



# Skills for Employment Investment Program (SEIP)

# COMPETENCY-BASED LEARNING MATERIAL (FACULTY GUIDE)

**FOR** 

**PAINTING** 

(CONSTRUCTION SECTOR)

Finance Division, Ministry of Finance
Government of the People's Republic of Bangladesh

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#### Copyright

The Competency-based Learning Material (Faculty Guide) for Painting is a document, aligned to its applicable competency standard, for providing training consistent with the requirements of industry in order for individuals who graduated through the established standard via competency-based assessment to be suitably qualified for a relevant job.

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#### **Approval Sheet**

Identification and validation of modules and content for this occupation were made by experts within this sector. A series of consultations were held to accurately capture industry and employer needs and expectations and develop the learning material that would help to enhance the employability of the youth trained. This process started on 6 May 2018 and concluded with a validation workshop with a sectoral working group on 13 August 2018.

#### **Experts Involved**

Industry and subject-matter experts who provided their valuable inputs to develop this competency-based learning material [May 2018 - August 2018]:

Name	Organisation	Designation
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#### **Validation Workshop**

Competency-based learning material validation workshop participants [held on 13 August 2018]:

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#### **Committee Workshop**

The National competency-based learning material for National Skills Certificate in Painting, **NTVQF Level** [INSERT LEVEL] qualification is a document developed by the Skill for Employment Investment Programme (SEIP), Finance Division, Ministry of Finance. This competency-based learning material has been developed by an industry expert group under guidance of SEIP. The competency-based learning material was approved by the SCDC [BTEB to insert date] at NTVQF Cell, BTEB.

#### Respectable members of the SCDC:

Painting - Level [INSERT LEVEL]				

#### How to Use this Competency-based Learning Material

Welcome to the competency-based learning material for Painting for use in construction works. These modules contain training materials and activities for learners to complete in order to become competent and qualified as a skilled worker.

There are <u>eight (8) modules</u> that make up this course which comprises the skills, knowledge and attitudes required to become a skilled worker including:

- 1. Perform distempering
- 2. Perform plastic emulsion painting
- 3. Perform synthetic enamel painting
- 4. Perform weather coat painting
- 5. Perform concrete painting
- 6. Perform spray painting
- 7. Perform varnishing
- 8. Perform estimate for painting works

As a trainer, you are required to guide the learners through a series of activities in order to complete each learning outcome of the module. These activities may be completed as part of structured classroom activities or they may be required to work at their own pace.

These activities will require the learners to complete associated learning and practice activities in order to gain knowledge and skills they need to achieve the learning outcomes. Refer to **Learning Activity Page of each module** to know the sequence of learning tasks and the appropriate resources to use for each task.

This page will serve as the road map towards the achievement of competence. If you read the **Information Sheets**, these will give you an understanding of the work, and why things are done the way they are. Once the learners have finished reading the Information Sheets, they are required to complete the questions in the **Self-Check Sheets**.

The self-check process follows the Information Sheets in the learning guide. Completing self-checks will help the learners know how they are progressing. To know how they fared with self-checks, they can review the **Answer Key**.

The learners are required to complete all activities as directed in the **Job Sheet**. This is where they will apply their newly acquired knowledge while developing new skills. When working, high emphasis should be laid on safety requirements. The learners should be encouraged to raise relevant queries or ask the facilitator for assistance as required.

When the learners have completed all the tasks required in the learning guide, an assessment event will be scheduled to evaluate if they have achieved competency of the specified learning outcomes and are ready for the next task.

#### **Introduction to Teaching Adult Learners**

Since you will be dealing with adult learners, it is important to understand the basic principles of adult learning and methodologies. Adults learn best through associations, experiences and application. A few facts to consider while teaching adult learners:

**Discussion:** Adult learning is best managed through mutual dialogue and discussion. Discussion needs to be encouraged and used in the classroom to maximise learning.

**Associations**: Adults have experiences which can be related to any learning objectives to create associations which enhance conceptual comprehension. Associations can be used to create user interest and gain attention. Adults learn new attitudes or skills best in relation to previous life experiences.



This strategy also ensures knowledge retention.

Create an environment conducive to learning and sharing: Make people feel comfortable talking to you and each other. They should feel at ease asking questions, sharing views even if they are not very sure of the efficacy of their suggestions or views.

**Physical surroundings:** Temperature, light, space and furniture should be optimal. There should be no distractions.

**Inculcate respect**: Encourage learners' contributions and experiences. People are more encouraged to learn and share when their experiences are acknowledged - new information builds easily on past knowledge and experience.

**Reward and recognition:** Acknowledging the efforts of people, even small attempts, can reap great benefits. Learners like to receive praise and positive encouragement, which motivates them to deliver their best

Learners also like to be reassured that they are correctly recalling or using information they have absorbed in the classroom.

Structured teaching: Learners study faster when information or skills are presented in a structured way:

- Concepts to be taught in small, bite sized portions for easy assimilation
- Put forth the easiest ideas or skills first and then gradually build on them
- Bring in the important ideas first
- Reinforce key ideas at regular intervals
- Reinforce high order concepts at regular intervals

**Move learner from generic to specific flow of information**: Introduce the generic concepts first and then move to specific more complex information to ease understanding and comprehension.

**Application of concepts/ideas taught**: Help students put into practice the concepts taught in the class through exercises and work-based projects. Application ensures knowledge retention and skill building.

**Relevance building:** Build up relevance of the concepts being taught in class by relating them to day-to-day life and workplace experiences.

Learners should know to use and apply what they have learned in the classroom as they learn faster when they recognise that what they are learning will be useful in the future.

**Sharing:** Encourage learners to learn from each other and solve problems collectively. This makes learning easier and improves team spirit and the interpersonal skills of the learners.

**Participation**: Involve learners in the class - adults favour to be *active participants* in learning rather than passive receivers of knowledge. People learn faster when they actively process information, solve problems and practice skills.

**Motivate:** Inspire the class so that teaching does not become a one-way process of knowledge download. Learners will learn faster when they feel an inner urge to learn and be an active participant in the class.

Create a learning environment in which the learners feel free and able to shed their inhibitions and develop receptivity towards new ideas and concepts.

Students will have different motivation levels - some will be more eager to learn than others as each leaner is different from the other and therefore need to be treated differently.

And remember - adapt your communication style to suit the needs of the audience.

**Communicate effectively:** Communicate in a manner that is understood by the class. The language and sentence structuring should be clear and succinct.

Technical concepts should be explained in a manner that de-mystifies the concept - make things simple and easy to understand.

Avoid using *too much* technical jargon - if it is part of the curriculum, ensure the class is first made familiar with the words or jargon used.

Assessments: Conduct skill and knowledge checks regularly:

- Reinforce high order concepts at regular intervals.
- Conduct formative and summative assessments.
- Strengthen areas which appear to be weak.

#### Regular feedback:

- Provide regular feedback to learners
- Help them identify their strengths and areas of improvement
- Feedback should always be constructive
- Timely and specific feedback is easier to accept and act on



#### **List of Icons**

Icon Name	Icon
Module content	
Learning outcomes	
Performance criteria	
Contents	
Assessment criteria	A <sup>+</sup>
Resources required	
Information sheet	
Self-check Quiz	?
Answer key	
Activity	Activity
Video reference	*
Learner job sheet	
Assessment plan	
Review of competency	

#### **Module 1: Perform distempering**

Module Descriptor:	This module covers the skills, knowledge and attitudes to perform distempering for painting in construction which includes checking tools, equipment and materials, preparing surface, applying base materials, performing distempering, and cleaning tools, equipment and the workplace.		
Nominal Duration:	38 ho	urs	
Learning Outcomes:	1.1.	Check tools, equipment and materials	
	1.2.	Prepare surface	
	1.3.	Apply base materials	
	1.4.	Perform distempering	
	1.5.	Clean tools, equipment and workplace	
Performance Criteria:	1.1.	Tools and equipment are selected, collected and checked for usability	
	1.2.	Materials are selected, collected and checked in accordance with workplace requirement	
	1.3.	Personal protective equipment (PPE) is selected and used as per requirements	
	1.4.	Surface is brushed thoroughly and scales, grease, dirt are removed as per standard procedure	
	1.5.	Holes in plaster are filled in with plaster of Paris mixed with colour	
	1.6.	Surface is rubbed down with fine grade sand paper to make it smooth	
	1.7.	Patched is applied before applying regular coat of distemper	
	1.8.	Appropriate ratio of base materials is maintained	
	1.9.	Horizontal or vertical coating of base materials is applied from top to bottom or vice-versa	
	1.10.	Base materials are prepared and applied as per requirement	
	1.11.	Distemper materials are mixed with water as per requirement	
	1.12.	Horizontal or vertical coating of distemper is applied from top to bottom or vice-versa	
	1.13.	Second coating is then applied after the previous coating or surface is dried off properly	
	1.14.	Final coating is applied up to get well finishing	
	1.15.	Quality of distemper is checked and rectified (as required)	
	1.16.	Tools and equipment are cleaned	
	1.17.	Workplace is cleaned	
	1.18.	Waste materials are disposed of	



