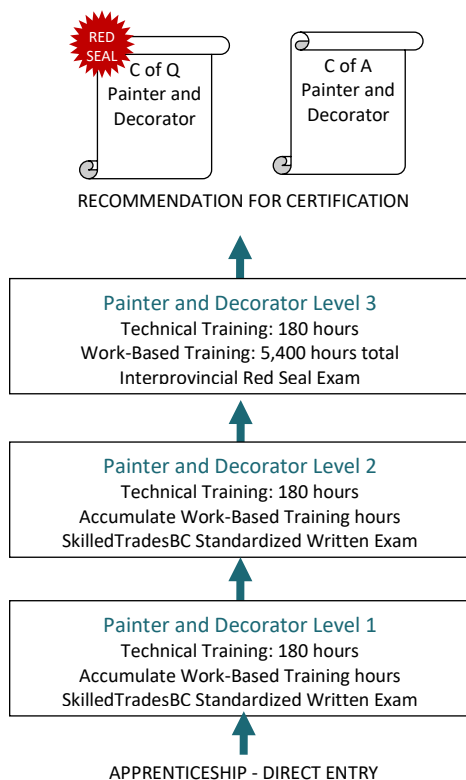
### **Painter and Decorator**

## Program Credentialing Model

### Apprenticeship Pathway

This graphic provides an overview of the Painter and Decorator apprenticeship pathway.

*C of Q = Certificate of Qualification  
C of A = Certificate of Apprenticeship*



#### CROSS-PROGRAM CREDITS

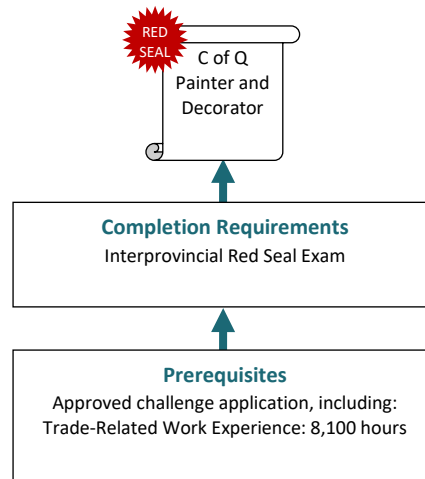
*Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program*

Corrections Canada/BC Work Experience Program	Technical Training: None Work-Based Training: 800 hours
---	--

## Challenge Pathway

This graphic provides an overview of the Painter and Decorator challenge pathway.

*C of Q = Certificate of Qualification*



### CREDIT FOR PRIOR LEARNING

*Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program*

*None*

# Occupational Analysis Chart

## Painter and Decorator

**Occupation Description:** “Painter and Decorator” means a person who prepares and applies paint or any organic/inorganic coating when applied in the same manner as paints; sand/hydro blasts for cleaning, decorative or preparatory purposes to steel, concrete or wood; installs rubber, fiberglass, acid resistant or metalized linings to tanks, pipes, or other vessels; installs all wall covering on buildings or structure surfaces.

<b>USE SAFE WORK PRACTICES</b>  <b>A</b>	Manage Workplace Hazards  A1 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Interpret OHS Regulations and WorkSafeBC Standards  A2 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Attain Confined Space Awareness Training  A3 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Use Fall Protection Systems and Equipment  A4 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Use Personal Protective Equipment  A5 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Use Fire Safety Procedures  A6 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Attain First Aid Certification  A7 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Apply WHMIS  A8 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>				
<b>USE TOOLS AND EQUIPMENT</b>  <b>B</b>	Use Hand Tools and Measuring Equipment  B1 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Use Abrasive Media  B2 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Use Power and Pneumatic Tools  B3 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Use Access Equipment  B4 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Use Hoisting and Lifting Equipment  B5 <input type="checkbox"/> 2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<b>ORGANIZE WORK</b>  <b>C</b>	Use Mathematics  C1 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Interpret Drawings and Specifications  C2 <input type="checkbox"/> <input type="checkbox"/> 3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Communicate with Others  C3 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Handle Materials  C4 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Plan a Project  C5 <input type="checkbox"/> <input type="checkbox"/> 3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<b>PREPARE SURFACES</b>  <b>D</b>	Prepare and Repair Drywall and Plaster Surfaces  D1 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Prepare Wood Surfaces  D2 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Treat and Repair Concrete and Masonry Surfaces  D3 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Prepare and Repair Metal Surfaces  D4 1 <input type="checkbox"/> 2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Perform Abrasive Blasting  D5 <input type="checkbox"/> 2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Perform Hydro Cleaning  D6 1 <input type="checkbox"/> 2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

## Program Overview

<b>APPLY PAINT AND COATINGS</b> <b>E</b>	Apply Paint E1 1 2 3 4 5	Apply Industrial Coatings and Materials E2 1 2 3 4 5	Correct Paint/Coating Failures E3 1 2 3 4 5	Use Air Spray Equipment E4 1 2 3 4 5	Use Airless Spray Equipment E5 1 2 3 4 5	Use Specialty Spray Equipment E6 1 2 3 4 5
	Use Thermal Spray E7 1 2 3 4 5	Use Fibre-Reinforced Plastic E8 1 2 3 4 5	Apply Caulking E9 1 2 3 4 5			
<b>APPLY WALL COVERING PROCEDURES</b> <b>F</b>	Prepare and Install Wall Coverings F1 1 2 3 4 5	Apply Wall Coverings F2 1 2 3 4 5				
<b>APPLY FINISHES</b> <b>G</b>	Apply Wood Finishes G1 1 2 3 4 5	Apply Decorative Finishes G2 1 2 3 4 5	Apply Graphics G3 1 2 3 4 5			
<b>APPLY COLOUR THEORY</b> <b>H</b>	Use Colour Theory H1 1 2 3 4 5	Mix and Match Colours H2 1 2 3 4 5				

## Training Topics and Suggested Time Allocation

### PAINTER AND DECORATOR – LEVEL 1

		% of Time Allocated to:			
		% of Time	Theory	Practical	Total
<b>Line A</b>	<b>USE SAFE WORK PRACTICES</b>	<b>20%</b>	<b>85%</b>	<b>15%</b>	<b>100%</b>
A1	Manage Workplace Hazards		✓		
A2	Interpret OHS Regulations and WorkSafeBC Standards		✓		
A3	Attain Confined Space Awareness Training		✓		
A4	Use Fall Protection Systems and Equipment		✓	✓	
A5	Use Personal Protective Equipment		✓	✓	
A6	Use Fire Safety Procedures		✓		
A7	Attain First Aid Certification		✓	✓	
A8	Apply WHMIS		✓		
<b>Line B</b>	<b>USE TOOLS AND EQUIPMENT</b>	<b>20%</b>	<b>80%</b>	<b>20%</b>	<b>100%</b>
B1	Use Hand Tools and Measuring Equipment		✓		
B2	Use Abrasive Media		✓	✓	
B3	Use Power and Pneumatic Tools		✓	✓	
B4	Use Access Equipment		✓	✓	
<b>Line C</b>	<b>ORGANIZE WORK</b>	<b>10%</b>	<b>100%</b>	<b>0%</b>	<b>100%</b>
C1	Use Mathematics		✓		
C3	Communicate with Others		✓		
C4	Handle Materials		✓		
<b>Line D</b>	<b>PREPARE SURFACES</b>	<b>20%</b>	<b>75%</b>	<b>25%</b>	<b>100%</b>
D1	Prepare and Repair Drywall and Plaster Surfaces		✓	✓	
D2	Prepare Wood Surfaces		✓	✓	
D3	Treat and Repair Concrete and Masonry Surfaces		✓		
D4	Prepare and Repair Metal Surfaces		✓		
D6	Perform Hydro Cleaning		✓		
<b>Line E</b>	<b>APPLY PAINT AND COATINGS</b>	<b>20%</b>	<b>60%</b>	<b>40%</b>	<b>100%</b>
E1	Apply Paint		✓	✓	
E3	Correct Paint/Coating Failures		✓		
E5	Use Airless Spray Equipment		✓	✓	
E9	Apply Caulking		✓		

		% of Time Allocated to:			
		% of Time	Theory	Practical	Total
<b>Line G</b>	<b>APPLY FINISHES</b>	<b>5%</b>	<b>50%</b>	<b>50%</b>	<b>100%</b>
G3	Apply Graphics		✓	✓	
<b>Line H</b>	<b>APPLY COLOUR THEORY</b>	<b>5%</b>	<b>50%</b>	<b>50%</b>	<b>100%</b>
H1	Use Colour Theory		✓	✓	
H2	Mix and Match Colours		✓	✓	
<b>Total Percentage for Painter and Decorator Level 1</b>		<b>100%</b>			

## Training Topics and Suggested Time Allocation

### PAINTER AND DECORATOR – LEVEL 2

		% of Time	% of Time Allocated to:		
			Theory	Practical	Total
<b>Line B</b>	<b>USE TOOLS AND EQUIPMENT</b>	<b>5%</b>	<b>50%</b>	<b>50%</b>	<b>100%</b>
B5	Use Hoisting and Lifting Equipment		✓	✓	
<b>Line C</b>	<b>ORGANIZE WORK</b>	<b>5%</b>	<b>100%</b>	<b>0%</b>	<b>100%</b>
C1	Use Mathematics		✓		
<b>Line D</b>	<b>PREPARE SURFACES</b>	<b>25%</b>	<b>60%</b>	<b>40%</b>	<b>100%</b>
D4	Prepare and Repair Metal Surfaces		✓	✓	
D5	Perform Abrasive Blasting		✓	✓	
D6	Perform Hydro Cleaning		✓		
<b>Line E</b>	<b>APPLY PAINT AND COATINGS</b>	<b>25%</b>	<b>60%</b>	<b>40%</b>	<b>100%</b>
E2	Apply Industrial Coatings and Materials		✓	✓	
E3	Correct Paint/Coating Failures		✓		
E4	Use Air Spray Equipment		✓	✓	
E7	Use Thermal Spray		✓		
E8	Use Fibre-Reinforced Plastic		✓		
<b>Line F</b>	<b>APPLY WALL COVERING PROCEDURES</b>	<b>20%</b>	<b>50%</b>	<b>50%</b>	<b>100%</b>
F1	Prepare and Install Wall Coverings		✓	✓	
<b>Line G</b>	<b>APPLY FINISHES</b>	<b>20%</b>	<b>50%</b>	<b>50%</b>	<b>100%</b>
G1	Apply Wood Finishes		✓	✓	
<b>Total Percentage for Painter and Decorator Level 2</b>		<b>100%</b>			



## Training Topics and Suggested Time Allocation

### PAINTER AND DECORATOR – LEVEL 3

		% of Time Allocated to:			
		% of Time	Theory	Practical	Total
<b>Line C</b>	<b>ORGANIZE WORK</b>	<b>25%</b>	<b>75%</b>	<b>25%</b>	<b>100%</b>
C1	Use Mathematics		✓		
C2	Interpret Drawings and Specification		✓		
C5	Plan a Project		✓	✓	
<b>Line E</b>	<b>APPLY PAINT AND COATINGS</b>	<b>15%</b>	<b>75%</b>	<b>25%</b>	<b>100%</b>
E6	Use Specialty Spray Equipment		✓	✓	
<b>Line F</b>	<b>APPLY FINISHES</b>	<b>30%</b>	<b>50%</b>	<b>50%</b>	<b>100%</b>
F2	Apply Wall Coverings		✓	✓	
<b>Line G</b>	<b>APPLY COLOUR THEORY</b>	<b>30%</b>	<b>50%</b>	<b>50%</b>	<b>100%</b>
G2	Apply Decorative Finishes		✓	✓	
<b>Total Percentage for Painter and Decorator Level 3</b>		<b>100%</b>			

# **Section 3**

## **PROGRAM CONTENT**

### **Painter and Decorator**

# **Level 1**

## **Painter and Decorator**

**Line (GAC):**        **A    USE SAFE WORK PRACTICES**  
**Competency:**     **A1   Manage Workplace Hazards**

### Objectives

To be competent in this area, the individual must be able to:

- Recognize hazards in a given worksite scenario.
- Conduct a workplace assessment.
- Demonstrate correct emergency procedures for a given hazard.
- Minimize hazards by applying safe work practices at a given worksite.

### LEARNING TASKS

### CONTENT

- |  |   |
|--|---|
| 1. Describe hazards in the Painter and Decorator trade | <ul style="list-style-type: none"> <li>• Differences between acute and chronic</li> <li>• Sharp objects – glass and metal</li> <li>• Overhead hazards/Moving equipment</li> <li>• Electrical</li> <li>• Flammable and explosive materials</li> <li>• Atmospheres               <ul style="list-style-type: none"> <li>○ Flammable, explosive, oxygen-deficient</li> </ul> </li> <li>• Environmental</li> <li>• Slips, trips and falls</li> <li>• Toxic substances               <ul style="list-style-type: none"> <li>○ Bio hazards</li> <li>○ Heavy metals</li> <li>○ Asbestos</li> <li>○ Industry products</li> </ul> </li> <li>• Respiratory</li> <li>• Repetitive strain injuries</li> <li>• Back injuries</li> <li>• Other</li> </ul> |
| 2. Conduct a workplace assessment                      | <ul style="list-style-type: none"> <li>• As per job requirements</li> </ul>   |
| 3. Describe and interpret worksite safety policies     | <ul style="list-style-type: none"> <li>• Site orientations               <ul style="list-style-type: none"> <li>○ Hazard assessment</li> <li>○ Conditions</li> <li>○ Meeting requirements</li> <li>○ Reporting hazards and incidents</li> <li>○ Investigations</li> <li>○ Committees</li> <li>○ Employee orientation</li> <li>○ First-aid</li> <li>○ Hearing</li> </ul> </li> </ul>   |

**LEARNING TASKS**

**CONTENT**

4. Demonstrate emergency procedures

- Records and statistics
- Non-compliance procedures
- First aid facilities
- Reports
- Reports to first aid attendant
- Tape identification (red, yellow)
- Minimum standards
- Acts and regulations
- Emergency shutoffs
- Fire control systems
- Eye wash facilities
- Emergency exits
- Emergency contact/phone numbers
- Marshalling/mustering areas
- Emergency horn protocol
- Emergency rescue procedures

5. Control workplace hazards

- Lifting techniques
- Safety/equipment inspection
- Engineering controls
- Administrative controls
- Lock-out/ tag-out
- OHS Programs
  - Regulatory
  - Contractor-specific

<b>Line (GAC):</b>	<b>A USE SAFE WORK PRACTICES</b>
<b>Competency:</b>	<b>A2 Interpret OHS Regulations and WorkSafeBC Standards</b>

### Objectives

To be competent in this area, the individual must be able to:

- Locate the Parts of the Occupational Health and Safety Regulations applicable to the Painter and Decorator workplace.
- Interpret the Parts of the Occupational Health and Safety Regulations applicable to the Painter and Decorator workplace.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1. Locate terms used in the Workers Compensation Act   | • Definitions, Section 1 of the Act  |
| 2. Locate the conditions under which compensation will be paid (Book 1)                      | • Part 1, Division 2 of the Act  |
| 3. Locate the general duties of employers, employees and others (Book 1)                     | • Part 2, Division 3, Section 115-124 of the Act   |
| 4. Locate the Workers Compensation Act requirements for the reporting of accidents (Book 1)  | • Part 1, Division 5, Section 53 and 54 of the Act   |
| 5. Locate the “Core Requirements” of the Occupational Health and Safety Regulations (Book 1) | <ul style="list-style-type: none"> <li>• Definitions</li> <li>• Application</li> <li>• Rights and Responsibilities               <ul style="list-style-type: none"> <li>○ Health and safety programs</li> <li>○ Investigations and reports</li> <li>○ Workplace inspections</li> <li>○ Right to refuse work</li> </ul> </li> <li>• General conditions               <ul style="list-style-type: none"> <li>○ Building and equipment safety</li> <li>○ Emergency preparedness</li> <li>○ Preventing violence</li> <li>○ Working alone</li> <li>○ Ergonomics</li> <li>○ Illumination</li> <li>○ Indoor air quality</li> <li>○ Smoking</li> </ul> </li> </ul> |

**LEARNING TASKS**

**CONTENT**

- |  |   |
|--|---|
| <p>6. Locate the “General Hazards Requirements” of the Occupational Health and Safety Regulations (Book 2)</p>     | <ul style="list-style-type: none"> <li>• Chemical and biological substances</li> <li>• Substance specific requirements</li> <li>• Noise, vibration, radiation and temperature</li> <li>• Personal protective clothing and equipment</li> <li>• Confined spaces</li> <li>• De-energization and lockout</li> <li>• Fall protection</li> <li>• Tools, machinery and equipment</li> <li>• Ladders, scaffolds and temporary work platforms</li> <li>• Rigging and hoisting equipment</li> <li>• Mobile equipment</li> <li>• Transportation of workers</li> <li>• Traffic control</li> <li>• Electrical safety</li> </ul> |
| <p>7. Interpret Occupational Health and Safety information that is relevant to the Painter and Decorator trade</p> | <ul style="list-style-type: none"> <li>• As per documentation</li> </ul>  |

<b>Line (GAC):</b>	<b>A</b>	<b>USE SAFE WORK PRACTICES</b>
<b>Competency:</b>	<b>A3</b>	<b>Attain Confined Space Awareness Training</b>

## Objectives

To be competent in this area, the individual must be able to:

- Attain Confined Space Awareness training.
- Recognize a confined space.
- Apply confined space procedures.

