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सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

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Construction Skill Development Council of India

Facilitator Guide



Sector
Construction

Sub-Sector
Real Estate and Infrastructure Construction

Occupation
Masonry

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NSQF Level 4

Mason Tiling

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Disclaimer

"Skilling is building a better India. If we have to move India towards development then Skill Development should be our mission."

Shri Narendra Modi
Prime Minister of India

Acknowledgement

We are thankful to all organizations and individuals who have helped us in the preparation of this Facilitator Guide. We also wish to extend our gratitude to all those who reviewed the content and provided valuable inputs for improving the quality, coherence and content presentation of chapters. This Facilitator Guide will lead to the successful rollout of the skill development initiatives, helping greatly our stakeholders particularly trainees, trainers and assessors etc. We are thankful to our Subject Matter Expert for the content and for helping us in the preparation of this Facilitator Guide.

It is expected that this publication would meet the complete requirements of QP/NOS based training delivery. We welcome suggestions from users, industry experts and other stakeholders for any improvement in future.

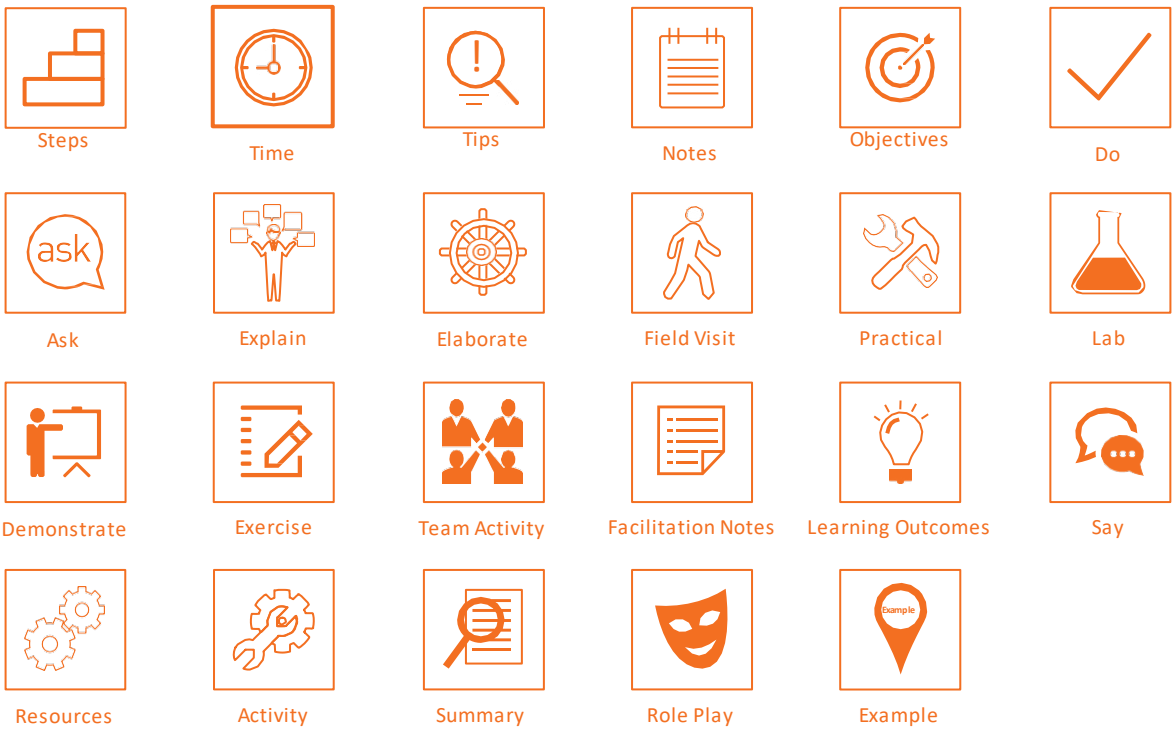
About this book

The objective of the guide is to provide an approach map for interacting with the trainees undergoing training in this job role. The course aims to provide both theoretical and practical knowledge to the trainees and also to guide them about Mason Tiling. The guide is neither a substitute nor a complete road map, but an aid to help to pass on the knowledge on all the aspects to the trainees in a systematic manner. It is expected that the trainer is fully conversant with all the contents of the guide. The guide is just to indicate how to proceed in covering a topic and includes some additional information that may be necessary for the trainer to develop better comprehension of the following aspects:

- **Knowledge and Understanding:** Satisfactory operational learning and comprehension to play out the required chore.
- **Performance Criteria:** Pick up the required aptitudes through hands-on preparation and play out the required operations inside the predetermined measures.
- **Professional Skills:** Capacity to settle on operational choices relating to the zone of work.

The job will also include judging comprehension and also help them learn more through hands-on training. But it has to be ensured that these are following the knowledge imparted and time spent on each unit. It is expected that irrespective of the region, knowledge of all aspects will be imparted to trainees.

Symbols Used



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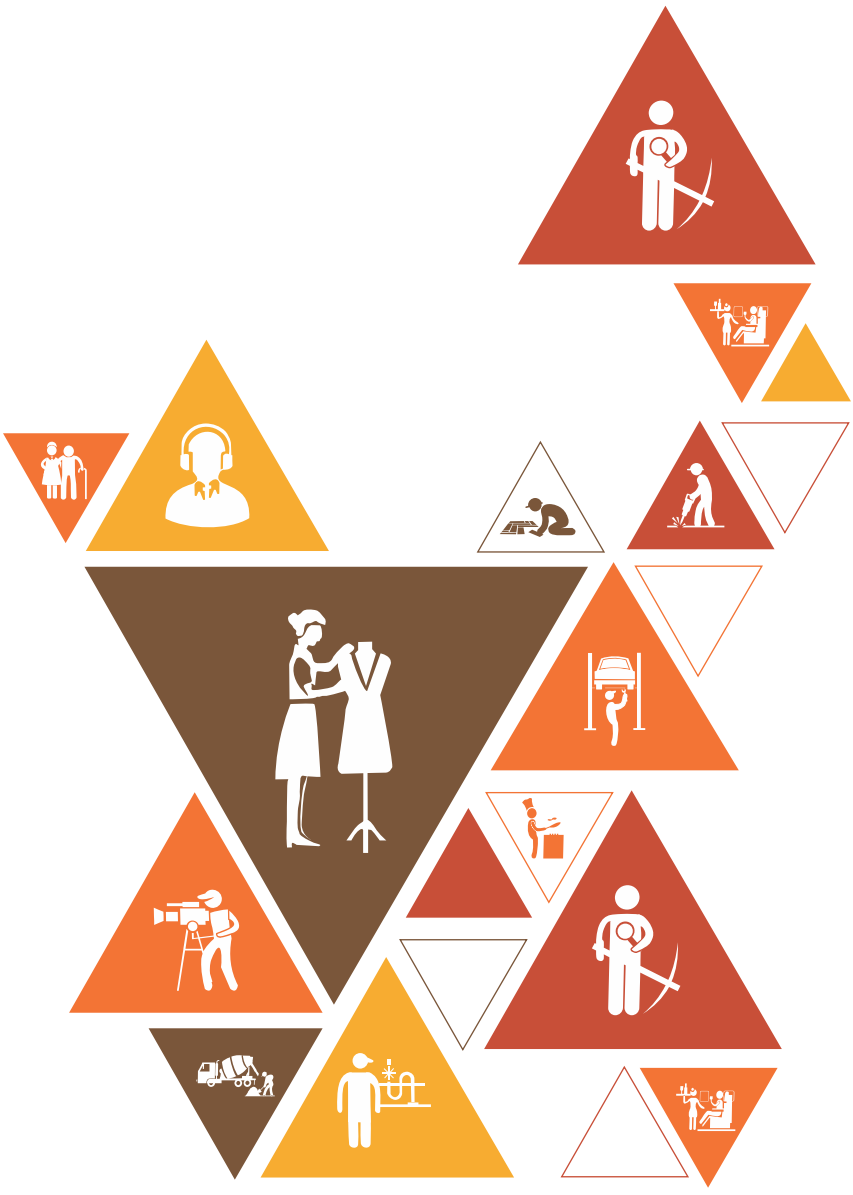
https://www.skillindiadigital.gov.in/content/list



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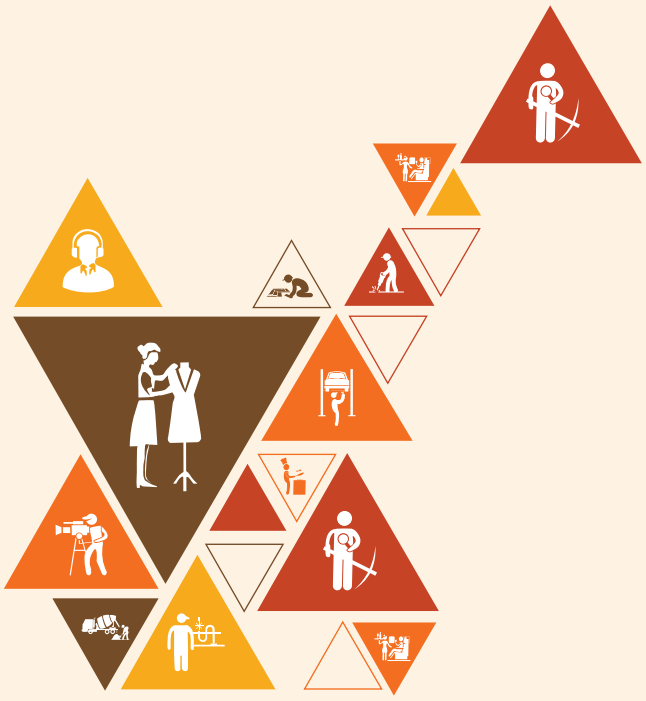
1. Introduction to the Role of a Mason Tiling

Unit 1.1 – Overview of construction industry in India

Unit 1.2 – Major occupation in construction sector

Unit 1.3 – Mason tiling - job role and responsibility

Unit 1.4 – Training for mason tiling



Bridge Module

Key Learning Outcomes

At the end of this module, trainer will ensure that participant will be able to:

1. Understand broadly the construction activities in India
2. Differentiate between real estate & infrastructure and rural construction
3. Know about major occupations in construction sector
4. Understand few job roles under each occupation
5. Know about role and duties of a mason tiling
6. Know about personal and professional attributes under the mason tiling occupation
7. List QP and NOS details of mason tiling programme
8. Know about career path as a mason tiling
9. Understand the purpose of training
10. Know about mode and duration of training program
11. Understand the benefits of training skill card & certification

Unit 1.1 Introduction to Construction Industry

Unit Objectives

By the end of this unit, participants will be able to:

1. Understand broadly the construction activities in India; and
2. Differentiate between real estate & infrastructure and rural construction.

Ice Breaker

Say

- Welcome and greet the participants.

Topic Introduction -

- Give the participants a brief overview of this unit.
- Applications of Mason Tiling job role in various construction sectors.

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.

Do

- Take a paper.
- Draw a rough tiling sketch.

Elaborate

- About the purpose of the activity.
- Ensure every participant to understand the program.
- Encourage participants to ask questions.
- Encourage each participant to explain their activity sheet.
- Help them by giving some hints to identify, if something is missing.
- Some participants may be shy and hesitant, encourage them to speak and share their details.

- When everyone finished introducing themselves, explain the schedule in detail for the day and inform about the break timings.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 1.1 to explain overview of construction, Mason Tiling job roles and about the training program.
- The construction industry in India is a critical driver of economic growth, encompassing various sectors such as real estate, infrastructure, and rural construction. Let's take a closer look at each of these segments:
  - Real Estate Sector: The real estate sector in India includes the development of residential, commercial, and industrial properties. It has a substantial impact on urbanization and provides essential spaces for living, working, and recreation. Key Points are:
    - Residential Properties: The demand for housing, especially in urban areas, remains high due to rapid urbanization and population growth.
    - Commercial Properties: The growth of industries and businesses fuels demand for office spaces, retail outlets, and commercial complexes.
    - Industrial Properties: As manufacturing and industrial sectors expand, there's a need for well-designed industrial facilities and warehouses.
  - Infrastructure Development: India's focus on infrastructure development is crucial for economic progress and improving the quality of life for its citizens. Key Points are:
    - Transportation: Roadways, highways, railways, airports, and ports are being developed to improve connectivity.
    - Energy: Investment in power plants and renewable energy projects is essential for meeting the energy needs of a growing economy.
    - Urban Development: The "Smart Cities Mission" aims to create sustainable and efficient urban centers.
  - Rural construction focuses on developing infrastructure and facilities in rural areas to bridge the urban-rural divide and improve the living standards of rural communities. Key Points are:
    - Housing: Initiatives like "Pradhan Mantri Awas Yojana - Rural" aim to provide affordable housing to rural populations.
    - Rural Infrastructure: Building roads, schools, healthcare facilities, and water supply systems enhances rural living conditions.

Notes

Unit 1.2 – Major Occupation in Construction Sector

Unit Objectives

By the end of this unit, participants will be able to:

1. Know about major occupations in construction sector; and
2. Understand few job roles under each occupation.

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.

Explain

Introduction to Major Occupations in Construction Sector:

- About occupation in construction sector.
- Show some examples of construction occupations.
- Describe different type of construction works and occupations applicable accordingly.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 1.2 to explain major occupations in construction sector.
- The construction sector encompasses a wide range of job opportunities across various occupations. Here are some major occupations in the construction industry along with a few job roles under each occupation:
- Civil Engineers: Civil engineers play a key role in designing, planning, and overseeing construction projects. They ensure projects are completed safely, efficiently, and according to specifications.
  - Structural Engineer: Designs and analyzes the structural components of buildings and infrastructure projects.
  - Geotechnical Engineer: Evaluates soil conditions and provides recommendations for foundation design.
  - Transportation Engineer: Designs roads, highways, and transportation systems to ensure smooth mobility.
- Architects: Architects are responsible for designing the overall layout, aesthetics, and functionality of buildings and structures.

- Residential Architect: Designs homes and residential buildings, focusing on functionality and aesthetics.
- Commercial Architect: Specializes in designing commercial spaces, offices, and retail complexes.
- Landscape Architect: Plans outdoor spaces, parks, and landscapes within construction projects.

- Construction Managers: Construction managers oversee the entire construction process, including budgeting, scheduling, and coordinating various teams.
  - Project Manager: Manages all aspects of a construction project, from planning to completion.
  - Site Manager: Supervises on-site activities, ensuring safety and efficient progress.
  - Estimator: Calculates project costs and prepares budgets for construction projects.
- Electricians: Electricians are responsible for installing and maintaining electrical systems in buildings and structures.
  - Residential Electrician: Installs electrical systems in homes and residential complexes.
  - Commercial Electrician: Works on electrical installations in commercial buildings and offices.
  - Industrial Electrician: Focuses on electrical systems in factories and industrial facilities.
- Plumbers: Plumbers install, repair, and maintain water supply and drainage systems in buildings.
  - Residential Plumber: Handles plumbing systems in homes and residential buildings.
  - Commercial Plumber: Works on plumbing installations in commercial spaces and offices.
  - Pipefitter: Installs and maintains pipes in industrial settings.
- Welders and Fabricators: Welders and fabricators join and shape metal parts to create structures and components.
  - Structural Welder: Welds and assembles metal parts for construction projects.
  - Pipe Welder: Specializes in welding pipes for plumbing and industrial systems.
  - Sheet Metal Fabricator: Crafts metal components used in construction projects.
- Surveyors: Surveyors measure and map out the land, providing crucial data for construction projects.
- Land Surveyor: Measures and defines property boundaries and topography.
- Quantity Surveyor: Estimates materials and costs for construction projects.
- Geodetic Surveyor: Uses advanced techniques to map larger areas and create accurate models.
- Construction Laborers: Construction laborers perform various physical tasks on construction sites to support other professionals.
- Concrete Worker: Pours, levels, and finishes concrete for foundations and structures.
- Carpenter: Constructs and installs wooden components in buildings.
- Mason: Lays bricks, stones, and other masonry materials to build structures.

- Each of these major occupations within the construction sector offers a wide range of job opportunities and career paths. From engineering and design to hands-on labor, the construction industry provides diverse roles that contribute to building the world around us.

Notes

Unit 1.3 – Mason Tiling - Job Role and Responsibility

Unit Objectives

By the end of this unit, participants will be able to:

1. Know about role and duties of a mason tiling;
2. Know about personal and professional attributes under the mason tiling occupation;
3. List QP and NOS details of mason tiling programme; and
4. Know about career path as a mason tiling.

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.

Explain

- Introduction to Tiling Works in the Construction Sector
- About the possible tiling works happen at a construction site.
- Show some examples with illustrations of construction tiling works.
- List the important tiling activities that happen often at construction site.

Career Progression Path

- Show and explain the various stages of career progression path.
- List down the important mile stones in the progression path.
- Discuss the advantages of the career progression path.

Elaborate

- About the necessity of defining roles and responsibilities.
- List the roles and responsibilities of a Mason Tiling in detail.
- Correlate the roles and responsibilities of a Mason Tiling.
- About the necessity of personal attributes.

- List the personal attributes of a Mason Tiling in detail.
- Correlate the roles, responsibilities and personal attributes of a Mason Tiling.
- About the need of QP, NOS and NSQF level descriptors.
- Describe the major features of a QP and NOS.
- About the QP and NOS used for Mason Tiling role.
- Show a sample QP and NOS.
- Show and explain the various stages of career progression path.
- List down the important mile stones in the progression path.
- Discuss the advantages of the career progression path.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 1.3 to explain Mason Tiling - job role and responsibility.
- A Mason Tiler, also known as a Tile Setter, is responsible for installing and arranging tiles on various surfaces, including floors, walls, and ceilings. They work with a variety of tile materials, such as ceramic, porcelain, marble, and glass, to create visually appealing and functional spaces.
- Responsibilities:
    - Preparing Surfaces: Ensuring that the surface is clean, smooth, and properly prepared for tiling.
    - Measuring and Layout: Taking accurate measurements and planning the layout of tiles to achieve symmetry and proper alignment.
    - Cutting Tiles: Using tools to cut tiles to fit around corners, edges, and obstacles.
    - Mixing and Applying Adhesive: Preparing and applying tile adhesives or mortar to secure tiles in place.
    - Setting Tiles: Arranging and placing tiles according to the planned layout while maintaining even spacing and alignment.
    - Grouting: Filling the gaps between tiles with grout, ensuring a finished and polished appearance.
    - Finishing Touches: Cleaning excess grout and polishing tiles to achieve a clean and attractive final look.
    - Working with Different Tile Types: Handling various types of tiles, such as ceramic, porcelain, natural stone, and glass, while considering their specific installation requirements.
    - Problem Solving: Overcoming challenges related to uneven surfaces, irregular layouts, or unusual design requirements.
    - Safety: Following safety guidelines to prevent accidents and injuries during tile installation.

- Personal and Professional Attributes:
  - Attention to Detail: Precision is crucial to achieve a seamless and aesthetically pleasing tile installation.
  - Physical Stamina: Tile setting often involves standing, bending, and lifting for extended periods.
  - Spatial Awareness: Ability to visualize patterns and layouts to create balanced designs.
  - Communication Skills: Effective communication with clients, supervisors, and team members.
  - Problem-Solving: Quick thinking to address unexpected challenges during installation.
  - Technical Proficiency: Familiarity with tile cutting tools, adhesives, and grouting techniques.
  - Time Management: Efficiently completing projects within specified timelines.
  - Adaptability: Adjusting to various types of tiles and installation conditions.
  - Customer Service: Delivering high-quality work that meets client expectations.
- Continuous learning, staying updated on new tile materials and installation techniques, and seeking certifications can further enhance one's career prospects in the field of Mason Tiling

Notes

Unit 1.4 – Training for Mason Tiling

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Understand the purpose of training;
2. Know about mode and duration of training program; and
3. Understand the benefits of training skill card & certification

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.

