

RED SEAL

THE INTERPROVINCIAL STANDARDS RED SEAL PROGRAM



National Occupational Analysis

2011 | Painter and Decorator



Human Resources and
Skills Development Canada

Ressources humaines et
Développement des compétences Canada

Canada

Painter and Decorator

2011

Trades and Apprenticeship Division

Division des métiers et de l'apprentissage

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The Canadian Council of Directors of Apprenticeship (CCDA) recognizes this National Occupational Analysis (NOA) as the national standard for the occupation of painter and decorator.

Background

The first National Conference on Apprenticeship in Trades and Industries, held in Ottawa in 1952, recommended that the federal government be requested to cooperate with provincial and territorial apprenticeship committees and officials in preparing analyses of a number of skilled occupations. To this end, Human Resources and Skills Development Canada (HRSDC) sponsors a program, under the guidance of the CCDA, to develop a series of NOAs.

The NOAs have the following objectives:

- to describe and group the tasks performed by skilled workers;
- to identify which tasks are performed in every province and territory;
- to develop instruments for use in the preparation of Interprovincial Red Seal Examinations and curricula for training leading to the certification of skilled workers;
- to facilitate the mobility of apprentices and skilled workers in Canada; and,
- to supply employers, employees, associations, industries, training institutions and governments with analyses of occupations.

ACKNOWLEDGEMENTS

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This analysis was prepared by the Workplace Partnerships Directorate of HRSDC. The coordinating, facilitating and processing of this analysis were undertaken by employees of the NOA development team of the Trades and Apprenticeship Division. The host jurisdiction of New Brunswick also participated in the development of this NOA.

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LIST OF PUBLISHED
NATIONAL OCCUPATIONAL ANALYSES
(Red Seal Trades)

TITLE	NOC* Code
Agricultural Equipment Technician (2007)	7312
Appliance Service Technician (2011)	7332
Automotive Painter (2009)	7322
Automotive Service Technician (2011)	7321
Baker (2006)	6252
Boilermaker (2008)	7262
Bricklayer (2011)	7281
Cabinetmaker (2007)	7272
Carpenter (2010)	7271
Concrete Finisher (2006)	7282
Construction Craft Worker (2009)	7611
Construction Electrician (2011)	7241
Cook (2011)	6242
Electrical Rewind Mechanic (1999)	7333
Floorcovering Installer (2005)	7295
Glazier (2008)	7292
Hairstylist (2011)	6271
Heavy Duty Equipment Technician (2009)	7312
Industrial Electrician (2011)	7242
Industrial Mechanic (Millwright) (2009)	7311
Instrumentation and Control Technician (2010)	2243
Insulator (Heat and Frost) (2007)	7293
Ironworker (Generalist) (2010)	7264
Ironworker (Reinforcing) (2010)	7264
Ironworker (Structural/Ornamental) (2010)	7264
Landscape Horticulturist (2010)	2225
Lather (Interior Systems Mechanic) (2007)	7284

* National Occupational Classification

TITLE	NOC* Code
Machinist (2010)	7231
Metal Fabricator (Fitter) (2008)	7263
Mobile Crane Operator (2009)	7371
Motorcycle Mechanic (2006)	7334
Motor Vehicle Body Repairer (Metal and Paint) (2010)	7322
Oil Heat Systems Technician (2006)	7331
Painter and Decorator (2011)	7294
Partsperson (2010)	1472
Plumber (2010)	7251
Powerline Technician (2009)	7244
Recreation Vehicle Service Technician (2006)	7383
Refrigeration and Air Conditioning Mechanic (2009)	7313
Rig Technician (2008)	8232
Roofer (2006)	7291
Sheet Metal Worker (2010)	7261
Sprinkler System Installer (2009)	7252
Steamfitter/Pipefitter (2010)	7252
Tilesetter (2010)	7283
Tool and Die Maker (2010)	7232
Transport Trailer Technician (2008)	7321
Truck and Transport Mechanic (2010)	7321
Welder (2009)	7265

Requests for printed copies of NOAs may be forwarded to:

Trades and Apprenticeship Division
Workplace Partnership Directorate
Human Resources and Skills Development Canada
140 Promenade du Portage, Phase IV, 5th Floor
Gatineau, Quebec K1A 0J9

These publications can be ordered or downloaded online at: <http://www.red-seal.ca>. Links to Essential Skills Profiles for some of these trades are also available on this website.

STRUCTURE OF ANALYSIS

To facilitate understanding of the occupation, the work performed by tradespersons is divided into the following categories:

Blocks	the largest division within the analysis that is comprised of a distinct set of trade activities
Tasks	distinct actions that describe the activities within a block
Sub-Tasks	distinct actions that describe the activities within a task
Key Competencies	activities that a person should be able to do in order to be called 'competent' in the trade

The analysis also provides the following information:

Trends	changes identified that impact or will impact the trade including work practices, technological advances, and new materials and equipment
Related Components	a list of products, items, materials and other elements relevant to the block
Tools and Equipment	categories of tools and equipment used to perform all tasks in the block; these tools and equipment are listed in Appendix A
Context	information to clarify the intent and meaning of tasks
Required Knowledge	the elements of knowledge that an individual must acquire to adequately perform a task

The appendices located at the end of the analysis are described as follows:

Appendix A — Tools and Equipment	a non-exhaustive list of tools and equipment used in this trade
Appendix B — Glossary	definitions or explanations of selected technical terms used in the analysis
Appendix C — Acronyms	a list of acronyms used in the analysis with their full name
Appendix D — Block and Task Weighting	the block and task percentages submitted by each jurisdiction, and the national averages of these percentages; these national averages determine the number of questions for each block and task in the Interprovincial exam
Appendix E — Pie Chart	a graph which depicts the national percentages of exam questions assigned to blocks
Appendix F — Task Profile Chart	a chart which outlines graphically the blocks, tasks and sub-tasks of this analysis

DEVELOPMENT AND VALIDATION OF ANALYSIS

Development of Analysis

A draft analysis is developed by a committee of industry experts in the field led by a team of facilitators from Human Resources and Skills Development Canada. This draft analysis breaks down all the tasks performed in the occupation and describes the knowledge and abilities required for a tradesperson to demonstrate competence in the trade.

Draft Review

The National Occupational Analysis (NOA) development team then forwards a copy of the analysis and its translation to provincial and territorial authorities for a review of its content and structure. Their recommendations are assessed and incorporated into the analysis.

Validation and Weighting

The analysis is sent to all provinces and territories for validation and weighting. Participating jurisdictions consult with industry to validate and weight the document, examining the blocks, tasks and sub-tasks of the analysis as follows:

- BLOCKS** Each jurisdiction assigns a percentage of questions to each block for an examination that would cover the entire trade.
- TASKS** Each jurisdiction assigns a percentage of exam questions to each task within a block.
- SUB-TASKS** Each jurisdiction indicates, with a YES or a NO, whether or not each sub-task is performed by skilled workers within the occupation in its jurisdiction.

The results of this exercise are submitted to the NOA development team who then analyzes the data and incorporates it into the document. The NOA provides the individual jurisdictional validation results as well as the national averages of all responses. The national averages for block and task weighting guide the Interprovincial Red Seal Examination plan for the trade.

This method for the validation of the NOA also identifies common core sub-tasks across Canada for the occupation. If at least 70% of the responding jurisdictions perform a sub-task, it shall be considered common core. Interprovincial Red Seal Examinations are based on the common core sub-tasks identified through this validation process.

Definitions for Validation and Weighting

YES	sub-task performed by qualified workers in the occupation in a specific jurisdiction
NO	sub-task not performed by qualified workers in the occupation in a specific jurisdiction
NV	analysis Not Validated by a province/territory
ND	trade Not Designated in a province/territory
NOT COMMON CORE (NCC)	sub-task, task or block performed by less than 70% of responding jurisdictions; these will not be tested by the Interprovincial Red Seal Examination for the trade
NATIONAL AVERAGE %	average percentage of questions assigned to each block and task in Interprovincial Red Seal Examination for the trade

Provincial/Territorial Abbreviations

NL	Newfoundland and Labrador
NS	Nova Scotia
PE	Prince Edward Island
NB	New Brunswick
QC	Quebec
ON	Ontario
MB	Manitoba
SK	Saskatchewan
AB	Alberta
BC	British Columbia
NT	Northwest Territories
YT	Yukon Territory
NU	Nunavut

ANALYSIS

Safe working procedures and conditions, accident prevention, and the preservation of health are of primary importance to industry in Canada. These responsibilities are shared and require the joint efforts of government, employers and employees. It is imperative that all parties become aware of circumstances that may lead to injury or harm. Safe learning experiences and work environments can be created by controlling the variables and behaviours that may contribute to accidents or injury.

It is generally recognized that safety-conscious attitudes and work practices contribute to a healthy, safe and accident-free work environment.

It is imperative to apply and be familiar with the Occupational Health and Safety (OH&S) Acts and Workplace Hazardous Materials Information System (WHMIS) Regulations. As well, it is essential to determine workplace hazards and take measures to protect oneself, co-workers, the public and the environment.

Safety education is an integral part of training in all jurisdictions. As safety is an imperative part of all trades, it is assumed and therefore it is not included as a qualifier of any activities. However, the technical safety tasks and sub-tasks specific to the trade are included in this analysis.

SCOPE OF THE PAINTER AND DECORATOR TRADE

“Painter and Decorator” is this trade’s official Red Seal occupational title approved by the CCDA. This analysis covers tasks performed by painters and decorators whose occupational title has been identified by some provinces and territories of Canada under the following names:

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
Painter					✓								
Painter and Decorator	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓
Painter and Decorator – Commercial and Residential						✓							

Painters and decorators apply decorative and protective finishes in residential, commercial, institutional and industrial settings. They prepare a variety of surfaces (wood, masonry, drywall, plaster, concrete, synthetics, stucco and metal) prior to the application of materials such as paint, high performance coatings, waterproofing, fireproofing, varnish, shellac, wall coverings and specialty finishes. These materials are applied for a variety of reasons such as protection, decoration, sanitation, identification and safety.

Painters and decorators are employed by construction companies, painting contractors or building maintenance contractors, or they are self-employed. They work on residential, commercial, institutional and industrial projects. Some painters and decorators may work for years on a single site; others may work for contractors that rarely work on the same site more than once.

Painters and decorators may come in contact with hazardous materials such as isocyanates, free silica, lead, volatile organic compounds (VOC) and at times, carcinogenic materials. They may work with some physical discomfort when preparing surfaces or applying coatings in awkward positions. Painters and decorators may work indoors and outdoors. They also may risk injury from falling off access equipment such as ladders, platforms, scaffolds and swing stages.

Key attributes for people entering this trade are manual dexterity, excellent colour perception and artistic aptitude. The work often requires considerable standing, kneeling and repetitive activities such as brushing, rolling, spraying and blasting. Painters and decorators must have an eye for detail, the ability to plan work, and knowledge of many types of finishes, their properties and their applications. They must be able to calculate areas and relate such calculations to required material. Good communication and customer service skills are required by painters and decorators who often interact with home/business owners, contractors, interior designers, architects and engineers. Experienced painters and decorators may advance to supervisory positions for painting contractors or in other related fields such as construction management, instructing, estimating or building inspection.

OCCUPATIONAL OBSERVATIONS

Manufacturers are continually making changes to their products to make them more environmentally friendly. Organic paints and non-caustic cleaners that are solvent-free and VOC-free are becoming increasingly popular as their performance continues to improve.

Safety and environmental concerns have also led manufacturers to make substantial changes to equipment used. For example, infrared heat equipment is increasingly being used instead of hazardous chemicals for removing paint and varnish. The infrared technology allows paint or varnish to be scraped off and disposed of easily while preventing the release of harmful gases.

Increased urban development has resulted in many homes and businesses being closer to sources of high-frequency electromagnetic radiation such as telecommunication antennae and other similar sources of radiation. Electromagnet shielding paints are increasingly incorporated in the construction of new buildings or added to existing ones to reduce the exposure of a building's occupants to these radiations and therefore help mitigate their potential adverse health effects.