## **Learning Outcome 1.1 - Check Tools, Equipment and Materials**

Contents:	<ul> <li>Collect and check personal protective equipment (PPE), tools and equipment</li> <li>Prepare personal protective equipment (PPE), tools and equipment</li> <li>Collect and check materials</li> </ul>				
Resources Required:	<ul> <li>Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush, sand paper (fine), pumice stone</li> <li>Materials: chalk powder, water, gum, sealer, distemper</li> </ul>				
Learning Activities:	Activity Resource Student Guide Page				
	1.1.1	Information Sheet 1.1.1 Self-Check Quiz 1.1.1 Answer Key 1.1.1 <a href="https://en.wikipedia.org/wiki/Paintbrush">https://en.wikipedia.org/wiki/Paintbrush</a>	8 10 26		
	1.1.2	.2 Information Sheet 1.1.2 10 Self-Check Quiz 1.1.2 11 Answer Key 1.1.2 20 <a href="https://en.wikipedia.org/wiki/Paintbrush">https://en.wikipedia.org/wiki/Paintbrush</a>			
Assessment Criteria:	<ul> <li>Tools and equipment are selected and collected</li> <li>Tools and equipment are checked for usability</li> <li>Materials are selected and collected</li> <li>Materials are checked in accordance with job requirements</li> </ul>				



# **Learning Outcome 1.2 - Prepare Surface**

Contents:  Resources Required:	<ul> <li>Personal protective equipment (PPE): functions/uses</li> <li>Surface: preparation of plastered masonry and concrete surface</li> <li>Materials: sand paper, plaster of Paris</li> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Tools and equipment: scraper, spatula, rags, lifeline and anchorage, steel wire brush, sand paper (fine), pumice stone</li> </ul>		
Learning Activities:	Activity	Resource	Student Guide Page
	1.2.1	Information Sheet 1.2.1 Self-Check Quiz 1.2.1 Answer Key 1.2.1 https://www.rustoleum.com/pages/industrial/resources//surface-preparation-guide/ Information Sheet 1.2.2 Self-Check Quiz 1.2.2 Answer Key 1.2.2 https://www.rustoleum.com/pages/industrial/resources//surface-preparation-guide/	13 14 26 14 15 26
Assessment Criteria:	<ul> <li>Personal protective equipment (PPE) is selected and used</li> <li>Surface is brushed thoroughly to make it free from mortar droppings</li> <li>Scales, grease, dirt are removed from an old surface</li> <li>Holes in plaster are filled in with plaster of Paris mixed with colour</li> <li>Surface is rubbed down with fine grade sand paper to make it smooth</li> <li>Patched is applied before applying regular coat of distemper</li> </ul>		



## **Learning Outcome 1.3 - Apply Base Materials**

Contents:	<ul><li>Base materials: ratio</li><li>Coating procedure: horizontal and vertical coat</li></ul>		
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush, sand paper (fine), pumice stone</li> <li>Materials: base materials for painting</li> </ul>		
Learning Activities:	Activity	Resource	Student Guide Page
	1.3.1	Information Sheet 1.3.1 Self-Check Quiz 1.3.1 Answer Key 1.3.1	16 17 26
Assessment Criteria:	<ul> <li>Horizontal or vertical coating of mixed materials is applied on the working surface from top to the bottom or vice-versa</li> <li>Base materials are prepared as requirement</li> </ul>		



# **Learning Outcome 1.4 - Perform Distempering**

Contents:	<ul> <li>Distemper</li> </ul>			
	<ul><li>Quali</li></ul>	<ul> <li>Quality of distemper</li> </ul>		
	<ul><li>Coati</li></ul>	ng procedure		
Resources Required:	shoes • Tools	shoes, hard hat, belt/body harness, goggles, working clothes, apron		
		putty knife, lifeline and anchorage, roller brush, stee paper (fine), pumice stone	el wire brush,	
	<ul><li>Mate</li></ul>	rials: chalk powder, water, gum, sealer, distemper		
Learning Activities:	Activity	Resource	Student Guide Page	
	1.4.1	Information Sheet 1.4.1	19	
		Job Sheet 1	21	
		Self-Check Quiz 1.4.1	22	
		Answer Key 1.4.1	26	
		https://gharpedia.com/4-simple-steps-for-application-of-distemper-paint/		
		https://www.wikihow.com/Paint-a-Wall		
Assessment Criteria:	Distemper materials are mixed with water as requirement			
	<ul> <li>Horizontal or vertical coating is thoroughly applied on the working surface from top to the bottom carefully or vice-versa</li> </ul>			
	<ul> <li>Vertical or horizontal coating is then applied after the previous coating or surface is dried off properly or vice versa</li> </ul>			
	<ul> <li>Another coating should be applied up to get well finishing</li> </ul>			
	<ul><li>Quali</li></ul>			



# **Learning Outcome 1.5 - Clean Tools, Equipment and Workplace**

Contents:	<ul> <li>Importance and necessity of cleaning tools, equipment and workplace</li> <li>Methods of cleaning, tools and equipment required for cleaning</li> <li>Display and/or storing of tools and equipment used</li> </ul>				
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Cleaning tools and equipment: brooms, dusters, dust pans, cleaning brushes, mops, waste containers and cotton rags</li> <li>Materials: water, detergents, abrasives, bleaches</li> </ul>				
Learning Activities:	Activity	Activity Resource Student Guide Page			
	1.5.1	Information Sheet 1.5.1	23		
	Self-Check Quiz 1.5.1 25				
		Answer Key 1.5.1 27			
		https://en.wikipedia.org/wiki/Cleaning_agent			
Assessment Criteria:	<ul> <li>Tools and equipment are cleaned</li> <li>Workplace is cleaned</li> <li>Waste materials are disposed in proper place</li> </ul>				

#### Module 2: Perform plastic emulsion painting

Module Descriptor:	This module covers the knowledge, skills and attitudes to perform plastic emulsion painting in construction which includes inspecting surface, collecting and checking tools, equipment and materials, preparing surface, applying plastic emulsion paint, and cleaning tools, equipment and the workplace.		
Nominal Duration:	40 ho	urs	
Learning Outcomes:	2.1.	Inspect surface	
	2.2.	Collect and check tools, equipment and materials	
	2.3.	Prepare surface	
	2.4.	Apply plastic emulsion paint	
	2.5.	Clean tools, equipment and workplace	
Performance Criteria:	2.1.	Surfaces are inspected/checked in conformance to required surface preparation requirements	
	2.2.	Surface quality is prepared in accordance with specified quality requirement	
	2.3.	Personal protective equipment (PPE) is selected and used as per requirements	
	2.4.	Tools and equipment are selected, collected and checked for usability	
	2.5.	Materials are selected and collected and checked in accordance with workplace requirements	
	2.6.	Surface is brushed thoroughly and scales, grease, dirt are removed as per standard procedure	
	2.7.	Holes in plaster are filled in with plaster of Paris mixed with colour	
	2.8.	Surface is rubbed down with fine grade sandpaper to make it smooth	
	2.9.	Patch is applied before applying plastic emulsion paint	
	2.10.	Properties of plastic emulsion paint are identified	
	2.11.	Methods and techniques of applying plastic emulsion paint are explained	
	2.12.	Advantages and disadvantages of plastic emulsion paints are described	
	2.13.	Application of plastic emulsion paint is carried out in accordance with workplace requirements	
	2.14.	Tools and equipment are cleaned	
	2.15.	Work place is cleaned	
	2.16.	Waste materials are disposed of	



## **Learning Outcome 2.1 - Inspect Surface**

Contents:	<ul><li>Surface quality</li><li>Important points for inspection of surface</li></ul>					
Resources Required:	shoes Tools rags,	shoes, hard hat, body harness, goggles, working clothes, apron				
Learning Activities:	Activity	Activity Resource Student Guide Page				
	2.1.1	2.1.1 Information Sheet 2.1.1 29				
		Self-Check Quiz 2.1.1				
		Answer Key 2.1.1	41			
		https://en.wikipedia.org/wiki/Paintbrush				
Assessment Criteria:	<ul> <li>Surfaces are inspected/checked in conformance with surface preparation requirements</li> <li>Surface quality is prepared in accordance with specified quality requirement</li> </ul>					