Explain

- Introduction to Training Program for Mason Tiling
  - About the mode and duration of training.
  - About the benefits of this training program in detail.
  - About the benefits of the skill card and certification in detail.
- Purpose, Benefits of the Training Programme and Introduction to QP and NOS
  - Show and explain, how a skill card looks?
  - Show and explain, how a certificate looks?
  - Explain the need of QP and NOS.
  - Describe the major features of a QP and NOS.
  - Explain the QP and NOS used for Mason Tiling role.
  - Show a sample QP and NOS.
  - Explain NSQF and NSQF level.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 1.4 to explain training for Mason Tiling.
- The purpose of Mason Tiling training is to equip individuals with the necessary skills, knowledge, and techniques required to become proficient in tile installation. This training ensures that tile setters can perform their job with precision, ensuring safety, quality, and aesthetic appeal in their work. It also familiarizes them with different types of tiles, adhesives, grouting methods, and tools.
- Mason Tiling training plays a crucial role in developing the skills and knowledge needed for a successful career in tile installation. Obtaining a skill card and certification further validate expertise and provide numerous benefits, including improved job prospects, higher income, and increased industry recognition.
- The National Skill Qualification Framework (NSQF) is a competency-based framework that aims to align and standardize various qualifications across different sectors and industries in India. It was introduced by the Government of India to bring uniformity and transparency to the skills and qualifications acquired by individuals in the country. The NSQF focuses on creating a seamless pathway for skill development, recognition, and certification. The National Skill Qualification Framework aims to bridge the gap between formal education and vocational skills, making vocational education and training more valuable and on par with traditional academic qualifications. It enhances the employability of individuals and contributes to the overall development of the workforce in India.

Notes

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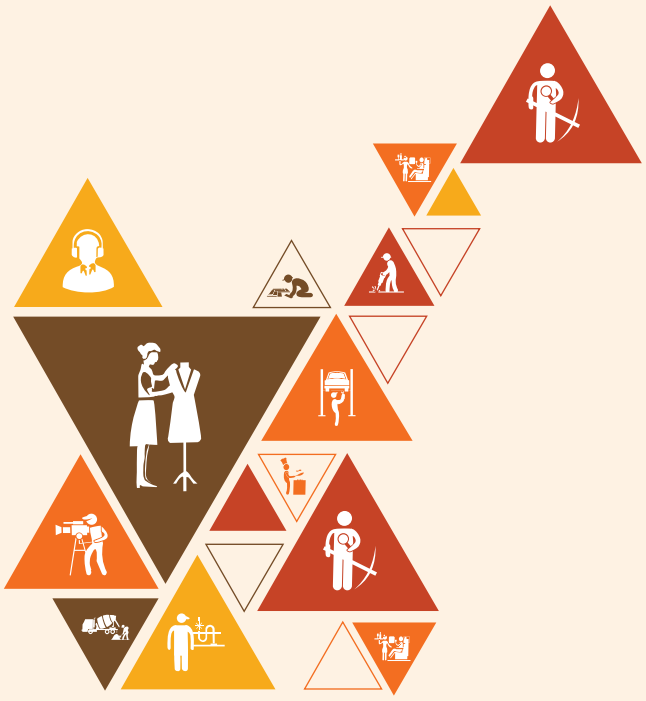
2. Core/ Generic Skills

Unit 2.1 – Unit conversion and measurement
Unit 2.2 – Basic geometrical shapes and its properties
Unit 2.3 – Pythagoras theorem and its application



(Bridge Module)

Key Learning Outcomes

At the end of this module, you will be able to:

1. Explain brief on metric system of measurement;
2. Explain briefly inch system of measurement;
3. Perform basic arithmetic calculations;
4. Know about basic geometrical shapes;
5. Calculate area, volume and perimeter of different shapes;
6. Know about Pythagoras theorem;
7. Perform basic calculations using Pythagoras theorem.
8. Calculate problems using trigonometric functions.

UNIT 2.1: Unit Conversion and Measurement

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Explain brief on metric system of measurement; and
2. Understanding inch system of measurement.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Calculator, conversion charts, measurement tapes

Do

- Explain the Different System of Measurement.
- Elaborate Metric system and Inch system.
- Explain the conversion between metric and inch systems.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 2.1 to explain Unit Conversion and Measurement for Mason Tiling.

Today, we're going to delve into the world of masonry tiling and explore the importance of understanding different measurement systems when working with tiles. In this session, we'll focus on the Metric system and the Inch system, and we'll also cover how to convert between these two systems.

1. Different Systems of Measurement:

Measurement systems are crucial in masonry tiling to ensure accurate and precise work. There are two primary systems of measurement: the Metric system and the Inch system. Each system has its own units of measurement for length and other dimensions.

2. Metric System:

The Metric system, also known as the International System of Units (SI), is widely used around the world, including in most countries. Key characteristics of the Metric system include:

- Base Unit: The meter (m) is the base unit for length in the Metric system. Other units are derived from this base unit.
- Centimeter (cm): One hundredth of a meter. Commonly used for smaller measurements in masonry tiling.
- Millimeter (mm): One thousandth of a meter. Useful for very precise measurements.

3. Inch System:

The Inch system, often used in the United States and a few other countries, employs a different set of units. The main unit of length in this system is the inch (in), and it's divided into smaller fractions.

- Inch (in): The base unit for length in the Inch system.
- Foot (ft): Twelve inches make up a foot. It's often used for larger measurements in masonry tiling projects.
- Fractional Inches: Smaller divisions of an inch are usually expressed in fractions, such as 1/4 inch, 1/8 inch, and 1/16 inch.

4. Conversion Between Metric and Inch Systems:

When working on projects that involve both Metric and Inch systems, it's important to be able to convert measurements accurately. Here's how you can do it:

- Metric to Inches:
- To convert from metric units to inches, you can use the following approximate conversions:
    - 1 centimeter ≈ 0.3937 inches
    - 1 millimeter ≈ 0.0394 inches
- Inches to Metric:
- To convert from inches to metric units:
    - 1 inch = 2.54 centimeters
    - 1 inch = 25.4 millimeters
- Example Conversion:
    - Let's say you have a tile that's 30 cm long. To convert it to inches:
    - 30 cm * 0.3937 ≈ 11.81 inches

Notes

UNIT 2.2: Basic Geometrical Shapes and its Properties

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Perform basic arithmetic calculations;
2. Know about basic geometrical shapes; and
3. Calculate area, volume and perimeter of different shapes.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Calculator, conversion charts, measurement tapes

Do

- Explain the basic mathematical calculations.
- Elaborate about basic geometrical shapes.
- Demonstrate the calculate area, volume and perimeter of different shapes.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 2.2 to explain basic Geometrical Shapes and its Properties for Mason Tiling.
- Basic mathematical calculations are essential in mason tiling to ensure accurate measurements, layouts, and tile placements.

- It's important to use the appropriate units of measurement (such as inches or centimeters) consistently throughout your calculations. Additionally, using tools like measuring tapes, straightedges, and angle finders can help ensure accurate measurements for mason tiling projects. Always double-check calculations to avoid mistakes that could impact the final outcome of your tile installation.
- Basic geometrical shapes play a crucial role in mason tiling as they form the foundation for tile layouts, designs, and placements.
- Understanding these basic geometrical shapes is essential for planning and executing tile layouts accurately. It's important to visualize how different shapes will fit together and how they interact with the surrounding space to achieve a visually appealing and well-structured tiling design.
- Certainly, calculating the area, volume, and perimeter of different shapes is crucial in mason tiling to determine the amount of materials needed and ensure accurate tile placement. Here's how you can calculate these measurements for common shapes related to tiling:
- Rectangle:
    - Area: Area = Length × Width
    - Perimeter: Perimeter = 2 × (Length + Width)
- Square:
    - Area: Area = Side × Side
    - Perimeter: Perimeter = 4 × Side
- Triangle:
    - Area: Area = (Base × Height) / 2
    - Perimeter: Perimeter = Sum of all three sides
- Circle:
    - Area: Area = π × (Radius)^2
    - Circumference (Perimeter): Circumference = 2 × π × Radius
- Hexagon:
    - Area: Area = (3 × √3 × Side^2) / 2
    - Perimeter: Perimeter = 6 × Side
- Octagon:
    - Area: Area = 2 × (1 + √2) × Side^2
    - Perimeter: Perimeter = 8 × Side
- Diamond:
    - Area: Area = (Diagonal 1 × Diagonal 2) / 2
    - Perimeter: Perimeter = 4 × Side (where Side is half the sum of the lengths of Diagonal 1 and Diagonal 2)
- Irregular Shapes:

- For irregular shapes, you can divide them into smaller regular shapes and calculate their areas separately. Then add up the areas to find the total area.
- Volume (3D Shapes):
- Cuboid or Rectangular Prism:
  - Volume: Volume = Length × Width × Height
- Cylinder:
  - Volume: Volume = π × (Radius)^2 × Height
- Sphere:
  - Volume: Volume = (4/3) × π × (Radius)^3
- Cone:
  - Volume: Volume = (1/3) × π × (Radius)^2 × Height

- Remember that these calculations are crucial for determining the amount of tiles needed, adhesive quantity, grout volume, and other materials required for tiling projects. Additionally, accurate measurements ensure proper alignment, symmetry, and a professional finish to your tiling work.

Notes

UNIT 2.3: Pythagoras theorem and its application

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Know about Pythagoras theorem; and
2. Perform basic calculations using Pythagoras theorem.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Calculator, conversion charts, measurement tapes

Do

- Explain the Pythagoras theorem.
- Elaborate about basic calculations using Pythagoras theorem.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 2.3 to explain Pythagoras theorem and its application for Mason Tiling.
- The Pythagorean theorem is a fundamental principle in geometry that has practical applications in various fields, including mason tiling. It is especially relevant when dealing with right-angled triangles, which are common in tile layout and installation. The theorem states that in a right-angled triangle, the square of the length of the hypotenuse (the side opposite the right angle) is equal to the sum of the squares of the lengths of the other two sides.

- By applying the Pythagorean theorem, mason tilers can ensure that their tile placements are accurate, corners are properly aligned, and diagonal measurements are precise. This contributes to a professional finish in tile installations and enhances the overall appearance of the tiled surface.

Activity - 1

Mathematical skills - Practice

Conduct a group activity.

- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Maximum duration mentioned in the below table is for extensive practice and corresponding guidance until the skill is acquired by the participants.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

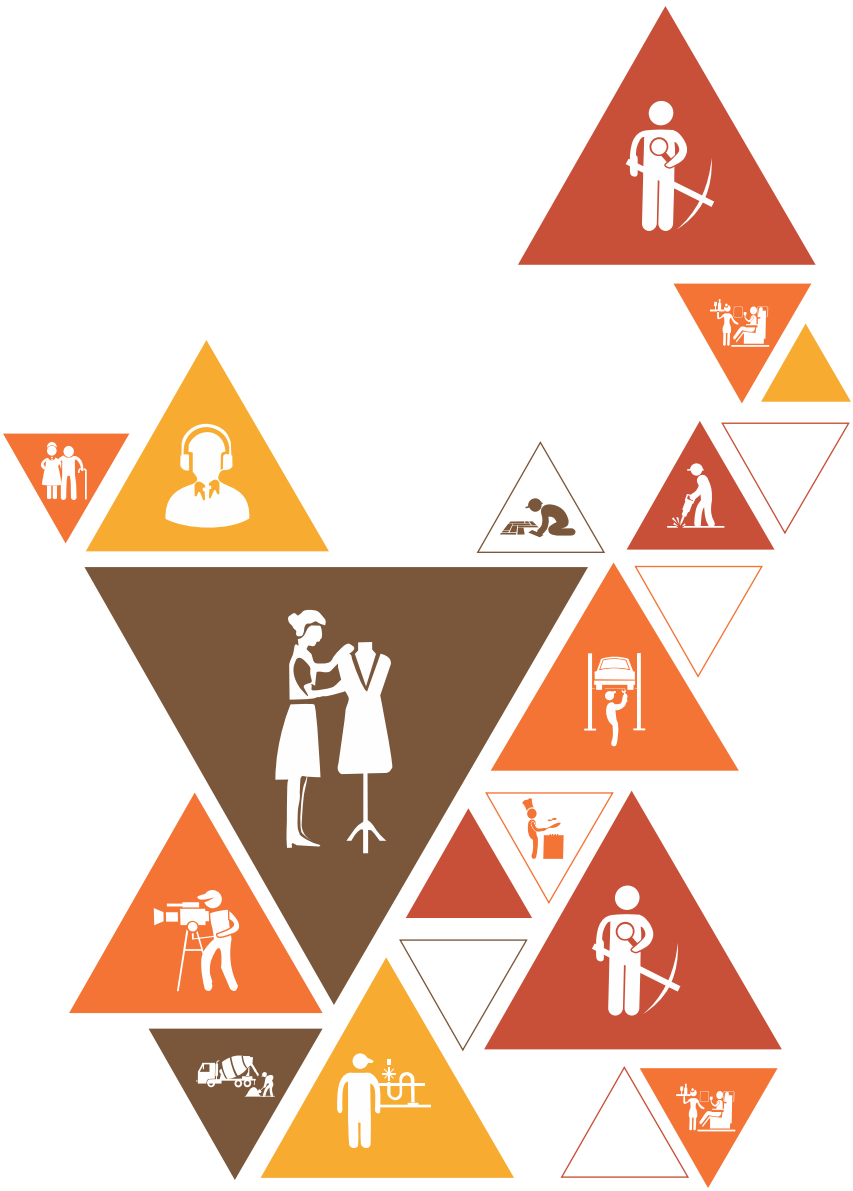
Sub activity	Skill Practice	Time	Resources
1	Measure the size of the classroom in metric system by using a tape measure	2 Hours	Tape measure, stationary items (pen, marker, scale and notebook)
2	Measure the size of the classroom in imperial system by using a tape measure	2 Hours	
3	Convert the following: • 100000 mm into ..... mts, and • 1000mts into ..... mm. • 100 inches into ..... ft. • 10000 sft into ..... m^2 • 1m^3 into ..... mm^3	1 Hour	
4	Solve the below: 300-200+100x50-30/5 = ... 100-20/3+15-150 = ... 1.5-0.2/4+2.8-1500+15000 = ...	1 Hour	
5	Calculate, how many 600x600 mm tile units are needed to install flooring for an area of 20 sft?	2 Hours	
6	Demonstrate and practice 3-4-5 method for squaring of corners of the classroom	2 Hours	

Table 2.3.1 – Mathematical skills

Specific Instructions

- Make sure all the participants are wearing proper PPEs.
- Explain the overall procedure and key points of measuring the classroom with a tape measure before commencing the exercise.
- Use the unit conversion table for the activity.
- Give hints on the method of converting the units easily.
- Assist them wherever, it is necessary during the activity.
- At end of the process ask each one of them to mention the experience they had in activity.
- Clarify doubts, if any.
- Check and observe that all the steps followed by the participants.
- Complete the activity in scheduled time, at the end of activity, to assess the skill and knowledge acquired, call a person randomly from the group and ask him to explain the steps involved for mathematical conversion of units, calculation of area/volume and squaring of corners.

Notes



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सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

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National
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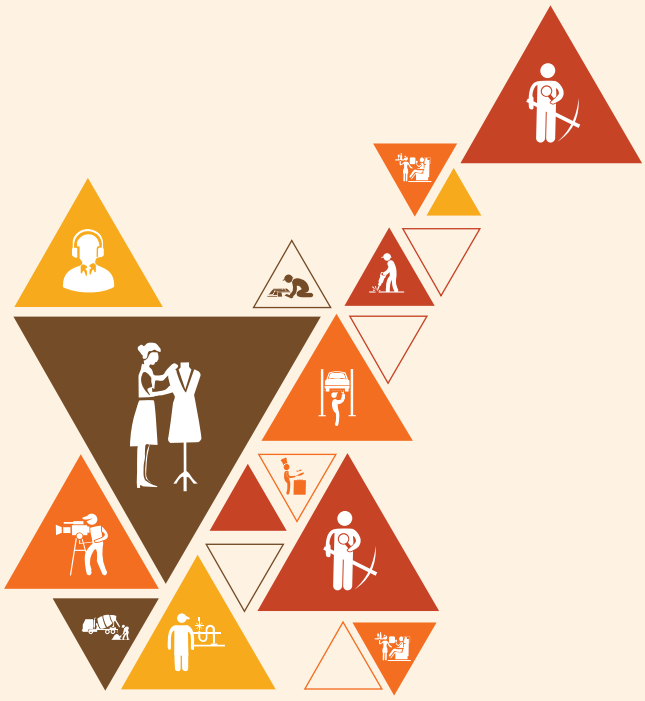
Transforming the skill landscape

3. Tools, Materials and Consumables Required for Mason Tiling

Unit 3.1 – Tools for mason tiling

Unit 3.2 – Material and consumables required



(CON/N0115)

Key Learning Outcomes

At the end of this module, trainer will ensure that the participant will be able to:

1. Understand various types of tiling tools;
2. Know about use of tiling tools;
3. Know about tiles;
4. Know about different types of tiles;
5. Know about consumables required; and
6. Know about storing and stacking of materials and consumables

UNIT 3.1: Tools for Mason Tiling

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Understand various types of tiling tools; and
2. Know about use of tiling tools.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminium), Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, mallets, wedges, power wet saws, tile scribes or hand held, tile cutters, rubber grout float, tile trims/tile strips, spacers, Mixing platform {3'x5'}

Do

- Explain the Tools required.
- Elaborate about Tools used by Mason tiling.
- Explain the Selection Procedure of Hand Tools.
- Describe the Maintenance of tools.
- Explain the process of Inspecting the cleanliness.
- Elaborate ways of sharpening important components.
- Explain the process of storing and take good care of accessories and parts properly.

- Elaborate Power tools.
- Elaborate Materials and Accessories required in Mason Tiling.
- Explain the selection procedure of spacers and tile edge trims.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 3.1 to explain Tools for Mason Tiling work.
- Mason tiling requires a variety of tools to ensure accurate measurements, precise cuts, and proper tile placement. Here is a list of essential tools commonly used in mason tiling:
- Measuring and Layout Tools:
    - Measuring Tape: For taking accurate measurements of surfaces and tiles.
    - T-square: Used for drawing straight lines and ensuring right angles.
    - Chalk Line: Creates straight reference lines on surfaces for tile alignment.
    - Level: Ensures that tiles are laid flat and level.
- Cutting Tools:
    - Tile Cutter: Used for straight cuts on ceramic and porcelain tiles.
    - Tile Nippers: For making small cuts or trimming edges of tiles.
    - Wet Saw: A power tool for precise and clean cuts, especially for large tiles or complex shapes.
    - Angle Grinder with Diamond Blade: For cutting tiles and creating notches.
- Setting and Spacing Tools:
    - Trowel: Used to spread adhesive or mortar evenly on the surface.
    - Notched Trowel: Creates ridges in adhesive for better tile adhesion.
    - Tile Spacers: Keep tiles evenly spaced for uniform grout lines.
    - Cross Spacers: Ensure tiles are square and aligned at corners.
- Grouting Tools:
    - Grout Float: Used to spread and press grout into tile joints.
    - Grout Sponge: For cleaning excess grout and finishing grout lines.
    - Grout Brush: Used to scrub grout lines for a clean finish.
- Surface Preparation Tools:
    - Hammer: For tapping tiles into place and making minor adjustments.
    - Chisel: Used to remove old tiles or trim edges.
    - Sander or Grinder: To smooth rough edges and surfaces.
- Safety Gear:

- Safety Glasses: Protects eyes from tile fragments and dust.
- Dust Mask or Respirator: Guards against inhaling tile dust.
- Knee Pads: Provide comfort and protect knees during long periods of work.