Intumescent coatings are increasingly being used on steel columns that must be fire-proofed by code. These coatings allow architectural design to be maintained while providing benefits such as a significantly reduced total system thickness, durability, aesthetics and good adhesion. They can also be top-coated to match surroundings.

Due to increasingly stringent environmental controls, the move away from oil-based products will continue thereby making it healthier for painters and better for the environment. The constant development of new products and technology requires ongoing learning in order to keep skills up-to-date.

ESSENTIAL SKILLS SUMMARY

Essential skills are needed for work, learning and life. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change.

Through extensive research, the Government of Canada and other national and international agencies have identified and validated nine essential skills. These skills are used in nearly every occupation and throughout daily life in different ways.

A series of CCDA-endorsed tools have been developed to support apprentices in their training and to be better prepared for a career in the trades. The tools can be used independently or with the assistance of a tradesperson, trainer, employer, teacher or mentor to:

- understand how essential skills are used in the trades;
- learn about individual essential skills strengths and areas for improvement; and
- improve essential skills and increase success in an apprenticeship program.

The tools are available online or for order at: www.hrsdc.gc.ca/essentialskills

The essential skills profile for the painter and decorator trade indicates that the most important essential skills are **oral communication, problem solving, and job task planning and organizing**. The NOA workshop participants indicated that **working with others** is also very important.

The application of these skills may be described throughout this document within the competency statements which support each subtask of the trade. The following are summaries of the requirements in each of the essential skills, taken from the essential skills profile. A link to the complete essential skills profile can be found at www.red-seal.ca.

Reading

Painters and decorators read a variety of safety related documentation such as Material Safety Data Sheets (MSDS) to understand the safety and personal protective equipment (PPE) requirements when using a particular material or substance, OH&S Regulations to determine correct and safe procedures to use, and hazard assessments to determine what to do in different hazardous situations. They read product data sheets to determine the proper application and use of particular materials and substances. They also read labels on equipment as well as the instructions for their use. This is important when troubleshooting, or when setting up or using a piece of equipment for the first time to ensure safe and efficient use of the equipment.

Document Use

Painters and decorators interpret and refer to blueprints to determine the type of paints and coatings to be applied and to which areas. They read assembly drawings and make sketches of items to be built such as containment structures. They refer to tables or charts to determine exposure limits to different chemicals and to select appropriate PPE. They also complete time sheets and record quality control information such as batch numbers, temperatures and drying times for future reference in case problems arise.

Writing

Painters and decorators complete work orders, material lists and time sheets. They may write a list of tasks to be performed. They may also sign for materials received.

Numeracy

Painters and decorators estimate mix ratios and measure out quantities of paints, thinners, solvents and coatings. They estimate the amount of time, cost and material required to complete a job. They also estimate and calculate measurements such as square footage, coverage and cubic feet per minute (CFM). They calculate the weight of material that can safely be supported on swing stages and platforms. Painters and decorators also use both the metric and imperial measurement systems and therefore must be able to convert between the two systems.

Oral Communication

Painters and decorators talk with co-workers, foremen, and other tradespeople to co-ordinate activities or to clarify procedures. They give directions to apprentices, participate in project meetings and advise customers on selection of colour schemes and choice of wall coverings. Painters and decorators performing work in an industrial setting use hand signals and/or two-way radios to communicate with crane operators and other tradespeople.

Thinking Skills

Painters and decorators use problem solving skills to address issues that may arise on the job such as colour mismatch or defects in finishes, or to troubleshoot problems with equipment. They use decision making skills to decide on the types of materials and application methods to use on a job, and to determine how to approach the job. They plan the materials and equipment they need for a job and schedule tasks to meet the needs of other trades on site.

Working with Others

Painters and decorators usually work as part of a team that may include apprentices, other journeypersons, and supervisors although they may work alone on some specific tasks or jobs. Painters and decorators may perform supervisory functions and guide or monitor the work performance of others, including apprentices or new employees.

Computer Use

Painters and decorators may use the Internet to look up product and safety information. They may use computers for designing graphics, reporting work logs and matching colours.

Continuous Learning

Painters and decorators learn through on-the-job training and observation of co-workers. They may keep up on their product knowledge by talking with suppliers or reading product/equipment information pamphlets or other literature. They may attend upgrading courses when entering a new area of specialization. Painters and decorators may also attend training sessions provided by manufacturers of new or specialty products and by union training providers.

Trends Painters and decorators are required to use computers more often to access and record information. There is an increased requirement to reference and complete quality control and safety documentation. There is an increase in use of platforms and enclosed containment areas to respect safety and environmental regulations.

Related Components All components apply.

Tools and Equipment See Appendix A.

Task 1 Performs safety-related functions.

Context Painters and decorators use and maintain PPE and safety equipment to provide protection of self and others.

Required Knowledge

- K 1 types of PPE such as respirators, safety glasses and steel-toed boots
- K 2 types of safety equipment such as fire extinguishers, first aid kits and eye wash stations
- K 3 types of fall arrest, fall restraint and fall prevention equipment and procedures
- K 4 training requirements for certain PPE
- K 5 WHMIS including MSDS and labels
- K 6 company safety policies, procedures and training
- K 7 jurisdictional health and safety acts and regulations
- K 8 location of safety equipment such as eye wash stations, fire extinguishers, spill kits and first aid kits
- K 9 procedures for working in confined spaces
- K 10 disposal and recycling procedures
- K 11 product data sheets

K 12	housekeeping practices such as hanging or taping down extension cords, sweeping up work area and removing tools and equipment not in use
K 13	escape route, evacuation plan and muster point
K 14	working in extreme temperatures

Sub-task

A-1.01 Uses personal protective equipment (PPE) and safety equipment.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

A-1.01.01	determine which type of PPE and safety equipment to use according to task to be performed
A-1.01.02	perform positive and negative air flow system seal tests when donning respirator mask to ensure proper seal
A-1.01.03	clean interior and exterior of respirator mask according to manufacturers' specifications before and after each use to ensure proper functioning and fit
A-1.01.04	replace respirator pre-filters when required and cartridges according to manufacturers' specifications to ensure proper functioning
A-1.01.05	replace defective or damaged parts of respirator mask as required
A-1.01.06	inspect PPE and safety equipment for damage before each use
A-1.01.07	dispose of damaged or expired PPE and safety equipment such as fall arrest systems, respirators and hard hats
A-1.01.08	store PPE and safety equipment according to manufacturers' specifications to promote longevity of equipment

Sub-task

A-1.02 Maintains safe work environment.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

A-1.02.01	install temporary safety protection such as caution tape and signage
A-1.02.02	ventilate workplace using methods such as setting up fans, opening doors or windows and installing positive and/or negative air systems

- A-1.02.03 organize work area to minimize possibility of tripping hazards or falling objects
- A-1.02.04 recognize and report unsafe work practices and hazards

Task 2

Uses and maintains tools and equipment.

Context Painters and decorators maintain tools and equipment in order to ensure their safe use, longevity and optimal performance. Proper maintenance also avoids product contamination and helps obtain the desired finish.

Required Knowledge

- K 1 hand tools and their uses for specific jobs
- K 2 power tools and their uses for specific jobs
- K 3 abrasive blasting equipment and media such as sand, soda, glass and water
- K 4 spray equipment such as airless, high volume low pressure (HVLP), electrostatic and conventional
- K 5 measuring equipment such as measuring cups, tape measures and rulers
- K 6 testing equipment such as sling psychrometers, wet and dry film thickness gauges and holiday testers
- K 7 rigging, hoisting and lifting equipment and components such as straps, slings, chains and shackles
- K 8 common problems with equipment
- K 9 tool and equipment manufacturers' specifications and instructions
- K 10 applications, operating procedures, limitations and training requirements of rigging, hoisting and lifting equipment
- K 11 types of scaffolding such as ground-based (stationary and mobile) and suspended (tube and clamp)
- K 12 types of suspended access equipment such as swing stages and spiders
- K 13 scaffolding components such as stirrups, planks, outriggers and cross braces
- K 14 access equipment such as ladders and elevated work platforms
- K 15 training requirements for motorized access equipment such as man lifts, swing stages and scissors lifts
- K 16 fall arrest, fall restraint and fall prevention equipment and procedures
- K 17 restrictions for access equipment such as electrical, height, no-step zones, load limitations and no painting of ladders
- K 18 3-point contact on access equipment such as ladders, step-ladders and access ladders

K 19	load limits of rigging, hoisting and lifting equipment
K 20	jurisdictional health and safety acts and regulations
K 21	hoisting and lifting hand signals

Sub-task

A-2.01 Maintains tools and equipment.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

A-2.01.01	inspect tools and equipment for excessive wear or damage such as frayed or cut extension cords, flared brushes and worn roller sleeves
A-2.01.02	inspect tool and equipment components for excessive wear or damage such as worn couplings, nozzles, hoses, blasting pots and rubber seals
A-2.01.03	repair spray equipment by replacing or repairing damaged components such as hoses, couplings, fittings, washers and screens
A-2.01.04	lubricate spray equipment components and air-powered tools according to manufacturers' specifications
A-2.01.05	clean spray equipment components such as tips, pumps, guns and filters according to materials used and manufacturers' specifications
A-2.01.06	clean brushes and roller sleeves using appropriate solvent following industry accepted procedures
A-2.01.07	clean hand tools such as scraper blades, trowels and broad knives by using appropriate solvent and/or by sanding or scraping off dried material
A-2.01.08	repair power tools by replacing worn components such as grinding wheels, brushes and cords
A-2.01.09	lubricate and top up fluids in abrasive blasting equipment components such as compressor and air dryer
A-2.01.10	clean abrasive blasting equipment by emptying pots, blowing out lines and wiping down hoses
A-2.01.11	calibrate measuring and testing equipment according to manufacturers' specifications
A-2.01.12	store tools and equipment according to manufacturers' specifications

Sub-task**A-2.02 Uses rigging, hoisting and lifting equipment.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- A-2.02.01 inspect rigging, hoisting and lifting equipment and report worn, damaged, expired or defective components
- A-2.02.02 lubricate moving parts of motorized hoisting and lifting equipment such as chains, gears and wheels
- A-2.02.03 store rigging, hoisting and lifting equipment according to manufacturers' specifications
- A-2.02.04 calculate weight of materials to be lifted to respect load limits of rigging, hoisting and lifting equipment
- A-2.02.05 set up rigging, hoisting and lifting equipment according to manufacturers' specifications

Sub-task**A-2.03 Uses access equipment.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- A-2.03.01 replace deteriorated, worn or damaged access equipment components such as frayed ropes and cables, broken feet and split planks
- A-2.03.02 position step ladders and extension ladders according to health and safety guidelines
- A-2.03.03 lay out scaffolding to ensure all necessary parts and components are present and compatible for assembly
- A-2.03.04 assemble scaffolding while maintaining level working platform and base
- A-2.03.05 tie in scaffolding and ladders to structure according to jurisdictional regulations to ensure scaffolding and ladders are secured
- A-2.03.06 install kickboards (toeboards) and guardrails according to safety regulations
- A-2.03.07 install outriggers according to safety regulations to stabilize scaffolding
- A-2.03.08 disassemble scaffolding keeping all components together for future assembly
- A-2.03.09 store scaffolding and ladders in approved storage locations

Task 3

Performs routine trade practices.

Context This task describes common activities performed by painters and decorators. They include using trade-related documentation, determining project requirements, planning jobs, protecting surroundings and handling materials.