# **Learning Outcome 2.2 - Collect and Check Tools, Equipment and Materials**

Contents:  Resources Required:	equip Prepa Colle	equipment  Prepare personal protective equipment (PPE), tools and equipment  Collect and check materials			
Resources Required.	shoes	s, hard hat, belt/body harness, goggles, working s and equipment: paint brushes, scraper, spate	clothes, apron		
		putty knife, lifeline and anchorage, roller brush, paper (fine)	steel wire brush,		
	<ul><li>Mate</li></ul>	rials: plastic emulsion paint, water, sealer			
Learning Activities:	Activity Resource Student G				
	2.2.1	Information Sheet 2.2.1 <a href="https://en.wikipedia.org/wiki/Paintbrush">https://en.wikipedia.org/wiki/Paintbrush</a>	31		
	2.2.1 Information Sheet 2.2.2 32				
	2.2.1	Information Sheet 2.2.3	32		
		Self-Check Quiz 2.2.1	33		
		Answer Key 2.2.1	41		
Assessment Criteria:	<ul> <li>Personal protective equipment (PPE) is selected and used</li> <li>Tools and equipment are checked for usability/function ability</li> <li>Materials are selected and collected</li> <li>Materials are checked in accordance with work order requirement</li> </ul>				



## **Learning Outcome 2.3 - Prepare Surface**

Contents:	<ul> <li>Surface: plastered masonry and concrete surface</li> <li>Plaster of Paris</li> <li>Sandpaper</li> </ul>			
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, body harness, goggles, working clothes, apron</li> <li>Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush, sand paper (fine), pumice stone</li> </ul>			
	■ Mate	rials: sand paper, plaster of Paris		
Learning Activities:	Activity Resource Student Gu			
	2.3.1	Information Sheet 2.3.1	34	
		Self-Check Quiz 2.3.1	35	
		Answer Key 2.3.1	41	
		https://www.rustoleum.com/pages/industrial/resources//surface-preparation-guide/		
Assessment Criteria:	<ul> <li>Surface is brushed thoroughly to make it free from mortar droppings</li> <li>Scales, grease, dirt are removed from old surfaces</li> <li>Holes in plaster are filled in with plaster of Paris mixed with colour</li> <li>Surface is rubbed down with fine grade sandpaper to make it smooth</li> <li>Patched is applied before applying plastic emulsion paint</li> </ul>			



## **Learning Outcome 2.4 - Apply Plastic Emulsion Paint**

Comtonto	- D	antian of plantic annulaine point			
Contents:	•	erties of plastic emulsion paint			
	■ Meth	ods and techniques of applying plastic emulsion	paint		
	<ul><li>Adva</li></ul>	ntages and disadvantages of plastic emulsion pa	int		
Resources Required:	shoes	onal protective equipment (PPE): gloves, dust, hard hat, body harness, goggles, working clothes and equipment: paint brushes, scraper, spate	nes, apron		
	rags,	putty knife, lifeline and anchorage, roller brush, spaper (fine), pumice stone			
	<ul><li>Mate</li></ul>	rials: plastic emulsion paint			
Learning Activities:	Activity Resource Student Guid Page				
	2.4.1	Information Sheet 2.4.1	36		
		Job Sheet 2	38		
		Self-Check Quiz 2.4.1 39			
		Answer Key 2.4.1	41		
		www.quora.com/what-is-an-emulsion-paint- and-why-use-it-mainly-on-walls			
Assessment Criteria:	Properties of plastic emulsion paint is identified.				
	<ul> <li>Methods and techniques of applying plastic emulsion paint are explained.</li> </ul>				
	<ul> <li>Advantages and disadvantages of plastic emulsion paints are described.</li> </ul>				
		cation of plastic emulsion paint is carried out in place requirements	accordance with		



## **Learning Outcome 2.5 - Clean Tools, Equipment and Workplace**

Contents:	<ul> <li>Importance and necessity of cleaning tools, equipment and workplace</li> <li>Methods of cleaning, tools and equipment required for cleaning</li> <li>Display and/or storing of tools and equipment used</li> </ul>				
Resources Required:	shoes Clear brush	shoes, hard hat, belt/body harness, goggles, working clothes, apron  Cleaning tools and equipment: brooms, dusters, dust pans, cleaning brushes, mops, waste containers and cotton rags			
Learning Activities:	Activity Resource Student Guide Page				
	1.5.1	Information Sheet 1.5.1	23		
		Self-Check Quiz 1.5.1	25		
		Answer Key 1.5.1	27		
		https://en.wikipedia.org/wiki/Cleaning_agent			
Assessment Criteria:	<ul> <li>Tools and equipment are cleaned</li> <li>Workplace is cleaned</li> <li>Waste materials are disposed in proper place</li> </ul>				

#### Module 3: Perform synthetic enamel painting

Module Descriptor:	This module covers the skills, knowledge and attitudes to perform synthetic enamel painting in construction which includes collecting and checking tools, equipment and materials, preparing surfaces for synthetic enamel painting, applying putty and primer, performing synthetic enamel painting, and cleaning tools, equipment and the workplace.		
Nominal Duration:	40 ho	urs	
Learning Outcomes:	3.1.	Collect and check tools, equipment and materials	
	3.2.	Prepare surfaces for synthetic enamel painting	
	3.3.	Apply putty and primer	
	3.4.	Perform synthetic enamel painting	
	3.5.	Clean tools, equipment and workplace	
Performance Criteria:	3.1.	Personal protective equipment (PPE) are selected and used as per requirements	
	3.2.	Tools and equipment are selected, collected and checked for usability	
	3.3.	Materials are selected and collected and checked in accordance with work order requirements	
	3.4.	Old paint, scales, grease, dirt are removed from old surfaces following standard practice	
	3.5.	Surface is rubbed down with applicable sand paper grade to produce the required texture	
	3.6.	Primer material is mixed with thinner material in accordance with workplace requirements	
	3.7.	Recommended putty is applied into uneven surfaces in accordance with work instruction	
	3.8.	Primer is applied into the surface acting as preliminary coat in accordance with work instruction	
	3.9.	Properties of synthetic enamel paint are described	
	3.10.	Mixed synthetic enamel paint with thinner in accordance with work order requirements	
	3.11.	Perform synthetic enamel painting	
	3.12.	Synthetic enamel paint is applied using appropriate brush and/or roller following standard procedures	
	3.13.	Tools and equipment are cleaned	
	3.14.	Work place is cleaned	
	3.15.	Waste materials are disposed of	



# **Learning Outcome 3.1 - Collect and Check Tools, Equipment and Materials**

			,	
Contents:		ct and check personal protective equipment ( oment	PPE), tools and	
	■ Prepa	are personal protective equipment (PPE), tools a	nd equipment	
	■ Colle	ct and check materials		
Resources Required:		onal protective equipment (PPE): gloves, dust, hard hat, belt/body harness, goggles, working		
	■ Tools	s and equipment: paint brushes, scraper, spate	ula, mixing stick,	
		putty knife, lifeline and anchorage, roller brush, gun, air compressor	steel wire brush,	
		rials: synthetic enamel paint, primer paint,	thinner, putty.	
		paper	, рану,	
Learning Activities:	Activity	Resource	Student Guide	
	•		Page	
	3.1.1	Information Sheet 3.1.1	43	
		https://en.wikipedia.org/wiki/Paintbrush		
	3.1.1	Information Sheet 3.1.2	44	
	3.1.1	Information Sheet 3.1.3	44	
		Self-Check Quiz 3.1.1	45	
		Answer Key 3.1.1	57	
Assessment Criteria:	Personal protective equipment (PPE) is selected and used			
	Tools and equipment are checked for usability			
	Materials are selected and collected			
	<ul><li>Mate</li></ul>			



## **Learning Outcome 3.2 - Prepare Surface for Synthetic Enamel Paint**

Contents:	<ul> <li>Surface: plastered masonry, concrete surface, wooden surface and mild steel surface</li> <li>Sandpaper grade (grit): coarse grit, medium grit, fine grit</li> </ul>				
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush</li> <li>Materials: sandpaper</li> </ul>				
Learning Activities:	Activity	Activity Resource Student Guide Page			
	3.2.1	3.2.1 Information Sheet 3.2.1 46			
		Self-Check Quiz 3.2.1	47		
		Answer Key 3.2.1	57		
		https://www.rustoleum.com/pages/industrial/resources//surface-preparation-guide/			
Assessment Criteria:	Old paint, scales, grease and dirt are removed from old surfaces  Surface is rubbed down with applicable condensor grade to produce the				
		<ul> <li>Surface is rubbed down with applicable sandpaper grade to produce the required surface texture</li> </ul>			