- Miscellaneous Tools:
  - Pencil or Marker: For marking tile layouts and cutting lines.
  - Rubber Mallet: Used to gently tap tiles into place without damaging them.
  - Bucket and Mixing Paddle: For preparing adhesive or mortar.
- Having the right tools for mason tiling is essential for achieving accurate measurements, clean cuts, and professional-looking results. Investing in quality tools and using them correctly can make the tiling process smoother and more efficient.
- Show the pictures of the tools, materials and equipment required for tiling work.

Notes

UNIT 3.2: Materials and Consumables Required

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Know about tiles;
2. Know about different types of tiles;
3. Know about consumables required; and
4. Know about storing and stacking of materials and consumables.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminium), Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, mallets, wedges, power wet saws, tile scribes or hand held, tile cutters, rubber grout float, tile trims/tile strips, spacers, Mixing platform {3'x5'}

Do

- Explain the different types of tiles and consumables required
- Elaborate about storing and stacking of materials and consumables.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 3.2 to explain materials and consumables required for Mason Tiling.
- In addition to tools, various materials and consumables are essential for successful tiling work in masonry. These materials ensure proper adhesion, alignment, and finishing of tiles.
- Adhesive and Mortar:
  - Tile Adhesive: A bonding agent used to attach tiles to surfaces. Different types of tiles may require specific adhesives.
  - Thin-Set Mortar: Used to set tiles on floors, walls, and other surfaces. It provides a strong bond and is available in various formulations.
- Grout:
  - Grout: Fills the gaps between tiles, providing stability and preventing moisture penetration. Available in different colors.
- Tile:
  - Tiles: The primary material for tiling work. They come in various materials, sizes, colors, and designs.
- Tile Backer Board or Substrate:
  - Backer Board: Provides a stable and even surface for tile installation. It's used on walls and floors before tiling.
- Waterproofing Membrane:
  - Waterproofing Membrane: Used to prevent water seepage and protect underlying surfaces, particularly in wet areas like bathrooms and kitchens.
- Expansion Joints:
  - Expansion Joints: Flexible strips or materials that allow for movement due to temperature changes, preventing tiles from cracking.
- Spacers:
  - Tile Spacers: Keep tiles evenly spaced during installation to ensure uniform grout lines.
- Sealants:
  - Tile Sealant: Applied to tiles and grout joints to prevent moisture penetration, staining, and promote longevity.
- Primers:
  - Primer: Applied to the substrate before tiling to improve adhesive bonding and prevent moisture penetration.
- Edging Profiles:
  - Edging Profiles: Used to finish tile edges and provide a smooth transition between different surfaces.
- Back Buttering Tools:

- Back Buttering Tools: Used to apply adhesive directly to the back of tiles, ensuring a secure bond.

- Tools for Mixing:
  - Mixing Paddle: Used with a drill to mix adhesive or mortar.
- Tools for Application:
  - Trowel: Used to spread adhesive or mortar on surfaces.
  - Notched Trowel: Creates ridges in adhesive for better tile adhesion.
- Cleaning and Finishing Materials:
  - Sponges: Used for cleaning tiles and grout lines during and after installation.
  - Grout Float: Spreads and presses grout into joints.
  - Grout Brush: Used to scrub grout lines for a clean finish.
- Backer Rod:
  - Backer Rod: Used in expansion joints to fill gaps and support sealant.
- Laticrete or Similar Products:
  - Laticrete or Similar Products: Waterproofing solutions and adhesive products used for specialized tiling projects.
- Make sure to choose materials that are suitable for the specific type of tiling project and adhere to industry standards. Proper selection and application of materials are crucial for achieving a durable, well-finished, and long-lasting tile installation.

Activity - 1

Identification of Tiling Tools, Materials and Equipment

Conduct a skill practice activity.

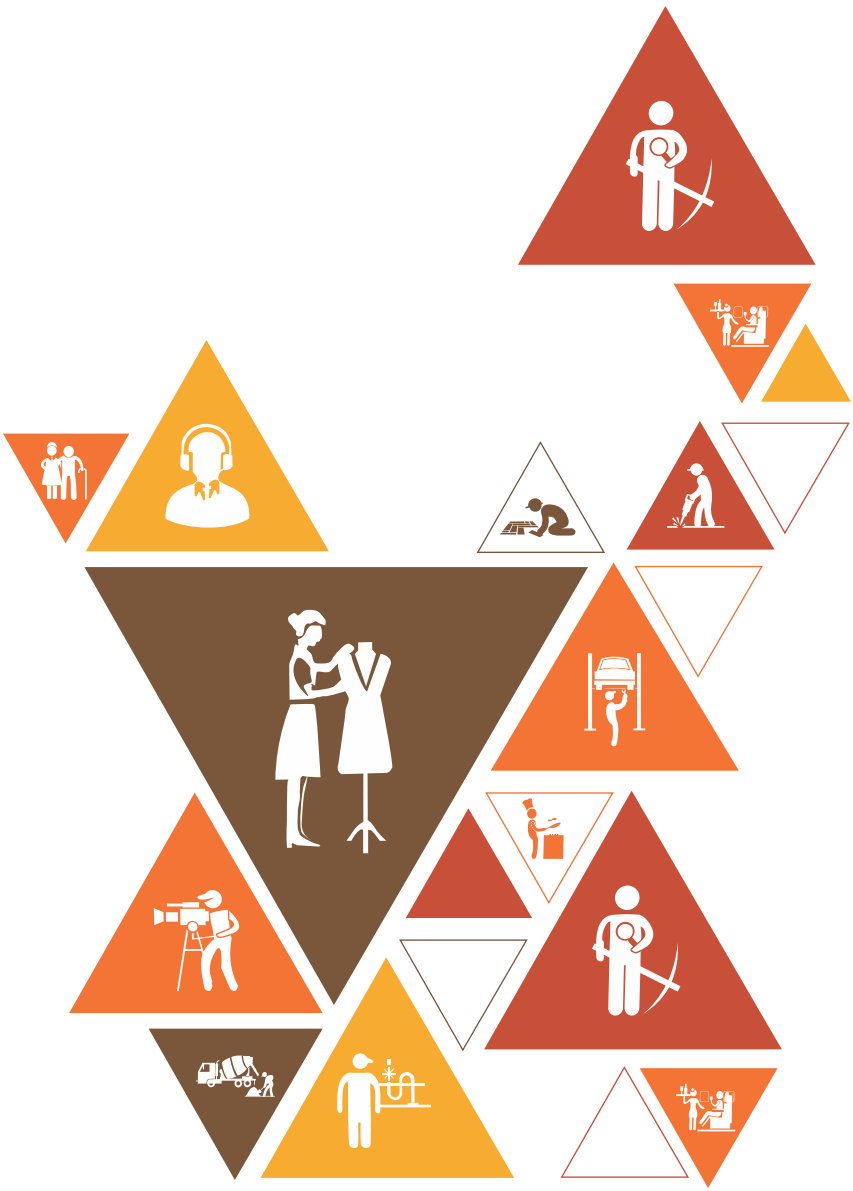
- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Maximum duration mentioned in the below table is for extensive practice and corresponding guidance until the skill is acquired by the participants.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

Sub Activity	Skill Practice	Time	Resources
1	Identify and use tiling material	8 hours	Measuring tape/rule, Masons line, Plumb bob Try Square, Mortar pan Trowels, Straight edge (Aluminum), Wood/ rubber mallet, Corner trowel, Pointer trowel, Line and pins Spirit level, Water level, Square notch trowel, Hammers, Mallets, Wedges, Power wet saws, Tile scribes or hand held tile cutters, Rubber grout float, Tile trims/tile strips, Spacers, Mixing plat form, Tile boxes – 5 nos.
2	Identify grouting material/ adhesives	4 hours	
3	Check tile batch numbers and specifications	2 hours	
4	Identify and use tile spacers and edge trims	4 hours	
5	Identify and operate hand, power tools	8 hours	
6	Identify and operate tiling equipment	6 hours	

Specific Instructions

- Demonstrate and show the use of each tool, device and equipment.
- Ask the participant to practice the same.
- Check whether the participants are following the standard and safe procedure of usage of tools and equipment.
- Intervene wherever needed and correct the mistakes done by participants.
- Ensure that each of the participants are well versed in identifying and using the tiling tools and equipment.
- Make sure that the participants are well versed in checking the condition and run any immediate maintenance of tiling tools and equipment.
- Ensure that the participants are well versed in requesting and returning the new material and unused material respectively to the store.
- Complete the activity in scheduled time, at the end of activity to assess the skill acquired, call a person randomly from the group and ask him to demonstrate any tool.

Notes



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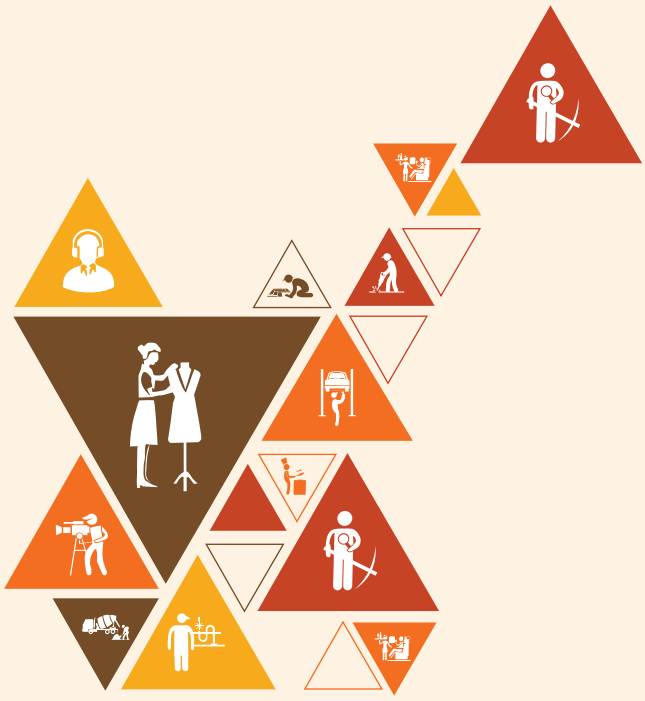
4. Laying and Fixing of Tiles

Unit 4.1 – Sketches/layouts in tiling

Unit 4.2 – Cutting of tiles

Unit 4.3 – Horizontal laying and fixing of tiles

Unit 4.4 – Vertical laying and fixing of tiles



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UNIT 4.1: Sketches/Layouts in Tiling

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Read the layout and sketches; and
2. Understand informatory signs on the sketches.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminium), Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, mallets, wedges, power wet saws, tile scribes or hand held, tile cutters, rubber grout float, tile trims/tile strips, spacers, Mixing platform {3'x5'}

Do

- Explain the way of reading the layout and sketches
- Elaborate about informatory signs on the sketches

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 4.1 of sketches/layouts in tiling for Mason Tiling.
- Reading the layout and sketches is a fundamental skill in mason tiling. It involves understanding the design, dimensions, and placement of tiles on surfaces.

- Informatory signs on sketches provide important guidance for the tiling project. They convey specific instructions and details that impact the installation process:
  - Arrow Symbols: Arrows indicate the direction in which tiles should be laid. Pay attention to the direction of arrows for proper alignment.
  - Numbers or Letters: Numeric or alphanumeric labels on tiles correspond to those on the sketch. This helps you match tiles with their correct positions.
  - Markings: Symbols or markings may indicate where to start tiling, align specific tiles, or make cuts.
  - Corners and Angles: Informatory signs can highlight corners and angles, helping you achieve precise alignments.
  - Patterns: Sketches may have guides for patterned tiles, specifying the order or arrangement.
  - Material Specifications: Symbols may indicate which type of tile or material to use in specific areas.
  - Border Instructions: Informatory signs may indicate how to lay border tiles for a seamless finish.
- Understanding these informatory signs is crucial to ensure that the tile installation follows the intended design and layout accurately. Clear communication between the designer, contractor, and installer helps avoid errors and ensures a successful tiling project

Notes

UNIT 4.2: Cutting of Tiles

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Know about how to identify batch no. and arrow mark on tile;
2. Know about tools required for cutting tiles; and
3. Perform tile cutting

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminium), Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, mallets, wedges, power wet saws, tile scribes or hand held, tile cutters, rubber grout float, tile trims/tile strips, spacers, Mixing platform {3'x5'}

Do

- Explain the process of identifying batch no. and arrow marking on tile.
- Elaborate about tools required for cutting tiles.
- Demonstrate the procedure of tile cutting.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 4.2 of cutting of tiles for Mason Tiling.

- The batch number on a tile is a unique identifier that represents the manufacturing batch from which the tile originated. It helps ensure consistency in color, pattern, and quality within a specific batch. When working on a tiling project, it's important to use tiles from the same batch to maintain uniformity in appearance. The batch number is often printed on the back of the tile or on its packaging.
- An arrow mark on a tile indicates the direction in which the tile is intended to be laid. This is especially important for tiles with a particular pattern or directional design. By following the arrow marks, you ensure that the tiles are aligned correctly and the design appears as intended.
- Tools Required for Cutting Tiles:
    - Tile Cutter
    - Tile Nippers
    - Wet Saw
    - Angle Grinder with Diamond Blade.
- Performing Tile Cutting:
    - Safety Precautions: Before cutting tiles, ensure you are wearing appropriate safety gear, including safety glasses, ear protection, and a dust mask.
    - Measuring: Measure the area where the tile needs to be cut. Mark the cutting line using a pencil or marker.
    - Tile Cutter:
    - Place the tile on the cutting surface of the tile cutter.
    - Align the cutting wheel with the marked cutting line.
    - Apply gentle pressure and score the tile along the line.
    - Press the tile breaker or handle to snap the tile along the scored line.
    - Tile Nippers:
    - Use tile nippers to make small, precise cuts along the marked line.
    - Nibble away small portions of the tile until you achieve the desired shape.
    - Wet Saw:
    - Set up the wet saw according to the manufacturer's instructions.
    - Place the tile on the cutting surface, aligning the marked line with the saw's blade.
    - Turn on the wet saw and gently guide the tile through the blade, following the marked line.
    - Angle Grinder:
    - Secure the tile in place, either clamped or with a non-slip surface.
    - Turn on the angle grinder and carefully guide it along the marked cutting line.
    - Finishing: After cutting, smooth any rough edges using sandpaper or a tile file.
    - Safety Cleanup: Dispose of tile fragments safely and clean the work area.

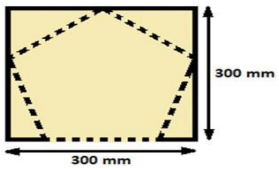
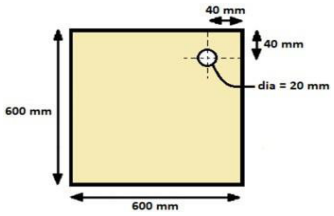
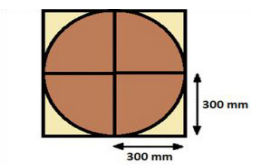
- Remember to practice caution when cutting tiles, especially when using power tools. Precision and safety are crucial to achieve clean and accurate cuts for a successful tiling project.

Activity - 1

Marking and Cutting of tiles

Conduct a skill practice activity.

- Ask the participants to assemble in-group of two trainees.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Each trainee have to perform the exercise in activity.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

Sub Activity	Skill Practice	Time	Resources
1	Mark and cut an arc (radius 40mm) on corner of tile (300mm x 300mm))	1 hour	Measuring tape/rule, Tile marking tool Drill machine, Set square Marker Compass, Tile cutting machine
2	Cut a tile (300mm x 300mm) in pentagon shape 	1 hour	
3	Drill a hole of 20mm dia. (40mm from edges) in the corner of tile (600mm x 600mm) 	1 hour	
4	Cut a circle (radius 150 mm) from a tile (300mm x 300mm)	1 hour	
5	Group tiles as per pattern given below 	2 hours	

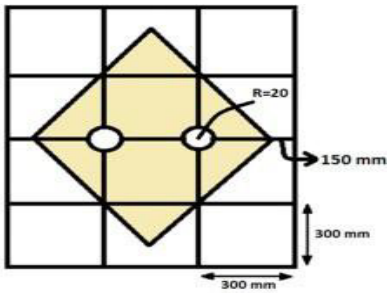
6	Group tiles as per pattern given below 	4 hours	

Table 4.2.1 – Marking & cutting of tiles

Specific Instructions

- Make sure all the participants are wearing proper PPEs.
- Explain the overall procedure and key points before commencing the exercise.
- Ensure proper housekeeping wherever required.
- Ensure the proper protection of completed tile work.
- Check and observe that all the steps followed by the participants.
- Complete the activity in scheduled time, at the end of activity, to assess the skill and knowledge acquired, call a person randomly from the group and ask him to explain the steps involved in laying of tiles using conventional method.

Notes

UNIT 4.3: Horizontal laying and fixing of tiles

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Discuss about surface preparation methods;
2. Perform preparation of cement mortar; and
3. Perform laying and fixing of tiles horizontally

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminium), Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, mallets, wedges, power wet saws, tile scribes or hand held, tile cutters, rubber grout float, tile trims/tile strips, spacers, Mixing platform {3'x5'}

Do

- Explain the different types of tiles and consumables required
- Elaborate about storing and stacking of materials and consumables.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 4.3 to explain horizontal laying and fixing of tiles required for Mason Tiling.
- Surface preparation is a crucial step in mason tiling to ensure proper adhesion, stability, and longevity of the tiles. Here are common surface preparation methods:
  - Clean the Surface.

- Levelling.
- Priming.
- Scratching or Roughening.
- Waterproofing.

- Cement mortar is commonly used as the adhesive for tile installation. Here's how to prepare it:
  - Ingredients: You'll need cement, sand, and water. The ratio of cement to sand depends on the type of tiles and the substrate.
  - Mixing: In a mixing container, add sand and cement in the required ratio. Mix them dry to ensure even distribution.
  - Adding Water: Gradually add water while continuously mixing until you achieve a smooth and workable consistency.
  - Mixing Tools: Use a trowel or mixing paddle attached to a drill for efficient mixing.
- Laying and fixing tiles horizontally requires precision and attention to detail. Here's a general process:
  - Layout: Begin by measuring and marking layout lines using chalk lines. This provides a guide for tile placement.
  - Applying Adhesive: Use a notched trowel to spread adhesive on a small section of the surface. Work in manageable areas to prevent the adhesive from drying too quickly.
  - Tile Placement: Press the first tile firmly into the adhesive at the intersection of the layout lines. Wiggle it slightly to ensure proper adhesion.
  - Using Spacers: Insert tile spacers at the corners of the first tile to create uniform gaps for grout lines.
  - Alignment: As you place subsequent tiles, use a level to ensure they are flat and level. Adjust as needed by tapping gently with a rubber mallet.
  - Cutting Tiles: When you reach the edges, measure and mark tiles for cutting. Use a tile cutter, wet saw, or other appropriate tools to make accurate cuts.
  - Back Buttering: For larger tiles or uneven surfaces, apply a thin layer of adhesive (back buttering) to the back of the tile before placing it.
  - Continuation: Continue placing tiles in rows, using spacers to maintain consistent gaps.
  - Clean Excess Adhesive: Wipe away any excess adhesive that oozes out from the gaps between tiles.
  - Grouting: After the adhesive has cured, remove spacers and fill the gaps between tiles with grout using a grout float.
  - Finishing: Clean excess grout from the tile surfaces using a damp sponge.
  - Curing: Allow the grout to cure according to manufacturer's instructions.
- Remember to follow manufacturer guidelines for adhesive mixing and application.
- Proper tile alignment, spacing, and adhesive application are critical for achieving a neat and professional finish in horizontally laid tiles.