## LEARNING TASKS

1. Describe a confined space
2. Identify equipment used when working in a confined space
3. Demonstrate proper use of required equipment and procedures for a given confined space scenario

## CONTENT

- Definition
  - Legal definition
  - Health and safety definition
  - Hazard classification
- Levels of confined space certification
- Section 9 of OHS
- Responsibilities of worker and employer
- Procedures
  - Access/egress
  - Hole/ fire watch
  - Air quality testing
  - Lock out and isolation
  - Ventilation
  - Cleaning/purging/venting/inerting
  - Rescue procedures
- Entry permits
- Respiratory systems
- Ladders
- Tripod
- Harness
- Air tester
- As per above content



**Line (GAC):**        **A    USE SAFE WORK PRACTICES**  
**Competency:**    **A4    Use Fall Protection Systems and Equipment**

### Objectives

To be competent in this area, the individual must be able to:

- Recognize fall hazards.
- Apply fall protection controls for a given workplace scenario.

### LEARNING TASKS

### CONTENT

- |  |   |
|--|---|
| 1. Describe fall protection equipment                                      | <ul style="list-style-type: none"> <li>• Fall arrest/restraint/work positioning equipment               <ul style="list-style-type: none"> <li>○ Beam roller</li> <li>○ Lanyard</li> <li>○ Carabiner</li> <li>○ Shock-absorbing devices</li> <li>○ Retractable devices</li> <li>○ Rope grab</li> <li>○ Vertical and horizontal lines</li> <li>○ Cable/nylon tie-off slings</li> <li>○ Harnesses and waist belts</li> <li>○ Standards (CSA, ASTM, ANSI)</li> </ul> </li> </ul> |
| 2. Describe fall protection systems  | <ul style="list-style-type: none"> <li>• Railings/scaffolds</li> <li>• Barricades and control zones</li> <li>• Safety monitor</li> <li>• Nets</li> <li>• Rigging hardware</li> <li>• Anchor points</li> <li>• Assembly</li> <li>• Ladder systems</li> <li>• Vertical and horizontal systems</li> </ul>  |
| 3. Inspect, assemble and disassemble fall protection equipment and systems | <ul style="list-style-type: none"> <li>• OHS Regulations part 11</li> <li>• Assembly/disassembly</li> <li>• Routines/scheduled Inspection and maintenance               <ul style="list-style-type: none"> <li>○ Required reference material</li> </ul> </li> </ul>   |
| 4. Develop a fall protection plan  | <ul style="list-style-type: none"> <li>• Identify work area and hazards</li> <li>• List and choose equipment</li> <li>• Rescue procedures</li> </ul>  |

**LEARNING TASKS**

5. Use a harness as per industry standards

**CONTENT**

- Inspection
- Use
- As per specifications
  - D ring positioning
  - Snugness of fit

**Achievement Criteria**

Performance The learner will perform a fit test

Conditions The learner will be given:

- Harness and instructions

Criteria The learner will score 70% on a rating sheet that reflects the following criteria:

- According to manufacturer's recommendations
- Proper inspection
- D ring position
- Snugness of fit

**Line (GAC):**        **A    USE SAFE WORK PRACTICES**  
**Competency:**      **A5    Use Personal Protective Equipment**

### Objectives

To be competent in this area, the individual must be able to:

- Identify the appropriate personal protective equipment (PPE) for given workplace hazards.
- Demonstrate proper use of PPE.
- Maintain PPE according to manufacturer's specifications.

### LEARNING TASKS

### CONTENT

- |                                     |  |
|-------------------------------------|--|
| 1.    Describe PPE requirements     | <ul style="list-style-type: none"> <li>• Legal requirements</li> <li>• Safety footwear</li> <li>• Eye protection</li> <li>• Ear protection</li> <li>• Head protection</li> <li>• Gloves</li> <li>• Respiratory protection</li> <li>• Fit test for respirator</li> <li>• Clothing               <ul style="list-style-type: none"> <li>○ Hi visibility</li> <li>○ Thermal</li> <li>○ Cooling</li> </ul> </li> <li>• Fall protection</li> <li>• Visual indicators</li> </ul> |
| 2.    Demonstrate proper use of PPE | <ul style="list-style-type: none"> <li>• Use</li> <li>• Proper fit</li> <li>• Inspection before use</li> </ul>   |
| 3.    Maintain PPE                  | <ul style="list-style-type: none"> <li>• Maintenance</li> <li>• Storage</li> </ul>   |

### Achievement Criteria

- |             |   |
|-------------|---|
| Performance | The learner will perform a fit test for a respirator until successful   |
| Conditions  | The learner will be given: <ul style="list-style-type: none"> <li>• A respirator</li> </ul>   |
| Criteria    | The learner will score 70% on a rating sheet that reflects the following criteria: <ul style="list-style-type: none"> <li>• Adherence to manufacturer's protocol</li> <li>• Comfortable fit</li> <li>• Documentation</li> </ul> |

**Line (GAC):**        **A    USE SAFE WORK PRACTICES**  
**Competency:**     **A6    Use Fire Safety Procedures**

### Objectives

To be competent in this area, the individual must be able to:

- Identify the four classes of fires.
- Apply preventative fire safety precautions when working near or handling hazardous materials.
- Select and use fire extinguishers for the given class of fire and environmental condition.

### LEARNING TASKS

### CONTENT

- |   |   |
|---|---|
| 1. Describe the conditions necessary to support a fire  | <ul style="list-style-type: none"> <li>• Air</li> <li>• Fuel</li> <li>• Ignition</li> <li>• Continued chemical reaction</li> </ul>  |
| 2. Describe the classes of fires according to the materials being burned                                      | <ul style="list-style-type: none"> <li>• Class A</li> <li>• Class B</li> <li>• Class C</li> <li>• Class D</li> <li>• Symbols and colours</li> <li>• NFPA (National Fire Protection Association)</li> </ul>  |
| 3. Apply preventative fire safety precautions for classified combustibles, flammables and explosive materials | <ul style="list-style-type: none"> <li>• Safe handling and storage of Fuels               <ul style="list-style-type: none"> <li>○ Diesel</li> <li>○ Gasoline</li> <li>○ Propane</li> <li>○ Natural Gas</li> <li>○ Acetylene</li> <li>○ Chemicals</li> </ul> </li> <li>• Lubricants</li> <li>• Contaminated rags</li> <li>• Combustible explosive dusts</li> <li>• Aerosols</li> <li>• WHMIS               <ul style="list-style-type: none"> <li>○ Classifications</li> </ul> </li> <li>• Labelling</li> <li>• Ignition source</li> <li>• PPE</li> <li>• Ventilation               <ul style="list-style-type: none"> <li>○ Purging</li> <li>○ Inerting</li> </ul> </li> </ul> |

## LEARNING TASKS

4. Describe the considerations and steps to be taken prior to fighting a fire

5. Demonstrate proper use of fire extinguishers

## CONTENT

- Personal safety
- Knowledge of equipment
- Warning others and fire department
- Evacuation protocols
- Training
- Awareness of fire suppression/fighting systems
- Extinguisher selection
- P.A.S.S.
  - Pull
  - Aim
  - Squeeze
  - Sweep

**Line (GAC):           A    USE SAFE WORK PRACTICES**  
**Competency:         A7   Attain First Aid Certification**

**Objectives**

To be competent in this area, the individual must be able to:

- Attain First Aid Certification.

**LEARNING TASKS**

1. Attain First Aid Certification

**CONTENT**

- Arrange training with a certified provider of First Aid certification
- Documentation of certification

**Line (GAC):**        **A    USE SAFE WORK PRACTICES**  
**Competency:**     **A8    Apply WHMIS**

**Objectives**

To be competent in this area, the individual must be able to:

- Attain WHMIS Certification.

**LEARNING TASKS**

1. Attain WHMIS certification

**CONTENT**

- Arrange WHMIS training
- Documentation of certification

**Line (GAC):**        **B     USE TOOLS AND EQUIPMENT**  
**Competency:**     **B1    Use Hand Tools and Measuring Equipment**

### Objectives

To be competent in this area, the individual must be able to:

- Demonstrate proper use of hand tools appropriate for a given task.
- Demonstrate proper use of measuring and testing equipment for a given task.
- Inspect and maintain hand tools according to manufacturer's specifications.

### LEARNING TASKS

### CONTENT

- |   |  |
|---|--|
| 1. Describe hand tools used in the Painting and Decorating trade                      | <ul style="list-style-type: none"> <li>• Refer to tool list in appendix</li> <li>• Types               <ul style="list-style-type: none"> <li>○ Paint application tools</li> <li>○ Basic hand tools</li> </ul> </li> <li>• Uses</li> </ul> |
| 2. Describe measuring and testing equipment used in the Painting and Decorating trade | <ul style="list-style-type: none"> <li>• Refer to list in appendix</li> <li>• Basic measuring and testing</li> </ul>   |
| 3. Demonstrate proper use of hand tools   | <ul style="list-style-type: none"> <li>• Procedures according to manufacturer's recommendations</li> <li>• Safety</li> <li>• Adjustment</li> <li>• Ergonomics</li> </ul>   |
| 4. Demonstrate proper use of measuring and testing equipment                          | <ul style="list-style-type: none"> <li>• Procedures according to manufacturer's recommendations</li> <li>• Basic measuring and testing equipment</li> </ul>  |
| 5. Inspect and maintain hand tools  | <ul style="list-style-type: none"> <li>• As per job requirement and manufacturer specifications</li> <li>• Maintenance, cleaning</li> <li>• Storage</li> </ul>   |



**Line (GAC):**        **B    USE TOOLS AND EQUIPMENTS**  
**Competency:**     **B2    Use Abrasive Media**

**Objectives**

To be competent in this area, the individual must be able to:

- Demonstrate proper use of abrasive products for a given task.

**LEARNING TASKS**

**CONTENT**

- |  |  |
|--|--|
| 1.    Describe abrasive products             | <ul style="list-style-type: none"> <li>• Types <ul style="list-style-type: none"> <li>○ Coated</li> <li>○ Powdered</li> <li>○ Steel wool</li> <li>○ Wet and dry abrasive pads</li> </ul> </li> </ul> |
| 2.    Use abrasive products for a given task | <ul style="list-style-type: none"> <li>• Proper use</li> <li>• Safe use</li> </ul>   |

**Line (GAC):**        **B    USE TOOLS AND EQUIPMENT**  
**Competency:**     **B3    Use Power and Pneumatic Tools**

### Objectives

To be competent in this area, the individual must be able to:

- Demonstrate proper use, set up and adjustment of power and pneumatic tools appropriate for a given task.
- Inspect and maintain power and pneumatic tools according to manufacturer's specifications.

### LEARNING TASKS

### CONTENT

- |   |  |
|---|--|
| 1. Describe power and pneumatic tools used in the Painting and Decorating trade | <ul style="list-style-type: none"> <li>• Refer to tool list in appendix</li> <li>• Types               <ul style="list-style-type: none"> <li>○ Pneumatic</li> <li>○ Gas/diesel-powered</li> <li>○ Electrical/cordless</li> </ul> </li> <li>• Uses</li> <li>• Terminology</li> </ul> |
| 2. Demonstrate proper use, set up and adjustment of power and pneumatic tools   | <ul style="list-style-type: none"> <li>• Proper use</li> <li>• Procedures/Operations</li> <li>• Set-up</li> <li>• Safe use</li> <li>• Adjustment</li> </ul>  |
| 3. Inspect and maintain power tools according to manufacturer's specifications  | <ul style="list-style-type: none"> <li>• Inspection</li> <li>• Maintenance</li> <li>• Storage</li> <li>• Stewardship</li> </ul>  |

**Line (GAC):**        **B    USE TOOLS AND EQUIPMENT**  
**Competency:**    **B4    Use Access Equipment**

### Objectives

To be competent in this area, the individual must be able to:

- Use ladders and elevated platforms for a given task.
- Use access equipment for a given task.
- Maintain scaffolds and ladders.

### LEARNING TASKS

1. Describe ladders, scaffolding and elevated platforms

### CONTENT

- Types
  - Scaffolds
    - Mechanical, ground-based, rolling, stationary, ladder jack
  - Aerial work platforms
  - Aluminium and wooden planks
  - Extension ladders
  - Swing stages
  - Step ladders
  - Fly staging
  - Boatswain chair/harness
- Application
- Components
  - Stirrups, planks, outriggers and cross braces
- Safety
  - Hazard recognition
  - Fall arrest, restraint and prevention
  - OHS, site-specific
  - Competency levels for inspection and erection
  - Maintain three point contact

**LEARNING TASKS**

**CONTENT**

- |  |   |
|--|---|
| <p>2. Set up, move and level ladders and scaffolding</p> | <ul style="list-style-type: none"> <li>• Selection</li> <li>• Site hazards</li> <li>• Inspect for defects               <ul style="list-style-type: none"> <li>○ Rusting, split planks, broken rungs</li> </ul> </li> <li>• Set up, layout and levelling</li> <li>• Restrictions               <ul style="list-style-type: none"> <li>○ Height, no-step zones, load limitations, no opaque coatings</li> </ul> </li> <li>• Securing</li> <li>• Moving ladders</li> <li>• Competency levels for inspection and erection</li> </ul> |
| <p>3. Set up an elevated platform</p>                    | <ul style="list-style-type: none"> <li>• Selection</li> <li>• Site hazards</li> <li>• Set up, layout and levelling</li> <li>• Restrictions               <ul style="list-style-type: none"> <li>○ Height, no-step zones, load limitations, no painting of ladders</li> </ul> </li> <li>• Securing</li> </ul>  |
| <p>4. Describe powered elevated work platforms</p>       | <ul style="list-style-type: none"> <li>• Aerial lifts (certification required; employer responsibility)</li> </ul>  |
| <p>5. Maintain scaffolding and ladders</p>               | <ul style="list-style-type: none"> <li>• Maintenance</li> <li>• As per manufacturer's specifications</li> <li>• Storage</li> </ul>  |

**Line (GAC):**            **C    ORGANIZE WORK**  
**Competency:**        **C1    Use Mathematics**

### Objectives

To be competent in this area, the individual must be able to:

- Perform basic mathematical calculations, including addition, subtraction, multiplication and division, on whole numbers, decimals and fractions.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1.    Use fractions to solve problems                  | <ul style="list-style-type: none"> <li>• Add, subtract, multiply, divide</li> <li>• Express in higher terms</li> <li>• Simplify fractions</li> </ul>   |
| 2.    Use decimal fractions to solve problems          | <ul style="list-style-type: none"> <li>• Add, subtract, multiply, divide</li> <li>• Convert between decimals and fractions</li> <li>• Decimal notation</li> </ul>  |
| 3.    Solve problems of ratio and proportion           | <ul style="list-style-type: none"> <li>• Ratio               <ul style="list-style-type: none"> <li>○ Equivalent</li> </ul> </li> <li>• Proportion</li> <li>• Unknown quantities</li> </ul>  |
| 4.    Convert between metric and imperial measurements | <ul style="list-style-type: none"> <li>• Convert between metric and imperial               <ul style="list-style-type: none"> <li>○ Feet, inches/metres, millimetres</li> <li>○ Pounds, tons/kilograms, tonnes</li> </ul> </li> <li>• Use conversion tables</li> </ul> |

**Line (GAC):**        **C    ORGANIZE WORK**  
**Competency:**    **C3   Communicate with Others**

### Objectives

To be competent in this area, the individual must be able to:

- Describe methods of communication used in the Painter and Decorator trade.
- Use appropriate communication methods for completing a given task.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1. Describe methods of communication used in the Painter and Decorator trade | <ul style="list-style-type: none"> <li>• Listening</li> <li>• Verbal</li> <li>• Written</li> <li>• Hand signals</li> <li>• Interpersonal skills</li> <li>• Trade terminology</li> </ul>  |
| 2. Demonstrate proper use of electronic communication media                  | <ul style="list-style-type: none"> <li>• Cell phones               <ul style="list-style-type: none"> <li>○ Safety, emergency purposes</li> <li>○ Company/site policy, restricted use</li> </ul> </li> <li>• Two-way radios</li> <li>• Fax machines</li> <li>• Computers</li> <li>• Etiquette               <ul style="list-style-type: none"> <li>○ Personal devices such as I-pods, radios</li> </ul> </li> </ul>  |
| 3. Recognize signage used in the Painting and Decorating trade               | <ul style="list-style-type: none"> <li>• Men working above</li> <li>• Tapes (yellow, red)</li> </ul>   |
| 4. Use appropriate communication methods for completing a given task         | <ul style="list-style-type: none"> <li>• Other trades</li> <li>• Industry people</li> <li>• Customers</li> <li>• Safety authorities</li> <li>• Suppliers and manufacturers</li> <li>• Apprentices (mentoring)</li> <li>• General respect for others</li> <li>• Barriers to effective communication               <ul style="list-style-type: none"> <li>○ Body language</li> <li>○ Tone of voice</li> <li>○ Facial expression</li> <li>○ Accent/language differences</li> <li>○ Site noise</li> <li>○ PPE</li> </ul> </li> </ul> |

**Line (GAC):**        **C    ORGANIZE WORK**  
**Competency:**    **C4   Handle Materials**

### Objectives

To be competent in this area, the individual must be able to:

- Describe considerations and responsibilities involved when handling, ordering and coordinating materials.
- Handle materials according to job requirements.