Required Knowledge

- K 1 types of documentation such as permits, blueprints, manufacturers' specifications, work orders, contracts and safety documentation (MSDS and WHMIS symbols)
- K 2 surface preparation and paint application standards such as the Society for Protective Coatings (SSPC), the National Association of Corrosion Engineers (NACE) and the International Standards Organization (ISO)
- K 3 site specific safety policies, procedures and training
- K 4 sequence and timing of procedures
- K 5 utilities required such as heating, electricity and water
- K 6 containment products such as tarps, plastic and shrink wrap
- K 7 protective coverings such as drop cloths, plastic, hoarding and tape
- K 8 environmental regulations and standards
- K 9 types and amounts of materials required for project
- K 10 handling and mixing procedures for different types of materials such as solvents and paints
- K 11 removal and disposal of hazardous materials such as asbestos and lead-based paints
- K 12 storage requirements such as explosive-proof cabinets and protection from freezing
- K 13 requirements for the transportation of dangerous goods (TDG)

Sub-task**A-3.01 Uses documentation.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- A-3.01.01 locate documentation
- A-3.01.02 interpret documentation such as WHMIS symbols, specifications, site-specific documents, drawings and blueprints
- A-3.01.03 complete work-related documents such as work orders, material lists and time and materials sheets (T&M)
- A-3.01.04 document jobsite problems such as humidity and dust levels for future reference in case of deficiencies

Sub-task**A-3.02 Determines project requirements.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	no	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- A-3.02.01 determine area of substrate to be covered by estimating or by referencing blueprints or drawings
- A-3.02.02 calculate time and labour requirements based on area to be covered such as square footage covering, linear footage covering and hourly rates
- A-3.02.03 estimate tools and materials needed for project such as paint, brushes, rollers, wall coverings, drop sheets, extension cords, and spray equipment and accessories
- A-3.02.04 determine and recommend product to be used
- A-3.02.05 determine equipment required such as ladders, scaffolding, lifting equipment and spray equipment
- A-3.02.06 determine availability of power and water
- A-3.02.07 determine ventilation requirements depending on size of project and materials used
- A-3.02.08 determine method of application required

Sub-task**A-3.03 Plans job.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

A-3.03.01	coordinate ordering of materials and paint with supervisor or suppliers
A-3.03.02	organize tools and equipment on site such as explosion-proof box, job box, brushes, rollers and paints
A-3.03.03	determine optimal location for shop on site
A-3.03.04	coordinate work with other tradespersons on the job site
A-3.03.05	adapt to changing environmental conditions such as temperature and humidity changes
A-3.03.06	determine and adjust working hours based on job conditions and requirements
A-3.03.07	create job safety analysis (JSA) to identify potential hazards

Sub-task**A-3.04 Protects surroundings.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

A-3.04.01	erect hoarding and enclosures around work area using protective products such as wallboards, plywood and polyethylene tarps
A-3.04.02	cover surrounding objects such as furniture, flooring, lighting fixtures and landscaping using drop sheets and plastic to protect against paint splatter and overspray, and for ease of clean-up
A-3.04.03	cover electrical outlets before applying water to substrate for procedures such as wall paper removal
A-3.04.04	use spill kits and spill trays when mixing or pouring paints and coatings according to environmental regulations to protect surroundings
A-3.04.05	wear protective clothing such as disposable booties, coveralls and hoods to prevent contamination

Sub-task**A-3.05 Handles materials.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- A-3.05.01 acclimatize paints, coatings and wall coverings to enhance product performance
- A-3.05.02 store paints, coatings and solvent according to manufacturers' specifications and safety regulations such as storing in explosive-proof cabinets or protecting water-borne products from freezing
- A-3.05.03 dispose of used and empty product containers according to environmental and safety regulations
- A-3.05.04 cover trays and place lids on cans to protect paints and coatings and to prevent spills
- A-3.05.05 dispose of soiled rags in approved containers to prevent spontaneous combustion

Task 4**Performs quality control assessments.**

Context Painters and decorators must evaluate jobs in order to provide high quality results. This is done by identifying substrate and product deficiencies and evaluating the final work.

Required Knowledge

- K 1 compatibility of coatings such as water-borne and oil-based paints
- K 2 causes of deficiencies such as excessive moisture, efflorescence, improper taping, filling and/or sanding and insufficient cure of plaster/masonry
- K 3 substrate conditions and deficiencies such as scaling, rusting, spalling, peeling and cracking paint
- K 4 levels of drywall finishes (levels 1, 2, 3, 4, 5)
- K 5 substrate reference materials such as SSPC and NACE
- K 6 product conditions and deficiencies such as improperly stored, stirred, strained or mixed paints and stains
- K 7 finished surface conditions and deficiencies such as air entrapment and specks of dry paint, fish eyes, orange peeling, holidays and flashing
- K 8 product shelf life, pot life, viscosity and batch number

K 9	problematic substrates such as galvanized metals and concrete with form release agents present
K 10	galvanic action

Sub-task

A-4.01 Assesses substrate conditions and deficiencies.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

A-4.01.01	inspect wood for deficiencies visually and by touch to identify imperfections and select repair procedures
A-4.01.02	recognize metal conditions and deficiencies such as mill scale, contaminants or rust patterns using methods such as visual check and tape pull test
A-4.01.03	recognize concrete and masonry conditions and deficiencies such as efflorescence, honeycomb, surface pH and scaling
A-4.01.04	recognize improperly cured concrete, masonry and plaster surfaces (hot spots)
A-4.01.05	recognize the presence of mould and mildew on substrate such as wood, stucco, plaster and drywall
A-4.01.06	recognize causes of drywall damage such as structural deficiencies, moisture damage, poor tape adhesion and popping screws
A-4.01.07	inspect drywall surface prior to mudding for nicks, and narrow and wide gaps
A-4.01.08	recognize improperly taped, filled or sanded surfaces
A-4.01.09	recognize paint film defects such as blistering, mud cracking, alligatoring, orange peeling, flaking and bleeding
A-4.01.10	visually inspect caulking for improper tooling or gaps
A-4.01.11	perform moisture testing of substrate
A-4.01.12	perform surface temperature testing of substrate and humidity testing of environment

Sub-task**A-4.02 Assesses product conditions and deficiencies.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- A-4.02.01 perform visual assessment of products to identify conditions and deficiencies such as improperly stored, stirred, strained or mixed paints and stains
- A-4.02.02 determine product shelf life, pot life, viscosity and batch number according to manufacturers' specifications and product data sheets
- A-4.02.03 check dye lots, run or lot numbers and imperfections in wall coverings to ensure uniformity
- A-4.02.04 compare different samples of products to finished samples (draw downs) to ensure colour match and sheen

Sub-task**A-4.03 Assesses quality of painted or coated surfaces and wall coverings.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- A-4.03.01 determine if patching or touch ups are necessary
- A-4.03.02 visually inspect surface to determine if patching or touch-up procedures were performed correctly and that a uniform finish has been achieved
- A-4.03.03 compare finished surface to samples (draw downs) to ensure colour match and sheen
- A-4.03.04 visually inspect primed or painted surface to check coverage and even distribution of paint film
- A-4.03.05 inspect primer coat using a wet mil gauge and a dry film thickness gauge
- A-4.03.06 visually inspect painted or coated surface to check for quality of work such as cut-in lines, even flow of brush work and uniform rolled finish
- A-4.03.07 visually inspect wall covering to check for quality of work such as seam alignment, absence of air bubbles and use of adequate adhesive
- A-4.03.08 recognize paint film defects such as blistering, mud cracking, alligatoring, orange peeling, flaking and bleeding

Trends	Ultra-jetting high-pressure cleaning heads are being used more commonly in surface preparation for steel. This is done to reduce the amount of hazardous waste for cleanup. New abrasives have been introduced for projects removing lead-based products. These abrasives have the ability to encapsulate/contain lead to prevent contamination.
Related Components (including, but not limited to)	Tri-sodium phosphate (TSP), muriatic acid, bleach, conditioners, solvents, thinners, strippers, cleaners, soap, alcohol, detergents, methyl hydrate, blasting media, caulking, sealer, primer, trim, doors, windows, furniture, panelling, exterior wood siding, plywood, handrails, spindles, stairs, concrete blocks, ready-mix concrete, backing rods, concrete surfaces, metal doors and windows, bridges, tanks, ships, drywall, drywall tape, fasteners, compounds, corner beads, wood backing.
Tools and Equipment	See Appendix A.

Task 5**Performs general surface preparation.**

Context Painters and decorators prepare substrates by chemical and mechanical means (using power tools and hand tools), and clean surfaces to ensure the proper adhesion of primer and successive coats. Caulking is applied when needed.

Required Knowledge

- K 1 types of scrapers such as paint scrapers, broad knives and combination scrapers
- K 2 primer to be applied
- K 3 types of substrate such as wood, concrete, metal and drywall
- K 4 hazards associated with removal of hazardous materials such as lead paints and asbestos
- K 5 wall covering materials such as wall paper and commercial vinyl, and their associated adhesives

- K 6 stripping methods based on wall covering to be removed such as dry stripping and using surfactants
- K 7 results of unclean surface such as paint failures and poor quality finish
- K 8 cleaning equipment such as tack cloths, dust brushes, brooms, vacuums, pressure washers and dust collectors
- K 9 back priming
- K 10 types of water-borne and solvent-based primers for use on surfaces such as wood, metal and drywall
- K 11 specialty primers such as stain blocker, block filler and epoxy-based
- K 12 reasons for using primer (sealing, adhesion, tooth and sacrificial protection)
- K 13 caulking and glue removal procedures
- K 14 types of caulking such as epoxy, latex, silicone, polyurethane, and latex+silicone (paintable) and their areas of applications
- K 15 drying times of various caulking
- K 16 reasons for caulking breakdown such as moisture, insufficient cure time and environmental conditions
- K 17 uses of caulking such as filling cracks and joints in trim, and sealing around windows and doors
- K 18 caulking application techniques
- K 19 types of surfaces to be sanded such as wood, metal, drywall and concrete
- K 20 types of sanding tools and equipment such as power sanders (palm, disk, belt and random orbital), sanding blocks, sponges, steel wool, liquid sandpaper and pumice
- K 21 types of substrate and finish to be applied
- K 22 sandpaper grit and backing materials
- K 23 smoothness desired
- K 24 sanding sequence

Sub-task**B-5.01 Removes existing paints and coatings.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- B-5.01.01 use tools and procedures according to the coating to be removed and the substrate
- B-5.01.02 blast paints and coatings from substrate using equipment such as abrasive and hydro blasting equipment
- B-5.01.03 power tool surface using equipment such as grinders, needle guns and air chisels according to profiling specifications
- B-5.01.04 apply heat or paint stripper/remover according to product data sheets to lift paint or coating for ease of removal by scraping
- B-5.01.05 scrape lifted paint or coating from substrate

Sub-task**B-5.02 Removes existing wall coverings and adhesives.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- B-5.02.01 use tools and procedures according to the wall covering and adhesive to be removed and the substrate
- B-5.02.02 strip wall covering using stripping tools and equipment such as steamers, sponges and water, hand pump sprayers and score/perforator rollers
- B-5.02.03 saturate wall coverings with chemical wall covering remover to loosen adhesive bond before removal
- B-5.02.04 peel and/or scrape off loose wall covering materials
- B-5.02.05 soak adhesive to loosen for scraping and washing
- B-5.02.06 remove old adhesive from substrate using cleaning materials such as TSP and warm water

Sub-task**B-5.03 Cleans surfaces.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- B-5.03.01 determine cleaning procedures to follow according to substrate type and properties, coatings to be used and product specifications
- B-5.03.02 perform cleaning procedures such as sweeping new drywall, rinsing and wiping surfaces, using degreasers and using pressure washers on concrete, masonry and metal substrates
- B-5.03.03 dry the cleaned substrate to ensure that coating adheres to substrate
- B-5.03.04 blow down surface and vacuum to eliminate dust and debris from work area

Sub-task**B-5.04 Primes surfaces.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- B-5.04.01 determine priming procedures to follow according to substrate type and properties, coatings to be used and product specifications
- B-5.04.02 use tools required for priming such as sprayers, brushes and rollers
- B-5.04.03 apply primer using techniques such as brushing, rolling and spraying according to manufacturers' specifications
- B-5.04.04 cover stains with stain-inhibiting primer to avoid bleed-through to finish coat

Sub-task**B-5.05 Sands surfaces.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-5.05.01	select sandpaper type and grit to improve adhesion of subsequent coats, to create desired surface and according to substrate
B-5.05.02	use sanding tools according to desired finish
B-5.05.03	create surface profile for adhesion of subsequent coats
B-5.05.04	perform sanding procedures such as direction, pressure and feathering

Sub-task**B-5.06 Applies caulking.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-5.06.01	prepare substrate for caulking by drying completely to ensure adhesion
B-5.06.02	cut caulking tube tip at an angle to optimize flow of caulking and ease of tooling
B-5.06.03	tool caulking for uniformity, aesthetics and to create a tight seal

Task 6**Prepares wood surfaces for paints, coatings and wall coverings.**

Context Painters and decorators prepare the surface by repairing imperfections such as by applying wood filler. Treating wood surfaces prior to painting is an important step in preparing the substrate. It helps to ensure a uniform finish and good adhesion of top coats. Wood surfaces that may be painted range from door frames and sheds to signage, siding and shakes.