Activity - 1

Horizontal Laying of tiles - Conventional method

Conduct a skill practice activity.

- Install floor tiles for a floor area of 200 sq. ft. using conventional method, use 600 mm x 600 mm tiles.
- Use Central line method.
- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Maximum duration mentioned in the below table is for extensive practice and corresponding guidance until the skill is acquired by the participants.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

Sub Activity	Skill Practice	Time	Resources
1	Read tile layout drawing/sketches	3 hours	Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminum), Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, Mallets, Wedges, Power wet saws, Tile scribes or hand held tile cutters, Rubber grout float, Tile trims/tile strips, Spacers, Mixing plat form
2	Carryout preliminary checks on materials and tools required for quality and workability	5 hours	
3	Prepare the surface where floor tiles are to be laid	3 hours	
4	Transfer of FFL to the corners and fixing of button blocks	4 hours	
5	Dry lay the tiles for checking the feasibility of layout drawing and as per central line	3 hours	
6	Prepare mortar for required consistency	4 hours	
7	Spread the bed mortar	4 hours	
8	Horizontally lay full tiles	6 hours	
9	Lay cut tiles (tracing and cutting the tiles for any obstructions)	4 hours	
10	Carryout curing after completion of laying process	2 hours	
11	Carryout grouting (next day)	4 hours	
12	Carryout curing (next day)	2 hours	
13	Carryout grout sealing with sealant (next day)	3 hours	
14	Check for quality (hollow sound test)	2 hours	

Table 4.3.1 – Laying of tiles horizontally

Specific Instructions

- Make sure all the participants are wearing proper PPEs.
- Explain, why full tiles are laid first and then the cut tiles are fixed?
- Explain the overall procedure and key points of the laying and fixing of tiles horizontally before commencing the exercise.
- Explain alignment of tiles.
- Explain the method to conduct hollow sound test.
- Ensure proper housekeeping wherever required.
- Ensure the proper protection of completed tile work.
- Check and observe that all the steps followed by the participants.
- Complete the activity in scheduled time, at the end of activity, to assess the skill and knowledge acquired, call a person randomly from the group and ask him to explain the steps involved in laying of tiles using conventional method.

Activity - 2

Horizontal Laying of tiles - Adhesive method

Conduct a skill practice activity.

- Install floor tiles for a floor area of 200 sft using adhesive method, use 600 mm x 600 mm tiles.
- Use Corner edge method.
- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Maximum duration mentioned in the below table is for extensive practice and corresponding guidance until the skill is acquired by the participants.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

Sub Activity	Skill Practice	Time	Resources
1	Read tile layout drawing/sketches	3 hours	Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels,
2	Carryout preliminary checks on materials and tools required for quality and workability	5 hours	
3	Prepare the surface where floor tiles	3 hours	

	are to be laid		Straight edge (Aluminum), Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, Mallets, Wedges, Power wet saws, Tile scribes or hand held tile cutters, Rubber grout float, Tile trims/tile strips, Spacers, Mixing plat form, Adhesive
4	Transfer of FFL to the corners and fixing of button blocks	4 hours	
5	Dry lay the tiles for checking the feasibility of layout drawing and as per corner edge	3 hours	
6	Prepare mortar for required consistency	4 hours	
7	Spread the adhesive	4 hours	
8	Horizontally lay full tiles	6 hours	
9	Lay cut tiles (tracing and cutting the tiles for any obstructions)	4 hours	
10	Carryout curing after completion of laying process	2 hours	
11	Carryout grouting (next day)	4 hours	
12	Carryout curing (next day)	2 hours	
13	Carryout grout sealing with sealant (next day)	3 hours	
14	Check for quality (hollow sound test)	2 hours	

Table 4.3.2 – Laying of tiles horizontally

Specific Instructions

- Make sure all the participants are wearing proper PPEs.
- Explain, why full tiles are laid first and then the cut tiles are fixed?
- Explain the overall procedure and key points of the laying and fixing of tiles horizontally before commencing the exercise.
- Ensure proper housekeeping wherever required
- Ensure the proper protection of completed tile work.
- Check and observe that all the steps followed by the participants.
- Complete the activity in scheduled time, at the end of activity, to assess the skill and knowledge acquired, call a person randomly from the group and ask him to explain the steps involved in laying of tiles using adhesive technique.

Sub Activity	Skill Practice	Time
1	Deviation in length	+ / - 0.6%
2	Deviation in thickness	+ / - 5%
3	Straightness of sides	+ / - 0.5%
4	Rectangularity	+ / - 0.6%
5	Surface flatness (warpage)	+ / - 0.5%
6	Surface quality	Min. 95% free from defects
7	Water Absorption	> 3 % & ≤ 6 %

Table 4.3.3 – Tolerance's chart for floor tiles

Notes

UNIT 4.4: Vertical laying and fixing of tiles

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Perform laying and fixing of tiles vertically.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminium), Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, mallets, wedges, power wet saws, tile scribes or hand held, tile cutters, rubber grout float, tile trims/tile strips, spacers, Mixing platform {3'x5'}

Do

- Explain the different types of tiles and consumables required
- Elaborate about storing and stacking of materials and consumables.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 4.4 to explain vertical laying and fixing of tiles for Mason Tiling.
- Laying and fixing tiles vertically is a specific technique used for walls and other vertical surfaces. Here's a step-by-step guide on how to perform this process:
  - Surface Preparation: Ensure that the wall surface is clean, level, and free from any debris, dust, or existing materials. Use a level and straightedge to check for evenness.
  - Layout Planning: Measure the wall to determine the centreline and mark it vertically. This will guide you in starting the tiling process from the centre.

- Choosing Adhesive: Select the appropriate adhesive for vertical tiling. Thin-set mortar is commonly used for this purpose.
- Applying Adhesive:
  - Start with a small section of the wall that you can work on comfortably.
  - Using a notched trowel, apply a thin layer of adhesive to the wall. Hold the trowel at a 45-degree angle to create ridges in the adhesive.
  - The adhesive should cover an area slightly larger than the size of the tile you're placing.
- Tile Placement:
  - Press the first tile into the adhesive, aligning it with the centerline and the bottom reference line (if applicable).
  - Use a slight twisting motion to ensure good adhesive contact and eliminate air pockets.
- Using Spacers: Insert tile spacers at the corners of the first tile to maintain consistent gaps between tiles.
- Alignment and Levelling:
  - Use a level to check that the first tile is vertically aligned and level.
  - Adjust the tile as needed by tapping gently with a rubber mallet.
- Continuation: Continue placing tiles in vertical rows, following the same procedure. Use tile spacers between tiles to ensure uniform grout lines.
- Cutting Tiles: Measure and mark tiles for cutting at the edges, around outlets, or corners. Cut tiles using appropriate tools like a wet saw or tile cutter.
- Back Buttering: If necessary, apply adhesive to the back of a tile (back buttering) before placing it on the wall. This helps ensure proper adhesion.
- Grouting: After the adhesive has cured, remove tile spacers and proceed to grouting. Use a grout float to press grout into the gaps between tiles.
- Finishing: Clean excess grout from the tile surfaces using a damp sponge. Use a damp cloth to wipe the tiles clean once the grout has set.
- Curing: Allow the grout to cure according to the manufacturer's instructions.
- Sealing: Depending on the tile material, you might need to apply a sealer to protect the tiles and grout from moisture and stains.

Activity - 1

Vertical Laying of tiles - Conventional method

Conduct a skill practice activity.

- Install floor tiles for a wall area of 200 sft, use 600 mm x 600 mm tiles.
- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions,

method statements, etc.

- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Maximum duration mentioned in the below table is for extensive practice and corresponding guidance until the skill is acquired by the participants.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

Sub Activity	Skill Practice	Time	Resources
1	Read tile layout drawing /sketches	3 hours	Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminum) Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, Mallets, Wedges, Power wet saws Tile scribes or hand held tile cutters, Rubber grout float, Tile trims/tile strips, Spacers, Mixing platform
2	Carryout preliminary checks and procedure on materials and tools required	4 hours	
3	Prepare the surface where floor tiles are to be laid	4 hours	
4	Prepare mortar of required consistency	4 hours	
5	Place temporary support for tiling work	2 hours	
6	Spread the bed mortar and roughly plaster it	6 hours	
7	Vertically lay full tiles by leaving the first tile from bottom (slope/gradient purpose)	6 hours	
8	Lay cut tiles (tracing and cutting the tiles for any obstructions)	3 hours	
9	Carryout curing after completion of laying process	2 hours	
10	Carryout grouting (next day)	4 hours	
11	Carryout curing (next day)	2 hours	
12	Carryout grout sealing with sealant (next day)	4 hours	
13	Check for quality (hollow sound test)	2 hours	

Table 4.4.1 – Vertical laying of tiles

Specific Instructions

- Make sure all the participants are wearing proper PPEs.
- Explain, why full tiles are laid first and then the cut tiles are fixed?
- Explain the overall procedure and key points of the laying and fixing of tiles vertically before commencing the exercise.
- Explain alignment of tiles
- Explain the method to conduct hollow sound test.
- Ensure proper housekeeping wherever required.
- Ensure the proper protection of completed tile work.
- Check and observe that all the steps followed by the participants.
- Complete the activity in scheduled time, at the end of activity, to assess the skill and knowledge acquired, call a person randomly from the group and ask him to explain the steps involved in laying of tiles vertically using conventional technique.

Activity - 2

Vertical Laying of tiles - Adhesive method

Conduct a skill practice activity.

- Install floor tiles for a wall area of 200 sft, use 600 mm x 600 mm tiles.
- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Maximum duration mentioned in the below table is for extensive practice and corresponding guidance until the skill is acquired by the participants.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

Sub Activity	Skill Practice	Time	Resources
1	Read tile layout drawing /sketches	3 hours	Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminum) Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, Mallets, Wedges, Power wet saws Tile scribes or hand held tile cutters, Rubber grout float, Tile trims/tile strips, Spacers, Mixing platform, Adhesive
2	Carryout preliminary checks and procedure on materials and tools required	4 hours	
3	Prepare the surface where floor tiles are to be laid	4 hours	
4	Prepare mortar of required consistency	4 hours	
5	Place temporary support for tiling work	2 hours	
6	Spread the bed mortar and roughly plaster it	6 hours	
7	Vertically lay full tiles by leaving the first tile from bottom (slope/gradient purpose)	6 hours	
8	Lay cut tiles (tracing and cutting the tiles for any obstructions)	3 hours	
9	Carryout curing after completion of laying process	2 hours	
10	Carryout grouting (next day)	4 hours	
11	Carryout curing (next day)	2 hours	
12	Carryout grout sealing with sealant (next day)	4 hours	
13	Check for quality (hollow sound test)	2 hours	

Table 4.4.2 – Vertical laying of tiles

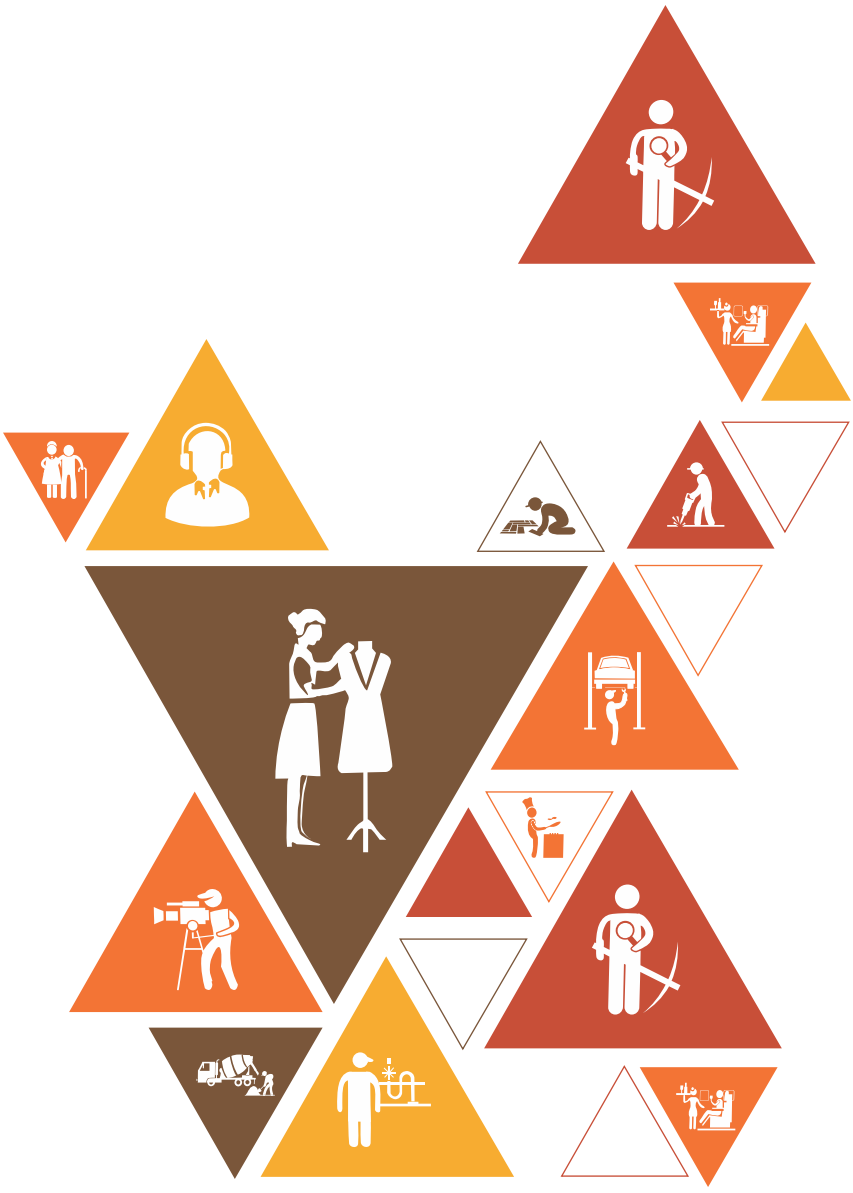
Tolerance's Chart for Wall Tiles

S. No.	Item/Parameter	Time
1	Deviation in length	+ / - 0.5%
2	Deviation in thickness	+ / - 10%

3	Straightness of sides	+ / - 0.3%
4	Rectangularity	+ / - 0.5%
5	Surface flatness (warpage)	+ / - 0.5%
6	Surface quality	Min. 95% free from defects
7	Water Absorption	> 10 % & < 20 %

Table 4.4.3 – Tolerance's chart for Wall Tiles

Notes



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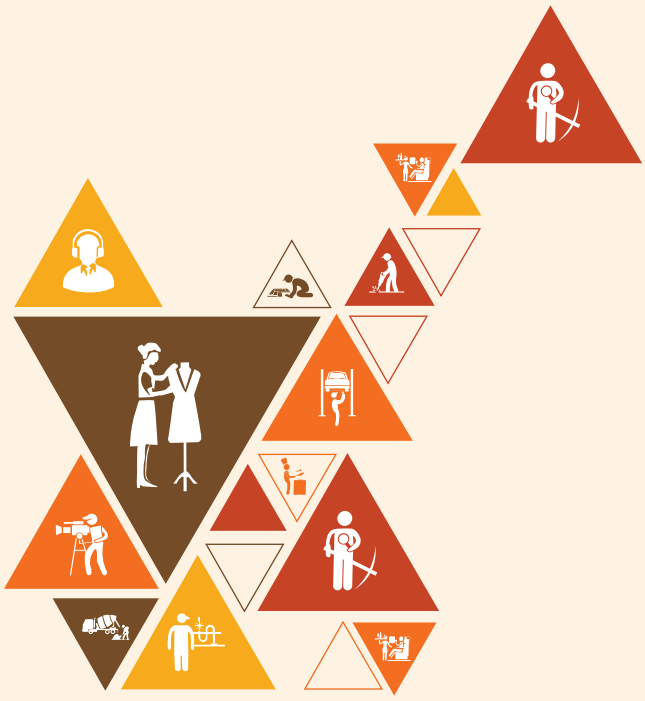
5. Grouting and Curing of Tiles

Unit 5.1 – Grouting of tiles

Unit 5.2 – Curing of tiles



(CON/N0116)

Key Learning Outcomes

At the end of this unit, trainer will ensure that participant will be able to:

1. Discuss about grouting work;
2. Know about procedure of mixing and applying grout;
3. Know about procedure of removing grout;
4. Discuss about curing of tile; and
5. Know about curing technique for tiles.

UNIT 5.1: Grouting of Tiles

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Discuss about grouting work;
2. Know about procedure of mixing and applying grout; and
3. Know about procedure of removing grout.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminium), Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, mallets, wedges, power wet saws, tile scribes or hand held, tile cutters, rubber grout float, tile trims/tile strips, spacers, Mixing platform {3'x5'}

Do

- Explain the grouting work.
- Elaborate about procedure of mixing and applying grout.
- Explain the procedure of removing grout.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 5.1 to explain grouting of tiles for Mason Tiling.
- Grouting is a crucial step in mason tiling that not only enhances the appearance of the tiled

surface but also provides stability and protection to the installation. Here's a step-by-step guide on how to properly grout tiles:

- Tools and Materials Needed:
  - Grout mix
  - Grout float
  - Sponge
  - Bucket of water
  - Grout sealer (if needed)
  - Masking tape (for neat edges)
  - Gloves and safety glasses
- Tips for Successful Grouting:
  - Use a rubber float or a grout bag for small or intricate areas.
  - Always wear gloves to protect your hands from chemicals in the grout.
  - Do not apply excessive water during the cleaning process, as it can weaken the grout.
  - Mask off adjacent surfaces to prevent grout from spilling onto areas where it shouldn't be.
  - Keep a damp sponge and a bucket of clean water nearby for easy cleanup.
  - Avoid walking on freshly grouted surfaces until the grout has fully cured.
- Proper grouting not only enhances the aesthetics of your tiled surface but also contributes to the overall durability and longevity of your tiling project.