### LEARNING TASKS

### CONTENT

- |   |   |
|---|---|
| 1. Describe consideration and responsibilities when handling, ordering and coordinating materials | <ul style="list-style-type: none"> <li>• Safety/OHS</li> <li>• Storage</li> <li>• Scheduling</li> <li>• Transportation               <ul style="list-style-type: none"> <li>○ Method of transportation</li> <li>○ Reference to TDG</li> </ul> </li> <li>• LEED (Leadership in Energy and Environmental Design)</li> <li>• Labelling               <ul style="list-style-type: none"> <li>○ MSDS</li> <li>○ Worksite specific</li> </ul> </li> <li>• Disposal</li> <li>• Recycling</li> <li>• Identification of materials</li> </ul> |
| 2. Demonstrate proper procedures for lifting heavy materials                                      | <ul style="list-style-type: none"> <li>• Manual               <ul style="list-style-type: none"> <li>○ Ergonomics</li> </ul> </li> <li>• Mechanical lifting</li> </ul>  |
| 3. Handle materials on site   | <ul style="list-style-type: none"> <li>• According to job requirements/policies</li> <li>• Safety procedures</li> <li>• Shipping and storage considerations</li> <li>• Quality control/assurance issues</li> </ul>  |

**Line (GAC):**           **D    PREPARE SURFACES**  
**Competency:**       **D1   Prepare and Repair Drywall and Plaster Surfaces**

### Objectives

To be competent in this area, the individual must be able to:

- Identify drywall and plaster surface imperfections.
- Prepare drywall and plaster surfaces.
- Repair drywall and plaster surfaces.

### LEARNING TASKS

### CONTENT

- |  |   |
|--|---|
| 1. Describe surface deficiencies/imperfections               | <ul style="list-style-type: none"> <li>• Causes</li> <li>• Excessive moisture</li> <li>• Efflorescence</li> <li>• Improper taping, filling and or sanding and insufficient cure of plaster/masonry</li> <li>• Types               <ul style="list-style-type: none"> <li>○ Holes, cracks, dents, improper taping, beading, nail and screw pops</li> <li>○ Contaminants</li> </ul> </li> <li>• Damage from moisture, mould and mildew</li> <li>• Hotspots (plaster)</li> <li>• Neutralizing</li> </ul> |
| 2. Clean surfaces  | <ul style="list-style-type: none"> <li>• Implications of unclean surfaces</li> <li>• Selection of cleaning equipment</li> <li>• Cleansing procedures               <ul style="list-style-type: none"> <li>○ Sweeping drywall</li> <li>○ Rinse/wipe surfaces</li> </ul> </li> </ul>  |
| 3. Sand surfaces   | <ul style="list-style-type: none"> <li>• Tools and equipment</li> <li>• Sanding sequence</li> <li>• Sanding practices               <ul style="list-style-type: none"> <li>○ Direction, pressure and feathering</li> </ul> </li> </ul>  |
| 4. Describe drywall and plaster repair materials and methods | <ul style="list-style-type: none"> <li>• Types of compounds               <ul style="list-style-type: none"> <li>○ All-purpose</li> <li>○ Taping filler</li> <li>○ Topping filler</li> <li>○ Fast-set filler</li> </ul> </li> <li>• Characteristics of filling compounds               <ul style="list-style-type: none"> <li>○ Thixotropy</li> <li>○ Open time</li> <li>○ Workability</li> </ul> </li> </ul>   |



**LEARNING TASKS**

**CONTENT**

- Flexibility
  - Types of tape
    - Fibre
    - Paper (perforated and non-perforated)
  - Taping methods
    - Manual
    - Machine
    - Dry tape
    - Wet tape
  - Types of corner bread
    - Fibre, metal, plastic, paper
  - Setting time and recoat time of various compounds
  - Waste disposal
  - Plaster of Paris
- 5. Apply drywall and plaster repair techniques
  - Tools/equipment
    - Hawk, trowels, broad knives
    - Reference to other equipment (see Appendix)
  - Mixing compounds to required consistency
  - Sanding between coats
  - Applying bleach and mildewcide
  - Filling cracks, holes and dents
  - Reference to lathing procedures
- 6. Apply drywall and plaster finishing techniques
  - Tools used for application
  - Installation of corner bread
  - Application sequence of compound
  - Setting and recoating times for various compounds
  - Spreading compound uniformly
  - Assessing drywall surface prior to mudding
  - Recognizing levels of drywall mudding-rough and final coats
  - Temperature and humidity considerations required for finishing
- 7. Describe the limitations of surface preparation
  - Access
  - Environmental considerations
  - Possible damage to property
  - Safety precautions

**Achievement Criteria**

Performance	The learner will repair defects in a drywall surface
Conditions	<p>The learner will be given:</p> <ul style="list-style-type: none"> <li>• Materials and equipment</li> <li>• Instructions</li> </ul>
Criteria	<p>The learner will score 70% on a rating sheet that reflects the following criteria:</p> <ul style="list-style-type: none"> <li>• Proper procedures</li> <li>• Repair quality</li> </ul>

**Line (GAC):**        **D    PREPARE SURFACES**  
**Competency:**     **D2   Prepare Wood Surfaces**

### Objectives

To be competent in this area, the individual must be able to:

- Describe surface preparation techniques for wood surfaces.
- Identify procedures required to prepare a given wood surface.
- Apply procedures to repair given wood surfaces.

### LEARNING TASKS

### CONTENT

- |  |   |
|--|---|
| 1. Describe the causes of surface imperfection                               | <ul style="list-style-type: none"> <li>• Causes               <ul style="list-style-type: none"> <li>○ Sun</li> <li>○ Moisture</li> <li>○ Natural oils and resins</li> <li>○ Biological and chemical contamination</li> <li>○ Staining</li> </ul> </li> </ul>   |
| 2. Describe limitations of surface preparation                               | <ul style="list-style-type: none"> <li>• Access</li> <li>• Environmental considerations</li> <li>• Possible damage to property</li> <li>• Safety precautions</li> </ul>   |
| 3. Describe the different types of chemical treatment and their applications | <ul style="list-style-type: none"> <li>• Purpose</li> <li>• Applications</li> <li>• Types               <ul style="list-style-type: none"> <li>○ Bleaches, strippers, solvents, acids, conditioners, alkalis</li> </ul> </li> </ul>   |
| 4. Apply chemical treatment to a given surface                               | <ul style="list-style-type: none"> <li>• Safety precautions               <ul style="list-style-type: none"> <li>○ PPE</li> <li>○ Public</li> </ul> </li> <li>• Solvent cleaning</li> <li>• Alkali and acid cleaning</li> <li>• Environmental concerns</li> <li>• Mixing procedures and ratios</li> <li>• Application methods</li> <li>• Application tools               <ul style="list-style-type: none"> <li>○ Brushes, rags, mops, squeegees, sprays</li> </ul> </li> <li>• Ventilation requirements</li> <li>• Post-application rinsing and neutralizing of the surface</li> <li>• Waste disposal and cleanup</li> </ul> |

## LEARNING TASKS

## 5. Clean surfaces

## 6. Scrape surfaces

7. Describe how to sand wood surfaces

## 8. Sand surfaces

9. Describe how to repair minor imperfections in wood surfaces

## CONTENT

- Implications of unclean surfaces
- Selection of cleaning equipment
- Cleaning procedures
  - Washing
  - Rinse/wipe surfaces
- Pressure washing issues
- Safety/hazards
- Lead
- Mould
- Contaminants
- Types of finish to be applied
- Types of scrapers and maintenance tools
  - Paint scraper, broad knife, combination, pull scraper, wire brush, files
- Use of heat gun and scraper
- Tools and equipment
  - Manual
  - Power
- Abrasives
  - Grit type
  - Grit size
  - Backing material
- Technique
- Required smoothness
- Sanding sequence
- Sanding practices
  - Direction, pressure and feathering
- Minor imperfections and causes
  - Damage, blistering, cracking, rust bleeding
- Repair procedures
- Moisture
  - Content
  - Damage

**LEARNING TASKS**

10. Apply procedures for repairing minor imperfections in wood surfaces
11. Describe how to seal wood surfaces
12. Apply wood fillers
13. Apply procedures or treatment to prepare a substrate

**CONTENT**

- Identification of minor imperfections
- Procedures
  - Graining
  - Sanding
  - Spot priming surfaces
  - Sealing knots
  - Filling imperfections
  - Feathering imperfections by sanding
- Types of sealers
  - Shellac, varnishes, latex, alcohol and lacquer-based, water-borne polyurethane, primary sealers, undercoats
- Types of wood fillers
- Application tools
- Application sequence
- Coloring filler to match wood grain
- Filling holes and imperfections
- Compatibility of filler with stains and finishes
- According to job specifications

**Line (GAC):**           **D    PREPARE SURFACES**  
**Competency:**       **D3    Treat and Repair Concrete and Masonry Surfaces**

### Objectives

To be competent in this area, the individual must be able to:

- Apply surface preparation techniques for concrete and masonry.
- Treat new concrete and masonry surfaces.
- Repair concrete and masonry surfaces.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1. Describe and identify surface deficiencies                                | <ul style="list-style-type: none"> <li>• Causes               <ul style="list-style-type: none"> <li>○ Contamination</li> <li>○ Excessive moisture</li> <li>○ Efflorescence</li> <li>○ Improperly cured concrete, masonry</li> <li>○ Spalling</li> <li>○ Laitance</li> </ul> </li> </ul>   |
| 2. Describe how to treat new concrete and masonry                            | <ul style="list-style-type: none"> <li>• Safety</li> <li>• Purpose of etching</li> <li>• Etching materials</li> <li>• Purpose of neutralizing</li> <li>• Neutralizing materials</li> <li>• Hazards associated with etching materials</li> <li>• Form release agent contamination</li> <li>• ASTM standards</li> <li>• Surface preparation standards</li> <li>• Other applicable standards</li> </ul> |
| 3. Apply techniques used to treat new concrete                               | <ul style="list-style-type: none"> <li>• Tools</li> <li>• Surface preparation prior to treatment of concrete</li> <li>• Mixing and handling neutralizing and etching materials</li> <li>• Removing contaminants, neutralizing and etching residues</li> </ul>  |
| 4. Describe the different types of chemical treatment and their applications | <ul style="list-style-type: none"> <li>• Safety-PPE</li> <li>• Purpose</li> <li>• Applications</li> <li>• Types               <ul style="list-style-type: none"> <li>○ Solvents, acids, detergents, cleaners, degreasers, emulsifiers, alkalis</li> </ul> </li> </ul>  |

**LEARNING TASKS**
**CONTENT**

- |  |   |
|--|---|
| 5. Apply chemical treatment to a given surface                                 | <ul style="list-style-type: none"> <li>• Safety precautions</li> <li>• Chemical cleaning</li> <li>• Environmental concerns</li> <li>• Mixing procedures and ratios</li> <li>• Application methods</li> <li>• Application tools                             <ul style="list-style-type: none"> <li>○ Brushes, rags, mops, squeegees</li> </ul> </li> <li>• Ventilation requirements</li> <li>• Post-application and rinsing and neutralizing of the surface</li> </ul> |
| 6. Describe the different types of mechanical treatment and their applications | <ul style="list-style-type: none"> <li>• Safety, PPE</li> <li>• Reference abrasive blasting</li> <li>• Acquiring/retaining surface profile</li> <li>• Purpose</li> <li>• Types of mechanical treatment                             <ul style="list-style-type: none"> <li>○ Scarifiers, sanders, grinders, needle guns, abraders</li> </ul> </li> </ul>   |
| 7. Scrape surfaces   | <ul style="list-style-type: none"> <li>• Types of scrapers</li> <li>• Types of substrate                             <ul style="list-style-type: none"> <li>○ Cautionary measures</li> </ul> </li> <li>• Hazards</li> <li>• Removal of loose and peeling paint and coatings</li> <li>• Remove gross contaminants</li> </ul>   |
| 8. Describe how to sand surfaces   | <ul style="list-style-type: none"> <li>• Types of substrate to be sanded</li> <li>• Types of power sanders</li> <li>• Types of sanding tools and equipment</li> <li>• Types of finish to be applied</li> <li>• Required smoothness</li> </ul>   |
| 9. Sand surfaces   | <ul style="list-style-type: none"> <li>• Sanding sequence</li> <li>• Sanding practices</li> </ul>   |
| 10. Describe how to repair concrete and masonry surfaces                       | <ul style="list-style-type: none"> <li>• Imperfections to be repaired</li> <li>• Materials used to repair concrete</li> <li>• Filling cracks, gaps and honeycombs</li> <li>• Repair tools</li> </ul>  |

**LEARNING TASKS**

11. Apply procedure or treatment to prepare a substrate

**CONTENT**

- According to job specifications



**Line (GAC):**           **D    PREPARE SURFACES**  
**Competency:**       **D4   Prepare and Repair Metal Surfaces**

### Objectives

To be competent in this area, the individual must be able to:

- Describe the causes of surface deficiencies.
- Identify surface deficiencies.
- Describe metal surface preparation standards.
- Prepare metal surfaces for treatment.
- Treat metal surfaces.
- Repair metal surfaces.