## **Learning Outcome 3.3 - Apply Putty and Primer**

Contents:	■ How	How to mix paint/primer with thinner			
Contents.					
	• now	to apply putty			
Resources Required:		<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> </ul>			
	rags,	■ Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush, sand paper (fine), pumice stone			
	<ul><li>Mate</li></ul>	rials: base materials for painting, primer, putty			
Learning Activities:	Activity	Resource	Student Guide Page		
	3.3.1	Information Sheet 3.3.1	48		
		Self-Check Quiz 3.3.1	50		
		Answer Key 3.3.1	57		
		https://www.hunker.com/13413253/how-to-mix-primer-thinner			
Assessment Criteria:	<ul> <li>Paint/primer material is mixed with thinner material in accordance with workplace requirements</li> </ul>				
	<ul> <li>Recommended putty is applied into uneven surfaces in accordance with work instruction</li> </ul>				
		oved primer is applied to the surface acting as produce with work instruction	eliminary coat in		



# Learning Outcome 3.4 - Perform Synthetic Enamel Painting

Contents:  Resources Required:	<ul> <li>Properties of synthetic enamel paint.</li> <li>Synthetic enamel painting using brush, roller and spray gun</li> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush, sandpaper (fine), spray gun, air compressor</li> <li>Materials: primer, putty, synthetic enamel paint</li> </ul>				
Learning Activities:	Activity	Activity Resource Student Guide Page			
	3.4.1	Information Sheet: 3.4.1	52		
		Self-Check Quiz: 3.4.1	53		
		Job Sheet 3	54		
		Answer Key: 3.4.1	57		
		https://gharpedia.com/4-simple-steps-for-application-of-distemper-paint/ https://www.wikihow.com/Paint-a-Wall			
Assessment Criteria:	■ Prope	erties of synthetic enamel paint are described			
	<ul> <li>Mixed synthetic enamel paint with thinner material in accordance with workplace requirement</li> <li>Perform synthetic enamel painting</li> </ul>				
	<ul> <li>Synthetic enamel paint is applied using appropriate paint brush in accordance with workplace requirements</li> </ul>				
		netic enamel paint is applied using appropriated ance with workplace requirements	e paint roller in		
		netic enamel paint is applied using spray produce with workplace requirement	painting gun in		



## **Learning Outcome 3.5 - Clean Tools, Equipment and Workplace**

Contents:	<ul> <li>Importance and necessity of cleaning tools, equipment and workplace</li> <li>Methods of cleaning, tools and equipment required for cleaning</li> <li>Display and/or storing of tools and equipment used</li> </ul>		
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Cleaning tools and equipment: brooms, dusters, dust pans, cleaning brushes, mops, waste containers and cotton rags</li> <li>Materials: water, detergents, abrasives, bleaches</li> </ul>		
Learning Activities:	Activity	Resource	Student Guide Page
	1.5.1	Information Sheet 1.5.1	23
		Self-Check Quiz 1.5.1	25
		Answer Key 1.5.1	27
		https://en.wikipedia.org/wiki/Cleaning_agent	
Assessment Criteria:	■ Work	s and equipment are cleaned place is cleaned e materials are disposed in proper place	

#### Module 4: Perform weather coat painting

Module Descriptor:	This module covers the skills, knowledge and attitudes to perform weather coat painting in construction which includes collecting and checking tools, equipment and materials, installing scaffolding, preparing surface for painting, applying sealer, performing weather coat painting, and cleaning tools, equipment and the workplace.		
Nominal Duration:	40 hours		
Learning Outcomes:	4.1.	Collect and check tools, equipment and materials	
	4.2.	Install scaffolding	
	4.3.	Prepare surface for painting	
	4.4.	Apply sealer	
	4.5.	Perform weather coat painting	
	4.6.	Clean tools, equipment and workplace	
Performance Criteria:	4.1.	Personal protective equipment (PPE), tools and equipment and materials are selected, collected and checked for usability as per requirements	
	4.2.	Required type of scaffolding is confirmed and associated work tasks are identified	
	4.3.	Projected loading on scaffolding and supporting structure is determined based on local and international building codes and project specifications	
	4.4. Site/workplace access and egress routes are identified		
	4.5.	Scaffolding components are selected and inspected for damage; rejects are labelled and segregated	
	4.6.	Sole board/base plate is selected in accordance with relevant code rules and regulations and work requirements	
	4.7.	Installation of scaffolding is carried out in accordance with OHS requirements	
	4.8.	Scaffolding is set up/erected in accordance with work requirements and workplace rules and regulations	
	4.9.	Surface is brushed thoroughly to make it free from mortar droppings, soil and other foreign matters.	
	4.10.	Scales, grease, dirt are removed from old surfaces following standard practice	
	4.11.	Previously painted surface with cement paint should be wire brushed and washes with water	
	4.12.	Surface is rubbed down with suitable grade sand paper to make it smooth	
	4.13.	Recommended sealer is applied into uneven surfaces in accordance with work instruction	
	4.14.	Holes, cracks tears and open seams are filled with sealer in accordance with workplace requirements	

4.	.15.	Sealant is allowed to set and dried before coating with weather coat paint
4.	.16.	Usage of weather coat paints are identified, and properties are described
4.	.17.	Initial and top coat is applied using appropriate brush and/or roller in accordance with workplace requirements
4.	.18.	Tools, equipment and workplace are cleaned and waste materials disposed of



# **Learning Outcome 4.1 - Collect and Check Tools, Equipment and Materials**

Contents:	<ul> <li>Collect and check personal protective equipment (PPE), tools and equipment</li> <li>Prepare personal protective equipment (PPE), tools and equipment</li> <li>Collect and check materials</li> </ul>		
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush</li> <li>Materials: weather coat paint, sealer, sandpaper, water</li> </ul>		
Learning Activities:	Activity	Resource	Student Guide Page
	4.1.1	Information Sheet 4.1.1  https://en.wikipedia.org/wiki/Paintbrush https://www.bergerpaints.com/products/exterio r-wall-coatings/15//weathercoat-smooth	60
	4.1.1	Information Sheet 4.1.2	60
	4.1.1	Information Sheet 4.1.3 Self-Check Quiz 4.1.1 Answer Key	60 60 73
Assessment Criteria:	<ul><li>Tools</li><li>Mate</li></ul>	onal protective equipment (PPE) is selected and use and equipment are checked for usability rials are selected and collected rials are checked in accordance with work order req	



## **Learning Outcome 4.2 - Install Scaffolding**

Contents:		requirements: wearing of appropriate persment (PPE), disposal of waste materials, availab		
	■ Types	s of scaffolding: steel, wooden/timber, bamboo s	caffolding	
		olding components: bracing, fixed/rotating clamplock pins, steel/wood platform, steel/wood ladder		
	■ Scaff			
Resources Required:		onal protective equipment (PPE): gloves, dus, hard hat, belt/body harness, goggles, working		
		s and equipment: paint brushes, scraper, spatu putty knife, lifeline and anchorage, roller brush, s		
	<ul> <li>Scaff</li> </ul>	olding materials: steel, wooden/timber, bambo	0	
		<b>folding components:</b> bracing, fixed/rotating jack, lock pins, steel/wood platform, steel/wood I		
	<ul> <li>Scaffe</li> </ul>	olding code rules and regulations		
Learning Activities:	Activity	Resource	Student Guide Page	
	4.2.1	Information Sheet 4.2.1	62	
		Self-Check Quiz 4.2.1	64	
		Answer Key 4.2.1	73	
		https://en.wikipedia.org/wiki/Scaffolding		
		https://www.wikihow.com/Erect-Scaffolding		
Assessment Criteria:	<ul> <li>Installation of scaffolding is carried out in accordance with OHS requirements</li> </ul>			
	<ul> <li>Required type of scaffolding is confirmed and associated work tasks are identified</li> </ul>			
	<ul> <li>Projected loading on scaffolding and supporting structure is determined based on local and international building codes and project specifications</li> </ul>			
	■ Site/v	vorkplace access and egress routes are identifie	d	
	<ul> <li>Scaffolding components are selected and inspected for damage; rejects are labeled and segregated</li> </ul>			
	<ul> <li>Sole board/base plate is selected in accordance with relevant code rules and regulations, and work requirements</li> </ul>			
		olding is set up/erected in accordance with wo vorkplace rules and regulations	rk requirements	