Required Knowledge

K 1	minor imperfections such as nail holes, nicks, dings and cracks
K 2	causes of blistering such as excessive heat and moisture

K 3	repair procedures for minor rot
K 4	types of wood substrates such as open grain and closed grain

Sub-task

B-6.01 Treats wood surfaces.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-6.01.01	determine procedures to follow for treating wood according to substrate type and properties, coatings to be used, desired finish and product specifications
B-6.01.02	seal wood substrate with oil-based primer or shellac to prevent bleeding through and to prevent finish coat from absorbing into the wood
B-6.01.03	smooth primed surface by sanding to ensure a uniform coat
B-6.01.04	remove dust using tack cloth or lint-free rag to clean surface

Sub-task

B-6.02 Repairs imperfections in wood.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-6.02.01	fill cracks, dents and nail holes with filler material according to job requirements
B-6.02.02	replace rotted or damaged wood using required tools

Task 7

Prepares concrete and masonry surfaces.

Context Painters and decorators prepare concrete and masonry surfaces using mechanical and chemical treatments to make substrates suitable for application of coatings and to expose aggregate. This includes repairing minor imperfections and filling cracks, gaps and holes.

Required Knowledge

K 1	mechanical treatment tools and equipment such as grinders, chisels, pressure washers, blasters and blast tracks
K 2	neutralizing to ensure adhesion of coating
K 3	reasons for etching such as creating a profile on the substrate and ensuring adhesion of coating
K 4	neutralizing materials such as zinc sulphate
K 5	etching materials such as muriatic acid
K 6	hazards of using muriatic acid such as improper mixing sequence and corrosive properties
K 7	form release agent contamination
K 8	imperfections to be repaired such as cracks, gaps, tie rod holes, honeycombs and efflorescence
K 9	materials used such as caulking, ready-mix concrete and backing rod

Sub-task

B-7.01 Mechanically treats concrete and masonry surfaces.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-7.01.01	use tools for mechanical treatment such as grinders, needle guns, wire brushes, chisels, pressure washers, blasters and blast tracks
B-7.01.02	maintain a uniform profile on substrate at the required profile depth
B-7.01.03	test areas for hardness, moisture and profile depth

Sub-task**B-7.02 Chemically treats concrete and masonry surfaces.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-7.02.01	mix neutralizing and etching materials according to product data sheets
B-7.02.02	work chemical treatment material into substrate using a broom to etch surface and improve adhesion of coating
B-7.02.03	remove contaminants, and neutralizing and etching residue by pressure washing
B-7.02.04	remove efflorescence by pressure washing with a chemical formula

Sub-task**B-7.03 Repairs concrete and masonry surfaces.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-7.03.01	identify repair materials that are compatible with coating material
B-7.03.02	fill cracks, gaps and honeycombs with grouting compound or concrete slurry using tools such as putty knives, trowels and caulking guns
B-7.03.03	smooth surfaces using tools and equipment such as pole scrapers, grinders and chisels

Task 8

Prepares metal surfaces.

Context Painters and decorators prepare metal surfaces to make substrates suitable for application of coatings. This includes grinding surfaces and applying epoxy, putty and grouts designed for metal surfaces.

Required Knowledge

K 1	application methods such as applying over bare metal and over compatible substrate
K 2	surface preparation tools and equipment such as grinders, blasters and needle guns
K 3	repair materials such as epoxy, putty and grouts
K 4	types of metals and their properties such as hardness and corrosion resistance
K 5	existing coating

Sub-task

B-8.01 Treats metal surfaces.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-8.01.01	solvent wash metal surfaces to remove contaminants such as oil and grease
B-8.01.02	etch metal surfaces by applying chemical to soft metal surfaces such as aluminium in order to improve adhesion without damage
B-8.01.03	grind metal surfaces to remove sharp edges
B-8.01.04	create profile with mechanical treatments by blasting or using power tools

Sub-task

B-8.02 Repairs metal surfaces.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-8.02.01	remove burrs, sharp edges and corrosion by grinding, scraping and using a wire brush
B-8.02.02	mix filling compounds according to manufacturers' specifications
B-8.02.03	fill voids and pitting by applying putty and filling material and letting it cure according to manufacturers' specifications

Task 9

Prepares plaster surfaces and drywall.

Context Painters and decorators repair damage and imperfections of existing plaster surfaces and drywall. In some jurisdictions, they may also finish new drywall.

Required Knowledge

K 1	imperfections to be repaired such as holes, cracks, dents, and loose tape and corner beads
K 2	types of compounds such as quick-set and all-purpose compounds
K 3	types of tape such as fibreglass and paper (perforated and non-perforated)
K 4	setting time and recoat time of various compounds
K 5	types of corner beads such as metal, plastic and paper
K 6	sequence of application of compound
K 7	temperature and humidity level required for finishing

Sub-task**B-9.01 Repairs existing plaster surfaces and drywall.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-9.01.01	remove mould and mildew by applying bleach or mildewcide
B-9.01.02	mix compound to required consistency
B-9.01.03	fill cracks, holes and dents using tools such as broad knives and trowels
B-9.01.04	correct deficiencies such as bubbling tape, out-of-square corner bead and loose or improperly installed screws
B-9.01.05	replace drywall components such as corner beads and tape
B-9.01.06	remove damaged drywall and replace or fill with mud compound

Sub-task**B-9.02 Finishes new drywall.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

B-9.02.01	apply mud and tape using tools such as broad knives, trowels, hawks, sanding sponges, pole sanders and tape dispensers
B-9.02.02	install corner bead using tools and materials such as corner crimpers, staple guns and contact cement
B-9.02.03	mix compound to required consistency
B-9.02.04	spread compound uniformly and feather edges out

Trends Environmentally friendly products are being used more widely. There are new products such as washable flat paint, colour changing ceiling paint, and low or zero VOC paint. Manufacturers have developed water-borne pigments that allow superior coverage with fewer coats such as self-priming paints or coatings.

Related Components (including, but not limited to) Architectural paints (oil, alkyd, acrylic, ceramic, water-borne), architectural coatings (lacquers, glazes), sealers, primers, undercoats, solvents/thinners, driers, colorants, high performance coatings (acrylic, epoxies, urethanes, varnishes, acoustical, lacquers, elastomeric, polyurethane, intumescent), reinforcing mesh, leaf (gold, silver, bronze), texture, crack fill.

Tools and Equipment See Appendix A.

Task 10**Prepares for application of residential, institutional and commercial paints and coatings.**

Context This task encompasses the preparation of paints and coatings for application to a substrate. It also covers the installation of reinforcing mesh.

Required Knowledge

- K 1 types of architectural paints and coatings such as water-borne, acrylic and alkyds
- K 2 components of paint and coatings such as binder, pigment and vehicle
- K 3 types of solvents such as aromatic, alcohol and blended
- K 4 paint and coating application considerations such as substrates and drying times
- K 5 product information and specifications such as MSDS and product data sheets
- K 6 environmental conditions such as ambient temperature and humidity
- K 7 types of high performance coatings such as intumescent, water-borne epoxies, urethanes, zinc-rich and moisture cured

K 8	types of reinforcing mesh such as fibreglass, metal lath and cloth
K 9	application techniques for reinforcing mesh
K 10	layout design and pattern for decorative finishes

Sub-task

C-10.01 Prepares residential, institutional and commercial paints and coatings.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- C-10.01.01 match colour according to job specifications
- C-10.01.02 mix paints or coatings according to product data sheet, using tools such as stir sticks or mixers, to ensure adherence, visual appearance and drying time
- C-10.01.03 thin product according to product data sheet for application
- C-10.01.04 strain product to ensure uniform application
- C-10.01.05 stir, box, shake and mix paints and coatings to ensure uniformity

Sub-task

C-10.02 Installs residential, institutional and commercial reinforcing mesh.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- C-10.02.01 apply bonding primer to substrate without profile
- C-10.02.02 apply primer to bare substrate with profile
- C-10.02.03 lay mesh manually, uniformly overlapping to maintain integrity and strength, and according to pre-calculated measurements
- C-10.02.04 overlap reinforcing mesh to ensure complete coverage
- C-10.02.05 calculate ratios to mix base with catalyst according to product data sheets
- C-10.02.06 saturate reinforcing mesh with coating until wetted out using tools such as brushes, rollers or spray equipment
- C-10.02.07 remove air bubbles using aluminium and spiked (porcupine) rollers to avoid failures in the reinforcing mesh

Task 11

Applies residential, institutional and commercial paints and coatings.

Context Architectural paints and coatings are applied by brushing, rolling, and spraying. The method of application depends on accessibility, desired effect and productivity.

High performance coatings are designed for various purposes such as corrosion and fire resistance, abrasion resistance and flexibility. They may be applied by brush, roller, applicator or spray equipment.

Required Knowledge

K 1	types, sizes and uses of brushes such as angled sash and radiator
K 2	types of bristles such as natural and synthetic
K 3	types of applicators such as pads and foam squeegees
K 4	types of paints or other coatings that can be applied by brush, roller, applicator or spray equipment
K 5	types and sizes of roller cages and sleeves
K 6	nap/pile of sleeve
K 7	brushing, rolling, applicator and spraying techniques
K 8	types of spray systems such as airless, conventional, HVLP, electrostatic and specialized spray equipment
K 9	overspray and shielding
K 10	product data sheet information such as pot life, induction times and viscosity

Sub-task

C-11.01 Applies residential, institutional and commercial paints and coatings with brushes.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

C-11.01.01	access hard to reach areas using tools and equipment such as brush extenders, radiator brushes and extension handles
C-11.01.02	lay off and feather paint using techniques such as brushing dry to wet
C-11.01.03	cut in a straight line to ensure a clean edge using brushes
C-11.01.04	maintain uniform coating according to material type such as alkyd, varnish and latex

Sub-task**C-11.02 Applies residential, institutional and commercial paints and coatings with rollers.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- C-11.02.01 access hard to reach areas using tools and equipment such as extension handles and roller cages
- C-11.02.02 maintain uniform coating using techniques such as back rolling and W pattern
- C-11.02.03 maintain a wet edge according to drying time of material

Sub-task**C-11.03 Applies residential, institutional and commercial paints and coatings with applicators. (NOT COMMON CORE)**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
no	yes	NV	yes	yes	yes	no	yes	yes	no	NV	NV	NV

Key Competencies

- C-11.03.01 select applicator such as pad and foam squeegee according to manufacturers' product installation instructions
- C-11.03.02 access hard to reach areas using tools and equipment such as extension handles
- C-11.03.03 maintain uniform coating using techniques as described in manufacturers' product installation instructions
- C-11.03.04 maintain a wet edge according to drying time of material

Sub-task**C-11.04 Applies residential, institutional and commercial paints and coatings with spray equipment.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- C-11.04.01 select type and size of tip according to substrate, size and type of job, and material type such as lacquer, epoxies, alkyd, varnish and latex
- C-11.04.02 access hard to reach areas using tools and equipment such as gun extensions
- C-11.04.03 maintain uniform coating using techniques such as using 50% overlap, maintaining motion while spraying, triggering and keeping a consistent distance from substrate
- C-11.04.04 make adjustments such as fluid and air flow, pressure control, tip size, paint viscosity and temperature to achieve desired atomization and ensure consistent spray pattern
- C-11.04.05 use shielding while spraying to minimize and contain overspray
- C-11.04.06 spray edge (banding) then face of substrates such as doors and tables to avoid dry spray

Task 12**Applies decorative/specialty finishes.**

Context Painters and decorators apply specialty finishes on substrates for decorative purposes.