### LEARNING TASKS

### CONTENT

- |   |  |
|---|--|
| 1. Describe the causes of surface deficiencies                                      | <ul style="list-style-type: none"> <li>• Causes               <ul style="list-style-type: none"> <li>○ Excessive moisture</li> <li>○ Basic corrosion</li> <li>○ Contaminants</li> <li>○ Mill scale</li> </ul> </li> </ul>  |
| 2. Identify surface deficiencies  | <ul style="list-style-type: none"> <li>• Types</li> <li>• Specific deficiencies               <ul style="list-style-type: none"> <li>○ Mill scale on steel</li> <li>○ Types of corrosion</li> <li>○ Problematic surfaces such as galvanized metals</li> </ul> </li> </ul>  |
| 3. Identify substrate and standards for application of coatings to metal substrates | <ul style="list-style-type: none"> <li>• Types of substrates               <ul style="list-style-type: none"> <li>○ Ferrous and non-ferrous</li> </ul> </li> <li>• Manufacturer's recommendations</li> <li>• Specifications</li> <li>• Standards               <ul style="list-style-type: none"> <li>○ NACE</li> <li>○ SSPC</li> <li>○ ASTM</li> <li>○ ISO</li> </ul> </li> </ul> |
| 4. Describe limitations of surface preparations                                     | <ul style="list-style-type: none"> <li>• Access</li> <li>• Environmental considerations</li> <li>• Possible damage to substrate</li> <li>• Safety precautions</li> </ul>   |

**LEARNING TASKS**

**CONTENT**

- |  |   |
|--|---|
| 5. Clean surfaces  | <ul style="list-style-type: none"> <li>• Safety</li> <li>• Chemical cleaning</li> <li>• Implications of unclean surfaces</li> <li>• Selection of cleaning equipment</li> <li>• Cleaning procedures               <ul style="list-style-type: none"> <li>○ Rinse/wipe surfaces</li> <li>○ Pressure washer</li> </ul> </li> </ul>                               |
| 6. Describe how to scrape surfaces   | <ul style="list-style-type: none"> <li>• Types of scrapers               <ul style="list-style-type: none"> <li>○ Paint scraper, broad knife, combination, pull scraper, offset scraper, powered scrapers</li> </ul> </li> <li>• Types of substrate</li> <li>• Types of finish to be applied</li> </ul>   |
| 7. Scrape surfaces   | <ul style="list-style-type: none"> <li>• Protection of substrate</li> <li>• Removal of loose and peeling paint and coatings and contaminants</li> <li>• Use of heat gun</li> </ul>  |
| 8. Describe how to sand surfaces   | <ul style="list-style-type: none"> <li>• Types of substrate to be sanded</li> <li>• Types of power sanders</li> <li>• Types of sanding tools and equipment</li> <li>• Abrasive paper               <ul style="list-style-type: none"> <li>○ Grit type</li> <li>○ Grit size</li> <li>○ Backing materials</li> </ul> </li> <li>• Required smoothness</li> </ul> |
| 9. Describe the different types of chemical treatment and their applications | <ul style="list-style-type: none"> <li>• Purpose</li> <li>• Applications</li> <li>• Types               <ul style="list-style-type: none"> <li>○ Strippers, solvents, acids, detergents, degreasers, alkalis</li> </ul> </li> <li>• Pre-treatment</li> </ul>  |

**LEARNING TASKS**

**CONTENT**

- |  |  |
|--|--|
| <p>10. Apply chemical treatment to a given surface</p>                                 | <ul style="list-style-type: none"> <li>• Safety precautions, PPE</li> <li>• Environmental concerns</li> <li>• Mixing procedures and ratios</li> <li>• Application methods</li> <li>• Application tools               <ul style="list-style-type: none"> <li>○ Brushes, rags, mops</li> </ul> </li> <li>• Ventilation requirements</li> <li>• Pre and Post-application rinsing and neutralizing of the surface</li> </ul> |
| <p>11. Describe the different types of mechanical equipment and their applications</p> | <ul style="list-style-type: none"> <li>• Reference abrasive blasting</li> <li>• Purpose</li> <li>• Types of mechanical equipment               <ul style="list-style-type: none"> <li>○ Sanders, grinders, scarifiers, abraders, steel wool, wire brushes, synthetic brushes</li> </ul> </li> <li>• Limitations</li> <li>• Provincial and other applicable regulations</li> </ul>  |
| <p>12. Apply mechanical treatment to a given surface</p>                               | <ul style="list-style-type: none"> <li>• Selecting mechanical treatment equipment</li> <li>• Industry standards for mechanical treatment of surfaces</li> <li>• Conditioning tools</li> <li>• Grinding metal surfaces</li> </ul>   |
| <p>13. Describe how to repair metal surfaces</p>                                       | <ul style="list-style-type: none"> <li>• Repair materials and equipment</li> <li>• Methods of repair</li> <li>• Applicable standards</li> </ul>  |

**Line (GAC):**         **D    PREPARE SURFACES**  
**Competency:**       **D6   Perform Hydro Cleaning**

### Objectives

To be competent in this area, the individual must be able to:

- Perform pressure washing.
- Maintain pressure washing equipment according to manufacturer's specifications.

### LEARNING TASKS

### CONTENT

- |   |   |
|---|---|
| 1.   Describe pressure washing  | <ul style="list-style-type: none"> <li>• Purpose</li> <li>• Categories and classifications</li> <li>• Pressure and volume</li> <li>• Preparation of equipment and work area</li> <li>• Applicable standards</li> <li>• Safety, PPE</li> <li>• Access</li> <li>• Environmental considerations</li> <li>• Possible property damage</li> <li>• Containment</li> <li>• Water recovery, treatment and disposal</li> <li>• Accessories</li> </ul> |
| 2.   Perform pressure washing   | <ul style="list-style-type: none"> <li>• Techniques</li> <li>• Nozzle selection</li> <li>• Equipment set-up</li> <li>• Consideration of substrate</li> </ul>  |
| 3.   Maintain pressure washing equipment according to manufacturer's specifications | <ul style="list-style-type: none"> <li>• Fueling</li> <li>• Storage</li> <li>• troubleshooting</li> </ul>   |

### Achievement Criteria

**Performance**   The learner will pressure wash a given area.

**Conditions**    The learner will be given:

- Equipment
- PPE
- Instructions
- Checklist

**Criteria**       The learner will score 70% on a rating sheet that reflects the following criteria:

- Proper techniques
- Safety protocols

**Line (GAC):**        **E    APPLY PAINT AND COATINGS**  
**Competency:**     **E1    Apply Paint**

### Objectives

To be competent in this area, the individual must be able to:

- Describe paint components and their associated properties.
- Prepare paint and coatings.
- Use brushes to apply paint and coatings.
- Use rollers to apply paint and coatings.

### LEARNING TASKS

### CONTENT

- |  |   |
|--|---|
| 1. Describe paint/coating composition                | <ul style="list-style-type: none"> <li>• Components</li> <li>• Paint properties</li> <li>• Application</li> </ul>   |
| 2. Describe paint pigments, vehicles and additives   | <ul style="list-style-type: none"> <li>• Reference list in appendix</li> <li>• Pigments               <ul style="list-style-type: none"> <li>○ Coloured, white specialty</li> </ul> </li> <li>• Vehicles               <ul style="list-style-type: none"> <li>○ Volatile                   <ul style="list-style-type: none"> <li>– Solvents, thinners</li> </ul> </li> <li>○ Non-volatile                   <ul style="list-style-type: none"> <li>– Oils, resins</li> </ul> </li> </ul> </li> <li>• Additives               <ul style="list-style-type: none"> <li>○ Mildewcides, fungicides</li> </ul> </li> </ul>           |
| 3. Describe pigments and their associated properties | <ul style="list-style-type: none"> <li>• Types               <ul style="list-style-type: none"> <li>○ White                   <ul style="list-style-type: none"> <li>– Lead, titanium dioxide</li> </ul> </li> <li>○ Coloured                   <ul style="list-style-type: none"> <li>– Chemical, natural</li> </ul> </li> <li>○ Specialty                   <ul style="list-style-type: none"> <li>– Aluminum, fire-retardant, zinc</li> </ul> </li> <li>○ Extenders                   <ul style="list-style-type: none"> <li>– Whiting, Kaolin</li> </ul> </li> </ul> </li> <li>• Properties</li> <li>• Functions</li> </ul> |
| 4. Describe vehicles and their associated properties | <ul style="list-style-type: none"> <li>• Types               <ul style="list-style-type: none"> <li>○ Non-volatile                   <ul style="list-style-type: none"> <li>– Resin/binder</li> <li>– Natural and synthetic</li> <li>– Oils</li> </ul> </li> </ul> </li> </ul>  |

**LEARNING TASKS**

**CONTENT**

- Drying, non-drying
  - Volatile
  - Solvents, thinners
- Uses
- Properties
- Functions
  
- 5. Describe additives and their associated properties
  - Types
  - Uses
  - Properties
  - Functions
  
- 6. Describe the components of a Product Data Sheet
  - Components
  - Function
  - Use
  - Parameters
  - Thinning
  - Mixing
  - Dry times
  - Induction time
  - Safety, PPE
  
- 7. Describe types and preparation of architectural paint and high performance coatings
  - Types of architectural paint and coatings
    - Water-borne
    - Acrylic and alkyds
  - Types of high performance coatings
    - Fibre-reinforced
    - Intumescent
    - Epoxies
    - Urethanes
    - Zinc-rich
    - Moisture-cured
  - Application considerations
    - Drying/curing time
    - Specifications
    - Substrates
  - Environmental conditions
    - Humidity
    - Ambient temperature
  - Colour matching and tinting

**LEARNING TASKS**
**CONTENT**

- |   |  |
|---|--|
| 8. Strain, mix and thin coatings according to specifications including ratios and induction times | <ul style="list-style-type: none"> <li>• As per job requirements and manufacturer's specifications               <ul style="list-style-type: none"> <li>○ Ratios, weight and volume</li> </ul> </li> </ul>   |
| 9. Apply paint/coatings with brushes  | <ul style="list-style-type: none"> <li>• Types and sizes of brushes (refer to appendix)</li> <li>• Types of paint that can be brushed on</li> <li>• Brushing techniques               <ul style="list-style-type: none"> <li>○ Lay off and feathering paint</li> <li>○ Cut in accurately</li> </ul> </li> <li>• Product data sheet</li> <li>• Other hand application tools</li> <li>• Cleaning and maintaining</li> </ul>  |
| 10. Apply paint/coatings with rollers   | <ul style="list-style-type: none"> <li>• Types and sizes of rollers (refer to appendix)</li> <li>• Types of paints that can be rolled on</li> <li>• Nap/pile of sleeve</li> <li>• Conditioning roller sleeves</li> <li>• Roller techniques</li> <li>• Maintaining a wet edge</li> <li>• Cleaning and maintaining</li> </ul>  |
| 11. Describe spray systems  | <ul style="list-style-type: none"> <li>• Refer to E4-E6 (air spray, airless spray and specialty spray)</li> </ul>  |
| 12. Describe how to prime and seal surfaces   | <ul style="list-style-type: none"> <li>• Purpose</li> <li>• Types               <ul style="list-style-type: none"> <li>○ Water-borne</li> <li>○ Solvent-based</li> <li>○ Specialty primers                   <ul style="list-style-type: none"> <li>– Stain blocker</li> <li>– Block filler</li> <li>– Epoxy-based</li> </ul> </li> </ul> </li> <li>• Basic priming               <ul style="list-style-type: none"> <li>○ New substrate</li> <li>○ Previously finished surface</li> </ul> </li> </ul> |
| 13. Prime and seal surfaces   | <ul style="list-style-type: none"> <li>• Selection of primer for new substrate and previously finished surface</li> <li>• Identification of moisture content before priming</li> </ul>   |

**Achievement Criteria**

Performance	The learner will apply coating to a surface.
Conditions	The learner will be given: <ul style="list-style-type: none"><li>• Instructions</li><li>• Equipment</li><li>• Tools</li></ul>
Criteria	The learner will score 70% on a rating sheet that reflects the following criteria: <ul style="list-style-type: none"><li>• Accuracy</li><li>• Sequence and procedures</li><li>• Housekeeping</li><li>• Tool use</li><li>• Overall finish</li></ul>



**Line (GAC):** E APPLY PAINT AND COATINGS

**Competency:** E3 Correct Paint/Coating Failures

## Objectives

To be competent in this area, the individual must be able to:

- Identify paint/coating failures.
- Correct paint/coating failures.

## LEARNING TASKS

## CONTENT

- |    |   |  |
|----|---|--|
| 1. | Describe the causes of paint/coating defects and failures | <ul style="list-style-type: none"> <li>• Degree of surface degradation</li> <li>• Types               <ul style="list-style-type: none"> <li>○ Alligatoring</li> <li>○ Orange peeling</li> <li>○ Flaking</li> <li>○ Bleeding</li> <li>○ Other paint film defects</li> <li>○ Rusting</li> <li>○ Peeling and cracking of paint</li> </ul> </li> <li>• Causes of Coating defects and failures               <ul style="list-style-type: none"> <li>○ Poor surface preparation</li> <li>○ Unsuitable coating</li> <li>○ Environmental influences</li> <li>○ Improper application</li> <li>○ Surface contamination</li> <li>○ Corrosion of substrate</li> </ul> </li> </ul> |
| 2. | Determine remedies for given paint/coating failures       | <ul style="list-style-type: none"> <li>• Determine cause of defects</li> <li>• Remedies</li> </ul>   |
| 3. | Correct paint/coating failures                            | <ul style="list-style-type: none"> <li>• According to failures</li> <li>• Safety, PPE</li> </ul>   |

**Line (GAC):**           **E     APPLY PAINT AND COATINGS**  
**Competency:**       **E5    Use Airless Spray Equipment**

### Objectives

To be competent in this area, the individual must be able to:

- Apply a spray finish using airless spray equipment according to project specifications.
- Maintain airless spray equipment.
- Troubleshoot airless spray equipment.

### LEARNING TASKS

1. Describe airless spray equipment

### CONTENT

- Advantages and disadvantages of airless spray equipment compared to air spray equipment
  - Production, finish, transfer efficiency
- Finish required
- Transfer efficiency
- Power sources
  - Air, electrical, gas
- Basic parts
  - Paint lines couplings and fittings
  - Gun
  - Safety features
    - Trigger safety
    - Tip guard
    - Non-static lines
    - Equipment ground
  - Spray tips
  - Accessories
- Safety, PPE
  - Injection
- Environmental considerations
- Hazards

2. Select airless spray equipment based on the surface and coating requirements

- Coating to be sprayed
- Substrate to be painted
- Pump ratings
  - Viscosity rating
  - Flow rate
  - Ratio
- Tip selection

**LEARNING TASKS**
**CONTENT**

- |   |   |
|---|---|
| 3. Demonstrate airless spray technique  | <ul style="list-style-type: none"> <li>• Motion               <ul style="list-style-type: none"> <li>○ Speed, angle</li> </ul> </li> <li>• Distance from surface</li> <li>• Overlap distance</li> <li>• Triggering</li> </ul> |
| 4. Describe airless spray finishing procedures                                      | <ul style="list-style-type: none"> <li>• Set-up and shutdown of airless spray systems</li> <li>• Precautions and techniques</li> </ul>  |
| 5. Apply a spray finish using airless equipment according to project specifications | <ul style="list-style-type: none"> <li>• As per project specifications</li> </ul>   |
| 6. Maintain airless spray equipment   | <ul style="list-style-type: none"> <li>• Flush/clean the system</li> <li>• Cleaning equipment filters</li> <li>• Proper storage of equipment</li> <li>• Repacking of airless pumps</li> </ul>                                 |
| 7. Troubleshoot airless spray equipment   | <ul style="list-style-type: none"> <li>• No/insufficient pressure</li> <li>• Power source</li> <li>• Faulty spray pattern</li> <li>• Incorrect filters</li> <li>• Repacking of airless pumps</li> </ul>                       |

**Achievement Criteria**

- |             |   |
|-------------|---|
| Performance | The learner will spray a surface according to specifications  |
| Conditions  | The learner will be given: <ul style="list-style-type: none"> <li>• Tools</li> <li>• Materials</li> <li>• Equipment</li> <li>• Instructions</li> </ul>  |
| Criteria    | The learner will score 70% on a rating sheet that reflects the following criteria: <ul style="list-style-type: none"> <li>• Technique</li> <li>• Safety</li> <li>• Sequence/procedures</li> <li>• Housekeeping</li> <li>• Tool use</li> <li>• Overall finish</li> </ul> |

**Line (GAC):**        **E    APPLY PAINT AND COATINGS**  
**Competency:**    **E9    Apply Caulking**

### Objectives

To be competent in this area, the individual must be able to:

- Describe caulking.
- Apply, finish and remove caulking.

### LEARNING TASKS

1. Describe caulking

### CONTENT

- Purpose/application
  - Filling cracks and joints in trim
  - Sealing around window and doors
  - Protection from moisture
  - Expansion and contraction
  - Reduce heat loss
  - Cosmetic, esthetic
  - Design flaws
- Types of caulking
  - Epoxy, latex, silicone, polyurethane, (paintable)
- Properties
  - Cohesion
  - Adhesion
  - Shrinkage
  - Elongation
  - Flexibility
  - Curing time
  - Life expectancy
  - Consistency and texture
  - Permeability
    - Repellency
    - Breathability
- Additives
  - Biocides, fungicides
- Tools
  - Caulking guns
    - Air, electric, manual
  - Squeeze tubes
- Drying time required for various caulking
- Reasons for caulking breakdown
  - Moisture and cure time

**LEARNING TASKS**

2. Apply, finish and remove caulking

**CONTENT**

- Tools
  - Application, removal, finishing
- Procedure
- Safety/PPE
- Environmental considerations
- According to job specifications

**Line (GAC):**        G    **APPLY FINISHES**

**Competency:** G3 Apply Graphics

## Objectives

To be competent in this area, the individual must be able to:

- Describe layout methods for graphics.
- Apply a graphic according to specifications.