## **Learning Outcome 4.3 - Prepare Surface for Painting**

Contents:	<ul><li>Surfa</li></ul>	ace: plastered masonry and concrete surface		
	<ul><li>Plast</li></ul>	er of Paris		
	■ Sand	l paper		
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, body harness, goggles, working clothes, apron</li> <li>Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush, sandpaper (fine), pumice stone</li> </ul>			
	<ul><li>Mate</li></ul>			
Learning Activities:	Activity	Resource	Student Guide Page	
	2.3.1	Information Sheet 2.3.1	34	
		Self-Check Quiz 2.3.1	35	
		Answer Key 2.3.1	41	
		https://www.rustoleum.com/pages/industrial/resources//surface-preparation-guide/		
Assessment Criteria:	Surface is brushed thoroughly to make it free from mortar droppings			
	Scales, grease, dirt are removed from old surfaces			
	<ul> <li>Holes in plaster are filled in with plaster of Paris mixed with colour</li> </ul>			
	<ul> <li>Surface is rubbed down with fine grade sandpaper to make it smooth</li> </ul>			
	<ul> <li>Patched is applied before applying plastic emulsion paint</li> </ul>			



## **Learning Outcome 4.4 - Apply Sealer**

Contents:	Sealer/sealant			
Resources Required:		<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> </ul>		
	rag	■ Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush, sand paper (fine), pumice stone		
	■ Ma	terials: sealer		
Learning Activities:	Activity	Resource	Student Guide Page	
	4.4.1	Information Sheet 4.4.1	66	
		Self-Check Quiz 4.4.1	67	
		Answer Key 4.4.1	73	
		https://www.youtube.com/watch?v=Lp58WpXDO4k		
Assessment Criteria:	<ul> <li>Recommended sealer material is applied to uneven surface in accordance with work instruction</li> </ul>			
	<ul> <li>Holes, cracks, tears and open seams are filled with sealant in accordance with workplace requirements</li> </ul>			
	<ul> <li>Sealant is set and dried before coating with weather coat paint</li> </ul>			



## **Learning Outcome 4.5 - Perform Weather Coat Painting**

Contents:	<ul> <li>Usage of weather coat paints on cement plaster, concrete stone, brick asbestos, cement sheet, all types of building boards</li> <li>Properties of weather coat paints: acrylic emulsion based, water resistant, fungi resistant, algae resistant</li> </ul>		
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, body harness, goggles, working clothes, apron</li> <li>Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush, sand paper (fine), spray gun, air compressor</li> </ul>		
		rials: weather coat paint	
Learning Activities:	Activity	Resource	Student Guide Page
	4.5.1	Information Sheet 4.5.1	69
		Job Sheet 4	70
		Self-Check Quiz 4.5.1	71
		Answer Key 4.5.1	73
		www.dryvit.com/media/202230/ds432- weathercoat-data-sheet.pdf	
Assessment Criteria:	<ul> <li>Usage of weather coat paints is identified</li> <li>Properties of weather coat paints are described</li> <li>Initial coat of weather coat paint is applied using paint roller in accordance with workplace specifications</li> <li>Top coat is applied using recommended paint roller in accordance with workplace requirements</li> </ul>		



## **Learning Outcome 4.6 - Clean Tools, Equipment and Workplace**

Contents:	<ul> <li>Importance and necessity of cleaning tools, equipment and workplace</li> <li>Methods of cleaning, tools and equipment required for cleaning</li> <li>Display and/or storing of tools and equipment used</li> </ul>		
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Cleaning tools and equipment: brooms, dusters, dust pans, cleaning brushes, mops, waste containers and cotton rags</li> <li>Materials: water, detergents, abrasives, bleaches</li> </ul>		
Learning Activities:	Activity	Resource	Student Guide Page
	1.5.1	Information Sheet 1.5.1	23
		Self-Check Quiz 1.5.1	25
		Answer Key 1.5.1	27
		https://en.wikipedia.org/wiki/Cleaning_agent	
Assessment Criteria:	■ Work	s and equipment are cleaned place is cleaned e materials are disposed in proper place	

#### **Module 5: Perform concrete painting**

Module Descriptor:	This module covers the skills, knowledge and attitudes to perform concrete painting in construction which includes collecting and checking tools, equipment and materials, installing scaffolding, preparing concrete surface, applying concrete paint, and cleaning tools, equipment and the workplace.		
Nominal Duration:	40 ho	purs	
Learning Outcomes:	5.1.	Collect and check tools, equipment and materials	
	5.2.	Install scaffolding	
	5.3.	Prepare concrete surface	
	5.4.	Apply concrete paint	
	5.5.	Clean tools, equipment and workplace	
Performance Criteria:	5.1.	Personal protective equipment (PPE) is selected and used as per requirements	
	5.2.	Tools and equipment are selected, collected and checked for usability	
	5.3.	Materials are selected, collected and checked in accordance with work order requirement	
	5.4.	Installation of scaffolding is carried out in accordance with OHS requirements	
	5.5.	Required type of scaffolding is confirmed and associated work tasks are identified	
	5.6.	Projected loading on scaffolding and supporting structure is determined based on local and international building codes and project specifications	
	5.7.	Site/workplace access and egress routes are identified	
	5.8.	Scaffolding components are selected and inspected for damage; rejects are labelled and segregated	
	5.9.	Sole board/base plate is selected in accordance with relevant code rules and regulations and work requirements	
	5.10.	Scaffolding is set up/erected in accordance with work requirements and workplace rules and regulations	
	5.11.	Cement surfaces are applied with appropriate concrete cleaning agent	
	5.12.	Sealant is applied on interior concrete surfaces to prevent moisture from seeping in accordance with sealant manufacturer's instruction and specification	
	5.13.	Concrete surfaces are rubbed down with suitable grade of sand paper to make it smooth	
	5.14.	Primer is applied on concrete surfaces in accordance with workplace instructions	

	5.15.	Suitable type of concrete paint is gathered and prepared in accordance with work order specification
	5.16.	Base paint is mixed with tinting colour to produce desired colour in accordance with work order specifications
	5.17.	Apply coat of concrete paint in accordance with work order specifications
	5.18.	Drying/curing time of paint in every coat is followed in accordance with workplace specifications
	5.19.	Tools, equipment and workplace are cleaned
	5.20.	Waste materials are disposed of



# **Learning Outcome 5.1 - Collect and Check Tools, Equipment and Materials**

Contents:  Resources Required:	<ul> <li>Collect and check personal protective equipment (PPE), tools and equipment</li> <li>Prepare personal protective equipment (PPE), tools and equipment</li> <li>Collect and check materials</li> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, body harness, goggles, working clothes, apron</li> <li>Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush,</li> </ul>			
	•	ry gun, air compressor  erials: concrete paint, concrete cleaning agent, seale er	r, sandpaper,	
Learning Activities:	Activity Resource Student Guide Page			
	5.1.1	Information Sheet 5.1.1 <a href="https://en.wikipedia.org/wiki/Paintbrush">https://en.wikipedia.org/wiki/Paintbrush</a> <a href="https://www.houselogic.com/remodel/painting-lighting/concrete-painting/">https://www.houselogic.com/remodel/painting-lighting/concrete-painting/</a>	75	
	5.1.1	Information Sheet 5.1.2	76	
	5.1.1	Information Sheet 5.1.3 Self-Check Sheet 5.1.1 Answer Key 5.1.1	76 77 86	
Assessment Criteria:	<ul> <li>Personal protective equipment (PPE) is selected and used</li> <li>Tools and equipment are checked for usability</li> <li>Materials are selected and collected</li> <li>Materials are checked in accordance with work requirements</li> </ul>			



## **Learning Outcome 5.2 - Install Scaffolding**

Contents:		requirements: wearing of appropriate persment (PPE), disposal of waste materials, availab			
	<ul><li>Types</li></ul>	s of scaffolding: steel, wooden/timber, bamboo s	caffolding		
		olding components: bracing, fixed/rotating clamplock pins, steel/wood platform, steel/wood ladder			
	• •	olding code rules and regulations and work requ	•		
December Demoised:					
Resources Required:		onal protective equipment (PPE): gloves, dus, hard hat, belt/body harness, goggles, working			
		s and equipment: paint brushes, scraper, spate putty knife, lifeline and anchorage, roller brush, s			
	<ul> <li>Scaff</li> </ul>	olding materials: steel, wooden/timber, bambo	0		
		<b>folding components:</b> bracing, fixed/rotating jack, lock pins, steel/wood platform, steel/wood l			
	<ul><li>Scaff</li></ul>	olding code rules and regulations			
Learning Activities:	Activity	Resource	Student Guide Page		
	4.2.1	Information Sheet 4.2.1	62		
		Self-Check Quiz 4.2.1	64		
		Answer Key 4.2.1	73		
		https://en.wikipedia.org/wiki/Scaffolding			
		https://www.wikihow.com/Erect-Scaffolding			
Assessment Criteria:		lation of scaffolding is carried out in accordancements	ance with OHS		
	<ul> <li>Required type of scaffolding is confirmed and associated work tasks are identified</li> </ul>				
	<ul> <li>Projected loading on scaffolding and supporting structure is determined based on local and international building codes and project specifications</li> </ul>				
	■ Site/v	vorkplace access and egress routes are identifie	d		
		board/base plate is selected in accordance wit and regulations, and work requirements	h relevant code		
		olding is set up/erected in accordance with wo vorkplace rules and regulations	rk requirements		