Required Knowledge

- K 1 types of paints that can be applied with sponges or rags
- K 2 various techniques such as positive and negative application
- K 3 paint viscosity
- K 4 natural random patterns (sea sponges) and artificial patterns (synthetic sponges)
- K 5 techniques used to produce the desired effects such as wood graining and marbling
- K 6 drying and setup times of finishes used
- K 7 tints and stains, their translucency, staining power and colour
- K 8 types of texture finishes such as stipple and knock-down

K 9	types of finishes such as rolled and hammered
K 10	materials used in gilded finishes such as silver, bronze and gold
K 11	types of substrates such as wood, glass, plastic and metal
K 12	layout and design using geometric calculations
K 13	types of stencils such as polyester film, paper and metal
K 14	types of graphics such as vinyl, peel-and-stick and paint-on
K 15	composition of multi-spec coatings (acrylic latex suspended in lacquer)
K 16	multi-spec coating application techniques
K 17	compatibility of multi-spec coatings and substrates

Sub-task

C-12.01 Applies paints and coatings using decorative techniques.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

C-12.01.01	cut and roll base coat according to project requirements
C-12.01.02	ensure proper drying time between coats according to material used and working environment
C-12.01.03	create pattern using positive application techniques such as sponging and striping and negative application techniques such as stippling and dragging to achieve desired effect, and according to project requirements

Sub-task

C-12.02 Creates faux finishes.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

C-12.02.01	apply base coat to match background colour of the effect to be imitated
C-12.02.02	apply colour coat such as glaze/colour mix for marble, and primary grain colour for wood, to produce desired effect
C-12.02.03	create intricate effect details such as cracks in wood knots using a nail, and veins of marble using a feather/badger blender

- C-12.02.04 apply finish coat according to job requirements to protect finish
- C-12.02.05 apply multiple layers of finish coat to produce the illusion of structure, depth and texture

Sub-task

C-12.03 Applies gilding.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
no	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- C-12.03.01 apply adhesive such as water size or oil size to substrate using tools such as camel hair brush
- C-12.03.02 position sheets on adhesive before adhesive dries using a camel hair brush or gilding tip brush
- C-12.03.03 smooth down and polish finish to blend in and create a uniform look

Sub-task

C-12.04 Applies stencils and graphics.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
no	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- C-12.04.01 create stencil or graphic of image using materials such as cardboard and bristol board, or equipment such as computers
- C-12.04.02 position stencil or graphic on substrate according to measurements in job plan using tools such as painter's tape, plastic smoothers, measuring tapes, chalk lines, levels and pencils
- C-12.04.03 create template from materials such as cardboard, plastic and metal, and tape stencil to template to protect surrounding area from paint splatter
- C-12.04.04 dab or spray on paint using tools such as stencil brushes or spray equipment
- C-12.04.05 remove stencil template when done without damaging substrate

Sub-task**C-12.05 Creates textured finishes.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- C-12.05.01 mix texture coating such as stucco, powdered textured finishes and drywall compound using tools such as a low rpm drill or mixer to create an even consistency, texture and grade
- C-12.05.02 uniformly produce varying degrees of stipple, both random and systematic patterns, using texturing equipment such as stipple guns, hawks and trowels, texture rollers, and sponges

Sub-task**C-12.06 Applies multi-spec coatings.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- C-12.06.01 pre-test spray pattern on a sample to confirm uniform finish
- C-12.06.02 apply base coat using spray gun, brush or roller
- C-12.06.03 spray multi-spec coating uniformly in a criss-cross pattern, using equipment such as conventional spray equipment with an internal mix gun

Trends	Trends in wall coverings tend to be cyclical according to design preferences. Application techniques have not changed substantially.
Related Components (including, but not limited to)	Paper-backed vinyls, fabric-backed vinyls, acoustical fabrics, hand/block prints, flocks, embossed paper, pulps, weaves, fabrics, foils, cork, micas, strands, wall carpets, wallpapers, murals, coatings, mica-coated liners, lining paper, veneer, white boards, cellulose pastes, clay-based adhesives, vinyl adhesives, contact cement, sizes.
Tools and Equipment	Hand tools, power tools (dehumidifiers, electric cords, fans, heat guns, lights, mixers, drills, steam strippers, vacuum cleaners), measuring and testing equipment (calculators, measuring cups, plumb bob, measuring tapes, sling psychrometers, thermometers), access equipment, hoisting and lifting equipment, PPE and safety equipment, and specialty wall covering tools.

Task 13**Prepares for application of wall coverings.**

Context	Painters and decorators must treat the substrate before applying wall coverings. This is done to ensure that the surface is smooth and sealed. It is crucial to ensure temperatures and humidity levels are to manufacturers' specifications. The wall covering material must be inspected, acclimatized, measured and cut in preparation for hanging.
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Required Knowledge

K 1	run and lot number order
K 2	wall covering patterns such as straight, random and drop
K 3	techniques for hanging wall coverings to match patterns
K 4	where to start and finish
K 5	types of wall covering materials
K 6	types of adhesives and their uses
K 7	methods for pre-soaking, folding, booking and storing prior to hanging
K 8	how adhesion of material to substrate is affected by temperature and humidity
K 9	alternating rolls (bolts) of wall covering for drop patterns

Sub-task**D-13.01 Treats surfaces for wall coverings.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- D-13.01.01 repair imperfections in substrate such as dents and scratches using drywall compounds or fillers
- D-13.01.02 seal water, ink and marker stains using stain blocking primer to prevent bleed through
- D-13.01.03 apply coatings such as alkyd paints, latex paints and wall size to prevent absorption of adhesive and allow time for proper positioning of wall coverings

Sub-task**D-13.02 Lays out surface.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- D-13.02.01 determine start and finish according to room layout and location of fixed objects in the room such as fireplaces and doors
- D-13.02.02 draw straight pencil line for starting point of wall coverings using tools and equipment such as levels, plumb bobs and straight edges
- D-13.02.03 keep wall coverings plumb and pattern consistent in situations such as passing a corner and working around wall openings

Sub-task

D-13.03 Prepares wall coverings.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- D-13.03.01 measure and cut sheet of wall covering according to wall covering patterns such as straight, drop and random to ensure alignment with the previously cut sheet and to minimize waste
- D-13.03.02 reverse every other sheet to ensure uniformity of random pattern
- D-13.03.03 activate adhesive on pre-pasted wall coverings according to manufacturers' specifications and considering factors such as soaking and booking times, and minimizing expansion and contraction of wall coverings once placed on wall

Task 14

Applies wall coverings.

Context

Painters and decorators apply different types of wall coverings such as wallpaper, vinyl, veneer and fabric. They also repair damaged wall coverings.

There are many factors to consider when installing wall coverings such as temperature, humidity, air movement, types of wall coverings, and types of adhesives and substrates. These factors affect materials as well as application techniques.

Required Knowledge

- K 1 types of wall coverings such as wallpaper/borders, paintable embossed paper, photographic murals, paper-backed fabrics, grass cloths, silks, natural weaves, burlaps, acoustical fabric (with or without backing) and rigid wall coverings (cork, wood veneer, tack boards and white boards)
- K 2 types of adhesives and their uses
- K 3 adhesive application techniques such as brushing, rolling and using paste machines
- K 4 effect of environmental conditions such as temperature and air movement on drying time and material
- K 5 patterns and reasons for reversing some materials every alternate length
- K 6 tools such as razor knives, sled knives, smoothing brushes, seam rollers and smoothers, and their uses

K 7	various techniques for installing wall coverings
K 8	characteristics of certain materials such as fabrics, grass cloths, burlaps and types of backing

Sub-task

D-14.01 Applies adhesives.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

D-14.01.01	set up paste tables to lay wall covering while applying adhesive
D-14.01.02	brush or roll adhesive onto wall covering or substrate according to manufacturers' specifications ensuring complete coverage and book
D-14.01.03	determine spreading rate considering factors such as material weight, thickness and temperature
D-14.01.04	place adhesive on vinyl using paste machine and ensuring complete coverage

Sub-task

D-14.02 Installs vinyl wall coverings.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

D-14.02.01	place vinyl on substrate according to pre-determined layout
D-14.02.02	smooth vinyl using a smoother to eliminate air bubbles
D-14.02.03	trim excess materials top and bottom
D-14.02.04	remove excess glue from surface of vinyl using a rag or sponge
D-14.02.05	place second sheet overlapping previous sheet and double cut or butt joint to hide seams
D-14.02.06	smooth out seams using tools such as plastic smoothers and seam rollers

Sub-task**D-14.03 Installs fabric and natural material wall coverings.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- D-14.03.01 place fabric and natural material wall coverings such as foils, silks and flocks on substrate according to pre-determined layout
- D-14.03.02 handle fabric and natural material wall coverings with care according to manufacturers' specifications and avoiding stretches, runs, tearing, creasing, wrinkling and soiling
- D-14.03.03 smooth fabric and natural material wall coverings using a smoother to eliminate air bubbles and to avoid creasing and wrinkling
- D-14.03.04 trim excess materials top and bottom
- D-14.03.05 remove excess glue on natural material wall coverings using a rag or sponge
- D-14.03.06 place second sheet overlapping previous sheet and double cut or butt joint to hide seams
- D-14.03.07 smooth out seams using a smoothing brush

Sub-task**D-14.04 Installs rigid wall coverings.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- D-14.04.01 place rigid wall coverings such as cork board and veneer wood on substrate according to pre-determined layout
- D-14.04.02 wet down veneer when excessively dry to facilitate ease of installation
- D-14.04.03 smooth rigid wall covering using as smoother to eliminate air bubbles
- D-14.04.04 trim excess materials top and bottom
- D-14.04.05 remove excess glue on rigid wall covering using a rag or sponge
- D-14.04.06 place second sheet overlapping previous sheet and double cut or butt joint to hide seams
- D-14.04.07 smooth out seams using a smoother

Sub-task**D-14.05 Repairs existing wall coverings.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- D-14.05.01 remove air bubbles using a syringe
- D-14.05.02 re-seal open seam using seam sealer
- D-14.05.03 stain tears using coloured marker to hide tear
- D-14.05.04 remove and replace damaged wall covering

Trends	The use of environmentally-friendly products such as low-VOCs and zero-VOCs is increasing. Water-based finishing products are continually being improved while factory based finishes are becoming more common. New regulations regarding the recycling and disposal of finishing products are ongoing.
Related Components (including, but not limited to)	Furniture, cabinets, siding, windows, doors, frames, hardwood floors, trim, panelling, stairs and stairway components, exterior wood siding, plywood, wood finishes (shellacs, lacquers, stains, Danish oils, lemon oils, varnishes, waxes), universal colorants.
Tools and Equipment	Hand tools, power tools, spray equipment, access equipment, PPE and safety equipment.