## LEARNING TASKS

1. Describe layout methods for graphics

## CONTENT

- Geometric calculations and measurement
- Square grid
- Projector
- Templates
- Pounce wheel
- Stencils
- Design on surface
- Positioning on substrate
- Transfer of design
- Modifications
- Marking equipment
- Considerations
  - Protection of surrounding areas
  - Sequence of colour application
  - Coats required

2. Describe layout and application tools and equipment

- Tape measures
- Compass
- Protractor
- Scale ruler
- T-squares
- French curves
- Straight edges
- Levels
- Lasers
- Basic brushes and rollers
- Spray equipment
- Mahl stick

**LEARNING TASKS**

3. Apply a graphic according to specifications

**CONTENT**

- Apply graphic to specifications
- Access
- Safety/PPE
- Environmental considerations

**Achievement Criteria**

**Performance** The learner will layout and apply paint to a graphic based on given specifications.

**Conditions** The learner will be given:

- Tools
- Materials
- Equipment
- Instructions

**Criteria** The learner will score 70% on a rating sheet that reflects the following criteria:

- Accuracy
- Procedure/sequence
- Housekeeping
- Overall finish

**Line (GAC):**        **H    APPLY COLOUR THEORY**  
**Competency:**     **H1   Use Colour Theory**

### Objectives

To be competent in this area, the individual must be able to:

- Describe colour theory.
- Create colours.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1. Describe colour theory  | <ul style="list-style-type: none"> <li>• The source of colour</li> <li>• Colour spectrum</li> <li>• Colour schemes               <ul style="list-style-type: none"> <li>○ Monochromatic</li> <li>○ Complementary</li> <li>○ Triadic</li> </ul> </li> <li>• Additive and subtractive colour theory</li> <li>• Absorption and reflection of light</li> <li>• Colour systems               <ul style="list-style-type: none"> <li>○ Munsell</li> <li>○ Ostwald</li> <li>○ Pantone</li> <li>○ ISO</li> </ul> </li> </ul> |
| 2. Describe the colour wheel   | <ul style="list-style-type: none"> <li>• Primary colours</li> <li>• Secondary colours</li> <li>• Immediate</li> </ul>  |
| 3. Describe colour characteristics and how they relate to the painting trade | <ul style="list-style-type: none"> <li>• Hue</li> <li>• Value</li> <li>• Chroma</li> <li>• Tint</li> <li>• Tone</li> <li>• Shade</li> <li>• Muting a colour</li> </ul>   |
| 4. Describe types and uses of bases, colourants, tints and dyes              | <ul style="list-style-type: none"> <li>• Bases               <ul style="list-style-type: none"> <li>○ Clear, white, accent, deep</li> </ul> </li> <li>• Opacity</li> <li>• Mixing light colours</li> <li>• Mixing bright or dark colours</li> <li>• Universal</li> <li>• Colours in Japan</li> </ul>   |



**LEARNING TASKS**
**CONTENT**

5. Describe characteristics of pigments used in colourants

- Colours in oil
- Dry powder
- Dyes
- Purity
- Strength
- Durability
- Restrictions of use
- Compatibility
- Acid and alkali resistance
- Light fastness

6. Create colours

- Light fastness
- Test strength and purity of pigments
  - Draw down
  - Mute colours
- Practice developing colour mixing and matching skills

7. Describe equipment and tools used to mix and match colours

- Measurement/ratios
  - Carousels, tint machines
- Paint mixtures
- Strainers
- Test panels
- Window viewing cards
- Record keeping
- Light box
- Fan deck/paint chip/colour sample

**Achievement Criteria**

**Performance** The learner will perform draw downs, colour matching and colour muting.

**Conditions** The learner will be given:

- Tools
- Materials
- Instructions

**Criteria** The learner will score 70% on a rating sheet that reflects the following criteria:

- Matching accuracy
- Cleanliness
- Sequence/Procedures

**Line (GAC):        H        APPLY COLOUR THEORY**

**Competency:        H2        Mix and Match Colours**

### Objectives

To be competent in this area, the individual must be able to:

- Match colours using bases and colourants.

### LEARNING TASKS

1. Describe how to match colours

2. Describe the equipment and tools used to match colours

3. Match colours

### CONTENT

- Colour matching skills
- Colour harmony
- Procedures
  - Ensuring suitable lighting
  - Evaluating the colour to be matched
  - Triangulation
  - Dry match
  - Approval of sample
- Measurement
- Paint mixers
- Strainers
- Test panels
- Viewing cards
- Record keeping
- Light box
- Heat dryers
- Fan decks/colour samples
- Match colours to project specifications

### Achievement Criteria

**Performance**    The learner will match colours to project specifications.

**Conditions**     The learner will be given:

- Tools
- Materials
- Equipment
- Instructions

**Criteria**        The learner will score 70% on a rating sheet that reflects the following criteria:

- Matching accuracy
- Sequence/Procedures
- Housekeeping

# **Level 2**

## **Painting and Decorating**

**Line (GAC):**        **B    USE TOOLS AND EQUIPMENT**  
**Competency:**    **B5    Use Hoisting and Lifting Equipment**

### Objectives

To be competent in this area, the individual must be able to:

- Use rigging and hoisting equipment for a given task.
- Use lifting equipment for a given task.
- Maintain hoisting and lifting equipment as per manufacturer's specifications.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1. Describe hoisting and lifting equipment | <ul style="list-style-type: none"> <li>• Types               <ul style="list-style-type: none"> <li>○ Straps, slings, chains, shackles</li> </ul> </li> <li>• Uses</li> <li>• Limitations and capacities</li> <li>• Government regulations</li> <li>• Safety</li> </ul>  |
| 2. Describe rigging hardware components    | <ul style="list-style-type: none"> <li>• Hooks               <ul style="list-style-type: none"> <li>○ Sorting hooks</li> <li>○ Eye hooks</li> </ul> </li> <li>• Headache balls</li> <li>• Swivels</li> <li>• Blocks</li> <li>• Sheaves</li> <li>• Shackles</li> <li>• Clips</li> <li>• Thimbles</li> <li>• Eyebolts</li> <li>• Load binders</li> <li>• Spreader bars</li> <li>• Equalizer bars and plates</li> <li>• Turnbuckles</li> <li>• Drums</li> <li>• Chains</li> <li>• Softeners</li> <li>• Sway braces</li> <li>• Spines/stiffener</li> <li>• Cables/wire rope</li> <li>• Plate grip</li> </ul> |

**LEARNING TASKS**
**CONTENT**

- |   |  |
|---|--|
| 3. Calculate weight for a given rigging and hoisting task                       | <ul style="list-style-type: none"> <li>• Calculation of weight</li> <li>• Selection of equipment</li> <li>• Mechanical advantage</li> </ul>  |
| 4. Use rigging and hoisting equipment for a given task                          | <ul style="list-style-type: none"> <li>• Selection of lifting location or point</li> <li>• Training requirements</li> <li>• Knots</li> <li>• Anchorage and hold back</li> <li>• Safety</li> <li>• Operating procedures</li> <li>• Communication and hand signals</li> <li>• Securing of loads</li> <li>• Inspection</li> </ul> |
| 5. Describe lifting equipment   | <ul style="list-style-type: none"> <li>• Training requirements</li> <li>• Mobile cranes</li> <li>• Fork lifts</li> </ul>   |
| 6. Use lifting equipment according to job requirements                          | <ul style="list-style-type: none"> <li>• As per job requirements</li> </ul>  |
| 7. Maintain hoisting and lifting equipment as per manufacturer's specifications | <ul style="list-style-type: none"> <li>• Maintenance</li> <li>• Storage</li> <li>• Safety</li> <li>• Basic operating procedures</li> </ul>   |

**Achievement Criteria**

- |             |   |
|-------------|---|
| Performance | The learner will calculate weights and rig for a given scenario.  |
| Conditions  | The learner will be given: <ul style="list-style-type: none"> <li>• Scenario</li> <li>• Materials</li> <li>• Equipment</li> </ul>   |
| Criteria    | The learner will score 70% or better on a rating sheet that reflects the following criteria: <ul style="list-style-type: none"> <li>• Accuracy of calculation</li> <li>• Accuracy of knots</li> <li>• Safety</li> </ul> |

**Line (GAC): C ORGANIZE WORK**

**Competency: C1 Use Mathematics**

### Objectives

To be competent in this area, the individual must be able to:

- Apply mathematical principals to solve problems including calculating area, volume, proportion and angles.

### LEARNING TASKS

1. Solve geometric problems

### CONTENT

- Area
- Perimeter
- Volume
- Angles
- Arc
- Radius and diameter
- Formulas
  - Square and rectangles
  - Triangles
  - Parallelogram
  - Trapezoid
  - Circle
  - Sector
  - Segment
  - Other relevant geometric shapes

**Line (GAC):**           **D    PREPARE SURFACES**  
**Competency:**       **D4   Prepare and Repair Metal Surfaces**

### Objectives

To be competent in this area, the individual must be able to:

- Describe specific metal substrate deficiencies.
- Perform quality control for surface preparation on metal substrates.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1. Describe corrosion  | <ul style="list-style-type: none"> <li>• Types</li> <li>• Corrosion theory</li> </ul>  |
| 2. Describe specific metal substrate deficiencies                      | <ul style="list-style-type: none"> <li>• Types</li> <li>• Specific deficiencies               <ul style="list-style-type: none"> <li>○ Mill scale</li> <li>○ Origins</li> <li>○ Problems</li> <li>○ Preparation of problematic surfaces such as galvanized metals</li> </ul> </li> </ul>   |
| 3. Identify standards for application of coatings to metal substrates  | <ul style="list-style-type: none"> <li>• Standards               <ul style="list-style-type: none"> <li>○ NACE</li> <li>○ SSPC</li> <li>○ ASTM</li> <li>○ ISO</li> <li>○ Job Standards (customer specifications)</li> </ul> </li> </ul>  |
| 4. Perform quality control for surface preparation of metal substrates | <ul style="list-style-type: none"> <li>• Procedures</li> <li>• Protocols</li> <li>• Testing               <ul style="list-style-type: none"> <li>○ Salt/chloride testing</li> <li>○ Ambient conditions</li> <li>○ Profiles (replica tape, comparator)</li> <li>○ Initial condition of substrate (VIS 1 and VIS 2)</li> <li>○ Degree of cleanliness</li> </ul> </li> <li>• Quality assurance program</li> <li>• Federal and Provincial and other applicable regulations and guidelines</li> </ul> |

**Achievement Criteria**

Performance	<p>The learner will perform quality control/assurance for:</p> <ul style="list-style-type: none"> <li>• Ambient conditions</li> <li>• Profiles</li> <li>• Initial condition of substrate (VIS 1 and VIS 2)</li> <li>• Degree of cleanliness</li> </ul>
Conditions	<p>The learner will be given:</p> <ul style="list-style-type: none"> <li>• Instructions</li> <li>• Inspection tools</li> <li>• Standards</li> <li>• Substrate</li> </ul>
Criteria	<p>The learner will score 70% on a rating sheet that reflects the following criteria:</p> <ul style="list-style-type: none"> <li>• Adherence to standards</li> <li>• Proper use of tools</li> <li>• Proper documentation of results</li> </ul>



**Line (GAC):**           **D    PREPARE SURFACES**  
**Competency:**       **D5   Perform Abrasive Blasting**

### Objectives

To be competent in this area, the individual must be able to:

- Select abrasive based on the specification, substrate, equipment being used and coating to be applied.
- Perform abrasive blasting on a given substrate.
- Inspect and maintain abrasive blasting equipment as per manufacturer's specifications.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1. Describe abrasive blasting and applicable standards         | <ul style="list-style-type: none"> <li>• Purpose</li> <li>• Types               <ul style="list-style-type: none"> <li>○ Air pressure</li> <li>○ Centrifugal</li> </ul> </li> <li>• Principles</li> <li>• Advantages and disadvantages</li> <li>• SSPC, NACE, ISO</li> </ul>   |
| 2. Evaluate initial condition of given substrate               | <ul style="list-style-type: none"> <li>• Welds</li> <li>• Slag</li> <li>• Weld splatter</li> <li>• Contaminants</li> <li>• Mould</li> <li>• Integrity of substrate               <ul style="list-style-type: none"> <li>○ De-laminations</li> <li>○ Inclusions</li> <li>○ Gouges/defects</li> <li>○ Existing profile</li> <li>○ Age of concrete (cure)</li> <li>○ Hardness of substrate</li> </ul> </li> </ul> |
| 3. Describe types and functions of abrasive blasting equipment | <ul style="list-style-type: none"> <li>• Types               <ul style="list-style-type: none"> <li>○ Suction</li> <li>○ Vacuum</li> <li>○ Barrel</li> <li>○ Cabinet</li> <li>○ Direct pressure</li> <li>○ Centrifugal wheel abraders</li> </ul> </li> <li>• Functions</li> </ul>  |
| 4. Use air compression used in abrasive blasting               | <ul style="list-style-type: none"> <li>• Types               <ul style="list-style-type: none"> <li>○ Rotary</li> <li>○ Screw</li> </ul> </li> </ul>   |

**LEARNING TASKS**

**CONTENT**

- |  |  |
|--|--|
| <p>5. Describe components of abrasive blasting equipment</p> | <ul style="list-style-type: none"> <li>• Set-up</li> <li>• Maintenance</li> <li>• Fuel considerations</li> <li>• Operation               <ul style="list-style-type: none"> <li>○ Start-up</li> <li>○ Shutdown</li> </ul> </li> <li>• Air quality               <ul style="list-style-type: none"> <li>○ Breathing</li> <li>○ Operating</li> </ul> </li> <li>• Air pressure</li> <li>• Air volume</li> </ul>   |
| <p>6. Describe abrasive blasting media</p>                   | <ul style="list-style-type: none"> <li>• Oil and moisture separators</li> <li>• Air hoses</li> <li>• Blasting hoses</li> <li>• Couplings</li> <li>• Control valves</li> <li>• Nozzles               <ul style="list-style-type: none"> <li>○ Straight</li> <li>○ Angle</li> <li>○ Venturi</li> <li>○ Specialty</li> <li>○ Water ring</li> <li>○ Water injection</li> </ul> </li> <li>• Remote control valves</li> <li>• Washers/gaskets</li> <li>• Air control equipment               <ul style="list-style-type: none"> <li>○ Dehumidifiers, water traps, cleaners, receivers, filters, pressure regulators</li> </ul> </li> </ul> |
|  | <ul style="list-style-type: none"> <li>• Types</li> <li>• Anchor pattern</li> <li>• Breakdown rate</li> <li>• Abrasive characteristics               <ul style="list-style-type: none"> <li>○ Shape</li> <li>○ Hardness</li> <li>○ Density</li> <li>○ Size distribution</li> </ul> </li> </ul>   |

**LEARNING TASKS**

7. Perform abrasive blasting

**CONTENT**

- Safety
  - PPE
  - Inspection of hose, couplings, whips and nozzle
  - Hazards
  - Communications
  - Protecting the public and other workers
- Environmental issues
  - Waste management
  - Reference HAZMAT
  - Reference Containment (standards)
- Equipment location and set-up
- Blasting techniques/procedures
  - Steel, concrete, wood
- Sand consumption
- Machine start-up
- Machine shutdown
- Inspection and testing
  - Testing equipment
  - Hold points
  - Specifications
  - Air quality

8. Maintain abrasive blasting equipment according to manufacturer's and other applicable specifications

- Manufacturer's specifications
- Other specifications

**Achievement Criteria**

**Performance** The learner will perform abrasive blasting on a panel.

**Conditions** The learner will be given:

- Panel
- Equipment
- PPE
- Specification

**Criteria** The learner will score 70% on a rating sheet that reflects the following criteria:

- Adherence to specification
- Proper sequence
- Safe practices

**Line (GAC):**        D    **PREPARE SURFACES**

**Competency: D6 Perform Hydro Cleaning**

## Objectives

To be competent in this area, the individual must be able to:

- Describe hydro blasting.
- Describe the procedures involved in hydro blasting.

## LEARNING TASKS

1. Describe hydro blasting

## CONTENT

- Purpose
  - Categories and classifications
  - Pressure and volume
  - Preparation of equipment and work area
  - NACE, SSPC, and ASTM standards
  - Systems
    - High pressure
    - Ultra high pressure
    - Water-jetting
  - Access
  - Environmental considerations
  - Possible property damage
  - Containment
  - Water recovery, treatment and disposal
- 
- Pumps
  - Gauges
  - High pressure hoses
  - Lances
  - Nozzles
  - Dump valves
  - Couplings
  - Fittings
  - Tips
  - Injectors
    - Cleaners
    - Rust inhibitors
    - Abrasives
  - Accessories

2. Describe hydro blast equipment

**LEARNING TASKS**

**CONTENT**

- |  |  |
|--|--|
| <p>3. Describe the procedures involved in hydro blasting</p> | <ul style="list-style-type: none"> <li>• Safety               <ul style="list-style-type: none"> <li>○ PPE</li> <li>○ Hazards</li> <li>○ Confined space procedures</li> <li>○ Lead removal</li> </ul> </li> <li>• Time limitations</li> <li>• Rules and recommended procedures</li> <li>• Protocols between blast and coating</li> </ul> |
|--|--|

<b>Line (GAC):</b>	<b>E</b>	<b>APPLY PAINT AND COATINGS</b>
<b>Competency:</b>	<b>E2</b>	<b>Apply Industrial Coatings and Materials</b>

### Objectives

To be competent in this area, the individual must be able to:

- Describe industrial, high performance and architectural coatings.
- Describe special function materials.
- Apply industrial coatings and materials to substrates.