## **Learning Outcome 5.3 - Prepare Concrete Surface**

	I				
Contents:	<ul><li>Surface</li></ul>	ce preparation			
	<ul><li>Concr</li></ul>	ete surface			
	<ul><li>Concr</li></ul>	Concrete primer			
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush</li> <li>Materials: sandpaper, primer</li> </ul>				
Learning Activities:	Activity	Resource	Student Guide Page		
	5.3.1	Information Sheet 5.3.1	80		
		Self-Check Quiz 5.3.1	80		
		Answer Key 5.3.1	86		
		https://www.rustoleum.com/pages/industri			
		al/resources//surface-preparation-guide/			
		https://en.wikipedia.org/wiki/Primer_(paint)			
Assessment Criteria:	<ul> <li>Surface is brushed thoroughly to make it free from mortar droppings, soil and to her foreign matters</li> </ul>				
	Scales, grease, dirt are removed from an old surface				
	<ul> <li>Previously painted surface with cement paint should be wire brushed and washed with water</li> </ul>				
	<ul> <li>Surface</li> <li>smooth</li> </ul>	ce is rubbed down with suitable grade sand p	aper to make it		



### **Learning Outcome 5.4 - Apply Concrete Paint**

Contents:	<ul> <li>Usage of weather coat paints on cement plaster, concrete stone, brick asbestos, cement sheet, all types of building boards</li> <li>Properties of weather coat paints: acrylic emulsion based, water resistant, fungi resistant, algae resistant</li> </ul>				
Resources Required:	<ul><li>shoes</li><li>Tools</li><li>rags,</li><li>sand</li></ul>	shoes, hard hat, belt/body harness, goggles, working clothes, apron  Tools and equipment: paint brushes, scraper, spatula, mixing stick, rags, putty knife, lifeline and anchorage, roller brush, steel wire brush, sand paper (fine), spray gun, air compressor			
Learning Activities:	Activity Resource Stude Guide F				
	5.4.1	Information Sheet 5.4.1	81		
		Job Sheet 5	83		
		Self-Check Quiz 5.4.1	84		
		Answer Key 5.4.1	86		
		https://www.wikihow.com/Paint-Concrete			
Assessment Criteria:	Usage of weather coat paints is identified				
	Properties of weather coat paints are described				
	<ul> <li>Initial coat of weather coat paint is applied using paint roller in accordance with workplace specification</li> </ul>				
		coat is applied using recommended paint roller in accorder requirements	cordance with		



### **Learning Outcome 5.5 - Clean Tools, Equipment and Workplace**

Contents:	<ul> <li>Importance and necessity of cleaning tools, equipment and workplace</li> <li>Methods of cleaning, tools and equipment required for cleaning</li> <li>Display and/or storing of tools and equipment used</li> </ul>				
Resources Required:	shoes Clear brush	shoes, hard hat, belt/body harness, goggles, working clothes, apron  Cleaning tools and equipment: brooms, dusters, dust pans, cleaning brushes, mops, waste containers and cotton rags			
Learning Activities:	Activity Resource Student Guide Pag				
	1.5.1	Information Sheet 1.5.1 Self-Check Quiz 1.5.1 Answer Key 1.5.1 <a href="https://en.wikipedia.org/wiki/Cleaning_agent">https://en.wikipedia.org/wiki/Cleaning_agent</a>	23 25 27		
Assessment Criteria:	■ Work	<ul> <li>Tools and equipment are cleaned</li> <li>Workplace is cleaned</li> </ul>			

#### **Module 6: Perform spray painting**

Module Descriptor:	This module covers the skills, knowledge and attitudes to perform spray painting in construction which includes collecting and checking tools, equipment and materials, inspecting and preparing surface for spray painting, applying putty and primer, performing spray painting, and cleaning tools, equipment and the workplace.		
Nominal Duration:	32 hours		
Learning Outcomes:	6.1.	Collect and check tools, equipment and materials	
	6.2.	Inspect and prepare surface for spray painting	
	6.3.	Apply putty and primer	
	6.4.	Perform spray painting	
	6.5.	Clean tools, equipment and workplace	
Performance Criteria:	6.1.	Personal protective equipment (PPE) is selected and used as per requirements	
	6.2.	Tools and equipment are selected, collected and checked for usability	
	6.3.	Materials are selected, collected and checked in accordance with work order requirements	
	6.4.	Scales, grease and dirt are removed from surfaces to be spray painted using recommended cleaning agents	
	6.5.	Sealant is applied on surfaces to be painted in accordance with work order requirements	
	6.6.	Surfaces to be spray painted is rubbed down with suitable grade of sand paper to produce the surface finish in accordance with work order specifications	
	6.7.	Recommended putty is applied into uneven surfaces in accordance with work instruction	
	6.8.	Base paint is mixed with tinting colour to produce desired colour in accordance with work order specifications	
	6.9.	Primer is applied on surfaces in accordance with work order specifications	
	6.10.	Base paint is mixed with thinner to specified viscosity in accordance with workplace specifications	
	6.11.	Spray gun parts are thoroughly cleaned using recommended cleaning agent	
	6.12.	Air pressure is adjusted to recommended set pressure	
	6.13.	Surfaces are spray painted in accordance with work order requirements	
	6.14.	Drying/curing time of paint in every coat is followed in accordance with workplace specifications	
	6.15. Tools and equipment are cleaned		
	6.16.	Work place is cleaned	
	6.17.	Waste materials are disposed of	



### **Learning Outcome 6.1- Collect and Check Tools, Equipment and Materials**

Contents:	<ul> <li>Collect and check personal protective equipment (PPE), tools and equipment</li> <li>Prepare personal protective equipment (PPE), tools and equipment</li> <li>Collect and check materials</li> </ul>		
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron.</li> <li>Tools and equipment: mixing stick, putty knife, lifeline and anchorage, steel wire brush, spray gun, air compressor, spray nozzle cleaner.</li> <li>Materials: paint, thinner, sandpaper</li> </ul>		
Learning Activities:	Activity	Resource	Student Guide Page
	6.1.1	Information Sheets: 6.1.1 <a href="https://en.wikipedia.org/wiki/Paintbrush">https://en.wikipedia.org/wiki/Paint</a> <a href="https://en.wikipedia.org/wiki/Paint">https://en.wikipedia.org/wiki/Paint</a>	89
	6.1.1	Information Sheet 6.1.2 Self-Check Quiz: 6.1.1 Answer Key: 6.1.1	89 90 102
	6.1.1	Information Sheets: 6.1.3 Self-Check Quiz: 6.1.2 Answer Key: 6.1.2	90 91 102
Assessment Criteria:	<ul> <li>Personal protective equipment (PPE) is selected and used</li> <li>Tools and equipment are checked for usability</li> <li>Materials are selected and collected</li> <li>Materials are checked in accordance with work order requirements</li> </ul>		



# **Learning Outcome 6.2 - Inspect and Prepare Surface for Spray Painting**

Contents:	<ul> <li>Scales, grease, dirt</li> <li>Cleaning agent: acidic concrete cleaners, alkaline concrete cleaners, enzymatic/bacterial cleaners, specialty cleaners, soap, water, thinner</li> <li>Sealant</li> <li>Sandpaper</li> </ul>			
Resources Required:	shoes Tools ancho	shoes, hard hat, body harness, goggles, working clothes, apron  Tools and equipment: mixing stick, putty knife, lifeline and anchorage, steel wire brush, spray gun, air compressor, spray nozzle cleaner		
Learning Activities:	Activity	Resource	Student Guide Page	
	6.2.1	Information Sheet 6.2.1	93	
		Self-Check Sheet 6.2.1	93	
		Answer Key 6.2.1	102	
		https://www.rustoleum.com/pages/industrial/resources//surface-preparation-guide/		
Assessment Criteria:	<ul> <li>Scales, grease and dirt are removed from surfaces to be spray painted using recommended cleaning agents</li> </ul>			
	<ul> <li>Sealant is applied on surfaces to be painted in accordance with work order requirements</li> </ul>			
	sandp	ces to be spray painted is rubbed down with so aper to produce the surface finish in accordance ications		