Notes

UNIT 5.2: Curing of Tiles

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Discuss about curing of tile; and
2. Know about curing technique for tiles.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Measuring tape/rule, Masons line, Plumb bob, Try Square, Mortar pan, Trowels, Straight edge (Aluminium), Wood/rubber mallet, Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, mallets, wedges, power wet saws, tile scribes or hand held, tile cutters, rubber grout float, tile trims/tile strips, spacers, Mixing platform {3'x5'}

Do

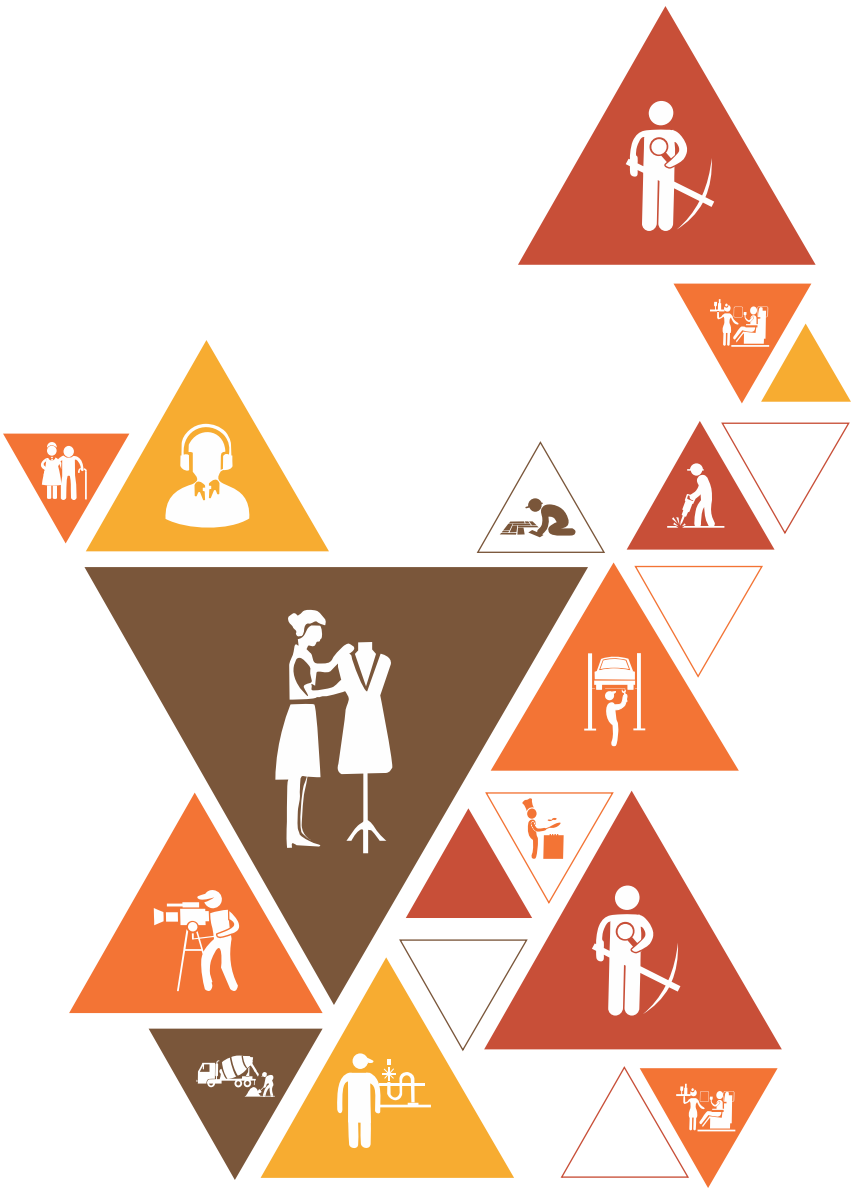
- Explain the curing of tile.
- Elaborate about curing technique for tiles.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 5.2 to explain curing of tiles for Mason Tiling.
- Curing is a process that involves allowing tiles and the materials used in their installation, such as adhesive and grout, to properly set and harden. Proper curing is essential for achieving the best performance, durability, and appearance of the tiled surface.
- Curing allows the adhesive and grout to achieve their optimal strength and bonding properties. It ensures that the tiles remain securely attached to the surface, and the grout lines are strong and

resistant to moisture infiltration. Proper curing also helps prevent cracking, shrinkage, and other issues that can occur if materials dry out too quickly.

- The curing times can vary based on factors such as the type of adhesive, grout, tile material, temperature, humidity, and the specific products used. Always refer to the manufacturer's guidelines for recommended curing times for the specific products you are using.
- Remember that rushing the curing process can compromise the integrity of your tile installation. By giving the tiles, adhesive, and grout the time they need to cure properly, you'll ensure a durable, well-bonded, and aesthetically pleasing finished project.



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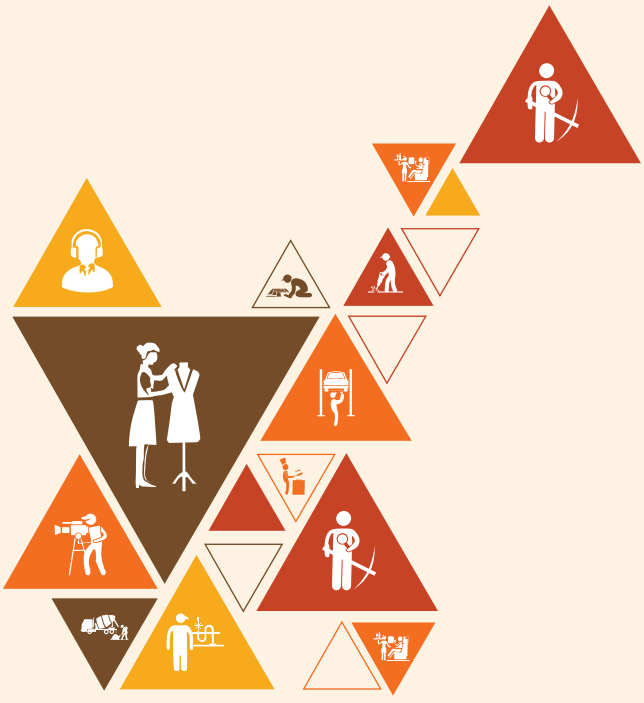
6. Team Work and Effective Communication at Workplace

Unit 6.1 – Effective Communication and Teamwork

Unit 6.2 – Working Effectively and Maintaining Discipline at Work

Unit 6.3 – Maintaining Social Diversity at Work



(CON/N8001)

Key Learning Outcomes

At the end of this unit, trainer will ensure that participant will be able to:

1. Importance of interacting and communicating in an effective manner.
2. Ways to support co-workers to execute the project requirements.
3. Ways to practice inclusion at workplace.

Unit 6.1 - Effective Communication and Teamwork

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Elucidate own roles and responsibilities.
2. Explain the importance of effective communication.
3. Explain different modes of communication used at the workplace.
4. Elucidate the consequence of poor teamwork on project outcomes, timelines, safety at the construction site, etc.
5. Demonstrate how to pass on work-related information clearly to the team members.
6. Show how to report any unresolved problem to the supervisor immediately.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Charts/props related to topic, if any

Do

- Explain the effective communication and its need in personal & professional life.
- Enlist different modes of communication used at the workplace.
- Explain the consequence of poor teamwork on project outcomes, timelines, safety at the construction site, etc.
- Demonstrate how to pass on work-related information/requirements clearly to the team members.
- Demonstrate how to report any unresolved problem to the supervisor immediately.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 6.1 of Effective Communication and Teamwork for Mason Tiling.
- Effective communication is crucial in Mason Tiling and any workplace. Clear and open communication fosters collaboration, minimizes misunderstandings, and enhances productivity. In tiling projects, it ensures that team members understand project goals, specifications, and timelines accurately. Good communication also facilitates problem-solving and decision-making by enabling team members to share ideas, raise concerns, and provide feedback.
- There are various modes of communication used in the workplace, including:
    - Verbal Communication: This involves spoken words and can take the form of face-to-face conversations, team meetings, or phone calls.
    - Written Communication: This includes emails, memos, reports, and project documentation. Written communication ensures a clear record of information exchange.
    - Visual Communication: Visual aids like diagrams, sketches, and drawings can help convey complex information quickly, especially in tasks like illustrating tile layouts.
    - Nonverbal Communication: Body language, gestures, and facial expressions also play a role in conveying information and emotions.
    - Digital Communication Tools: Instant messaging, video conferencing, and project management software can facilitate remote collaboration and quick information sharing.
- Consequences of Poor Teamwork: Poor teamwork can have significant negative consequences on Mason Tiling projects:
    - Project Outcomes: Incomplete or subpar work due to miscommunication or lack of coordination can lead to unsatisfactory tiling installations.
    - Timelines: Delays may occur if team members fail to work together efficiently or if tasks are not coordinated.
    - Safety at the Construction Site: Miscommunication and lack of teamwork can compromise safety, leading to accidents and injuries.
- Passing on Work-Related Information: To pass on work-related information clearly to team members:
    - Use Clear Language: Use simple and concise language to convey instructions, requirements, and expectations.
    - Provide Visual Aids: Use diagrams or sketches to illustrate complex concepts like tile patterns or layout designs.
    - Repeat Important Details: Reinforce crucial information by repeating it verbally and in writing.
    - Allow for Questions: Encourage team members to ask questions if they need clarification.
- Reporting Unresolved Problems: If you encounter an unresolved problem on a Mason Tiling project:
    - Document the Issue: Note down the problem, its impact, and any attempts you've made to address it.

- Notify Supervisor: Inform your supervisor immediately about the issue. Provide them with the documented details.
- Offer Solutions: If possible, suggest potential solutions or strategies to mitigate the problem.
- Collaborate: Work with your supervisor and team to collectively address and resolve the problem.

Notes

Unit 6.2 - Working Effectively and Maintaining Discipline at Work

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Explain the importance of creating healthy and cooperative work environment among the gangs of workers.
2. Elucidate applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement.
3. Explain the importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timeliness, safety, risks at the construction project site.
4. Explain the importance and need of supporting co-workers facing problems for the smooth functioning of work.
5. Demonstrate ways to hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams.
6. Demonstrate ways to work together with co-workers in a synchronized manner.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Charts/props related to topic, if any

Do

- Explain the importance of creating healthy and cooperative work environment among the gangs of workers.
- Elucidate applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement.

- Explain the importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timeliness, safety, risks at the construction project site.
- Explain the importance and need of supporting co-workers facing problems for the smooth functioning of work.
- Demonstrate ways to hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams.
- Demonstrate ways to work together with co-workers in a synchronized manner.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 6.2 for Working Effectively and Maintaining Discipline at Work for Mason Tiling.
- In Mason Tiling, a cooperative work environment among gangs of workers is crucial for several reasons:
    - Efficiency: A cooperative environment promotes efficient task execution as workers can collaborate seamlessly, share responsibilities, and assist each other.
    - Quality: Collaboration and communication lead to consistent work quality as experienced workers can guide and mentor those with less experience.
    - Morale: A positive atmosphere fosters higher morale and job satisfaction, reducing stress and turnover rates.
    - Safety: Workers are more likely to adhere to safety protocols when they feel supported and responsible for one another's well-being.
    - Problem Solving: A cooperative environment encourages open discussion and creative problem-solving, leading to better solutions.
    - Supporting colleagues facing problems is essential for the smooth functioning of Mason Tiling projects:
    - Productivity: Addressing issues promptly prevents delays caused by unresolved problems that could affect the overall project timeline.
    - Team Spirit: Demonstrating support enhances team morale, trust, and camaraderie, leading to improved cooperation and communication.
    - Skill Enhancement: Assisting struggling co-workers improves their skills, contributing to their personal growth and overall team competence.
    - Ways to Hand Over Materials and Tools Timely:
    - Planning: Ensure that materials, tools, tackles, and equipment are scheduled for delivery well in advance to avoid last-minute shortages.
    - Communication: Maintain clear communication channels with interfacing teams to provide them with accurate information about what they'll receive and when.
    - Checklists: Create checklists of required items for each team and verify that everything is in order before handing them over.

- Physical Organization: Store materials and tools in an organized manner, making it easy to access and distribute them as needed.
- Working Together in a Synchronized Manner:
- Clear Roles: Define roles and responsibilities clearly within the team, ensuring everyone knows their tasks and areas of expertise.
- Communication: Maintain constant communication among team members to coordinate efforts, share progress, and address any challenges.
- Regular Meetings: Conduct regular team meetings to discuss plans, goals, and strategies. This ensures everyone is on the same page.
- Time Management: Coordinate work schedules to ensure different tasks align and work can progress without unnecessary waiting.
- Adaptability: Be open to adjusting plans based on changing circumstances, and encourage team members to provide input and suggest improvements.

Activity - 1

Effective communication and team work

Conduct a role play activity.

- Procure tools, equipment and materials for tiling
- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Maximum duration mentioned in the below table is for extensive practice and corresponding guidance until the skill is acquired by the participants.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

Sub Activity	Skill Practice	Time	Resources
1	Read and understand the reporting procedure	3 Hours	Pen, Paper, Sample reporting procedure
2	Communicate with the co-worker	6 Hours	
3	Report the situation to the superior	3 Hours	
4	Prepare a report accordingly	3 Hours	

Table 6.2.1 – Effective communication and team work

Specific Instructions

- Select three persons from the group.
- Explain the role play that will be enacted.
- Consider Person “A” to be a Mason Tiling and Person “B” as Co-worker and Person C as the Superior.
- Ask the Person A to read and understand the reporting procedure, tell him to convey the hazard to Person B, report the situation to Person C and prepare a report on the same.
- Guide the persons in enacting the role play, indulge wherever required.
- Finish the activity within the time allotted.
- Ask the group to explain, what they have learnt from the role play? clarify any doubts.

Notes

Unit 6.3 - Maintaining Social Diversity at Work

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Discuss the fundamental concept of gender equality.
2. Explain how to recognise and be sensitive to issues of disability culture and gender.
3. Discuss legislation, policies, and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation.
4. Demonstrate effective implementation of gender-neutral practices at the workplace.
5. Demonstrate ways to address discriminatory and offensive behaviour in a professional manner as per organizational policy.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Charts/props related to topic, if any

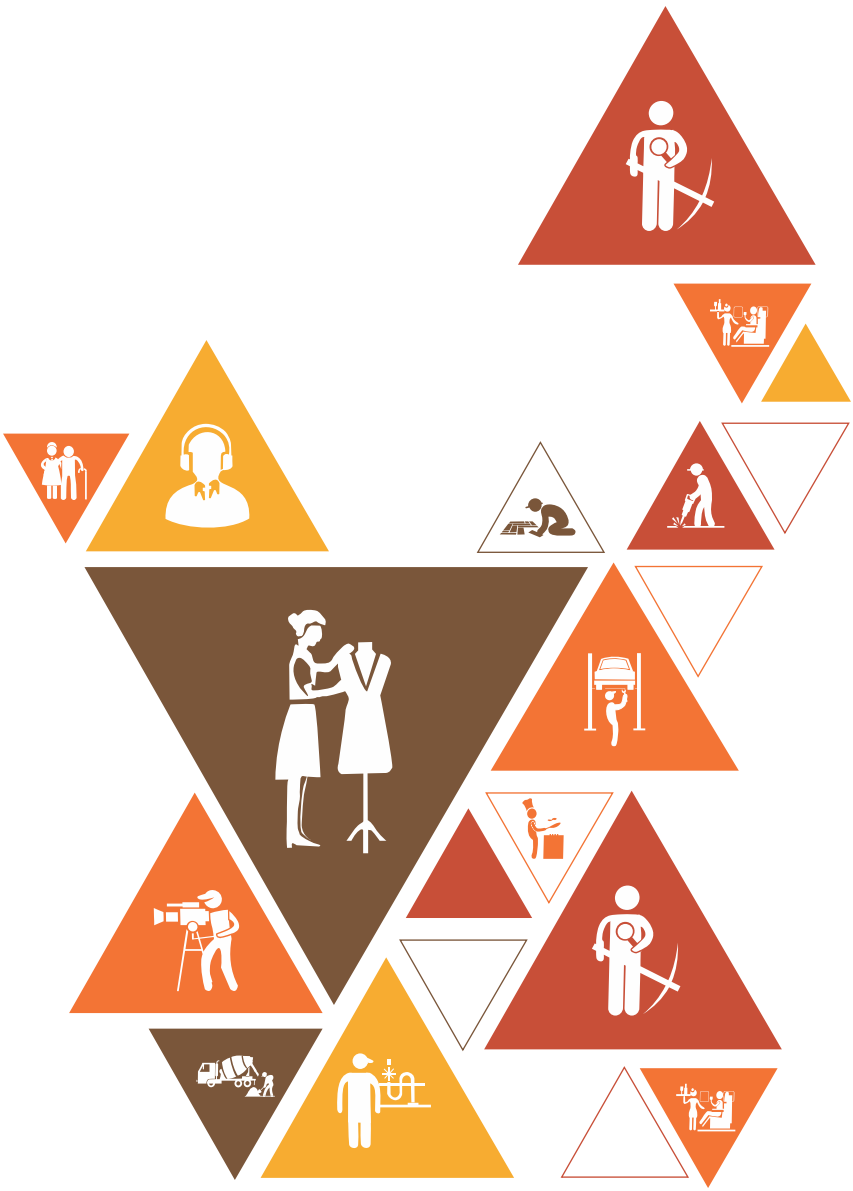
Do

- Explain the fundamental concept of gender equality.
- Explain how to recognise and be sensitive to issues of disability culture and gender.
- Enlist legislation, policies, and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation.
- Demonstrate effective implementation of gender-neutral practices at the workplace.
- Demonstrate ways to address discriminatory and offensive behaviour in a professional manner as per organizational policy.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 6.3 of Maintaining Social Diversity at Work for Mason Tiling.
- Gender equality refers to the equal treatment and opportunities for all genders, regardless of their perceived or assigned roles in society. In Mason Tiling, it means that both men and women should have the same rights, opportunities, and responsibilities. This includes fair representation, equal pay for equal work, and the elimination of gender-based discrimination and stereotypes.
- Effective Implementation of Gender-Neutral Practices:
    - **Language Usage:** Use gender-neutral language in communication, such as using "they/them" pronouns when appropriate, to ensure inclusivity.
    - **Uniforms and Attire:** Ensure that dress codes and uniform requirements do not reinforce gender stereotypes and are inclusive of diverse gender expressions.
    - **Restroom Facilities:** Provide gender-neutral restroom facilities to accommodate individuals of all gender identities comfortably.
    - **Training and Awareness:** Conduct training sessions to raise awareness about gender diversity and sensitivity, helping to foster a more inclusive work environment.
- Addressing Discriminatory and Offensive Behaviour:
    - **Stay Calm:** If you witness or experience discriminatory or offensive behavior, remain composed and composed when addressing the issue.
    - **Private Conversation:** If possible, address the person privately to discuss their behavior and explain how it was offensive or inappropriate.
    - **Refer to Policies:** If the behavior continues, refer to the organization's policies on discrimination or harassment and report the incident to the appropriate authority.
    - **Seek Mediation:** If necessary, involve a supervisor, manager, or HR representative to mediate the situation and find a resolution.
    - **Documentation:** Keep a record of the incident, including dates, times, individuals involved, and the steps you've taken to address the issue

Notes



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GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

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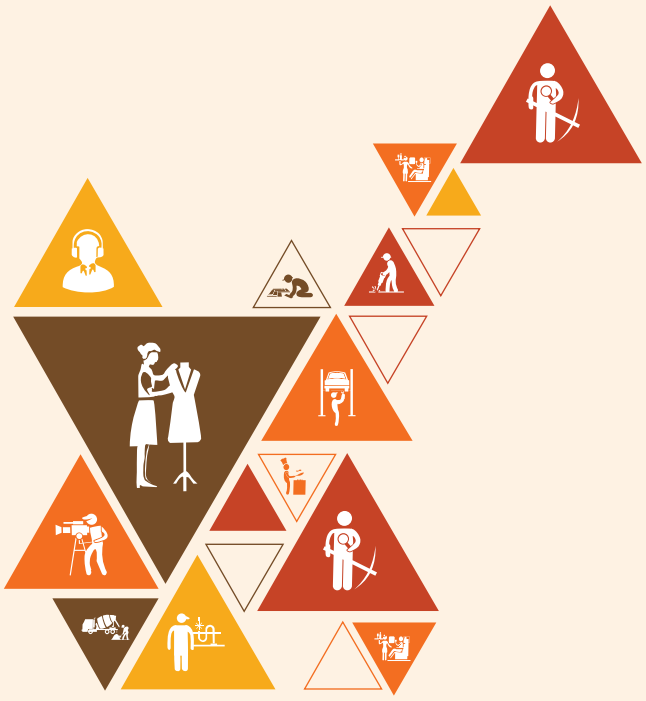
Transforming the skill landscape

7. Plan and Organize Work to Meet Expected Outcomes

Unit 7.1 – Prioritise work activities to achieve desired results

Unit 7.2 – Organising resources

Unit 7.3 – Sequence of work for mason tiling



(CON/N8002)

Key Learning Outcomes

At the end of this module, trainer will ensure that the participant will be able to:

1. Learn the importance of time;
2. Plan activities and schedules;
3. Learn the importance of targets and time lines set by supervisors;
4. Prioritise tasks to achieve desired results;
5. Plan desired resources prior to commencement of work;
6. Identify and organise resources prior to commencement of work;
7. Organise correct tools and materials for completion of work; and
8. Use and engage resources and manpower in appropriate manner.