### LEARNING TASKS

### CONTENT

1. Describe architectural, high performance, and industrial coatings	<ul style="list-style-type: none"> <li>• <i>Review Level 1: Apply Paint</i></li> <li>• Environmental concerns</li> <li>• Classes of coatings</li> <li>• Coating properties</li> <li>• Film-forming mechanisms</li> <li>• Curing mechanisms</li> <li>• Safe handling and application <ul style="list-style-type: none"> <li>◦ Material-specific hazards</li> </ul> </li> <li>• Safety, PPE</li> <li>• Product data sheets</li> </ul>
2. Describe special function materials	<ul style="list-style-type: none"> <li>• Foams</li> <li>• Seamless floorings</li> <li>• Fire retardant coatings</li> <li>• Heat cured powder coatings</li> <li>• Texture coatings</li> <li>• Lining systems</li> <li>• Emerging technologies/materials</li> </ul>
3. Describe application procedures for industrial coatings	<ul style="list-style-type: none"> <li>• Application sequence</li> <li>• Quality control</li> <li>• Required documentation</li> </ul>
4. Select materials based on substrate	<ul style="list-style-type: none"> <li>• Select materials based on substrate and intended use</li> </ul>
5. Apply coating system to substrate	<ul style="list-style-type: none"> <li>• As per job requirements</li> </ul>

**Achievement Criteria**

Performance	The learner will apply a coating to a given substrate.
Conditions	<p>The learner will be given:</p> <ul style="list-style-type: none"> <li>• Materials</li> <li>• Equipment</li> <li>• Instructions/specifications</li> </ul>
Criteria	<p>The learner will score 70% on a rating sheet that reflects the following criteria:</p> <ul style="list-style-type: none"> <li>• Accuracy</li> <li>• Sequence and procedures</li> <li>• Overall appearance</li> <li>• Adherence to specification</li> </ul>

**Line (GAC):**        **E    APPLY PAINT AND COATINGS**  
**Competency:**     **E3    Correct Paint/Coating Failures**

### Objectives

To be competent in this area, the individual must be able to:

- Identify coating failures and their causes.
- Describe corrosion control.
- Correct coating failures.

### LEARNING TASKS

### CONTENT

- |   |  |
|---|--|
| 1. Describe the causes of coating defects and failures      | <ul style="list-style-type: none"> <li>• <i>Reference Level 1</i></li> <li>• Causes of Coating defects and failures               <ul style="list-style-type: none"> <li>○ Poor surface preparation</li> <li>○ Unsuitable coating</li> <li>○ Environmental influences</li> <li>○ Improper application</li> <li>○ Surface contamination</li> <li>○ Corrosion of substrate</li> </ul> </li> <li>• Quality control and assurance</li> </ul> |
| 2. Describe the process of corrosion                        | <ul style="list-style-type: none"> <li>• Definition</li> <li>• Different forms of anodes and cathodes</li> <li>• Problems of mill scale</li> <li>• The electrolyte</li> <li>• Types               <ul style="list-style-type: none"> <li>○ General corrosion</li> <li>○ Galvanic corrosion</li> <li>○ Pitting corrosion</li> </ul> </li> <li>• Galvanic scale</li> </ul>   |
| 3. Describe corrosion control                               | <ul style="list-style-type: none"> <li>• Sacrificial coatings</li> <li>• Inhibitive coatings</li> <li>• Barrier coatings</li> <li>• Cathodic protection systems</li> </ul>   |
| 4. Determine causes and remedies for given coating failures | <ul style="list-style-type: none"> <li>• Determine cause of defects</li> <li>• Remedies</li> <li>• Testing/inspection equipment</li> </ul>   |
| 5. Correct coating failures                                 | <ul style="list-style-type: none"> <li>• According to failures</li> <li>• Safety, PPE</li> </ul>   |



**Line (GAC):**        **E    APPLY PAINT AND COATINGS**  
**Competency:**    **E4    Use Air Spray Equipment**

### Objectives

To be competent in this area, the individual must be able to:

- Describe air spray.
- Describe air spray systems and components.
- Apply a spray finish using air spray according to project specifications.

### LEARNING TASKS

### CONTENT

- |   |   |
|---|---|
| 1. Describe air spray                             | <ul style="list-style-type: none"> <li>• Atomization</li> <li>• Transfer efficiency</li> <li>• Overspray</li> <li>• Fluid properties</li> <li>• Fluid dynamics</li> <li>• Fluid controls</li> <li>• Safety/PPE</li> <li>• Environmental considerations</li> <li>• Ventilation</li> </ul>  |
| 2. Describe air spray procedures                  | <ul style="list-style-type: none"> <li>• Equipment placement</li> <li>• Job planning</li> <li>• Protection of surrounding areas</li> <li>• Set-up and shutdown</li> </ul>   |
| 3. Describe the components in an air spray system | <ul style="list-style-type: none"> <li>• Spray gun</li> <li>• Fluid and air lines</li> <li>• Containers               <ul style="list-style-type: none"> <li>○ Cups and tanks</li> </ul> </li> <li>• Pressure gauges</li> <li>• Filters</li> <li>• Mixing equipment</li> <li>• Air control equipment</li> <li>• Compressor</li> </ul> |
| 4. Describe basic types of air spray equipment    | <ul style="list-style-type: none"> <li>• Pressure feed</li> <li>• Suction feed</li> <li>• Gravity feed</li> <li>• Conventional (non HVLP) air spray</li> <li>• HVLP air spray</li> <li>• LVLP air spray</li> </ul>  |

**LEARNING TASKS**
**CONTENT**

- Tools
  
- 5. Describe air spray set up and finishing procedures
  - Set-up and shutdown
  - Safety precautions
  - Motion
  - Distance from surface
  - Overlap distance
  - Triggering
  - Faulty spray patterns
  - Trouble-shooting equipment problems
  - Inspection
  
- 6. Apply a spray finish using air spray according to project specifications
  - Project specifications

**Achievement Criteria**

- Performance** The learner will air spray equipment to apply material to a given project.
- Conditions** The learner will be given:
- Tools
  - Materials
  - Equipment
  - Instructions
- Criteria** The learner will score 70% on a rating sheet that reflects the following criteria:
- Technique
  - Finish
  - Safety
  - Sequence/procedures

**Line (GAC):**        **E    APPLY PAINT AND COATINGS**  
**Competency:**     **E7    Use Thermal Spray**

### Objectives

To be competent in this area, the individual must be able to:

- Use thermal spray to apply material to a given surface.

### LEARNING TASKS

1. Describe thermal spray systems
  
2. Describe the hazards and safety precautions associated with thermal spray equipment
  
3. Describe thermal spray equipment
  
4. Describe thermal spray coating materials
  
5. Describe application of gas flame thermal spray

### CONTENT

- Gas flame spray
- Powder thermal spray
- Electric arc spray
- Thermoplastic spray
  
- Hazards
  - Fire explosion hazards
  - Metal dusts
  - Metal fumes
- Precautions
  - Safety/PPE
  - Worker training
  - Safe work procedures
- Environmental considerations
  
- Application method
- Materials
- Tools and equipment (see appendix)
- Maintenance
- Calibration
  
- Surface preparation required
- Wire/powder (metalizing)
  - Zinc
  - Aluminum
  - Zinc-aluminum
  - Assorted metals
- Plastics
- Sealers and topcoats
  
- Application techniques
- Gas-oxygen mix
- Distance from surface
- Speed of wire feed
- Angle of spray

**LEARNING TASKS**

**CONTENT**

6. Describe the application of electric arc

- Gun speed
- Safety
  - Noise
  - UV radiation
  - Dust, fumes and vapours
  - Heat/ignition source
  - Electrical shock hazards
  - PPE
  - Operator fatigue
  - Zinc fume exposure
- Substrates
  - Steel
  - Concrete
  - Other
- Equipment selection
- Material selection
- Set up/operation
- Process and work instructions
- Inspection and testing
  - Visual
  - Destructive testing
  - DFT
  - Bend test
  - Adhesion test
  - Measuring
  - Documentation
- Factors affecting bonding and subsequent build up
  - Cleanliness
  - Surface area
  - Surface topography or profile
  - Temperature (thermal energy)
  - Time (reaction rates & cooling rates)
  - Velocity (kinetic energy)
  - Physical & chemical properties
  - Physical & chemical reactions

7. Use thermal spray to apply material to a given surface

- As per specifications

**Line (GAC):**                **E     APPLY PAINT AND COATINGS**  
**Competency:**           **E8     Use Fibre Reinforced Plastic**

### Objectives

To be competent in this area, the individual must be able to:

- Describe how to repair defects in fibre-reinforced plastic.
- Apply fibre-reinforced plastic according to project specifications.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1. Describe fibre-reinforced plastic   | <ul style="list-style-type: none"> <li>• History and development</li> <li>• Definitions and key terms</li> <li>• Resin</li> <li>• Materials               <ul style="list-style-type: none"> <li>○ Mat</li> <li>○ Roving</li> <li>○ Filament</li> <li>○ Veil</li> <li>○ Balsa wood</li> </ul> </li> <li>• Curing systems</li> <li>• Additives</li> <li>• Safety/PPE</li> <li>• Environmental considerations</li> </ul> |
| 2. Describe the hazards and required precautions for working with fibre-reinforced plastic | <ul style="list-style-type: none"> <li>• Hazards               <ul style="list-style-type: none"> <li>○ Explosive</li> <li>○ Chemical</li> <li>○ Fibreglass dust</li> </ul> </li> <li>• Precautions               <ul style="list-style-type: none"> <li>○ Safety programs</li> <li>○ Worker training</li> <li>○ Ventilation</li> <li>○ PPE</li> </ul> </li> </ul>   |
| 3. Describe resin characteristics  | <ul style="list-style-type: none"> <li>• Flammability ratings</li> <li>• Temperature limitations</li> <li>• Curing of resins</li> <li>• Catalysts, accelerators and promoters</li> <li>• Lay-up thickness</li> <li>• Cure issues</li> <li>• Inspection</li> </ul>  |

**LEARNING TASKS**
**CONTENT**

- |   |  |
|---|--|
| 4. Describe laminate and layout design                                | <ul style="list-style-type: none"> <li>• Basic reinforcements</li> <li>• Glass content</li> <li>• Glass arrangement</li> <li>• Butt and strap joints</li> <li>• Tees and laterals</li> </ul>   |
| 5. Describe tank linings and encapsulations                           | <ul style="list-style-type: none"> <li>• Surface preparation</li> <li>• Curing system selection</li> <li>• Application system selection               <ul style="list-style-type: none"> <li>○ Corrosion liner</li> <li>○ Impermeable linings</li> <li>○ NSF (potable water)</li> <li>○ Structural integrity</li> </ul> </li> </ul>  |
| 6. Describe fabricating methods                                       | <ul style="list-style-type: none"> <li>• Contact moulding</li> <li>• Filament winding</li> <li>• Pultrusion</li> <li>• Centrifugal casting</li> <li>• Resin injection mouldings</li> <li>• Compression moulding</li> <li>• Plural component systems</li> </ul>   |
| 7. Describe how to repair defects in fibre reinforced plastic         | <ul style="list-style-type: none"> <li>• Resin selection</li> <li>• Simple fractures</li> <li>• Repair of holes</li> <li>• Filament wound structure repairs</li> <li>• Voids</li> <li>• Wrinkles</li> <li>• De-lamination</li> <li>• Resin dryness</li> <li>• Resin richness</li> <li>• Crazing</li> <li>• Contamination</li> <li>• Specific tools and materials required</li> <li>• Inspection               <ul style="list-style-type: none"> <li>○ Equipment</li> <li>○ Protocol</li> <li>○ Standards</li> </ul> </li> </ul> |
| 8. Apply fibre reinforced plastic according to project specifications | <ul style="list-style-type: none"> <li>• As per project specifications</li> </ul>  |

**Line (GAC): F APPLY WALL COVERING PROCEDURES**  
**Competency: F1 Prepare and Install Wall Coverings**

### Objectives

To be competent in this area, the individual must be able to:

- Remove wall coverings and adhesives.
- Prepare for application of wall covering.
- Install wall coverings.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1. Describe wall covering materials and adhesives                  | <ul style="list-style-type: none"> <li>• Types</li> <li>• Purpose</li> <li>• Application</li> <li>• Storage and handling</li> <li>• Safety/PPE</li> </ul>  |
| 2. Describe surface preparation for installation of wall coverings | <ul style="list-style-type: none"> <li>• Substrate considerations               <ul style="list-style-type: none"> <li>○ Repairs</li> <li>○ Skim coat</li> <li>○ Environment</li> </ul> </li> <li>• Stripping               <ul style="list-style-type: none"> <li>○ Tools and equipment                   <ul style="list-style-type: none"> <li>– Steamers, sponge and water, hand pump sprayers, score/perforator roller</li> </ul> </li> <li>○ Dry stripping</li> <li>○ Surfactants</li> </ul> </li> <li>• Removal of adhesive and contaminants from substrate</li> <li>• Full versus partial removal</li> <li>• Primers, stain blockers, sizing, sealers, undercoats</li> <li>• Lining paper</li> </ul> |
| 3. Prepare for application of wall covering                        | <ul style="list-style-type: none"> <li>• Lay out</li> <li>• Run and lot number</li> <li>• Quantity/inventory</li> <li>• Wall covering patterns               <ul style="list-style-type: none"> <li>○ Straight, random, drop</li> </ul> </li> <li>• Hanging techniques for wall coverings to match patterns</li> <li>• Starting and finishing points</li> <li>• Identification of wall covering imperfections</li> </ul>   |

**LEARNING TASKS**

**CONTENT**

4. Prepare wall coverings

- Stains, lack of colour uniformity, determining inconsistency in pattern
- Achieve a level line
  - Plumb bob, level, laser, measuring tape and yard/meter stick
  - Check level for accuracy
- Application of wall covering prepping materials
  - Sizing, acrylic paints, alkyds
- Manufacturer's recommendations for pre-soaking, folding, booking and storing prior to hanging
- Identification of moisture problems and recommended corrective measures including micro-permeable vinyl
- Selection of adhesives for specific types of wall coverings
- Trimming and cutting of wall coverings
- Environmental consideration
  - Humidity, temperature, ventilation

5. Install wall coverings

- Manufacturer's recommendations for tools for a given application
- Installation techniques based on the type of wall covering
  - Wallpaper/borders, embossed paper, murals, vinyls
- Effects of environmental conditions on materials
- Starting and finishing points
- Patterns and reasons for reversal every alternate length for some materials
- Alternating bolts of wall covering for drop patterns
- Smoothing wall coverings
- Booking wall coverings
- Trimming excess materials and double cut seam
- Keeping wall coverings plumb and pattern consistent in situations such as passing a corner and working around doors and windows
- General cleanliness
- Repairs



**Achievement Criteria**

Performance	The learner will prepare and install a wall covering.
Conditions	<p>The learner will be given:</p> <ul style="list-style-type: none"> <li>• Material</li> <li>• Tools</li> <li>• Instructions</li> </ul>
Criteria	<p>The learner will score 70% on a rating sheet that reflects the following criteria:</p> <ul style="list-style-type: none"> <li>• Patterns match</li> <li>• Seams</li> <li>• Sequence and procedures</li> <li>• Lay out</li> <li>• Overall appearance</li> </ul>

**Line (GAC):**        **G    APPLY FINISHES**

**Competency:**            **G1    Apply Wood Finishes**

## Objectives

To be competent in this area, the individual must be able to:

- Prepare wood finishes.
- Apply wood finishes with brushes.
- Apply wood finishes with spray equipment.
- Wipe on wood finishes.
- Identify and correct common wood finishing failures.