Task 15**Prepares for wood finishing applications.**

Context	Painters and decorators prepare the surface by repairing imperfections, conditioning and sealing the surface and applying wood filler to ensure a uniform finish and good adhesion of top coats.
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Required Knowledge

K 1	types of conditioners such as water and manufacturer specific wood conditioners
K 2	types of sealers such as shellacs, varnishes, lacquers, sanding sealers, polyurethane and urethane
K 3	types of wood fillers such as paste wood filler, spackling, putty, plastic wood and putty sticks
K 4	types of stains such as semi-transparent, transparent and solid
K 5	woods that may require conditioning such as open-grained and close-grained softwoods and hardwoods
K 6	reasons for conditioning woods such as to provide even absorption of stain or finishes, and to provide a uniform finish
K 7	manufacturers' specifications such as drying time, and application rate and method
K 8	when to apply conditioners, stains or sealers

K 9	sequence of application of conditioners, stains and sealers
K 10	sanding sequence
K 11	matching draw downs

Sub-task

E-15.01 Conditions wood surfaces.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

E-15.01.01	dampen wood surface with water to raise the grain to sand off prior to conditioning
E-15.01.02	apply wood conditioning products according to manufacturers' specifications to open the grain to promote even absorption of stain or finishes, and to provide a uniform finish

Sub-task

E-15.02 Applies wood fillers.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

E-15.02.01	level out grain and fill holes and imperfections with wood fillers using application tools such as putty knives, brushes and cloths, or by hand
E-15.02.02	match wood finish using pre-coloured wood fillers or hand-mixed wood fillers

Sub-task**E-15.03 Seals wood surfaces.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- E-15.03.01 apply sealers using brushes, rollers and sprayers according to project specifications
- E-15.03.02 verify that sealer is compatible with substrate and successive coatings based on manufacturers' specifications

Sub-task**E-15.04 Prepares wood finishing products.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- E-15.04.01 adjust colour of wood finishes by adding universal colorants or dyes
- E-15.04.02 stir wood finishes according to manufacturers' specifications
- E-15.04.03 adjust viscosity of wood finishes by adding thinner according to manufacturers' specifications to optimize flow of application

Task 16**Finishes wood surfaces.**

Context Wood finish is applied to protect and enhance the wood surface and to increase the durability of the wood. The finish can be brushed on, sprayed on, or wiped on and off.

Required Knowledge

- K 1 types of hardwoods such as walnut, oak and teak, and types of softwoods such as fir, pine and spruce
- K 2 types of open-grained woods such as oak and mahogany, and types of closed-grained woods such as cherry, birch and maple
- K 3 types of wood finishes such as water-based, alcohol-based, lacquer-based and oil-based

K 4	wood finishes that can be brushed on such as grain filler, penetrating stains, pigmented stains and oil stains
K 5	wood finishes that can be sprayed on such as non-grain raising stains, spirit stains and penetrating oil stains
K 6	wood finishes that can be wiped on such as Danish oils, lemon oils and stains
K 7	interior and exterior wood finish products
K 8	types and sizes of brushes such as angled sash and radiator
K 9	types of bristles such as natural and synthetic
K 10	brushing techniques for wood finishes
K 11	types of sprayers such as airless, conventional and HVLP
K 12	spraying techniques such as overlap and even strokes
K 13	required cloth materials and techniques for wiping on wood finishes
K 14	manufacturers' specifications such as temperature and humidity allowances, thinning ratio, and drying and recoating times
K 15	compatibility of finishes
K 16	colour matching methods

Sub-task

E-16.01 **Brushes on wood finishes.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

E-16.01.01	apply wood finish uniformly ensuring adequate coverage
E-16.01.02	wipe off excess wood finish product to achieve desired finish

Sub-task**E-16.02 Wipes on wood finishes.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- E-16.02.01 apply wood finish ensuring adequate coverage using cloth material such as lamb's wool, cheese cloth and cotton rags
- E-16.02.02 wipe off excess wood finish after allowing the product to penetrate wood surface according to manufacturers' specifications or desired finish

Sub-task**E-16.03 Sprays on wood finishes.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	yes	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- E-16.03.01 thin wood finishes according to manufacturers' specifications to obtain a uniform finish with adequate coverage
- E-16.03.02 apply wood finishes using spray equipment such as HVLP, conventional and airless while ensuring proper atomization

Trends	More 100% solid coatings are being introduced to achieve lower VOCs. Inline heaters are increasingly being used. These lower the viscosity of coatings and are used as an alternative to chemical thinners.
Related Components (including, but not limited to)	Industrial high performance coatings (acrylic, epoxy, urethane, varnish, acoustical, lacquer, elastomeric, polyurethane, intumescent), sealers, primers (inorganic zincs), undercoats, solvents/thinners, driers, colorants, polyurea.
Tools and Equipment	See Appendix A.

Task 17**Prepares for application of industrial paints and coatings.**

Context	Painters and decorators must prepare for the application of industrial paints and coatings by mixing, thinning, heating and agitating. This task also includes the installation of fibre-reinforced plastic (FRP) which is used in industrial applications such as tank liners and explosion-proof areas to significantly strengthen the coatings.
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Required Knowledge

K 1	types of industrial paints and coatings and their properties and applications such as exposure to heat, moisture, water, acids and UV
K 2	specialized equipment for industrial paints and coatings
K 3	substrate and its immediate environment
K 4	project and product specifications such as induction time, pot life, and thinners and equipment to be used
K 5	specialized safety procedures and equipment such as explosion-proof lighting, and ventilation and respiratory equipment
K 6	application equipment for FRP such as specialized rollers and spiked (porcupine) rollers

Sub-task**F-17.01 Prepares industrial paints and coatings.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	no	yes	yes	yes	yes	NV	NV	NV

Key Competencies

F-17.01.01	determine mil thickness from project specifications and product data sheets
F-17.01.02	determine mixing information from product data sheet such as ratios, pot life, induction time and additives
F-17.01.03	mix paints and coatings according to product data sheet using equipment such as pneumatic paddles and mixing sticks
F-17.01.04	verify coating temperature meets requirements of product data sheet

Sub-task**F-17.02 Installs fibre reinforced plastics (FRP).**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	no	yes	yes	yes	yes	NV	NV	NV

Key Competencies

F-17.02.01	apply bonding primer to substrates without profile
F-17.02.02	verify profile and cleanliness of substrate
F-17.02.03	apply primer to bare substrate with profile
F-17.02.04	cut matting to fit required substrate area
F-17.02.05	overlap matting to ensure complete coverage
F-17.02.06	calculate ratios to mix resin with catalyst according to product data sheets
F-17.02.07	saturate mesh with resin using tools such as brushes, rollers, and spray equipment
F-17.02.08	remove air bubbles using aluminium and spiked (porcupine) rollers to avoid failures in the FRP
F-17.02.09	apply second resin coat to seal FRP and apply wax coat to prevent contact between product and FRP

Task 18

Applies industrial paints and coatings.

Context Industrial coatings are designed for various purposes such as corrosion resistance, fire resistance, abrasion resistance and flexibility. They may be applied by brush, roller or spray equipment. Their application requires skills and training in specialized equipment and processes. Safety considerations are of particular importance to this task.

Required Knowledge

- K 1 product data sheet and project specification information such as induction time, pot life, tip sizes and thinners
- K 2 specialized industrial painting power tools such as plural pumps, airless spray pumps with inline heaters, power rollers and conventional spray equipment
- K 3 specialized industrial painting hand tools such as squeegees, spiked (porcupine) rollers, brushes and rollers
- K 4 types of industrial paints and coatings and their properties and applications such as exposure to heat, moisture, water, acids and UV
- K 5 specialized safety procedures and equipment such as explosion-proof lighting, and ventilation and respiratory equipment
- K 6 overspray and effects on surrounding environment

Sub-task

F-18.01 Applies industrial paints and coatings with hand tools.

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	no	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- F-18.01.01 verify substrate temperature, humidity and cleanliness according to product data sheets and project specifications
- F-18.01.02 brush, roll or squeegee on industrial paints and coatings according to project requirements
- F-18.01.03 apply uniform coating and measure mil thickness using wet mil gauge
- F-18.01.04 perform visual inspection for paint runs, sags and misses during the application
- F-18.01.05 measure dry film thickness after specified cure time
- F-18.01.06 repair runs, sags and misses by abrading cured coatings and recoating

Sub-task**F-18.02 Applies industrial paints and coatings with power tools.**

<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>
yes	yes	NV	yes	yes	no	yes	yes	yes	yes	NV	NV	NV

Key Competencies

- F-18.02.01 verify substrate temperature, humidity and cleanliness according to product data sheets and project specifications
- F-18.02.02 spray industrial paints and coatings according to project requirements
- F-18.02.03 adjust pump pressure for atomization and fan of paints and coatings
- F-18.02.04 plan sequence of spraying to avoid runs and sags
- F-18.02.05 stripe coat leading edges and welds to ensure adequate coverage
- F-18.02.06 overlap and cross hatch to apply uniform spray coating
- F-18.02.07 apply uniform coating and measure film thickness using wet mil gauge
- F-18.02.08 perform visual inspection for paint runs, sags and misses
- F-18.02.09 measure dry film thickness after specified cure time
- F-18.02.10 repair runs, sags and misses by abrading cured coatings and recoating

APPENDICES

Hand Tools

adjustable wrenches (various sizes)	paint pads
air hose repair kits	paint strainers
aluminium rollers	pencils
Allen keys	pliers
aprons	plumb bobs
broad knives	pole sanders
brooms	putty knives
brush and roller spinners	rags
brush extenders	razor blades
brushes (various types of natural and synthetic bristle brushes and various types of handles)	roller cages
can hooks	roller grids
caulking guns	roller sleeves
chalk lines	sanding blocks
chisels	sanding sponges
cheese cloths	sandpaper
cutters	scrapers
drop sheets	screwdrivers
duct tape	shovel
dust pans	spiked (porcupine) rollers
dusters	sponges
extension poles	squeegees
files	steel wool
hammers	stir sticks
hand masking machine	straight edge
hawk	tack cloths
leather chamois	tape holders
levels (carpenter's, laser)	tarps/containments
masking tape	trays
mop	trowels
nail punch	utility knives
nut drivers	wire brushes
pails	wrench sets

Power Tools and Pneumatic Tools

abrasive blasting equipment and components: deadman switches (electric or air), nozzles (venture, straight bore), blast cabinets, blasting pots, blast hoses, blasting hoods, hydroblast equipment, centrifugal blasting equipment	grinders (angle grinder, die grinder) heat guns lighting (explosion-proof, halogen) needle guns paint agitators plotters pneumatic caulking guns pneumatic mixers pressure feed rollers printers rotary peeners sanders vacuum cleaners
air chisels/scrapers	
air dryers	
compressors	
computer/colour matching software	
dehumidifiers	
drills	
dust collectors	
fans	

Spray Equipment

air-assisted airless spray equipment	spray equipment components (compressors, inline heaters, pump filters, spray gun extensions, spray guns, spray lines, spray tips, washers and housing, spray whips and swivels, etc.)
airless spray equipment	
conventional spray equipment	
electrostatic spray equipment	
HVLP spray equipment	
plural component spray pumps	spray hoods
texture spray machine	

Measuring and Testing Equipment

adhesion tester	measuring tape
air monitoring equipment	moisture meter
architectural rule	profile gauge/replica tape
blotter test kit	pull test kit
calculator	salt test kit
clear tape (contaminant tester)	slings psychrometer
digital temperature gun	coating temperature probe
dry film thickness gauge	thermometers
holiday detector	viscosity cup
humidity meter	wet mil gauge
lead test kit	yard stick
measuring cup	

Access Equipment and Rigging, Hoisting and Lifting Equipment

aerial platforms (boom and scissor lifts)	rigging components (straps, slings, chains and shackles)
beam rollers	rolling scaffolds
boatswain's chair	stationary scaffolds
ladder jacks	spider
ladders	stilts
mechanical scaffolds	swing stages
planks (aluminium, wood)	transfer chains
platforms	

Personal Protective Equipment (PPE) and Safety Equipment

air conditioners/heaters for fresh air hood	goggles
air purifiers	hard hat
blast-spray hood	knee pads
coveralls	latex gloves
ear plugs and muffs	dust masks
exhaust fan	respirators (vapour, particle)
eye wash facilities	rope grabs
face shields	safety glasses
fall arrest equipment	safety vest
fire blankets	self-contained breathing apparatus (SCBA)
fire extinguishers	signage
fire hoses	spill kits
first aid equipment	steel toed boots
fresh air hood	toe guards
fume and toxic gas detector	two-way radios
gloves	warning tapes