UNIT 7.1: Prioritise Work Activities to achieve Desired Results

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Plan activities and schedules
2. Prioritise tasks to achieve desired results
3. Plan desired resources prior to commencement of work
4. Identify and organise resources prior to commencement of work

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Charts/props related to topic, if any

Do

- Explain the importance of Prioritising tasks to achieving desired results.
- Elaborate about Identifying and organizing resources prior to commencement of work.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 7.1 to explain the importance of Prioritizing Work Activities to achieve Desired Results for Mason Tiling.
- Planning activities and schedules in Mason Tiling involves creating a structured plan for the tasks that need to be accomplished and allocating timeframes to each task. This process is essential because it ensures that the tiling project progresses efficiently, deadlines are met, and resources are utilized effectively.
- In Mason Tiling, certain tasks might have a greater impact on the project's success or timeline. Prioritizing tasks allows you to focus on the most critical activities and ensure that essential

milestones are achieved in a timely manner.

- Steps for Prioritizing Tasks:
  - Identify Critical Tasks: Determine tasks that have a direct impact on project completion, quality, or safety.
  - Urgency: Consider tasks with imminent deadlines or those that need to be completed before others can begin.
  - Resource Availability: Prioritize tasks that require scarce resources or specialized skills.
  - Dependencies: Address tasks that are prerequisites for other tasks to avoid bottlenecks.
  - Impact: Evaluate tasks that significantly contribute to project outcomes, customer satisfaction, or overall project success.
- Identifying and organizing resources before starting Mason Tiling work is essential to avoid interruptions, delays, and confusion during the project. It ensures that the necessary resources are readily accessible when needed.
- Efficient planning, prioritization, and resource organization contribute significantly to the success of Mason Tiling projects by ensuring that tasks are completed on time, quality is maintained, and resources are optimally utilized.

Activity - 1

Prioritise and Organize Tiling Work Activities

Conduct a role-play activity.

- Plan resources for 100-sft floor tiling job.
- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Maximum duration mentioned in the below table is for extensive practice and corresponding guidance until the skill is acquired by the participants.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

Sub Activity	Skill Practice	Time	Resources
1	Identify the sequence of tiling activities	4 Hours	Material list, Pen, paper
2	Estimate the resource requirement for the tiling job	4 Hours	
3	Create a resource distribution chart with resource allocation	4 Hours	
4	Reallocate resources as per priority	4 Hours	
5	Prepare a preliminary action plan for the proposed tiling job	1 Hour	

Table 7.1.1 – Prioritise and Organize Tiling Work Activities

Specific Instructions

- Explain the importance of prioritizing and organizing in achieving the desired outcomes.
- Make sure that the participants are well versed in communicating any issues to both the superior and co-workers.
- Check whether the team is aware of standard reporting procedure and explain the important issues that are to be reported immediately.
- Check the team adherence to standards.
- Ensure that activity is completed in scheduled time.

Notes

UNIT 7.2: Organising Resources

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Identify and organise resources prior to commencement of work
2. Organise correct tools and materials for completion of work
3. Use and engage resources and manpower in appropriate manner
4. Organise self, resources, work environment and time efficiently

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Charts/props related to topic, if any

Do

- Explain the way of organizing correct tools and materials for completion of work.
- Elaborate about organizing self, resources, work environment and time efficiently.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 7.2 to explain the organising of resources for Mason Tiling.
- In Mason Tiling, identifying and organizing resources before starting work is essential to ensure a smooth and efficient project execution. It prevents delays, minimizes downtime, and contributes to a well-structured workflow.

- Steps for Organizing Tools and Materials:
    - Task-Related Tools: Group tools and materials based on the specific tasks they are required for, such as cutting, measuring, adhesive application, and grouting.
    - Tool Maintenance: Ensure all tools are clean, well-maintained, and in good working condition.
    - Storage: Store tools and materials in a designated area with proper organization, such as labelled shelves or toolboxes.
    - Accessibility: Arrange tools and materials in a way that allows quick and easy access, minimizing the time spent searching.
- Effective utilization of resources and manpower is crucial for optimizing productivity and achieving quality results in Mason Tiling. Proper allocation and coordination lead to smoother workflows and successful project outcomes.
- Efficient organization of oneself, resources, work environment, and time is essential in Mason Tiling to maximize productivity, minimize waste, and maintain a safe and orderly work environment.
- Steps for Efficient Organization:
    - Personal Organization: Plan your workday, prioritize tasks, and allocate time for each task. Stay focused and minimize distractions.
    - Work Environment: Keep your work area clean, clutter-free, and well-organized to enhance efficiency and safety.
    - Time Management: Use tools like calendars or task management apps to schedule tasks and allocate time blocks for different activities.
    - Resource Efficiency: Use resources judiciously to avoid wastage and ensure their availability throughout the project.
    - Flexibility: Be adaptable to changes and unforeseen challenges, adjusting your organization strategies as needed.

Notes

UNIT 7.3: Sequence of Work for Mason Tiling

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Know about work sequence of tiling job

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Charts/props related to topic, if any

Do

- Explain the work sequence of tiling job.
- Reiterate about personal attributes of Mason Tiling.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 7.3 to explain work sequence of tiling job for Mason Tiling.
- The work sequence of a tiling job outlines the step-by-step process of how tiling tasks are executed from start to finish. This sequence ensures that the tiling project is completed efficiently, with high-quality results and adherence to safety standards. Below is a typical work sequence for a tiling job:
  - Surface Preparation
  - Layout and Marking

- Adhesive Application
- Tile Installation
- Cutting and Shaping
- Grouting
- Grout Cleanup
- Finishing
- Final Inspection
- Cleanup and Handover

- It's important to note that the specific work sequence can vary depending on the project's scope, design, and requirements. Following a structured work sequence helps maintain consistency, quality, and efficiency in Mason Tiling projects.

Notes

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Construction Skill Development Council

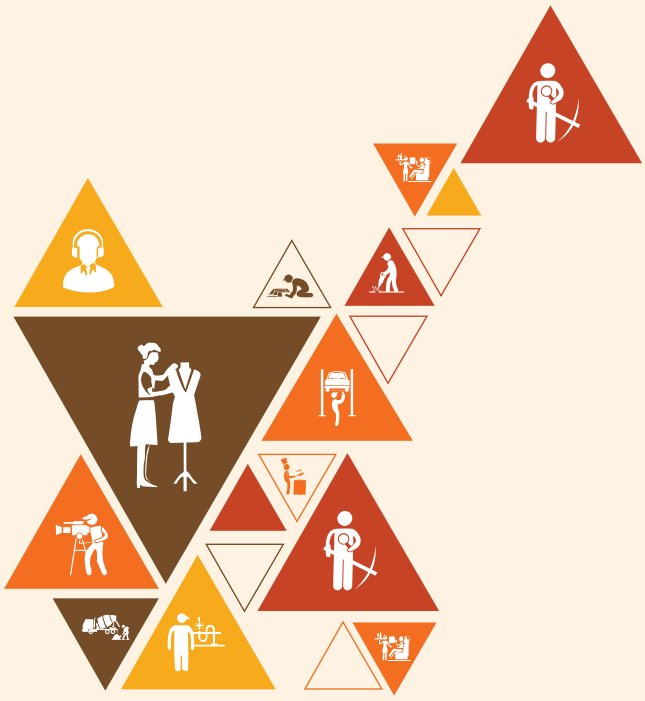
8. Work According to Personal Health, Safety a nd Environment Protocol at Construction Site

Unit 8.1 – Hazards and Emergency Situations

Unit 8.2 – Safety Drills, PPEs and Fire Safety

Unit 8.3 – Hygiene and Safe Waste Disposal Practices

Unit 8.4 – Infectious Disease and Its Cure



(CON/N9001)

Unit 8.1 - Hazards and Emergency Situations

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Understand the types of hazards at the construction sites and identify the hazards specific to the domain related works.
2. Recognize the safety control measures and actions to be taken under emergency situation.
3. Know the reporting procedure to the concerned authority in case of emergency situations.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Leather Hand Gloves, Jump suit, Wire brush, Hand and Leg guard leather, Safety goggles, Nose mask, Ear protection, Fire extinguishers, Sand buckets Flashback arrestors, Welding helmet, Welding glass, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags and Safety Notice board.

Do

- Explain the types of hazards at the construction sites and identify the hazards specific to the domain related works.
- Reiterate about safety control measures and actions to be taken under emergency situation.
- Share reporting procedure to the concerned authority in case of emergency situations.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 8.1 to explain Hazards and Emergency Situations for Mason Tiling.
- Construction sites pose various hazards due to the nature of the work. These hazards can be categorized as follows:
    - Physical Hazards
    - Chemical Hazards
    - Biological Hazards
    - Ergonomic Hazards
    - Psychosocial Hazards
- Specific Hazards in Mason Tiling: In the context of Mason Tiling, some hazards specific to the domain might include:
    - Tripping Hazards
    - Material Handling
    - Dust Exposure
- Recognizing Safety Control Measures and Emergency Actions:
    - Safety Control Measures: To mitigate hazards at construction sites, the following safety control measures can be taken:
        - Personal Protective Equipment (PPE).
        - Training: Ensure workers are trained in proper handling of tools, equipment, and materials to prevent accidents.
        - Safe Work Practices.
        - Ventilation and Dust Control.
    - Emergency Actions: In case of emergency situations at the construction site, follow these actions:
        - Evacuation.
        - First Aid.
        - Emergency Contacts.
    - Reporting Procedures in Emergency Situations:
        - Internal Communication: Notify your immediate supervisor or project manager about the emergency situation.
        - Established Protocol: Follow the organization's established protocol for reporting emergencies, including specific contact persons or numbers.
        - Documentation: If safe to do so, document the details of the emergency, including the time, location, nature of the incident, and any injuries.
        - Cooperate with Authorities: Provide accurate information to emergency responders and cooperate with their instructions.

Notes

Unit 8.2 - Safety Drills, PPEs and Fire Safety

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Explain the classes of fire and types of fire extinguishers.
2. Demonstrate the operating procedure of the fire extinguishers.
3. Explain the importance of participation of workers in safety drills.
4. List out basic medical tests required for working at construction site.
5. Explain the purpose and importance of vertigo test at construction site.
6. Explain the types and benefits of basic ergonomic principles, which should be adopted while carrying out specific task at the construction sites.
7. Demonstrate use of PPEs as per work requirements.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Leather Hand Gloves, Jump suit, Wire brush, Hand and Leg guard leather, Safety goggles, Nose mask, Ear protection, Fire extinguishers, Sand buckets Flashback arrestors, Welding helmet, Welding glass, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags and Safety Notice board.

Do

- Explain the classes of fire and types of fire extinguishers.
- Demonstrate the operating procedure of the fire extinguishers.

- Explain the importance of participation of workers in safety drills.
- Enlist basic medical tests required for working at construction site.
- Explain the purpose and importance of vertigo test at construction site.
- Explain the types and benefits of basic ergonomic principles, which should be adopted while carrying out specific task at the construction sites.
- Demonstrate use of PPEs as per work requirements.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 8.2 to explain Safety Drills, PPEs and Fire Safety for Mason Tiling.
- Classes of Fire: Fires are classified into different classes based on the type of fuel involved:
  - Class A: Fires involving common combustible materials like wood, paper, and cloth.
  - Class B: Fires involving flammable liquids, gases, or greases.
  - Class C: Fires involving energized electrical equipment.
  - Class D: Fires involving combustible metals.
  - Class K: Fires involving cooking oils and fats, commonly found in kitchens.
- Types of Fire Extinguishers: Different types of fire extinguishers are designed to handle specific classes of fire:
  - Water Extinguishers (Class A): Suitable for Class A fires, but not for fires involving flammable liquids or electrical equipment.
  - Foam Extinguishers (Class A and B): Effective on Class A and B fires, but not for electrical fires.
  - Dry Powder Extinguishers (Class A, B, C, and D): Suitable for a range of fires, including electrical fires and flammable liquids.
  - CO2 Extinguishers (Class B and Electrical Fires): Effective for flammable liquid and electrical fires, but not for Class A fires.
  - Wet Chemical Extinguishers (Class K): Specifically designed for kitchen fires involving cooking oils and fats.
- Operating Procedure of Fire Extinguishers:
  - Pull: Pull the pin to break the seal and unlock the operating lever.
  - Aim: Aim the nozzle at the base of the fire where the fuel source is.
  - Squeeze: Squeeze the operating lever to release the extinguishing agent.
  - Sweep: Sweep the nozzle from side to side while directing the agent at the base of the fire until it's extinguished.
- Importance of Participation in Safety Drills: Participation in safety drills is important for several reasons:

- Familiarity: Workers become familiar with evacuation routes and emergency procedures.
- Response Practice: Workers practice how to respond to emergencies, minimizing confusion during real incidents.
- Efficiency: Regular drills improve the efficiency of evacuation and emergency response.
- Identification of Weaknesses: Drills help identify areas that need improvement in the emergency plan.

- Basic Medical Tests Required for Construction Site: Common medical tests for construction site workers include:
  - Physical Examination: Overall health assessment.
  - Vision and Hearing Tests: Ensuring good visual and auditory health.
  - Lung Function Test: Assessing respiratory health.
  - Blood Pressure and Heart Rate Check: Monitoring cardiovascular health.
- Purpose and Importance of Vertigo Test: A vertigo test assesses a worker's balance and susceptibility to dizziness, which is crucial for working at heights. Vertigo can lead to accidents and falls, making this test vital for maintaining site safety.
- Types and Benefits of Basic Ergonomic Principles: Ergonomic principles for construction tasks include proper lifting techniques, maintaining neutral body positions, and using suitable tools. Benefits include reducing strain, preventing musculoskeletal injuries, and enhancing overall worker well-being.
- Demonstrating Use of PPEs: Proper PPE usage involves:
  - Selection: Choose the appropriate PPE for the task.
  - Fitting: Ensure PPE fits correctly and comfortably.
  - Wearing: Wear PPE consistently throughout the task.
  - Adjusting: Make necessary adjustments for comfort and effectiveness.
  - Maintaining: Regularly inspect and maintain PPE to ensure it functions properly.
- Using PPE correctly safeguards workers from potential hazards like head injuries, respiratory issues, and more, contributing to a safer work environment in Mason Tiling.

Activity - 1

General Safety at a Construction Site

Conduct a role play activity on following emergency procedure in case of accidental fire at work place.

- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.

- Ask two persons who are very much interactive to participate in the role play.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

Sub Activity	Time	Resources
Start the fire alarm	1 hour	Stationary items, Fire extinguisher, wood and paper pieces, match box
Use fire extinguisher	6 hours	
Call for medical help and carryout primary first aid for the injured person	2 hours	
Instruct co-workers to gather at the collection point	2 hours	

Table 8.2.1 – General safety at a construction site

Specific Instructions

- Select four persons from the group.
- Name the persons selected as Peron A, B, C and D.
- Explain and demonstrate the method to perform the sub activities.
- Consider Person A to be a Mason Tiling and the rest are co-workers.
- Start the role play and check whether it is happening as per the plan.
- Guide closely wherever needed.
- Complete the activity as per scheduled time.
- Ask the watching group to explain the steps that are performed.
- Clarify doubts, if any.

Activity - 2

Working at Heights

Conduct a skill practice activity on using ladder safely at heights with proper PPE.

- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- List and explain the safety guidelines followed at heights.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Maximum duration mentioned in the below table is for extensive practice and corresponding guidance until the skill is acquired by the participants.

Sub Activity	Time	Resources
Practice wearing PPE	2 hours	Ladder, PPE
Erect the ladder	2 hours	
Practice climbing the ladder safely	2 hours	

Table 8.2.2 – Working at heights

Specific Instructions

- Show the PPE matrix that has to be followed at a construction site.
- Demonstrate the standard procedure for wearing the PPE.
- Demonstrate the important checks that are to be performed while erecting the ladder.
- Ask the participants to practice wearing PPE, check and ensure that there is no deviation of standard procedure.
- Ask the participant to practice using ladder.
- Guide and correct the participants wherever necessary.
- List the advantages of using PPE.
- Clarify doubts, if any.

Notes

Unit 8.3 - Hygiene and Safe Waste Disposal Practices

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Follow the practices to maintain personal hygiene, workplace hygiene and site/ workplace sanitization
2. Understand the importance of housekeeping works
3. Keep an eye on safe housekeeping practices
4. Understand different types of waste at construction sites and their disposal method
5. Know safe waste disposal practices followed at construction site

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Leather Hand Gloves, Jump suit, Wire brush, Hand and Leg guard leather, Safety goggles, Nose mask, Ear protection, Fire extinguishers, Sand buckets Flashback arrestors, Welding helmet, Welding glass, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags and Safety Notice board.