## LEARNING TASKS

## CONTENT

1. Describe the types of woods used in Painting and Decorating
  - Types of wood
    - Hardwoods
      - Walnut, oak, teak
    - Softwoods
      - Spruce, pine, fir
    - Open grain woods
      - Walnut, oak, teak
    - Closed-grained woods
      - Cherry, birch, maple
2. Condition and prepare wood surfaces
  - Preparation procedures
    - Strip, bleach and sand
  - Purpose
  - Types of conditioners
  - Knowledge of woods that require conditioning
  - Manufacturer specifications
  - Drying time, and application rate and method
3. Seal wood surfaces
  - Types of sealers
    - Shellac
    - Varnishes
    - Lacquer
    - Water-borne
    - Urethane
  - Selection of proper sealer
  - Methods
  - Application sequence (manufacturer's specifications)
  - Re-coat times/dry times (manufacturer's

**LEARNING TASKS**

**CONTENT**

- specifications)

  - Application methods
    - Brush, rag, roller and sprayer ensuring compatibility with substrate and successive coatings
- 4. Apply wood fillers
  - Types of wood fillers
  - Application tools
  - Application sequence
  - Coloring filler to match wood grain
  - Filling holes and imperfections
  - Paste wood filler to level out grain
- 5. Describe wood finishes
  - Types
    - Water-borne, water-based, alcohol-based, urethane-based, wax, lacquer-based, oil-based, oil, pigment, dye, powder
  - Compatibility of finish with surface and previous coatings
  - Environmental considerations
- 6. Prepare wood finishes
  - Identification of different wood finishes
  - Adjusting viscosity for application
  - Adjusting the color of wood finish
    - Antiquing/restoring
    - Matching
  - Mixing wood finish
  - PPE
- 7. Apply wood finishes with brushes
  - Types of brushes
  - Brush sizes
  - Bristle types
    - Natural, synthetic
  - Types of finishes that can be brushed on
  - Brushing techniques
  - Manufacturers' specifications
    - Drying, recoating times
  - Applying uniformly with adequate coverage

**LEARNING TASKS**

**CONTENT**

- |   |   |
|---|---|
| <p>8. Apply wood finishes with spray equipment</p>                              | <ul style="list-style-type: none"> <li>• Types of wood finishes that can be sprayed on               <ul style="list-style-type: none"> <li>Non-grain raising stains, spirit stains, penetrating oil stains, water stains, spray stains</li> </ul> </li> <li>• Types of sprayers               <ul style="list-style-type: none"> <li>○ Airless, conventional, HVLP, hybrid</li> </ul> </li> <li>• Manufacturer's specifications               <ul style="list-style-type: none"> <li>○ Drying and re-coating times</li> </ul> </li> <li>• Temperature, humidity allowances, thinning ratio</li> <li>• Spraying techniques               <ul style="list-style-type: none"> <li>○ Overlap, even strokes</li> </ul> </li> <li>• Thinning finishes for spraying</li> <li>• Ensuring proper atomization</li> <li>• Preventing runs and sags</li> <li>• Safety               <ul style="list-style-type: none"> <li>○ PPE, disposal, storage, ventilation of workplace</li> </ul> </li> </ul> |
| <p>9. Wipe on wood finishes</p>   | <ul style="list-style-type: none"> <li>• Wood finishes that can be wiped on</li> <li>• Danish oils, lemon oils, stain</li> <li>• Application tools               <ul style="list-style-type: none"> <li>○ Cloth, sponge, squeegee</li> </ul> </li> <li>• Manufacturers' specifications               <ul style="list-style-type: none"> <li>○ Penetrating time, drying time, recoat time</li> </ul> </li> <li>• Ventilating the workplace</li> <li>• Applying finish uniformly</li> <li>• Safety               <ul style="list-style-type: none"> <li>○ PPE, disposal of used cloths, ventilation</li> </ul> </li> </ul>  |
| <p>10. Identify and correct common wood finishing failures and deficiencies</p> | <ul style="list-style-type: none"> <li>• Correction of failures and deficiencies               <ul style="list-style-type: none"> <li>○ Cause and repair</li> </ul> </li> </ul>   |

**Achievement Criteria**

Performance	The learner will strip, sand, condition, fill, seal and finish a panel(s).
Conditions	The learner will be given: <ul style="list-style-type: none"> <li>• Panel</li> <li>• Instructions</li> <li>• Materials</li> <li>• Tools</li> <li>• Variety of finishes</li> <li>• Specification</li> </ul>
Criteria	The learner will score 70% on a rating sheet that reflects the following criteria: <ul style="list-style-type: none"> <li>• Accuracy in procedures</li> <li>• Finishing deficiencies</li> <li>• Proper tool use</li> <li>• Safety, PPE</li> <li>• Overall appearance</li> </ul>

**Achievement Criteria**

Performance	The learner will strip, sand, condition, fill, seal and finish a wood project
Conditions	The learner will be given: <ul style="list-style-type: none"> <li>• Instructions</li> <li>• Materials</li> <li>• Tools</li> <li>• Variety of finishes</li> <li>• Specification linked to required finish</li> </ul>
Criteria	The learner will score 70% on a rating sheet that reflects the following criteria: <ul style="list-style-type: none"> <li>• Accuracy in procedures</li> <li>• Finishing deficiencies</li> <li>• Proper tool use</li> <li>• Safety, PPE</li> <li>• Overall appearance</li> </ul>

# **Level 3**

## **Painting and Decorating**

**Line (GAC): C ORGANIZE WORK**

**Competency: C1 Use Mathematics**

### Objectives

To be competent in this area, the individual must be able to:

- Apply mathematical principles to solve problems including calculating area, volume, proportion, angles and estimating.

### LEARNING TASKS

### CONTENT

1. Solve geometric problems

- As it pertains to wall covering
- Area
- Perimeter
- Volume
- Angles
- Arc
- Radius and diameter
- Formulas for area of:
  - Square and rectangles
  - Triangles
  - Parallelogram
  - Trapezoid
  - Circle
  - Sector
  - Segment
  - Other relevant geometric shapes

2. Solve problems of ratio and proportion

- Ratio
- Proportion
- Unknown quantities
- Estimating

**Line (GAC):**            **C    ORGANIZE WORK**  
**Competency:**        **C2   Interpret Drawings and Specifications**

### Objectives

To be competent in this area, the individual must be able to:

- Describe the types and basic functionality of drawings used in the Painter/Decorator trade.
- Calculate material requirements for a given application, using blueprints, finishing schedules, and specifications.

### LEARNING TASKS

### CONTENT

- |  |   |
|--|---|
| 1. Describe architectural drawings in detail | <ul style="list-style-type: none"> <li>• Types               <ul style="list-style-type: none"> <li>○ Architectural</li> <li>○ Plumbing</li> <li>○ Mechanical</li> <li>○ Electrical</li> </ul> </li> <li>• Hierarchy of drawings</li> <li>• Basic architectural terms</li> <li>• Site plans</li> <li>• Floor plans</li> <li>• Interior and exterior elevations</li> <li>• Building specifications</li> <li>• Detail sections</li> </ul> |
| 2. Identify components found on drawings     | <ul style="list-style-type: none"> <li>• Basic format               <ul style="list-style-type: none"> <li>○ Lines</li> <li>○ Symbols</li> <li>○ Notes</li> <li>○ Abbreviations</li> <li>○ Material list</li> <li>○ Scale</li> <li>○ Direction marks and placement marks</li> <li>○ Centres and work points</li> <li>○ Grid lines</li> <li>○ Details</li> <li>○ Title block</li> <li>○ Legend</li> </ul> </li> </ul>                    |



**LEARNING TASKS**
**CONTENT**

- |   |  |
|---|--|
| 3. Identify views on drawings   | <ul style="list-style-type: none"> <li>• Orthographic projections</li> <li>• Pictorial</li> <li>• Isometric</li> <li>• Oblique</li> <li>• Plan</li> <li>• Elevation</li> <li>• Sections</li> </ul>   |
| 4. Describe finishing schedules   | <ul style="list-style-type: none"> <li>• Purpose</li> <li>• Basic architectural terms</li> <li>• Scheduling tasks</li> </ul>   |
| 5. Apply specifications to a specific worksite scenario   | <ul style="list-style-type: none"> <li>• Scope of work</li> <li>• Scheduling</li> <li>• Quality control/assurance</li> <li>• Related documents</li> <li>• General conditions</li> <li>• Acceptance of substrate prior to painting</li> </ul> |
| 6. Calculate material requirements for a given application, using blueprints, finishing schedules, and specifications | <ul style="list-style-type: none"> <li>• Area to be painted</li> <li>• Material coverage</li> </ul>  |

**Line (GAC):**        **C    ORGANIZE WORK**  
**Competency:**    **C5   Plan a Project**

### Objectives

To be competent in this area, the individual must be able to:

- Plan and schedule a painting project.

### LEARNING TASKS

1. Describe how a project is organized

### CONTENT

- Site survey
  - Materials
  - Equipment
  - Staffing
  - Site access
- Project specifications
- Safety
  - Muster area
- Sequence of operation
- Coordination with other trades
- Documentation
  - Permits
  - Licenses
  - Programs
- Procedures
  - Emergency
  - General communication
- Required documentation
- Estimation of material and equipment
- Inventory requirements
  - Secure storage
  - Time delivery
  - Labelling materials
  - Stock maintenance
  - Consumables
- Checklist utilization
- Safety
- Site security for material and equipment
- Packaging/Shipping

2. Select material and equipment for the project

## CONTENT

- |   |   |
|---|---|
| 3. Schedule a project                               | <ul style="list-style-type: none"> <li>• Timelines</li> <li>• Crew and material/equipment required</li> <li>• Coordination</li> <li>• Customer communications</li> <li>• Communication with other trades</li> </ul> |
| 4. Plan a project according to project requirements | <ul style="list-style-type: none"> <li>• According to instructors</li> </ul>  |

Performance	The learner will plan a project according to instructor's specifications.
Conditions	<p>The learner will be given:</p> <ul style="list-style-type: none"> <li>• Project specifications</li> </ul>
Criteria	<p>The learner will score 70% or better on a rating sheet that reflects the following criteria:</p> <ul style="list-style-type: none"> <li>• Rationale</li> <li>• Execution</li> </ul>

**Line (GAC):**        **E    APPLY PAINT AND COATINGS**  
**Competency:**    **E6    Use Specialty Spray Equipment**

### Objectives

To be competent in this area, the individual must be able to:

- Use specialty spray equipment to apply material for a given project.

### LEARNING TASKS

### CONTENT

- |  |   |
|--|---|
| 1. Describe specialty spray equipment    | <ul style="list-style-type: none"> <li>• Types               <ul style="list-style-type: none"> <li>○ Electrostatic</li> <li>○ Plural components                   <ul style="list-style-type: none"> <li>– Fixed and variable proportion</li> </ul> </li> <li>○ Air assisted airless (hybrid)</li> </ul> </li> <li>• Environmental considerations</li> </ul>   |
| 2. Describe air-assisted airless systems | <ul style="list-style-type: none"> <li>• Advantages and limitations</li> <li>• Spraying distance</li> <li>• Safety/PPE</li> <li>• Equipment</li> <li>• Operation               <ul style="list-style-type: none"> <li>○ Set-up</li> <li>○ Substrate</li> </ul> </li> <li>• Application</li> <li>• Maintenance</li> <li>• Troubleshooting</li> <li>• Inspection and testing               <ul style="list-style-type: none"> <li>○ Visual</li> <li>○ Measuring</li> <li>○ Documentation</li> </ul> </li> </ul> |
| 3. Use air-assisted airless systems      | <ul style="list-style-type: none"> <li>• According to job specifications</li> </ul>   |
| 4. Describe electrostatic spray          | <ul style="list-style-type: none"> <li>• Advantages and limitations</li> <li>• Spraying distance</li> <li>• Recessed areas</li> <li>• Electrostatic Spray Equipment</li> <li>• Safety/PPE</li> <li>• Equipment</li> <li>• Coating polarity</li> </ul>   |

**LEARNING TASKS**

**CONTENT**

- |   |  |
|---|--|
| <p>5. Use electrostatic spray to meet project</p> <p>6. Describe plural component systems</p> | <ul style="list-style-type: none"> <li>• Operation               <ul style="list-style-type: none"> <li>○ Set-up</li> <li>○ Substrate</li> <li>○ Grounds</li> </ul> </li> <li>• Application</li> <li>• Maintenance</li> <li>• Troubleshooting</li> <li>• Inspection and testing               <ul style="list-style-type: none"> <li>○ Visual</li> <li>○ Measuring</li> <li>○ Documentation</li> </ul> </li> </ul> <p>• As per project specifications</p>  |
| <p>7. Use plural component systems</p>  | <ul style="list-style-type: none"> <li>• Advantages and limitations</li> <li>• Safety/PPE</li> <li>• Equipment</li> <li>• Operation               <ul style="list-style-type: none"> <li>○ Set-up</li> <li>○ Calibration</li> <li>○ Viscosity control</li> </ul> </li> <li>• Application</li> <li>• Maintenance</li> <li>• Troubleshooting</li> <li>• Inspection and testing               <ul style="list-style-type: none"> <li>○ Visual</li> <li>○ Measuring</li> <li>○ Documentation</li> </ul> </li> </ul> <p>• According to job specifications</p> |

**LEARNING TASKS**

8. Describe powder coating systems

**CONTENT**

- Types
  - Cloud chamber
  - Electrostatic
    - Air-assisted airless
    - Air spray
  - Fluidized bed
- Advantages and limitations
- Safety/PPE
- Equipment
- Materials
  - Thermosetting
  - Thermoplastic
- Operation
  - Set-up
  - Calibration
- Application
  - Heating/curing methods
- Maintenance
- Troubleshooting
- Inspection and testing
  - Visual
  - Measuring
  - Documentation
- According to job specifications

9. Use powder coating systems to apply material for a given applications

**Achievement Criteria**

**Performance** The learner will use specialty spray to apply material to a given project.

**Conditions** The learner will be given:

- Tools
- Material
- Equipment
- Instructions

**Criteria** The learner will score 70% or better on a rating sheet that reflects the following criteria:

- Technique
- Safety
- Sequence/procedure

**Line (GAC): F APPLY WALL COVERING PROCEDURES**

**Competency: F2 Apply Wall Coverings**

### Objectives

To be competent in this area, the individual must be able to:

- Install wall coverings.

### LEARNING TASKS

### CONTENT

- |   |   |
|---|---|
| 1. Review Level 2                           | <ul style="list-style-type: none"> <li>• As per content</li> </ul>  |
| 2. Prepare for application of wall covering | <ul style="list-style-type: none"> <li>• Lay out</li> <li>• Quantity/Inventory</li> <li>• Starting and finish points</li> <li>• Identification of wall covering imperfections               <ul style="list-style-type: none"> <li>○ Stains, lack of colour uniformity, delaminating, inconsistency in pattern</li> </ul> </li> <li>• Application of wall covering prepping materials               <ul style="list-style-type: none"> <li>○ Sizing</li> <li>○ Lining paper</li> </ul> </li> </ul>  |
| 3. Apply adhesives                          | <ul style="list-style-type: none"> <li>• Types and applications of adhesives</li> <li>• Application techniques               <ul style="list-style-type: none"> <li>○ Brushing, rolling, using paste machines</li> </ul> </li> <li>• Determination of spreading rate considering factors such as material, weight, thickness and temperature</li> <li>• Selecting adhesive for specific wall coverings</li> <li>• Manufacturer's specifications</li> </ul>  |
| 4. Install wall coverings                   | <ul style="list-style-type: none"> <li>• Installation techniques for wall coverings</li> <li>• Commercial, vinyl, fabric, foil, wood</li> <li>• Environmental considerations</li> <li>• Patterns and reasons for reversal every alternate length for some materials</li> <li>• Tools and equipment (see appendix)</li> <li>• Smoothing wall coverings               <ul style="list-style-type: none"> <li>○ Beaded, delicate coverings</li> </ul> </li> <li>• Booking wall coverings</li> <li>• Trimming excess materials and double cut seam</li> <li>• Rectifying problems including air bubbles and excess adhesive on paper</li> <li>• Safety/PPE</li> </ul> |

**LEARNING TASKS**

**CONTENT**

5. Install fabric and natural material wall coverings

- Installation techniques for fabric and natural materials
  - Paper-backed fabrics
  - Glass cloth
  - Silks
  - Natural weaves
  - Burlaps
  - Acoustical fabric (with or without backing)
- Characteristics of materials
  - Fabrics
  - Glass cloths
  - Burlaps
  - Types of backing
- Tools (see appendix)
- Handling fabric and natural wall coverings to avoid stretches, runs and soiled surfaces
- Manufacturers' recommendations

6. Install rigid wall coverings

- Installation techniques
  - Cork
  - Wood veneer
  - Tack boards
  - White boards
  - Laminates
- Characteristics of materials
- Tools (see appendix)
- Smoothing wall coverings
- Manufacturers' recommendations



**Achievement Criteria**

Performance	The learner will prepare and install commercial wall coverings.
Conditions	<p>The learner will be given:</p> <ul style="list-style-type: none"> <li>• Material</li> <li>• Tools</li> <li>• Instructions</li> </ul>
Criteria	<p>The learner will score 70% or better on a rating sheet that reflects the following criteria:</p> <ul style="list-style-type: none"> <li>• Pattern match</li> <li>• Seams/double cuts</li> <li>• Sequence and procedures</li> <li>• Lay out</li> <li>• Overall appearance</li> <li>• Adherence to specifications <ul style="list-style-type: none"> <li>○ Time</li> <li>○ Waste</li> </ul> </li> </ul>

**Line (GAC):**        **G    APPLY FINISHES**  
**Competency:**     **G2   Apply Decorative Finishes**

### Objectives

To be competent in this area, the individual must be able to:

- Apply decorative finishes using the appropriate techniques according to job specifications and standards.