Specialty Wall Covering Tools

glue gun	shears/scissors
hypodermic needle/syringe	sled knives
paste brush	smoothing brush
paste machine	steam stripper
paste table	trimming wheels
perforator	vinyl table
plastic smoother	water trough/dams
seam roller	

Specialty Finishing Tools and Equipment

artistic brushes
badger blender
camel hair brush
check roller
dragger
fan brushes
fitch brushes
flogging brushes
gilding tip brushes
goose feathers
graining combs
mottling brushes

newspaper and plastic sheets
notched spreaders
piped overgrainer
pounce wheels
projectors
rocker grainer
sea sponges
stencil brush
stencil knife
stencils
stiplers
sword stripers

abrasive blasting	process used to clean a surface or create a profile with abrasive media such as sand, steel shot, beads, glass, soda or walnut shells
acclimatize	bringing a product to ambient temperature before use
acrylic latex paint	water-thinned paint which employs synthetic acrylic resin as the majority of the binder
airless spraying	process of atomization of paint by forcing it through an orifice at high pressure; the effect is often aided by the vaporization of the solvents, especially if the paint has been previously heated
alkyd paint	paint which contains a synthetic alcohol-based resin; alkyd paint must be thinned and cleaned with solvent or paint thinner; it can be used in place of oil-based paints
alligatoring	paint film cracking that makes the surface look like alligator skin
angled sash brush	angled brush used for cutting-in
back priming	applying a coat of paint to the back of woodwork or exterior siding to prevent moisture from entering the wood and causing the grain to swell or wood to warp
backing rod	foam plastic rod inserted in a joint to be sealed to regulate the depth of sealant
bleach	product creating a chemical process to lighten wood finishes and/or to create a uniform colour of wood
blistering	forming of bubbles or pimples on the painted surface; blistering is caused by moisture in the substrate, by paint having been applied before the previous coat was dry, and by excessive heat during or after application
box	pouring two or more paints together to mix in order to achieve a consistent colour and viscosity
broad knife	flexible bladed knife used to apply fillers
catalyst	additive added to base to chemically activate the paint or coating for the purpose of curing

checking	kind of paint failure in which many small cracks appear on the surface of the paint
corner bead	metal, paper or plastic covering protecting and reinforcing corners of drywall
cracking	splitting of a dry paint or varnish film, usually a result of aging or movement of the substrate; different forms are hair-line cracking, checking, crazing, grain cracking, or alligating
draw down	sample panel created by applying paint being used in order to visualize finished product for comparison and approval
drier	paint ingredient that aids the drying or hardening of the film
efflorescence	deposit of salts that remains on the surface of masonry, brick or plaster when water has evaporated
eggshell	gloss range between flat and semi-gloss; sheen closely resembles the lustre of an eggshell; note that eggshell is a degree of gloss, not a colour
elastomeric	flexible high performance coating used to bridge fractures in concrete or stucco
electrostatic spraying	paint spraying process using electrically charged particles in the paint and a grounded substrate to significantly reduce overspray
emulsion	preparation where minute particles of one liquid such as oil are suspended in another such as water; used for poly-mix paint in spraying techniques
enamel	paint that forms an especially smooth, hard film; enamels may be obtained in a full range of glosses and can be either latex, alkyd or oil
epoxy	product made from synthetic resin derived from petroleum; epoxies, which are generally cured by catalysts, are perhaps the most durable of all coatings
etching	to wear away or roughen a substrate with an acid or other chemical agent or with a fine abrasive prior to painting to increase adhesion
faux finish	technique used to change surfaces into appearing to be of a different material; for instance, to make a wall look like granite, marble or a wood grain
feathering	process used to blend a small area into its surroundings after spot-priming, applying filler or sanding off edges of old paint

filler	ready-mixed paste or powder used for repairing small holes and cracks in the surface to be painted
film thickness	depth or thickness of the dry coating in millimetres
fire retardant	coating which will reduce flame spread, resist ignition when exposed to high temperature, or insulate the substrate and delay damage to the substrate
fish eyes	paint film defect caused by contaminants such as oil or water deposits
flash point	temperature at which a coating or solvent produces vapours that are capable of being ignited
flashing	paint film defect caused by inadequate coverage or uneven absorption
flat paint	paint with no gloss even when the surface is viewed from an angle; flat finish has even less gloss than an eggshell finish; flat paint is less durable than higher gloss paint
galvanic action	corrosion caused by dissimilar metals being in contact with each other
gilding	applying metal leaf (gold, palladium, brass, aluminium) for decorative effects
glaze	transparent or translucent coatings applied over a painted surface to produce blended effects of their colours
gloss	ability of the finished surface to reflect light in a mirror-like manner; the higher the gloss, the more scrubbable and durable the finish; degrees of gloss include flat, velvet, eggshell, low lustre, semi-gloss and high gloss
graining	simulating the grain of wood by means of specially prepared colours or stains and the use of graining tools or special brushing techniques
grout	fluid mortar mixture consisting of cement and water with or without aggregate
hoarding	tall screen or fence used to screen off and contain a construction site or work area
holiday tester	specialty tool used to detect pinholes and flaws in coatings on conductive substrates
honeycomb (bug holes)	concrete that, due to lack of the proper amount of fines or vibration, contains abundant interconnected voids or cavities

hot spots	incompletely cured lime spots that bleed through the coating on a plastered wall
induction time	time interval that must elapse after mixing the components of a multi-component paint before application can begin; also known as sweat-in time
intumescent coating	fire retardant coating which, when heated, becomes plastic and produces non-flammable gasses, such as carbon dioxide and ammonia; the gasses are trapped by the film, converting it to an expanding foam; at this stage, the film solidifies, resulting in a thick, highly insulating layer of carbon, which effectively protects the substrate from fire
knock-down	a technique used to flatten the top of textured finishes for a unique look
lacquer	clear or pigmented coating that dries quickly by evaporation of solvent; transparent protective film; can be matte, eggshell or gloss
latex	water-based paint product; latex has more permeability than oils and it eliminates odour and dangers associated with organic solvents; latex is fast-drying, has good colour retention, is more resistant to blistering and cleans up easily
lifting	raising and lifting of the surface as a result of the softening and penetration of a previous film by solvents in the paint being applied over it
“maintain a wet edge”	process of stroking or rolling the paint from dry areas back into wet areas to ensure a coat of paint always blends back into itself
marbling	technique used on surfaces to give appearance of marble
masonry	mineral-based building material such as cement, mortar, stone, brick and stucco
mildewcide	chemical agent, often included in exterior paints and caulks, that discourages mildew growth on the paint surface
mill scale	coating on new steel created by the hot roll process; after weathering, it appears flaky and scaly; must be removed before applying coating
muriatic acid	chemical used to etch and neutralize concrete substrates prior to applying paints and coatings; it is a diluted solution of hydrochloric acid
oil paint	paint which is oil-based and can be diluted with solvent; paint that contains drying oil, oil varnish or oil-modified resin as the film-forming ingredient

orange peel	film having the texture of an orange
peeling	detachment of paint from the surface in ribbons or sheets; like flaking, it is the result of loss of adhesion and film integrity; peeling can be intercoat, or down to the substrate
pigment	finely ground, natural or synthetic, inorganic or organic, insoluble dispersed particles (powder) which, when dispersed in a liquid vehicle to make paint, may provide, in addition to colour, many of the essential properties of the paint: opacity, hardness, durability, and corrosion resistance; the term is used to include extenders, as well as white or colour pigments; the distinction between powders which are pigments and those which are dyes is generally considered to be on the basis of solubility: pigments being insoluble and dispersed in the material, dyes being soluble or in solution when used
plural component coating	coating that is applied using a method that proportions and mixes two or more components of a paint material in the process of delivering them to a spray gun
polyurethane	coatings ranging from hard glossy enamels to soft, flexible coatings; with thorough surface preparation, polyurethanes provide good to very good adhesion, hardness, flexibility and resistance to UV damage
pot life	period during which a catalyzed paint can be applied after it has been mixed
primer	coating applied to a substrate for the purpose of sealing, adhesion of subsequent coats, and corrosion control
primer sealer	priming system that minimizes or prevents the penetration of coats into the substrate
putty knife	flat-bladed, narrow metal tool for filling cracks and holes
rag-rolling	method of producing decorative, broken-colour effects by rolling a piece of crumpled fabric or paper over the wet surface
recoat time	minimum and/or maximum period of time between applications of coats of paint
reinforcing mesh	mesh used to reinforce surface by being embedded in paint or coatings
resin	natural or synthetic material that is the main ingredient of paint; it binds the ingredients together and improves the coat's adhesion to the surface

runs and sags	blemishes on the film caused by excessive flow of the coating, applying too heavy a coat of paint or thinning the paint too much
satin finish	gloss range between eggshell and semi-gloss
sealer	coating used to prevent excessive absorption of subsequent coats into a porous surface or to prevent stains from bleeding out of the substrate
seam roller	small wooden or plastic roller for use on wallpaper edges
semi-gloss	degree of gloss that is glossier than low lustre but not as glossy as high gloss
shellac	natural resin, usually in the form of thin flakes, derived from a resinous substance called lac; shellac is used to seal and finish floors, knots, etc.
size	liquid composition that prevents excessive absorption of paint or wallpaper adhesive into plaster, wallboard, or a similar porous interior surface
sling psychrometer	tool that accurately determines relative humidity
solvent	any liquid that can dissolve a resin; generally refers to the liquid portion of paints and coatings that lowers the viscosity of paints and coatings and evaporates as the paint and coating dries
spackling compound	powder mixed with water or ready-mix compound that is primarily used to fill large cracks in walls; it dries hard and can be sanded and painted, but does not tolerate much movement in the substrate
spalling	cracking, breaking or splintering of concrete and masonry surfaces usually due to heat
spot-priming	application of primer to spots that require additional protection or repair
stain coating	solution designed to colour a surface (wood or concrete) without hiding it; solid colour and latex stains are available; stains may be latex or oil-based
stripper	chemical compound in gel or liquid form used to remove old or damaged paint
substrate	surface that is being painted, coated, blasted, etc.
synthetic brush	paint brush with filaments that are made from a non-absorbent plastic material such as polyester or nylon, rather than animal hair; synthetic brushes are usually used for latex paint

thinner	liquid used to adjust viscosity or to modify other properties of paint, varnish and lacquer; thinner is used to thin and clean up paint
tri-sodium phosphate (TSP)	cleaning agent; after the TSP has been dissolved in water, the solution is used in surface preparation; TSP is used to remove gloss, dirt and grease from surfaces
undercoat	coat of paint applied beneath the topcoat
urethane	product resulting in a tough, chemical-resistant finish
varnish	clear finish in either matte, gloss or satin finish; broadly speaking, a translucent liquid which, when applied to a surface in a thin film, dries to a hard and more or less transparent finish
viscosity	degree of resistance to flow of paint, varnish, or other liquids; viscosity is often referred to as consistency; the higher the viscosity, the thicker the fluid; the lower the viscosity, the thinner the fluid
volatile organic compound (VOC)	hazardous additive in paint; any carbon compound that evaporates under standard test conditions; essentially, all paint solvents except water are VOCs
wet edge time	length of time during which a paint can be brushed before it becomes too dry to flow out and blend together
wood filler	filler for wood repairs
wood graining	paint effect used to imitate the grain of real wood
wood veneer	very thin sheet of finely grained or coloured woods used to decorate panels on doors and wainscoting, and to form bands or other patterns, which is a form of inlay, and also for covering the whole surface of more common or stronger woods

FRP	Fibre-reinforced Plastic
HVLP	High Volume Low Pressure
ISO	International Standards Organization
JSA	Job Safety Analysis
MSDS	Material Safety Data Sheet
NACE	National Association of Corrosion Engineers
OH&S	Occupational Health and Safety
PPE	Personal Protective Equipment
SSPC	Society for Protective Coatings
T&M	Time and Materials
TDG	Transportation of Dangerous Goods
TSP	Tri-Sodium Phosphate
VOC	Volatile Organic Compound
WHMIS	Workplace Hazardous Materials Information System