Do

- Explain the practices to maintain personal hygiene, workplace hygiene and site/ workplace sanitization
- Describe the importance of housekeeping works
- Discuss the safe housekeeping practices and ask them to follow
- Explain different types of waste at construction sites and their disposal method
- Explain safe waste disposal practices followed at construction site

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 8.3 to explain Hygiene and Safe Waste Disposal Practices for Mason Tiling.
- Personal Hygiene: Maintaining personal hygiene involves practices such as washing hands before and after work, wearing clean and appropriate clothing, and using personal protective equipment (PPE) to prevent contamination and protect oneself from hazards.
- Workplace Hygiene: Workplace hygiene includes keeping work areas clean, organized, and free from hazards. Regular cleaning of tools, equipment, and surfaces helps prevent accidents, maintain efficiency, and promote a healthy work environment.
- Site Sanitization: Site sanitization involves cleaning and disinfecting shared areas to prevent the spread of germs and ensure a safe working environment. This is especially important in light of health concerns and global events.
- Importance of Housekeeping Works: Housekeeping works are crucial in the construction industry for several reasons:
    - Safety: A clean and organized workspace reduces the risk of slips, trips, falls, and other accidents.
    - Efficiency: Proper organization of tools, materials, and equipment improves work efficiency.
    - Prevention: Regular cleaning prevents the buildup of dust, debris, and potential fire hazards.
    - Morale: A clean and organized work environment boosts worker morale and job satisfaction.
- Safe Housekeeping Practices:
    - Daily Clean-up: Clean-up work areas at the end of each day to ensure a fresh start the next day.
    - Tool Storage: Properly store tools, equipment, and materials after use to prevent tripping hazards and damage.
    - Waste Disposal: Dispose of waste properly and promptly to prevent clutter and hygiene issues.
- Different Types of Waste at Construction Sites and Their Disposal:
    - General Waste: Regular construction debris like paper, packaging, and non-hazardous materials.
    - Hazardous Waste: Includes chemicals, solvents, paints, and materials that pose health or environmental risks.
    - Electronic Waste: Old or broken electronic equipment, requiring proper disposal due to environmental concerns.
- Safe Waste Disposal Practices at Construction Site:
    - Separation: Segregate waste into different categories for appropriate disposal.
    - Labeling: Clearly label hazardous waste containers to prevent accidents.
    - Storage: Store waste in designated areas to avoid contamination and health hazards.
    - Legal Compliance: Follow local regulations and guidelines for waste disposal.

- Maintaining personal and workplace hygiene, implementing proper housekeeping practices, and ensuring safe waste disposal contribute to a safer and more organized construction site environment, benefitting both workers and the overall project.

Activity - 1

Safe Disposal of Waste

Conduct a role play activity.

- Ask the participants to assemble at a designated place.
- Distribute the 'Practical Activity Format' which includes task, duration allowed, specific instructions, method statements, etc.
- Explain the purpose and duration of the activity.
- Set guidelines pertaining to discipline and expected tasks.
- Ask two persons who are very much interactive to participate in the role play.
- Explain the roles to each of them.
- Rotate the roles after completing one cycle.

Sub Activity	Time	Resources
Practice wearing PPE	1 hour	Waste containers, masonry pan, sample construction waste
Segregate the Wastes	2 hours	
Dispose the waste in the allocated container	2 hours	

Table 8.3.1 – Safe disposal of waste

Specific Instructions

- Ensure the participants are wearing the PPE properly.
- Select two persons from the group who are effective in communication
- Consider one as helper and the other as mason, now ask the helper to deposit the waste in one location and place the containers at another location.
- Ask the mason to instruct the helper to segregate or differentiate the type of wastes
- Then ask the mason to tell the helper to transfer the segregated waste with the help of masonry pan.
- Ensure that both the persons communicate properly by giving hints in between.
- Tell them to complete the activity on the speculated time and ensure that the wastes are properly placed in the containers and it is secured properly.

Notes

Unit 8.4 - Infectious Disease and Its Cure

Unit Objectives

At the end of this unit, trainer will ensure that participant will be able to:

1. Know different types of infectious disease that can spread/ originate at a construction site
2. Understand the ways of transmission of the various infectious disease.
3. Recognize the methods to check the spread of the infectious disease.
4. Understand the symptoms and cure of the various infectious disease.
5. Apprehend the procedure to report to the concerned authority regarding the outbreak/ hazard of any infectious disease/ pandemic.

Topic Introduction

- Give the participants a brief overview of this unit
- Applications in various job environment

Resources to be used

- **Theory**
  - Training Kit - Trainer Guide & Participant Handbook, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films.
- Practical
  - Leather Hand Gloves, Jump suit, Wire brush, Hand and Leg guard leather, Safety goggles, Nose mask, Ear protection, Fire extinguishers, Sand buckets Flashback arrestors, Welding helmet, Welding glass, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags and Safety Notice board.

Do

- Clarify different types of infectious disease that can spread/ originate at a construction site
- Explain the ways of transmission of the various infectious disease.
- Mention the methods to check the spread of the infectious disease.
- Explain the symptoms and cure of the various infectious disease.

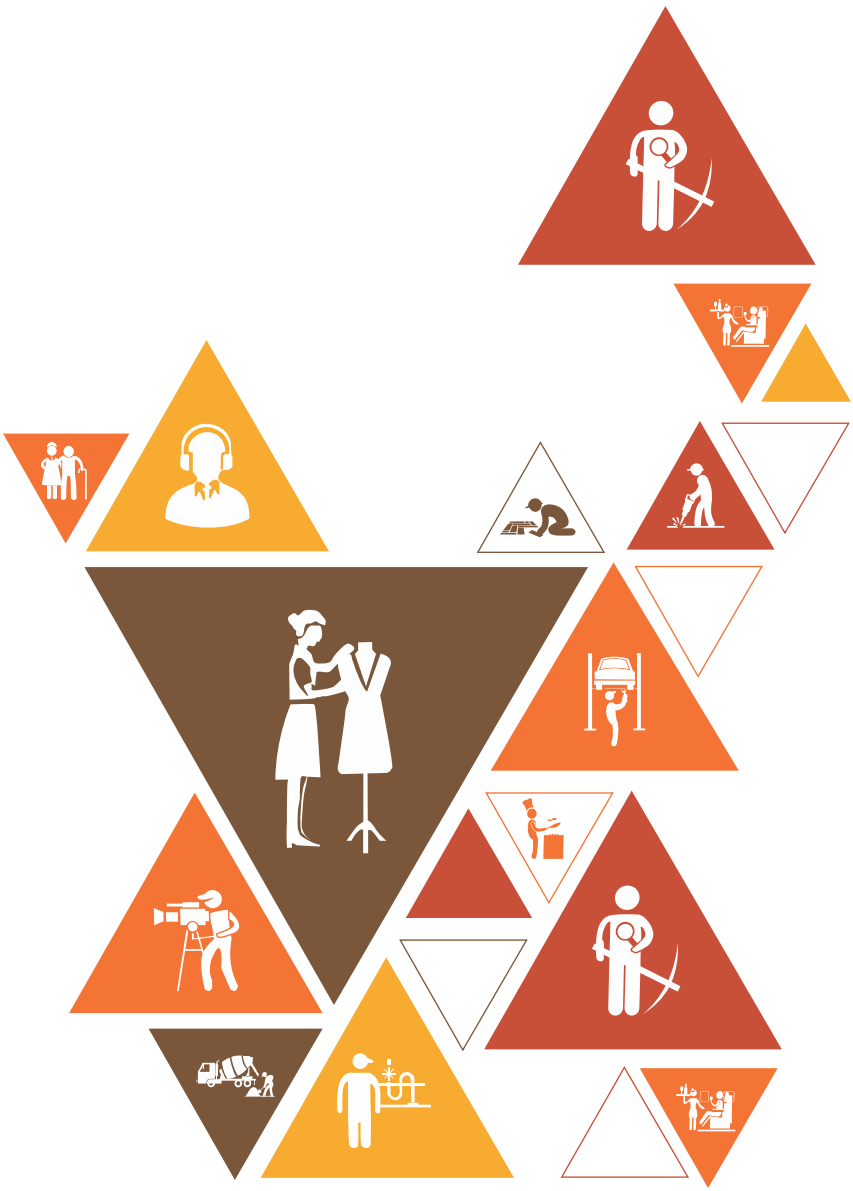
- Apprehend the procedure to report to the concerned authority regarding the outbreak/ hazard of any infectious disease/ pandemic.

Notes for Facilitation

- Use the Mason Tiling PHB and refer unit 7.4 to explain Infectious Disease and Its Cure for Mason Tiling.
- Infectious diseases that can spread or originate at construction sites include:
  - Respiratory Infections: Such as the flu, common cold, and COVID-19.
  - Skin Infections: Like bacterial infections, fungal infections, and rashes.
  - Gastrointestinal Infections: Including foodborne illnesses due to poor hygiene.
  - Vector-Borne Diseases: Like mosquito-borne diseases (e.g., Zika, dengue) due to stagnant water.
- Ways of Transmission of Infectious Diseases:
  - Airborne Transmission: Respiratory infections can spread through respiratory droplets released when an infected person coughs, sneezes, or talks.
  - Direct Contact: Skin infections can be transmitted through direct skin-to-skin contact or contact with contaminated surfaces.
  - Fecal-Oral Route: Gastrointestinal infections can spread through contaminated food, water, or surfaces.
  - Vector-Borne Transmission: Insects like mosquitoes can carry and transmit diseases from person to person.
- Methods to Check the Spread of Infectious Diseases:
  - Hand Hygiene: Regularly washing hands with soap and water or using hand sanitizers.
  - Respiratory Hygiene: Covering mouth and nose when coughing or sneezing.
  - Personal Protective Equipment (PPE): Wearing appropriate PPE like masks and gloves.
  - Disinfection: Regularly cleaning and disinfecting surfaces and shared equipment.
- Understanding Symptoms and Cure of Infectious Diseases:
  - Respiratory Infections: Symptoms include fever, cough, sore throat, and shortness of breath. Treatment includes rest, fluids, and in severe cases, medical attention.
  - Skin Infections: Symptoms include redness, swelling, itching, and rashes. Treatment depends on the type of infection and may involve antibiotics or antifungal medications.
  - Gastrointestinal Infections: Symptoms include nausea, vomiting, diarrhea, and abdominal pain. Treatment involves staying hydrated and in severe cases, medical intervention.
  - Vector-Borne Diseases: Symptoms vary based on the disease. Treatment ranges from supportive care to specific antiviral or antibiotic medications.

- Reporting Infectious Disease Outbreaks to Concerned Authorities:
    - Immediate Reporting: If an infectious disease outbreak is suspected, immediately inform your supervisor, manager, or the designated health and safety personnel.
    - Follow Protocols: Follow the organization's protocols for reporting infectious diseases or pandemics, including informing co-workers who may have been exposed.
    - Health Authorities: If necessary, local health authorities should be contacted to ensure proper containment and response.
- Understanding, preventing, and reporting infectious diseases is crucial to maintaining a healthy and safe working environment in the Mason Tiling industry. It protects both workers and the community from potential health risks.

Notes



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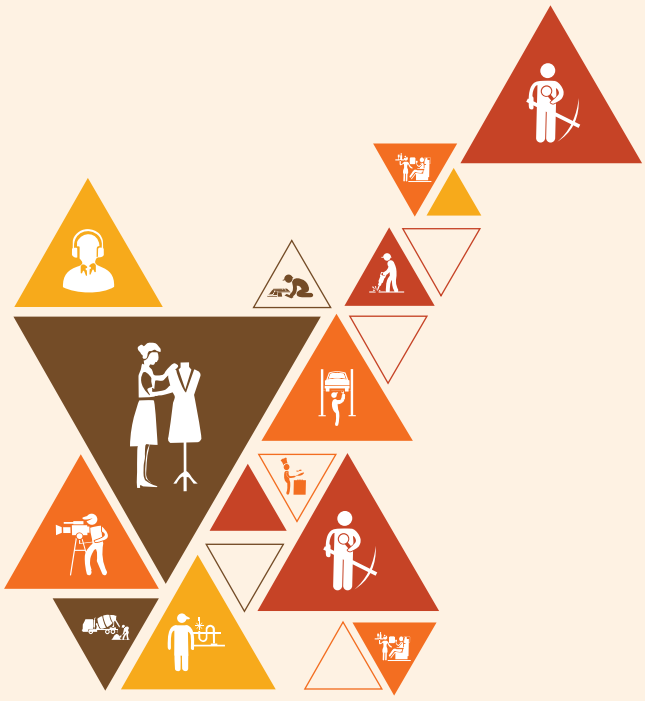
9. Employability Skills (60 Hours)

It is recommended that all trainings include the appropriate Employability skills Module. Content for the same can be accessed

https://www.skillindiadigital.gov.in/content/list



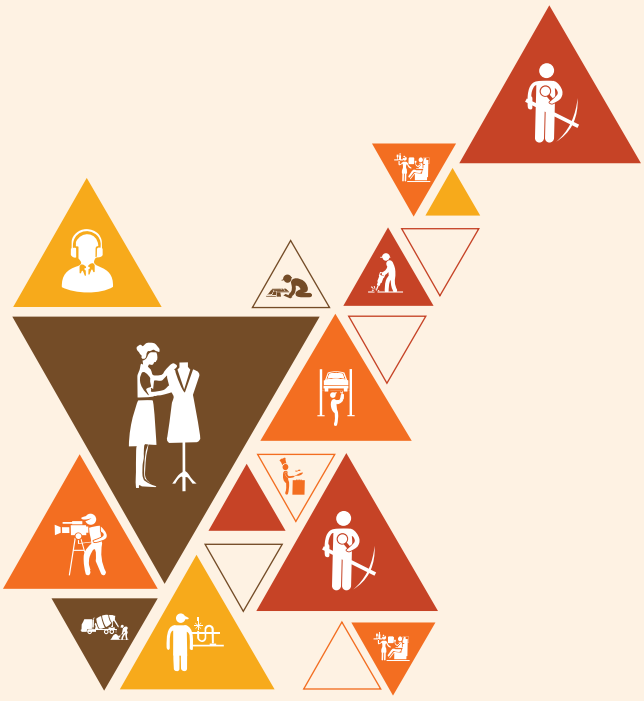
DGT/VSQ/N0102

10. Annexures

Annexure I - Training Delivery Plan

Annexure II - Assessment Criteria

Annexure III – QR Code fro Vidoe



Annexure – 1

Training Delivery Plan

Training Delivery Plan			
Program Name:	Mason Tiling		
Qualification Pack Name & Ref. ID	Mason Tiling (CON/Q0104)		
Version No.	3.0	**Version Update Date**	31/03/2022
Pre-requisites to Training (if any)	• 11th grade pass • Completed 1st year of 3-year diploma after 10th • 10th grade pass and pursuing continuous schooling • 8th grade pass with 3-year relevant experience • Previous relevant Qualification of NSQF Level 2.5 with 3-year relevant experience • Previous relevant qualification of NSQF Level 3 with 1.5-year relevant experience		
Training Outcomes	**By the end of this program, the participants will be able to:** 1. Lay and fix tiles both horizontally and vertically on wall and floor 2. Apply grouts and sealants for flooring and cladding works 3. Work effectively in a team to deliver desired results at the workplace 4. Plan and organize work to meet expected outcomes 5. Work according to personal health, safety and environment protocols at construction site 6. Employability Skills		

Sl. No.	Module	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools/ Aids	Duration (hours)
1	Introduction	Overview of construction industry in India	Understand broadly the construction activities in India Differentiate between real estate & infrastructure and rural construction	NA	Interactive Lecture	PPT	2
		Introduction to Major occupation in construction sector	Know about major occupations in construction sector	NA	Interactive Lecture	PPT	2

		Introduction to Mason Tiling - job role and responsibility	Know about role and duties of a Mason Tiling	NA	Interactive Lecture	PPT	6
			Know about personal and professional attributes under the Mason Tiling occupation				
		Introduction to Training program for Mason Tiling	List QP and NOS details of Mason Tiling programme	NA	Interactive Lecture	PPT	6
			Know about career path as a Mason Tiling				
			Understand the purpose of training				
			Know about mode and duration of training program				
			Understand the benefits of training skill card & certification				
			Understand about the NSQF & NSQF level				
2	Generic Mathematical Skills	Mathematical skills	Explain brief on different systems of measurement	CON/N0115 KB1, KB2	Interactive Lecture	PPT	8
			Explain brief on metric system of measurement				
			Explain briefly inch system of measurement				

			Explain briefly inch system of measuremen t				
			Explain briefly conversion of units				
			Explain basic arithmetic calculations				
			Know about basic geometrical shapes				
			Know about Pythagoras theorem				
			Explain 3-4-5 method				
		Mathematica l skills	Measure size of classroom using measuring tape	CON/N0115 PC28	Demonstrat ion and practice	Tape measure, pen, paper, scale	4
			Practice basic mathematica l skills		Demonstrat ion and practice	Pen, paper, scale	4
			Calculate number of tiles in a flooring area		Demonstrat ion and practice	Tape measure, pen, paper, scale	2
			Practice 3-4-5 method of squaring		Demonstrat ion and practice	Tape measure, pen, paper, scale	2
3	Tools, materials and consumab les required for Mason Tiling	Tiling tools, equipment and materials	Know about selection of hand and power tools	CON/N0115 KA2, KA5, KB6 KB7, SB1 SB4, SB14	Interactive Lecture	PPT	8
			Know about materials and accessories of tiling				4

		Tiling tools, equipment and materials - Activity	Identify & use hand tools & power tools.	CON/N0115 KB7	Demonstration and practice	Measuring tape/rule, Masons line Plumb bob Try Square Mortar pan Trowels Straight edge (Aluminium) Wood/ rubber mallet	8
			Identify & use tiling equipment		Demonstration and practice		6
			Identify & use tile spacers & tile trims		Demonstration and practice	Corner trowel, Pointer trowel, Line and pins, Spirit level, Water level, Square notch trowel, Hammers, Mallets, Wedges, Power wet saws, Tile scribes or hand held tile cutters, Rubber grout, Float, Tile trims/tile strips, Spacers, Mixing platform	4
			Identify & use tiling materials		Demonstration and practice		8
			Check tile batch number & specification		Demonstration and practice		2
			Identify & use grouting materials		Demonstration and practice		2

	Formative Assessment	Assessment on modules 1,2,3					8
4	Laying and fixing of tiles	Floor tiling work	Explain the steps involved in laying and fixing of tiles horizontally	CON/N0115 KB1,SA3 KB4, SB1, SB2, SB22 KB8, SB1 SB8, SB19 SB20, KA1 KB9, KB1 SB9, SB21 KB10, SB20 KB5,KB7 SB1, SB2 SB11, SB18 KB11, SB8,SB11 CON/N0116	Interactive Lecture	PPT	8+8+4
		Marking & cutting of tiles - Activity	Make a arc	CON/N0115 PC12	Demonstration and practice	Measuring tape/rule, Tile marking tool Drill machine Set square Marker Compass Tile cutting machine	1
			Cut a tile in pentagon shape		Demonstration and practice		1
			Drill a hole in tile		Demonstration and practice		1
			Cut a tile in circular shape		Demonstration and practice		1
			Group the tiles as per given shape		Demonstration and practice		1
			Group the tiles as per given shape		Demonstration and practice		1
		Floor tiling work using centerline method	Read tile layout drawing /sketches	CON/N0115 PC1,PC2, PC3,PC4, PC5,PC6	Demonstration and practice	Measuring tape/rule, Masons line Plumb	3

		- Activity	Carryout preliminary checks on materials and tools required for quality and workability	PC7,PC8 PC9,PC10 PC11,PC12 PC13,PC14, PC15,PC16 PC17,PC18 PC19,PC20 PC21,PC22 PC23,PC24 PC25,PC26 PC27,PC28 CON/N0116 PC1,PC2, PC3,PC4 PC5,PC6 PC7,PC8 PC9,PC10 PC11,PC12 PC13,PC14 PC15,PC16 PC17,PC18 PC19	Demonstration and practice	bob Try Square Mortar pan Trowels Straight edge (Aluminium) Wood/rubber mallet Corner trowel Pointer trowel Line and pins Spirit level Water level Square notch trowel Hammers Mallets Wedges Power wet saws Tile scribes or hand held tile cutters Rubber grout Float Tile trims/tile strips Spacers Mixing platform	5
			Prepare the surface where floor tiles are to be laid		Demonstration and practice		3
			Transfer of FFL to the corners and fixing of button blocks		Demonstration and practice		4
			Dry lay the tiles for checking the feasibility of layout drawing and as per central line		Demonstration and practice		3
			Prepare mortar for required consistency		Demonstration and practice		4
			Spread the bed mortar		Demonstration and practice		4
			Horizontally lay full tiles		Demonstration and practice		6
			Lay cut tiles (tracing and cutting the tiles for any obstructions)		Demonstration and practice		4
			Carryout curing after completion of laying process		Demonstration and practice		2
			Carryout grouting (next day)		Demonstration and practice		4