### LEARNING TASKS

### CONTENT

- |  |  |
|--|--|
| 1. Describe decorative finishes            | <ul style="list-style-type: none"> <li>• Types               <ul style="list-style-type: none"> <li>○ Faux</li> <li>○ Gilding</li> <li>○ Plaster/texture</li> <li>○ Marbleizing</li> <li>○ Stencils</li> <li>○ Graphics</li> <li>○ Multi-spec (incompatible coatings)</li> </ul> </li> <li>• <i>Refer to list in the appendix</i></li> </ul>   |
| 2. Describe decorative tools and equipment | <ul style="list-style-type: none"> <li>• Spray equipment</li> <li>• Type of finish determine appropriate tool</li> <li>• Refer to list of tools in appendix</li> </ul>   |
| 3. Describe decorative media               | <ul style="list-style-type: none"> <li>• Paints               <ul style="list-style-type: none"> <li>○ Latex, alkyd, artist oils, acrylics</li> </ul> </li> <li>• Glazes               <ul style="list-style-type: none"> <li>○ Latex, alkyd</li> </ul> </li> <li>• Paint conditioner               <ul style="list-style-type: none"> <li>○ Viscosity control, kerosene</li> </ul> </li> <li>• Pigments/dyes</li> <li>• Stains</li> <li>• Other               <ul style="list-style-type: none"> <li>○ Mineral, vegetable, synthetic</li> </ul> </li> </ul> |
| 4. Describe decorative materials           | <ul style="list-style-type: none"> <li>• Adhesives</li> <li>• Metal leaf/sizing</li> <li>• Stencils               <ul style="list-style-type: none"> <li>○ Materials                   <ul style="list-style-type: none"> <li>– Mylar, polyester, film, paper, cardboard, metal, polystyrene</li> </ul> </li> </ul> </li> </ul>  |

**LEARNING TASKS**

5. Prepare substrate according to specifications
  
6. Apply decorative finishes using the appropriate techniques according to job specifications and standards

**CONTENT**

- Substrate
- Required finish
  - Technique
  - Materials used
  - Desired effect
    - Translucency, opaqueness, transparency
- Drying and set-up times of finishes used
  
- Finishes
- Colour harmony
- Formulas
- Mixing finishes
- Techniques
  - Positive-negative
  - Natural or man-made structure and pattern
  - Random or uniform
  - Produce the illusion of structure, depth and texture
  - Stipple, knockdown
  - Produce texture
- Awareness of substrates
- Uniform patterns
- Safety, PPE

**Achievement Criteria**

- |             |   |
|-------------|---|
| Performance | The learner will produce and apply a decorative finish.   |
| Conditions  | The learner will be given: <ul style="list-style-type: none"> <li>• Instructions</li> <li>• Materials</li> <li>• Tools</li> </ul>   |
| Criteria    | The learner will score 70% or better on a rating sheet that reflects the following criteria: <ul style="list-style-type: none"> <li>• Uniformity/accuracy</li> <li>• Housekeeping</li> <li>• Colour harmony</li> <li>• Sequence and procedures</li> </ul> |

# **Section 4**

## **TRAINING PROVIDER STANDARDS**

## **Facility Requirements**

### **Classroom Area**

- Comfortable seating and tables suitable for learning
- Compliance with the local and national fire code and occupational safety requirements
- Overhead and/or multimedia projectors with a projection screen
- Whiteboard with marking pens and erasers
- Lighting controls to allow easy visibility of the projection screen while allowing students to take notes
- Windows must have shades or blinds to adjust sunlight
- Heating/Air conditioning for comfort all year round
- In-room temperature control to ensure comfortable room temperature
- Acoustics in the room must allow audibility of the instructor
- Access to a computer with internet access
- Appropriate reference material for student and instructor use

### **Shop Area**

- Adequate space for a tool crib and storage
- Minimum 10 foot ceiling height in shop areas
- Minimum 200 sq. ft./ student (not including tool crib and storage)
- Adequate heating, lighting and ventilation
- Refuse and recycling bins for used shop materials
- First-aid equipment
- Shops will support practical requirements as outlined in the program outline

### **Lab Requirements**

N/A

### **Student Facilities**

- Adequate lunch room as per WorkSafeBC requirements
- Adequate washroom facilities as per WorkSafeBC requirements
- Personal Storage lockers
- Clean-up (personal hygiene) facilities for students

### **Instructor's Office Space**

- Desk and secure filing space
- Computer
- Staff lounge appropriate for the number of staff

## **Tools and Equipment**

### **Shop (Facility) Tools**

#### **Shop Equipment**

##### ***Required***

#### **Access Equipment and Hoisting and Lifting Equipment**

- Breathable air pack
- Aerial platforms (boom and
- Scissor lifts)
- Boatswain's chair
- Ladders
- Mechanical scaffolds
- Planks (aluminum, wood)
- Rolling scaffolds
- Spider cage
- Stationary scaffolds
- Stilts
- Swing stage

#### **Measuring and Testing Equipment**

- Adhesion tester
- Air monitoring equipment
- Architectural rule
- Blotter test kit
- Calculator
- Dry film thickness gauge
- Holiday detector
- Humidity meter
- Lead test kit
- Measuring tape
- Mirror (telescoping)
- Moisture meter
- Profile gauge/replica tape
- Salt test kit
- Sling psychrometer
- Thermometers
- Viscosity cup
- Wet mil gauge
- Yard stick Measuring cup

#### **PPE and Safety Equipment**

- Air conditioners/heaters for fresh air hood
- Air purifiers
- Blast-spray hood
- Coveralls
- Ear plugs and muffs
- Exhaust fan
- Eye wash station
- Face shields
- Fall arrest equipment
- Fire blankets
- Fire extinguishers
- Fire hoses
- First aid equipment
- Fume and toxic gas detector
- Gloves
- Goggles
- Hard hat
- Knee pads
- Hand cleaner
- Masks (particulate, vapour)
- Respirators
- Rope grabs
- Safety glasses
- Safety vest
- Signage
- Spill kits
- Steel toe boots
- Toe guards

- Warning tapes

### **Specialty Wall Covering Tools**

- Glue gun
- Hypodermic needle/syringe
- Paste brush
- Paste machine
- Paste table
- Plastic smoother
- Pounce wheels
- Seam roller
- Shears/scissors
- Smoothing brush
- Steam stripper
- Trimming wheels
- Vinyl table
- Water trough/dams

### **Specialty Finishing Tools and Equipment**

- Artistic brushes
- Badger blender
- Check roller
- Dragger
- Fan brushes
- Fitch brushes
- Flogging brush
- Gilding brush
- Goose feathers
- Graining-combs
- Mottling brush
- Piped overgrainer
- Projectors
- Rocker grainer
- Sea sponges
- Stencil brush
- Stencil knife
- Stencils
- Stipplers
- Sword strippers

### **Spray Equipment**

- Air-assisted airless system
- Air compressor
- Airless pumps
- Conventional air spray system
- Electrostatic spray equipment
- HVLP equipment
- Plural component pumps
- Pump filters
- Prism
- Spray gun extensions
- Spray guns
- Spray hoods
- Spray lines
- Spray tips and housing
- Spray whips and swivels
- Texture spray machine

***Recommended***

N/A

***Standard Tools***

- Air hose repair kit
- Allen keys
- Apron
- Broad knife
- Broom
- Brush and roller spinner
- Brush extender
- Brushes (various types of natural  
And synthetic bristle brushes)
- Can hook
- Caulking gun
- Chalk line
- Cutters
- Drop sheets
- Dust pan
- Dusters
- Extension poles
- Felt marker
- Files
- Hammers
- Hand masking machine
- Hawk
- Leather chamois
- Masking tape
- Mop
- Nail punch
- Nut drivers
- Pails
- Paint pads
- Paint strainers
- Plastic bags
- Polyplastic
- Pliers
- Plumb bob
- Pole sander
- Putty knives
- Rags
- Razor blade
- Roller cage
- Roller grids
- Rollers
- Sanding block
- Sanding sponge
- Sandpaper
- Scrapers
- Screwdrivers
- Shovel
- Spinner
- Spirit level
- Sponges
- Squeegee
- Stir sticks
- Straight edge
- Tack cloth
- Tarps/containments
- Tool grip (workbag)
- Trays
- Trowels
- Utility knife
- Wire brush
- Wrench sets





## Reference Materials

### Required Reference Materials

Contact Training Facility for Required Reference Material

### Recommended Resources

- SkilledTradesBC [www.skilledtradesbc.ca](http://www.skilledtradesbc.ca)
- Workplace Hazardous Materials Information System (WHMIS) and First Aid <http://www.hc-sc.gc.ca/ewh-semt/occup-travail/whmis-simdut/index-eng.php>
- WorkSafeBC (WCB) [www.worksafebc.com](http://www.worksafebc.com)
- Codes
- National Fire Code of Canada <http://www.nrc-cnrc.gc.ca/eng/ibp/irc/codes/2010-national-fire-code.html>
- BC Ministry of Housing [www.housing.gov.bc.ca/building](http://www.housing.gov.bc.ca/building) Queen's Printer for BC Code books <http://www.bccodes.ca/default.htm>
  - BC Building Code
  - BC Fire Code
  - BC Electrical Code
- National Fire Protection Association [www.nfpa.org](http://www.nfpa.org)
  - NFPA 80 – Standards for Fire Doors and Fire Windows
  - NFPA 101 – Life Safety Code
- Canadian National Building Code <http://www.nrc-cnrc.gc.ca/eng/ibp/irc/codes/2010-national-building-code.html>

### Suggested Texts

- Contact Training Facility for Suggested Texts

## Instructor Requirements

### Occupation Qualification

The instructor must possess a:

- Painter & Decorator – Certificate of Qualification with Interprovincial Red Seal Endorsement

### Work Experience

A minimum of 5 years' experience working in the industry as a journeyperson

### Instructional Experience and Education

It is preferred that the instructor also possesses one of the following:

- Instructor Diploma or equivalent
- Bachelor Degree in Education

# Appendices

# **Appendix A**

## **ASSESSMENT GUIDELINES**

## Program: Painter and Decorator

Training providers delivering Painter and Decorator apprenticeship in-school technical training are required to enter the following information in SkilledTradesBC Portal for each apprentice:

An in-school mark in the form of a percentage

The in-school percentage score for each level is the result of a combination of theory and practical assessments. This percentage score is then combined with the SkilledTradesBC Standard Level Examination to determine a final percentage score for the level.

## Training Provider Component: In-School Technical Training

Calculation tables showing the subject competencies, level percentage weightings and level examination weightings are shown in the Grading Sheet: Subject Competencies and Weightings section of this document.

**Painter and Decorator** Level 1 in-school percentage scores are calculated by:

- totaling the level *theory* score as noted in the competencies and weightings tables and multiplying the total by 60% to produce a weighted *theory* percentage score;
- totaling the level *practical* score as noted in the competencies and weightings tables and multiplying the total by 40% to produce a weighted *practical* percentage score;
- adding the weighted theory and practical scores together to determine the final in-school percentage score.

This final percentage score is entered into SkilledTradesBC Portal.

**Painter and Decorator Level 2 & 3** in-school percentage scores are calculated by:

- totaling the level *theory* score as noted in the competencies and weightings tables and multiplying the total by 40% for Level 2 & 3 to produce a weighted *theory* percentage score;
- totaling the level *practical* score as noted in the competencies and weightings tables and multiplying the total by 60% for Level 2 & 3 to produce a weighted *practical* percentage score;
- adding the weighted theory and practical competency results together to determine the final in-school percentage score.

This final percentage score is entered into SkilledTradesBC Portal.

### **SkilledTradesBC Component:**

### **SkilledTradesBC Standardized Level Examinations - Level 1 & 2**

Once the in-school training and standard level exam percentage scores are entered into SkilledTradesBC Portal, the system automatically calculates the final percentage score. The percentage score is calculated by blending the standardized exam percentage score and the in-school technical training percentage score to determine the final percentage score for the level.

In-school technical training (combined theory & practical) is weighted at 80% and the SkilledTradesBC standardized exam is weighted at 20%. These two scores are combined to determine the final level percentage score. This result is the final percentage score that is recorded in SkilledTradesBC Portal.

A percentage score of 70% or greater is required to pass the level when combining the final in-school percentage score and the final SkilledTradesBC standardized level exam percentage score.

### **Painter and Decorator Level 3 Examinations**

Until further notice, apprentices taking Painter and Decorator Level 3 will write the Painter and Decorator Interprovincial Red Seal Examination as the final examination for the program.

Refer to the Grading Sheet Subject Competencies and Weightings Level 3 table to determine the calculation process for completing a final Level 3 percentage score.

The final percentage score for Level 3 is to be reported to SkilledTradesBC and must be 70% or greater to pass the level.

Apprentices must have passed all levels of in-school technical training or be approved challengers to sit the exam.

A percentage score of 70% or greater is required for a pass on the Painter and Decorator Interprovincial Red Seal exam.

Interprovincial Red Seal exams should be requested by training providers via the usual SkilledTradesBC procedure.

SkilledTradesBC will administer and invigilate Interprovincial Red Seal exams and score and record exam results in SkilledTradesBC Portal.

## Grading Sheet: Subject Competency and Weightings

<b>PROGRAM:</b> <b>IN-SCHOOL TRAINING:</b> <b>SkilledTradesBC PORTAL CODE:</b>		<b>PAINTER &amp; DECORATOR LEVEL 1 0016PD01</b>	
LINE	SUBJECT COMPETENCIES	THEORY WEIGHTING	PRACTICAL WEIGHTING
A	Use of Safe Work Practices	25%	10%
B	Use Tools & Equipment	25%	10%
C	Organize Work	8%	5%
D	Prepare Surfaces	17%	15%
E	Apply Paint and Coatings	17%	25%
G	Apply Finishes	0%	20%
H	Apply Colour Theory	8%	15%
	Total	100%	100%
<b>Calculated by the Training Provider</b> <b>PAINTER AND DECORATOR</b> in-school theory & practical subject competency weighting		60%	40%
<b>Training Provider enters final in-school percentage score into SkilledTradesBC Portal</b>		IN-SCHOOL %	

<b>Calculated by SkilledTradesBC: In-school Percentage Score</b> SkilledTradesBC Portal calculates the percentage score once the in-school mark is entered. Combined theory and practical subject competency multiplied by	80%
<b>Calculated by SkilledTradesBC: Standard Level Exam Percentage Score</b> SkilledTradesBC Portal will calculate the percentage score once the standard level exam marks have been entered. The exam score is multiplied by	20%
<b>Calculated by SkilledTradesBC: Final Percentage Score</b> The final score for determining credit is calculated by SkilledTradesBC Portal.	FINAL%



<b>PROGRAM: IN-SCHOOL TRAINING: SkilledTradesBC PORTAL CODE:</b>		<b>PAINTER &amp; DECORATOR LEVEL 2 0016PD02</b>	
LINE	SUBJECT COMPETENCIES	THEORY WEIGHTING	PRACTICAL WEIGHTING
B	Use Tools & Equipment	8%	10%
C	Organize Work	8%	5%
D	Prepare Surfaces	20%	15%
E	Apply Paint and Coatings	13%	25%
F	Apply Wall Covering Procedures	17%	20%
G	Apply Finishes	17%	15%
H	Apply Colour Theory	17%	10%
	Total	100%	100%
<b>Calculated by the Training Provider</b> <b>PAINTER AND DECORATOR</b> in-school theory & practical subject competency weighting		40%	60%
<b>Training Provider enters final in-school percentage score into SkilledTradesBC Portal</b>		IN-SCHOOL %	

<b>Calculated by SkilledTradesBC: In-school Percentage Score</b> SkilledTradesBC Portal calculates the percentage score once the in-school mark is entered. Combined theory and practical subject competency multiplied by	80%
<b>Calculated by SkilledTradesBC: Standard Level Exam Percentage Score</b> SkilledTradesBC Portal will calculate the percentage score once the standard level exam marks have been entered. The exam score is multiplied by	20%
<b>Calculated by SkilledTradesBC: Final Percentage Score</b> The final score for determining credit is calculated by SkilledTradesBC Portal.	FINAL%

<b>PROGRAM: IN-SCHOOL TRAINING: SkilledTradesBC PORTAL CODE:</b>		<b>PAINTER &amp; DECORATOR LEVEL 3 0016PD03</b>	
LINE	SUBJECT COMPETENCIES	THEORY WEIGHTING	PRACTICAL WEIGHTING
C	Organize Work	14%	20%
E	Apply Paint and Coatings	14%	10%
F	Apply Wall Covering Procedures	36%	35%
G	Apply Finishes	36%	35%
	Total	100%	100%

<b>Calculated by the Training Provider</b> <b>PAINTER AND DECORATOR</b> in-school theory & practical subject competency weighting	40%	60%
<b>Training Provider enters final in-school percentage score into SkilledTradesBC Portal</b>	IN-SCHOOL %	

All apprentices who complete Level 3 of the Painter and Decorator program with a FINAL level percentage score of 70% or greater will write the Interprovincial Red Seal examination as their final assessment.

SkilledTradesBC will enter the apprentices' Painter and Decorator Red Seal Interprovincial examination mark in SkilledTradesBC Portal. A minimum percentage score of 70% on the examination is required for a pass.