### **Learning Outcome 6.3 - Apply Putty and Primer**

Contents:	<ul><li>Putty</li><li>Base</li><li>Prime</li></ul>	paint			
Resources Required:	<ul> <li>Tools ancho clean</li> </ul>	shoes, hard hat, belt/body harness, goggles, working clothes, apron  Tools and equipment: mixing stick, putty knife, lifeline and anchorage, steel wire brush, spray gun, air compressor, spray nozzle cleaner			
Learning Activities:	Activity	Resource	Student Guide Page		
	6.3.1	Information Sheet 6.3.1	95		
		Self-Check Quiz 6.3.1	95		
		Answer Key 6.3.1	102		
		https://www.hunker.com/13413253/how-to- mix-primer-thinner			
Assessment Criteria:	<ul> <li>Recommended putty is applied into uneven surfaces in accordance with work instructions</li> </ul>				
	<ul> <li>Base paint is mixed with tinting colour to produce desired colour in accordance with work order specifications</li> </ul>				
		er is applied on surfaces in accordance w fications	vith work order		



## **Learning Outcome 6.4 - Perform Spray Painting**

Contents:  Resources Required:	<ul> <li>Spray gun parts: air cap, baffle, fluid tip, trigger, needle packing, air valve, spreader adjuster, fluid adjustment screw</li> <li>Air pressure</li> <li>Drying/curing time of paint</li> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Tools and equipment: mixing stick, putty knife, lifeline and anchorage, steel wire brush, spray gun, air compressor, spray nozzle cleaner</li> <li>Materials: thinner, primer, putty, cleaning agents, rags/cotton cloth</li> </ul>			
Learning Activities:	Activity Resource Student Guid Page			
	6.4.1	Information Sheet 6.4.1	97	
		Job Sheet 6	99	
		Self-Check Quiz 6.4.1	100	
		Answer Key	102	
		http://youtube.com/watch?v=u9IF-FFjSkM		
Assessment Criteria:	<ul> <li>Base paint is mixed with thinner to specified viscosity in accordance with workplace specifications</li> </ul>			
	<ul> <li>Spray gun parts are thoroughly cleaned using recommended cleaning agent</li> </ul>			
	Air pressure is adjusted to recommended set pressure			
	<ul> <li>Surfaces are spray painted in accordance with work order requirements</li> </ul>			
		<ul> <li>Required personal protective equipment (PPE) is used when performing spray painting work</li> </ul>		
		g/curing time of paint in every coat is followed in place specifications	accordance with	



### **Learning Outcome 6.5 - Clean Tools, Equipment and Workplace**

Contents:	<ul> <li>Importance and necessity of cleaning tools, equipment and workplace</li> <li>Methods of cleaning, tools and equipment required for cleaning</li> <li>Display and/or storing of tools and equipment used</li> </ul>		
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Cleaning tools and equipment: brooms, dusters, dust pans, cleaning brushes, mops, waste containers and cotton rags</li> <li>Materials: water, detergents, abrasives, bleaches</li> </ul>		
Learning Activities:	Activity	Resource	Student Guide Page
	1.5.1	Information Sheet 1.5.1	23
		Self-Check Quiz 1.5.1	25
		Answer Key 1.5.1	27
		https://en.wikipedia.org/wiki/Cleaning_agent	
Assessment Criteria:	■ Work	and equipment are cleaned place is cleaned e materials are disposed in proper place	

#### Module 7: Perform varnishing

Module Descriptor:	This module covers the skills, knowledge and attitudes to perform varnishing works which includes collecting and checking tools, equipment and materials, inspecting and preparing surface for varnishing, applying putty and stain, performing varnishing, and cleaning tools, equipment and the workplace.		
Nominal Duration:	24 ho	urs	
Learning Outcomes:	7.1.	Collect and check tools, equipment and materials	
	7.2.	Inspect and prepare surface for varnishing	
	7.3.	Apply putty	
	7.4.	Perform varnishing	
	7.5.	Clean tools, equipment and workplace	
Performance Criteria:	7.1.	Personal protective equipment (PPE) is selected and used as per requirements	
	7.2.	Tools and equipment are selected, collected and checked for usability	
	7.3.	Materials are selected, collected and checked in accordance with work order requirements	
	7.4.	Scales, grease and dirt are removed from surfaces to be varnished using recommended cleaning agents	
	7.5.	Surfaces to be varnished is rubbed down with suitable grade of sand paper to produce the surface finish in accordance with workplace/work order specifications	
	7.6.	Recommended putty is applied into holes and uneven surfaces in accordance with work instructions	
	7.7.	Surface to be varnished is sanded to eliminate in perfections and rough areas with the recommended grit sandpaper	
	7.8.	Stain is applied on the surface in accordance with workplace requirements	
	7.9.	Sanding sealer is applied evenly on the surface in accordance with workplace requirements	
	7.10.	After the sanding sealer dries, surface is rubbed with a fine grit sand paper in accordance with workplace specifications	
	7.11.	Oil-based varnish is applied on the surface evenly in accordance with workplace specifications	
	7.12.	Fine good quality brush material is used in applying varnish on surfaces in accordance with workplace specifications	
	7.13.	Tools and equipment are cleaned	
	7.14.	Work place is cleaned	
	7.15.	Waste materials are disposed of	



### **Learning Outcome 7.1 - Collect and Check Tools, Equipment and Materials**

Contents:		ect and check personal protective equipment (PPI	E), tools and	
		oment		
	•	are personal protective equipment (PPE), tools and	equipment	
	■ Colle	Collect and check materials		
Resources Required:		onal protective equipment (PPE): gloves, dust s, hard hat, belt/body harness, goggles, working clot		
		s and equipment: brush, sanding block, mixing stice and anchorage	k, putty knife,	
		rials: varnish, sanding sealer, sanding pads, dispo thinner, sandpaper, rags/cotton cloth	sable gloves,	
Learning Activities:	Activity Resource Stude Guide P			
	7.1.1	Information Sheet 7.1.1	104	
	https://en.wikipedia.org/wiki/Varnish			
	7.1.1 Information Sheet 7.1.2 105			
	7.1.1	Information Sheet 7.1.3	105	
		Self-Check Quiz 7.1.1	106	
		Answer Key 7.1.1	116	
Assessment Criteria:	Personal protective equipment (PPE) is selected and used			
	Tools and equipment are checked for usability			
	Materials are selected and collected			
	Materials are checked in accordance with work order requirements			



# **Learning Outcome 7.2 - Inspect and Prepare Surface for Varnishing**

Contents:	<ul> <li>Scales, grease, dirt</li> <li>Cleaning agent: acidic concrete cleaners, alkaline concrete cleaners, enzymatic/bacterial cleaners, specialty cleaners, soap, water, thinner</li> </ul>			
Resources Required:	shoe • Tool	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Tools and equipment: brush, sanding block, mixing stick, putty knife, lifeline and anchorage</li> </ul>		
		<ul> <li>Materials: sanding sealer, sanding pads, disposable gloves, stain, thinner, putty, sandpaper, rags/cotton cloth</li> </ul>		
Learning Activities:	Activity	Resource	Student Guide Page	
	7.2.1	Information Sheet 7.2.1	107	
		Self-Check Quiz 7.2.1	108	
		Answer Key 7.2.1	116	
		https://www.rustoleum.com/pages/industrial/resources//surface-preparation-guide/		
Assessment Criteria:	<ul> <li>Scales, grease and dirt are removed from surfaces to be varnished using recommended cleaning agents</li> </ul>			
	<ul> <li>Surfaces to be varnished are rubbed down with suitable grade of sandpaper to produce the surface finish in accordance with work order specifications</li> </ul>			



## **Learning Outcome 7.3 - Apply Putty**

Contents:  Resources Required:	<ul> <li>Putty and stain.</li> <li>Surfaces.</li> <li>Grit sandpaper: 100, 200, 240, 280, 400</li> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> </ul>			
	lifelin	s and equipment: brush, sanding block, mixing stick e and anchorage	, putty knife,	
Learning Activities:	Materials: putty, sandpaper, rags/cotton cloth  Activity Resource			
	7.3.1	Information Sheet 7.3.1	109	
		Self-Check Quiz 7.3.1	110	
		Answer Key 7.3.1	116	
		https://www.hunker.com/13413253/how-to-mix-primer-thinner		
		https://www.bergerpaints.com/imaginecolours/decorculture/wall-putty-make-		
Assessment Criteria:		<ul> <li>Recommended putty is applied into holes and uneven surfaces in accordance with work instructions</li> </ul>		
		ce to be varnished is sanded to eliminate in perfection with the recommended grit sandpaper	ns and rough	