APPENDIX D

BLOCK AND TASK WEIGHTING

BLOCK A COMMON OCCUPATIONAL SKILLS

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	National Average
%	20	20	NV	12	15	25	30	30	25	20	NV	NV	NV	22%

Task 1 Performs safety-related functions.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	21%
%	20	20	NV	22	20	35	20	10	20	20	NV	NV	NV	

Task 2 Uses and maintains tools and equipment.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	30%
%	40	20	NV	34	20	25	30	30	40	30	NV	NV	NV	

Task 3 Performs routine trade practices.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	25%
%	20	40	NV	27	10	20	20	40	30	20	NV	NV	NV	

Task 4 Performs quality control assessments.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	24%
%	20	20	NV	17	50	20	30	20	10	30	NV	NV	NV	

BLOCK B SURFACE PREPARATION

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	National Average
%	45	20	NV	23	35	25	30	23	25	30	NV	NV	NV	28%

Task 5 Performs general surface preparation.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	30%
%	25	20	NV	20	30	30	20	35	50	45	NV	NV	NV	

Task 6	Prepares wood surfaces for paints, coatings and wall coverings.		
	<u>NL</u> <u>NS</u> <u>PE</u> <u>NB</u> <u>QC</u> <u>ON</u> <u>MB</u> <u>SK</u> <u>AB</u> <u>BC</u> <u>NT</u> <u>YT</u> <u>NU</u>		
%	25 20 NV 18 15 20 20 10 10 15 NV NV NV	17%	
Task 7	Prepares concrete and masonry surfaces.		
	<u>NL</u> <u>NS</u> <u>PE</u> <u>NB</u> <u>QC</u> <u>ON</u> <u>MB</u> <u>SK</u> <u>AB</u> <u>BC</u> <u>NT</u> <u>YT</u> <u>NU</u>		
%	5 20 NV 19 15 15 20 15 15 10 NV NV NV	15%	
Task 8	Prepares metal surfaces.		
	<u>NL</u> <u>NS</u> <u>PE</u> <u>NB</u> <u>QC</u> <u>ON</u> <u>MB</u> <u>SK</u> <u>AB</u> <u>BC</u> <u>NT</u> <u>YT</u> <u>NU</u>		
%	5 20 NV 23 15 15 20 15 10 20 NV NV NV	16%	
Task 9	Prepares plaster surfaces and drywall.		
	<u>NL</u> <u>NS</u> <u>PE</u> <u>NB</u> <u>QC</u> <u>ON</u> <u>MB</u> <u>SK</u> <u>AB</u> <u>BC</u> <u>NT</u> <u>YT</u> <u>NU</u>		
%	40 20 NV 20 25 20 20 25 15 10 NV NV NV	22%	

BLOCK C RESIDENTIAL, INSTITUTIONAL AND COMMERCIAL PAINTS AND COATINGS

<u>NL</u> <u>NS</u> <u>PE</u> <u>NB</u> <u>QC</u> <u>ON</u> <u>MB</u> <u>SK</u> <u>AB</u> <u>BC</u> <u>NT</u> <u>YT</u> <u>NU</u>	National Average
% 20 20 NV 21 25 25 10 20 20 20 NV NV NV	20%

Task 10	Prepares for application of residential, institutional and commercial paints and coatings.		
	<u>NL</u> <u>NS</u> <u>PE</u> <u>NB</u> <u>QC</u> <u>ON</u> <u>MB</u> <u>SK</u> <u>AB</u> <u>BC</u> <u>NT</u> <u>YT</u> <u>NU</u>		
%	30 40 NV 45 45 40 40 20 50 15 NV NV NV	36%	
Task 11	Applies residential, institutional and commercial paints and coatings.		
	<u>NL</u> <u>NS</u> <u>PE</u> <u>NB</u> <u>QC</u> <u>ON</u> <u>MB</u> <u>SK</u> <u>AB</u> <u>BC</u> <u>NT</u> <u>YT</u> <u>NU</u>		
%	60 40 NV 44 45 40 40 45 30 60 NV NV NV	45%	
Task 12	Applies decorative/specialty finishes.		
	<u>NL</u> <u>NS</u> <u>PE</u> <u>NB</u> <u>QC</u> <u>ON</u> <u>MB</u> <u>SK</u> <u>AB</u> <u>BC</u> <u>NT</u> <u>YT</u> <u>NU</u>		
%	10 20 NV 11 10 20 20 35 20 25 NV NV NV	19%	

BLOCK D WALL COVERINGS

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	National Average
%	5	8	NV	7	5	10	10	10	10	10	NV	NV	NV	8%

Task 13 Prepares for application of wall coverings.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	43%
%	40	50	NV	50	50	40	50	45	30	30	NV	NV	NV	

Task 14 Applies wall coverings.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	57%
%	60	50	NV	50	50	60	50	55	70	70	NV	NV	NV	

BLOCK E WOOD FINISHES

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	National Average
%	5	10	NV	11	5	15	10	10	10	10	NV	NV	NV	10%

Task 15 Prepares for wood finishing applications.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	54%
%	50	50	NV	53	40	50	50	65	65	60	NV	NV	NV	

Task 16 Finishes wood surfaces.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	46%
%	50	50	NV	47	60	50	50	35	35	40	NV	NV	NV	

BLOCK F INDUSTRIAL PAINTS AND COATINGS

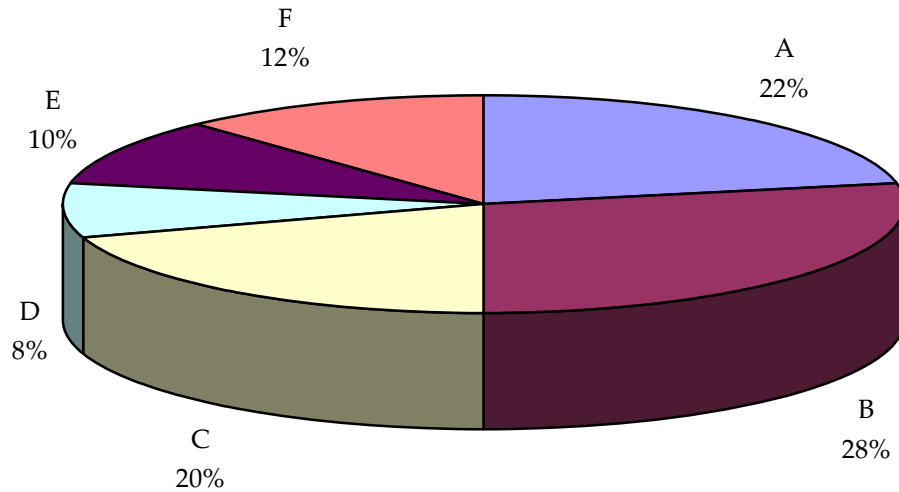
	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	National Average
%	5	22	NV	26	15	0	10	7	10	10	NV	NV	NV	12%

Task 17 Prepares for application of industrial paints and coatings.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	49%
%	60	50	NV	50	40	0	60	65	30	40	NV	NV	NV	

Task 18 Applies industrial paints and coatings.

	<u>NL</u>	<u>NS</u>	<u>PE</u>	<u>NB</u>	<u>QC</u>	<u>ON</u>	<u>MB</u>	<u>SK</u>	<u>AB</u>	<u>BC</u>	<u>NT</u>	<u>YT</u>	<u>NU</u>	51%
%	40	50	NV	50	60	0	40	35	70	60	NV	NV	NV	



TITLES OF BLOCKS

BLOCK A	Common Occupational Skills	BLOCK D	Wall Coverings
BLOCK B	Surface Preparation	BLOCK E	Wood Finishes
BLOCK C	Residential, Institutional and Commercial Paints and Coatings	BLOCK F	Industrial Paints and Coatings

*Average percentage of the total number of questions on an interprovincial examination, assigned to assess each block of the analysis, as derived from the collective input from workers within the occupation from all areas of Canada. Interprovincial examinations typically have from 100 to 150 multiple-choice questions.

APPENDIX F

TASK PROFILE CHART — Painter and Decorator

BLOCKS	TASKS	SUB-TASKS				
A - COMMON OCCUPATIONAL SKILLS	1. Performs safety-related functions.	1.01 Uses personal protective equipment (PPE) and safety equipment.	1.02 Maintains safe work environment.			
	2. Uses and maintains tools and equipment.	2.01 Maintains tools and equipment.	2.02 Uses rigging, hoisting and lifting equipment.	2.03 Uses access equipment.		
	3. Performs routine trade practices.	3.01 Uses documentation.	3.02 Determines project requirements.	3.03 Plans job.	3.04 Protects surroundings.	3.05 Handles materials.
	4. Performs quality control assessments.	4.01 Assesses substrate conditions and deficiencies.	4.02 Assesses product conditions and deficiencies.	4.03 Assesses quality of painted or coated surfaces and wall coverings.		
B - SURFACE PREPARATION	5. Performs general surface preparation.	5.01 Removes existing paints and coatings.	5.02 Removes existing wall coverings and adhesives.	5.03 Cleans surfaces.	5.04 Primes surfaces.	5.05 Sands surfaces.
		5.06 Applies caulking.				
	6. Prepares wood surfaces for paints, coatings and wall coverings.	6.01 Treats wood surfaces.	6.02 Repairs imperfections in wood.			
7. Prepares concrete and masonry surfaces.	7.01 Mechanically treats concrete and masonry surfaces.	7.02 Chemically treats concrete and masonry surfaces.	7.03 Repairs concrete and masonry surfaces.			

BLOCKS

TASKS

SUB-TASKS

**C - RESIDENTIAL,
INSTITUTIONAL
AND COMMERCIAL
PAINTS AND
COATINGS**

8. Prepares metal surfaces.

8.01 Treats metal surfaces.

8.02 Repairs metal surfaces.

9. Prepares plaster surfaces and drywall.

9.01 Repairs existing plaster surfaces and drywall.

9.02 Finishes new drywall.

10. Prepares for application of residential, institutional and commercial paints and coatings.

10.01 Prepares residential, institutional and commercial paints and coatings.

10.02 Installs residential, institutional and commercial reinforcing mesh.

11. Applies residential, institutional and commercial paints and coatings.

11.01 Applies residential, institutional and commercial paints and coatings with brushes.

11.02 Applies residential, institutional and commercial paints and coatings with rollers.

11.03 Applies residential, institutional and commercial paints and coatings with applicators. (NOT COMMON CORE)

11.04 Applies residential, institutional and commercial paints and coatings with spray equipment.

12. Applies decorative/specialty finishes.

12.01 Applies paints and coatings using decorative techniques.

12.02 Creates faux finishes.

12.03 Applies gilding.

12.04 Applies stencils and graphics.

12.05 Creates textured finishes.

12.06 Applies multi-spec coatings.

D - WALL COVERINGS

13. Prepares for application of wall coverings.

13.01 Treats surfaces for wall coverings.

13.02 Lays out surface.

13.03 Prepares wall coverings.

14. Applies wall coverings.

14.01 Applies adhesives.

14.02 Installs vinyl wall coverings.

14.03 Installs fabric and natural material wall coverings.

14.04 Installs rigid wall coverings.

14.05 Repairs existing wall coverings.

E - WOOD FINISHES

15. Prepares for wood finishing applications.

15.01 Conditions wood surfaces.

15.02 Applies wood fillers.

15.03 Seals wood surfaces.

15.04 Prepares wood finishing products.

BLOCKS

TASKS

SUB-TASKS

**F - INDUSTRIAL
PAINTS AND
COATINGS**

16. Finishes wood surfaces.

16.01 Brushes on wood finishes.

16.02 Wipes on wood finishes.

16.03 Sprays on wood finishes.

17. Prepares for application of industrial paints and coatings.

17.01 Prepares industrial paints and coatings.

17.02 Installs fibre reinforced plastics (FRP).

18. Applies industrial paints and coatings.

18.01 Applies industrial paints and coatings with hand tools.

18.02 Applies industrial paints and coatings with power tools.