			Carryout curing (next day)		Demonstration and practice		2
			Carryout grout sealing with sealant (next day)		Demonstration and practice		3
			Check for quality (hollow sound test)		Demonstration and practice		2
		Floor tiling work using corner edge method - Activity	Read tile layout drawing /sketches		Demonstration and practice		3
			Carryout preliminary checks on materials and tools required for quality and workability		Demonstration and practice		4
			Prepare the surface where floor tiles are to be laid		Demonstration and practice		3
			Transfer of FFL to the corners and fixing of button blocks		Demonstration and practice		4
			Dry lay the tiles for checking the feasibility of layout drawing and as per central line		Demonstration and practice		3
			Prepare mortar for required consistency		Demonstration and practice		4
			Spread the bed mortar		Demonstration and practice		4
			Horizontally lay full tiles		Demonstration and		6

					practice		
			Lay cut tiles (tracing and cutting the tiles for any obstructions)		Demonstration and practice		4
			Carryout curing after completion of laying process		Demonstration and practice		2
			ŸCarryout grouting (next day)		Demonstration and practice		4
			Carryout curing (next day)		Demonstration and practice		2
			Carryout grout sealing with sealant (next day)		Demonstration and practice		3
			Check for quality (hollow sound test)		Demonstration and practice		2
		Wall tiling work	Explain the steps involved in laying and fixing of tiles vertically	CON/N0115 KB1,SA3 KB4, SB1, SB2, SB22 KB8, SB1 SB8, SB19 SB20, KA1 KB9, KB1 SB9, SB21 KB10, SB20 KB5,KB7 SB1, SB2 SB11, SB18 KB11, SB8,SB11 CON/N0116	Interactive Lecture	PPT	8+8+4
		Wall tiling work using centerline method - Activity	Carryout the steps involved in laying and fixing of tiles for a wall	CON/N0115 PC15,PC16 PC17,PC18 PC19,PC20 PC21,PC22 PC23,PC24 PC25,PC26 PC27,PC28 CON/N0116	Demonstration and practice	Measuring tape/rule, Masons line Plumb bob Try Square Mortar pan Trowels	1
			Read tile layout drawing		Demonstration and practice		2

			/sketches	PC1,PC2, PC3,PC4 PC5,PC6 PC7,PC8 PC9,PC10 PC11,PC12 PC13,PC14 PC15,PC16 PC17,PC18 PC19		Straight edge (Aluminium) Wood/rubber mallet Corner trowel Pointer trowel Line and pins Spirit level Water level Square notch trowel Hammers Mallets Wedges Power wet saws Tile scribes or hand held tile cutters Rubber grout Float Tile trims/tile strips Spacers Mixing platform Adhesive	
			Carryout preliminary checks and procedure on materials and tools required		Demonstration and practice		4
			Prepare the surface where floor tiles are to be laid		Demonstration and practice		4
			Prepare mortar of required consistency		Demonstration and practice		4
			Place temporary support for tiling work		Demonstration and practice		2
			Spread the bed mortar and roughly plaster it		Demonstration and practice		6
			Vertically lay full tiles by leaving the first tile from bottom (slope/ gradient purpose)		Demonstration and practice		6
			Lay cut tiles (tracing and cutting the tiles for any obstructions)		Demonstration and practice		3
			Carryout curing after completion of laying process		Demonstration and practice		2
			Carryout grouting (next day)		Demonstration and practice		4
			Carryout curing (next day)		Demonstration and practice		2

			Carryout grout sealing with sealant (next day)		Demonstration and practice		4
			Check for quality (hollow sound test)		Demonstration and practice		2
		Wall tiling work using corner edge method - Activity	Carryout the steps involved in laying and fixing of tiles for a wall		Demonstration and practice		1
			Read tile layout drawing /sketches		Demonstration and practice		2
			Carryout preliminary checks and procedure on materials and tools required		Demonstration and practice		4
			Prepare the surface where floor tiles are to be laid		Demonstration and practice		4
			Prepare mortar of required consistency		Demonstration and practice		4
			Place temporary support for tiling work		Demonstration and practice		2
			Spread the bed mortar and roughly plaster it		Demonstration and practice		6
			Vertically lay full tiles by leaving the first tile from bottom (slope/gradient purpose)		Demonstration and practice		6

			Lay cut tiles (tracing and cutting the tiles for any obstructions)		Demonstration and practice		3
			Carryout curing after completion of laying process		Demonstration and practice		2
			Carryout grouting (next day)		Demonstration and practice		4
			Carryout curing (next day)		Demonstration and practice		2
			Carryout grout sealing with sealant (next day)		Demonstration and practice		4
			Check for quality (hollow sound test)		Demonstration and practice		2
5	Working effectively in a team	Effective communication and team work	Explain about effective communication skills	CON/N8001 KA2,KB4,SA5 SA6,SB1,SB4 SB6, SA3,SA5 SB1,SB2, SB5 KA3, SA6,SB6 KA1,KA4, KB3 SA3, SA5	Interactive Lecture	PPT	6
			Explain types of communication skills				
			Recognize effective ways of oral and written communication				
			Describe how to communicate with others at the workplace				
		Effective communication and team work - Activity	Identify the importance of reporting procedure	CON/N8001 PC1,PC2,PC3 PC4,PC5,PC6 PC7,PC8	Role Play	PPT	3
			Effectively communicate with others		Role Play	PPT	6

			Carry out effective reporting procedure		Role Play	PPT	3
			Prepare a report accordingly		Role Play	PPT	3
6	Plan and Organise work to meet expected outcomes	Prioritise and organize tiling work activities	Explain how to prioritize tasks to achieve desired results	CON/N8002 KA1,KA2,KA 3 KB1, KB2, SA6, SB1, SB2,SB3	Interactive Lecture	PPT	6
			Explain how to optimize activities and schedules				
		Prioritise and organize tiling work activities - Activity	Plan activities and schedules	CON/N8002 PC1, PC2, PC3, PC4, PC5,PC7, PC8,PC9, PC10,PC11, PC12	Role Play	Pen, paper, reporting format	5
			Optimize activities and schedules		Role Play		4
			Engage resources and manpower in appropriate manner		Role Play		4
			Organise self, resources, work environment and time efficiently		Role Play		4
7	Personal health, safety & environment protocol followed at construction site	Introduction to general safety at construction site	Learn about health and safety requirements in industry	CON/N9001 KA1,KA2 KA7, KA8 SA2, SA4 SA6 SB1, SB3, SB4, SB5 KB6, KB7 SA7, SA4	Interactive Lecture	PPT	4
			Know about essential elements for safety				
			Learn about good safety work practices				
			Explain what is hazard				

			List the types of hazards involved in construction sites				
			Explain hazard signs				
			Explain how to classify fire and fire extinguishers				
			Explain how safety drills are conducted				
		General safety at construction site - Activity	Start a fire alarm	CON/N9001 PC1, PC3, PC8, PC11 PC10, PC2	Demonstration and practice	Pen, paper, Fire extinguisher, wood and paper pieces, match box	1
			Use fire extinguisher		Demonstration and practice		6
			Call for medical help and carryout primary first aid for the injured person		Demonstration and practice		2
			Instruct co-workers to gather at the collection point		Demonstration and practice		2
		Personal safety at construction sites	Follow safety measures and actions to be taken under emergency situation	CON/N9001 KA1, KA2 KB6, KB7 SA7	Interactive Lecture	PPT	4
			Describe the uses of fire extinguishers				
			Know about PPE				
			Know about safety precautions while working at heights				

			Know about accident and incident reporting				
		Personal safety at construction sites - Activity	Carryout procedure for using PPE	CON/N9001 PC2, PC3 PC4, PC6	Demonstration and practice	Ladder, PPE	2
			Install the ladder as per safety norms		Demonstration and practice	Ladder, PPE	2
			Use the ladder as per safety norms		Demonstration and practice	Ladder, PPE	2
		Safe disposal of waste	Know about housekeeping practices	CON/N9001 KB9	Interactive Lecture	PPT	2
			Know about waste management				
		Safe disposal of waste - Activity	Identify types of waste	CON/N9001 PC12, PC8, PC11	Demonstration and practice	Waste containers, masonry pan, sample construction wastes	1
			Segregate the wastes		Demonstration and practice		2
			Dispose the waste in allocated container		Demonstration and practice		2
8	Employability Skills (60 hours)	1. Introduction to Employability Skills Duration	Discuss the Employability Skills required for jobs in various industries. List different learning and employability related GOI and private portals and their usage.	DGT/VSQ/N 0102	Team Activity: Interactive discussion	Whiteboard and Markers Chart paper and sketch pens LCD Projector, Laptop for Presentation, audio visual aids, note pad, paper, pen, computers etc.	01:30
		2. Constitutional values - Citizenship	Explain the constitutional values, including	DGT/VSQ/N 0102	Classroom lecture, discussion, demonstrat		01:30

Duration	civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen. Show how to practice different environment ally sustainable practices.		ion, practical		
3. Becoming a Professional in the 21st Century Duration	Discuss importance of relevant 21st century skills. Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking,	DGT/VSQ/N 0102	Classroom lecture, discussion, demonstrat ion, practical		02:30

	social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life. Describe the benefits of continuous learning.				
4. Basic English Skills Duration	Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone. Read and interpret text written in basic English. Write a short note/paragra ph / letter/e -mail using basic English.	DGT/VSQ/N 0102	Team Activity: Roleplay, video session		10:00
5. Career Development & Goal Setting Duration	Create a career development plan with well-defined short- and long-term goals	DGT/VSQ/N 0102	Classroom lecture, discussion, demonstration, practical		02:00

6. Communicati on Skills Duration	Demonstrate how to communicat e effectively using verbal and nonverbal communicati on etiquette. Explain the importance of active listening for effective communicati on. Discuss the significance of working collaborativel y with others in a team.	DGT/VSQ/N 0102	Classroom session, Team Activity: Round of Inter-active discussion		05:00
7. Diversity & Inclusion Duration	Demonstrate how to behave, communicat e, and conduct oneself appropriately with all genders and PwD. Discuss the significance of escalating sexual harassment issues as per POSH act.	DGT/VSQ/N 0102	Classroom lecture, discussion, demonstrat ion, practical		02:30
8. Financial and Legal Literacy	Outline the importance of selecting	DGT/VSQ/N 0102	Classroom lecture, discussion,		05:00

Duration	the right financial institution, product, and service. Demonstrate how to carry out offline and online financial transactions, safely and securely. List the common components of salary and compute income, expenditure, taxes, investments etc. Discuss the legal rights, laws, and aids.		demonstrat ion, practical		
9. Essential Digital Skills Duration	Describe the role of digital technology in today's life. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely. Discuss the significance	DGT/VSQ/N 0102	Classroom lecture, discussion, demonstration, practical		10:00

	of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely. Create sample word documents, excel sheets and presentations using basic features utilize virtual collaboration tools to work effectively.				
10. Entrepreneur ship Duration	Explain the types of entrepreneur ship and enterprises. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan. Describe the 4Ps of	DGT/VSQ/N 0102	Classroom lecture, discussion, Demonstration, practical, Team Activity: Role play, video session		07:00

			Marketing- Product, Price, Place and Promotion and apply them as per requirement. Create a sample business plan, for the selected business opportunity.				
		11. Customer Service Duration	Describe the significance of analysing different types and needs of customers. Explain the significance of identifying customer needs and responding to them in a professional manner. Discuss the significance of maintaining hygiene and dressing appropriately .	DGT/VSQ/N 0102	Classroom lecture, discussion, Demonstration, practical, Team Activity: Role play, video session		05:00
		12. Getting Ready for apprenticeship & Jobs	Create a professional Curriculum Vitae (CV).	DGT/VSQ/N 0102	Classroom lecture, discussion, Demonstrat		08:00

		Duration	Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively. Discuss the significance of maintaining hygiene and confidence during an interview. Perform a mock interview. List the steps for searching and registering for apprenticeship opportunities .		ion, practical, Team Activity: Role play, video session		
	Formative Assessment						8

Annexure - II

Assessment Criteria for Mason Tiling	
Job Role	Mason Tiling
Qualification Pack	CON/Q0104, v3.0
Sector Skill Council	Construction

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2	The assessment for the knowledge part will be based on knowledge bank of questions created by Assessment
3	Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on assessment criteria.
5	The passing percentage for each QP will be 50%. To pass the Qualification Pack, every trainee should score a minimum of 50% individually in each NOS.
6	The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome
7	The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
8	After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
9	In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
10	Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
Lay and fix tiles both horizontally and vertically on wall and floor (CON/N0115)	30	80	-	10	100	30
Apply grouts and sealants for flooring and cladding works (CON/N0116)	30	80	-	10	100	30
Work effectively in a team to deliver desired results at the workplace (CON/N8001)	30	70	-	-	100	10
Plan and organize work to meet expected outcomes (CON/N8002)	30	70	-	-	100	10
Work according to personal health, safety and environmen t protocols at construction site (CON/N9001)	30	70	-	-	100	10
Employability Skills (DGT/VSQ/N0 1 02)	20	30	-	-	50	10
Total	**170**	**360**		**20**	**550**	**100**

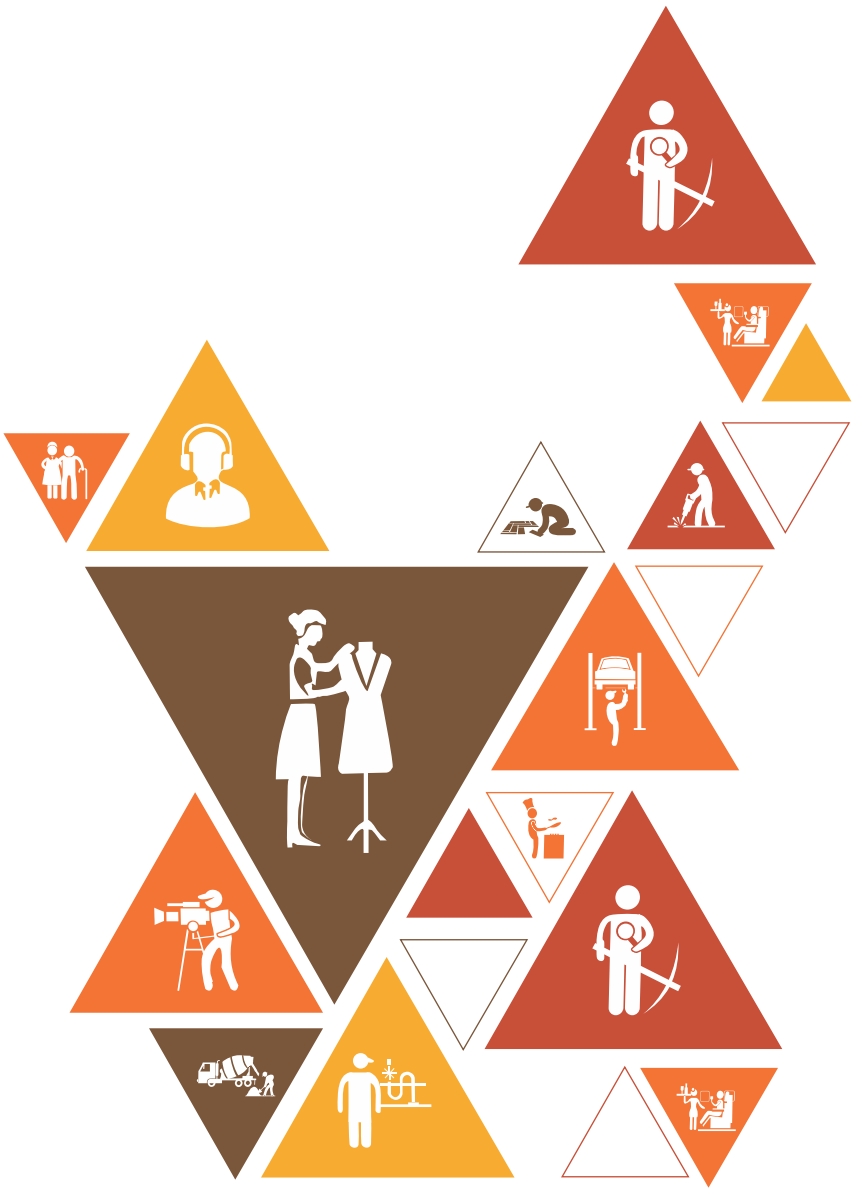
Annexure – III

Links for Video – QR Codes

Chapter Name	Unit Name	Topic Name	URL	Video Duration
Chapter 1: Introduction to the role of a Mason Tiling	Unit 1.1 – Overview of Construction Industry in India	Introduction of Construction Industry	https://youtu.be/yhjDhav4Pfw	Introduction of Construction Industry
	Unit 1.2 – Major Occupation in Construction Sector	Major occupations in construction sector	https://youtu.be/egQDs6cBzVI	Major occupations in construction sector
	Unit 1.3 – Mason Tiling - Job Role and Responsibility	Role of a Mason Tiling	https://youtu.be/Y5h0hycfbpE	Role of a Mason Tiling
Chapter 2: Generic Mathematical Skills	Unit 2.1 – Unit Conversion and Measurement	Different System of Measurement	https://youtu.be/H1xo5UVJKVo	Different System of Measurement
	Unit 2.2 – Basic Geometrical Shapes and Its Properties	Area, volume and perimeter of geometrical shapes	https://youtu.be/OhTubw4C0to	Area, volume and perimeter of geometrical shapes

Chapter 3: Tools, Materials and Consumables required for Mason Tiling (CON/N0115)	Unit 3.1 – Tools for Mason Tiling	Tools used by Mason tiling	https://youtu.be/aJ36AAwgBDg	Tools used by Mason tiling
	Unit 3.2 – Material and Consumables required	Selection and specification of materials	https://youtu.be/qQgh0n10548	Selection and specification of materials
Chapter 4: Laying and Fixing of Tiles (CON/N0115)	Unit 4.1 – Sketches/layouts in Tiling	Layout and Sketches for Tiling Work	https://youtu.be/dc4lm4qGjy0	Layout and Sketches for Tiling Work
	Unit 4.2 – Cutting of Tiles	Cutting of tile	https://youtu.be/slRU35Kan7E	Cutting of tile
	Unit 4.3 – Horizontal Laying and Fixing of Tiles	Preparation of cement mortar	https://youtu.be/vyt5POG6IdI	Preparation of cement mortar
	Unit 4.4 – Vertical Laying and Fixing of Tiles	Laying and fixing of tiles on walls/vertical surfaces	https://youtu.be/MwDX-RtU_BI	Laying and fixing of tiles on walls/vertical surfaces

Chapter 5: Grouting and Curing of Tiles (CON/N0116)	Unit 5.1 – Grouting of Tiles	Applying grout on joints	https://youtu.be/SKL0bx3pxNA	Applying grout on joints
	Unit 5.2 – Curing of Tiles	Uneven tiles	https://youtu.be/ib_EOym9H0g	Uneven tiles



Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Construction Skill Development Council

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Price: ₹