## **Learning Outcome 7.4 - Perform Varnishing**

Contents:	<ul> <li>Brush materials: natural fibre, black china, ox hair blend, white china and synthetic fibre, nylon, nylon/polyester blend, polyester</li> </ul>				
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Tools and equipment: brush, sanding block, mixing stick, putty knife, lifeline and anchorage</li> <li>Materials: varnish, putty, sealer, sandpaper, rags/cotton cloth</li> </ul>				
Learning Activities:	Activity	Activity Resource Student Guide Pag			
	7.4.1	Information Sheet 7.4.1	112		
		Job Sheet 7	113		
		Self-Check Quiz 7.4.1	114		
		Answer Key 7.4.1	116		
		https://www.youtube.com/watch?v=1Zum813aR 9Q			
Assessment Criteria:	<ul> <li>Stain is applied on the surface in accordance with workplace requirements</li> </ul>				
	<ul> <li>Sanding sealer is applied evenly on the surface in accordance with workplace requirements</li> </ul>				
	<ul> <li>After the sanding sealer dries, surface is rubbed with a fine grit sand paper in accordance with workplace specifications</li> </ul>				
		ased varnish is applied on the surface evenly in accolace specifications	ordance with		
		good quality brush material is used in applying ces in accordance with workplace specifications	g varnish on		



# **Learning Outcome 7.5 - Clean Tools, Equipment and Workplace**

Contents:	<ul> <li>Importance and necessity of cleaning tools, equipment and workplace</li> <li>Methods of cleaning, tools and equipment required for cleaning</li> <li>Display and/or storing of tools and equipment used</li> </ul>		
Resources Required:	<ul> <li>Personal protective equipment (PPE): gloves, dust mask, safety shoes, hard hat, belt/body harness, goggles, working clothes, apron</li> <li>Cleaning tools and equipment: brooms, dusters, dust pans, cleaning brushes, mops, waste containers and cotton rags</li> <li>Materials: water, detergents, abrasives, bleaches</li> </ul>		
Learning Activities:	Activity	Resource	Student Guide Page
	1.5.1	Information Sheet 1.5.1	23
		Self-Check Quiz 1.5.1	25
		Answer Key 1.5.1	27
		https://en.wikipedia.org/wiki/Cleaning_agent	
Assessment Criteria:	<ul> <li>Tools and equipment are cleaned</li> <li>Workplace is cleaned</li> <li>Waste materials are disposed in proper place</li> </ul>		

#### Module 8: Prepare estimate for painting works

Module Descriptor:	This module covers the skills, knowledge and attitudes to prepare estimate for painting works in construction which includes identifying required tools, equipment and materials, accessing the location, measuring paint work area and calculating cost, calculating materials quantity and cost, calculating labour cost, estimating total cost of painting works.			
Nominal Duration:	24 ho	24 hours		
Learning Outcomes:	8.1.	Identify required tools, equipment and materials		
	8.2.	Access the location		
	8.3.	Measure paint work area and calculate cost		
	8.4.	Calculate materials quantity and cost		
	8.5.	Calculate labour cost		
	8.6.	Estimate total cost of painting works		
Performance Criteria:	8.1.	Personal protective equipment (PPE) needed to carry out the painting work is identified		
	8.2.	Tools and equipment needed to carry out the painting work are identified		
	8.3.	Materials needed to complete the painting work are identified		
	8.4.	Cost for the utilization/purchase of PPE, tools, equipment and materials are identified		
	8.5.	Job site is visited and accessed to determine cost factors when carrying out the painting work		
	8.6.	Area to be covered for paint work is measured in accordance with workplace standards		
	8.7.	Area to be covered for paint work is calculated in accordance with workplace calculation standards		
	8.8.	Cost of paint is calculated in accordance with workplace calculation standards		
	8.9.	Cost of consumables and other materials are calculated in accordance with workplace requirements/standards		
	8.10.	Man-hours to complete the painting work is calculated in accordance with workplace requirements and standards		
	8.11.	Labour cost is calculated in accordance with workplace standards		
	8.12.	Overhead cost is identified and factored-in in accordance with workplace requirements		
	8.13.	Final total cost estimate is determined in accordance with workplace standards		



# **Learning Outcome 8.1 - Identify Required Tools, Equipment and Materials**

Contents:	<ul> <li>Cost of personal protective equipment (PPE), tools and equipment</li> <li>Cost of materials</li> </ul>					
Resources Required:	<ul> <li>Calcu</li> </ul>	ulator				
Learning Activities:	Activity	Activity Resource Student Guide Page				
	8.1.1	Information Sheet 8.1.1	118			
		Self-Check Quiz 8.1.1	120			
		Answer Key 8.1.1	133			
Assessment Criteria:		<ul> <li>Personal protective equipment (PPE) needed to carry out the painting work is identified</li> </ul>				
	<ul> <li>Tools and equipment needed to carry out the painting work are identified</li> </ul>					
	<ul><li>Mate</li></ul>	<ul> <li>Materials needed to complete the painting work are identified</li> </ul>				
		for the purchase of personal protective equipment and materials are identified	ent (PPE), tools,			



### **Learning Outcome 8.2 - Access the Location**

Contents:	<ul> <li>Cost factors: outdoor obstruction, indoor obstruction, movement /transfer requirements of furniture, counters, cupboards, etc., wall and surface area for painting, surface texture for painting</li> </ul>				
Resources Required:	■ N/A				
Learning Activities:	Activity	Activity Resource Student G Page			
	8.2.1	Information Sheet 8.2.1	121		
		Self-Check Quiz 8.2.1	122		
		Answer Key 8.2.1	133		
Assessment Criteria:	Job site is visited and accessed to determine cost factors when carrying out the painting work				



# **Learning Outcome 8.3 - Measure Paint Work Area and Calculate Cost**

Contents:	<ul><li>Surfa</li></ul>	Surface area calculation and cost calculation			
Resources Required:	<ul><li>Calculator</li><li>Tape measure</li></ul>				
Learning Activities:	Activity	Activity Resource Student Guid Page			
	8.3.1	Information Sheet 8.3.1	123		
		Self-Check Quiz 8.3.1	124		
		Answer Key 8.3.1	133		
Assessment Criteria:	<ul> <li>Area to be covered for paint work is measured in accordance with workplace standards</li> <li>Area to be covered for paint work is calculated in accordance with</li> </ul>				
	work	place standards			



### **Learning Outcome 8.4 - Calculate Materials Quantity and Cost**

Contents:		<ul> <li>Consumables: masks, booties, painter's tape, cleaning supplies, disposable items</li> </ul>			
Resources Required:	<ul><li>Calcu</li></ul>	ılator			
Learning Activities:	Activity	Activity Resource Student Guid Page			
	8.4.1	Information Sheet 8.4.1	125		
		Self-Check Quiz 8.4.1	126		
		Answer Key 8.4.1	133		
Assessment Criteria:	<ul> <li>Cost of paint is calculated in accordance with workplace calculation standards</li> </ul>				
	<ul> <li>Cost of consumables and other materials are calculated in accordance with workplace requirements and standards</li> </ul>				



### <u>Learning Outcome 8.5 – Calculate Labour Cost</u>

Contents:	Calculate labour cost: man-hours			
Resources Required:	Calculator			
Learning Activities:	Activity	Resource	Student Guide Page	
	8.5.1	Information Sheet 8.5.1	127	
		Self-Check Quiz 8.5.1	128	
		Answer Key 8.5.1	133	
Assessment Criteria:	<ul> <li>Man-hours to complete the painting work is calculated in accordance with workplace requirements and standards</li> </ul>			
	<ul> <li>Labour cost is calculated in accordance with workplace standards</li> </ul>			



### **Learning Outcome 8.6 - Estimate Total Cost of Painting Works**

Contents:	<ul> <li>Overhead cost: cost of operating expense, shipping and handling, transportation cost</li> </ul>			
Resources Required:	■ Calculator			
Learning Activities:	Activity	Resource	Student Guide Page	
	8.6.1	Information Sheet 8.6.1	129	
Assessment Criteria:	<ul> <li>Overhead cost is identified and factored-in in accordance with workplace requirements</li> </ul>			
	<ul> <li>Final total cost estimate is determined in accordance with workplace standards</li> </ul>			