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TLE-IA-CARPENTRY

Quarter 2 – Module 6

SCAFFOLDING

TOOLS AND EQUIPMENT



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9/10

TLE-IA-CARPENTRY

Quarter 2 – Module 6

SCAFFOLDING TOOLS AND EQUIPMENT





What I Need to Know

- Prepare work areas for safe laying out and assembling of scaffolds and braces.
- Assemble scaffolds and braces safely and securely.
- Discuss how a scaffolding is made.



What I Know

Cite at least five (5) examples of Scaffolding Personal Protective Equipment (PPE)
Write your answers on your notebook.

Lesson

1

SCAFFOLDING TOOLS AND EQUIPMENT



What's In

The use of protective clothing and equipment is not the only solution for preventing accident

It is most important to understand that the primary protection against accidents is to identify possible hazards and take the necessary safety measures to eliminate the hazard.

When necessary, workers should be provided with protective clothing and other personal protective equipment.



What's New

Without tools and equipment, an scaffolder is just a person.

If you want to erect safe scaffolding you need to make sure that you have the right training, the right team of people and the right tools and equipment. The tools and equipment that you need can differ slightly, depending on what type of scaffold you are trying to construct.

Training of scaffolders needs to relate to basic site safety, familiarity with everyday hazards and the requirements for a safe place of work. In general, training for scaffolders should start at ground level, where basic skills can be acquired, and when scaffolders are proficient, using those skills at increasing height would be appropriate. Training should continue after basic skills have been acquired to ensure that scaffolders are familiar with improvements in techniques, the use of newly developed equipment/materials, and to ensure that safe methods of work continue to be used.



What Is It

Scaffolding Tools and Equipment

Planks

These are the pieces of scaffold that workers walk on. They need to be of a sufficient size for your frames, and they need to be made of suitable materials.

“Planks” are usually wooden boards or steel/aluminium. If you are using wooden planks they must be treated properly to prevent them from rotting. All planks should be strong enough to hold at least two average sized men.



Cross Bars

These are the diagonal bars which go across the frame in scaffold structure. Creating triangle shapes with these diagonal bars helps to give the structure extra strength, meaning that it is able to support heavier loads. This allows the scaffold to be built higher safely. In addition to this, these cross bars also make it harder for people to accidentally fall off of the scaffold.



Frame

These are the bars and poles which are used to make up the general structure of the scaffold. They must be regularly checked over to make sure that they are in good enough condition for continued use. Scaffold poles which are starting to rust should not be used, as they will not be as strong as they should be.



Connecting Pins and Clamps

Pins and clamps are the devices which are used to connect all of the pieces of scaffold together. These must also be checked regularly, because if one pin or clamp fails then it can seriously affect the integrity of the entire scaffold structure may be compromised.



Base Plates

Base plates should be put under the lowest scaffold poles. These plates spread out the weight of the scaffold so that the legs put less pressure onto the ground. This may mean that they don't sink into the ground as easily as they might otherwise. They also help to prevent the poles from slipping when the ground is softer or uneven.



Safety Barriers or Safety Netting

Depending on the intended use, the location and the type of scaffolding that has been erected, additional safety features may be needed. Safety barriers are designed to give workers a little extra protection whilst they are working on scaffold structures. Although safety netting may not be strong enough to stop a person if they were to fall, it can catch tools or building components if they were to fall. This can help to protect people who are below the scaffold.



Level

Scaffold works best and is safest when it is constructed on a level surface. In order to check whether scaffold has been placed on a level surface, you should use a good level. Although spirit levels were traditionally used, electronic levels are now becoming more common. These levels are more accurate and they are less likely to produce a faulty reading.



Pull Push Rule

A pull push rule is used to make sure that the scaffold is built according to the requirements which are set out by the plan. Scaffold must be carefully planned to ensure that it meets the needs of the commissioner as well as meeting national health and safety regulations. It is therefore important that scaffolders follow their plans accurately.



Spanners/Socket Set

Without spanners or preferably a good socket set you'll never be able to tighten up clamps and anything else that has nuts, virtually. A decent socket set is preferred as it makes the tightening and loosening nuts so much faster, and is a real time saver.



Claw Hammer

A claw hammer is one of the most important tools that any scaffolder could have. These hammers allow people to drive pins and clamps into place securely, but they can also be used to pull pins out more easily when the scaffold is being disassembled. Different sizes and weights of claw hammer are available.



Personal Protective Equipment

When a scaffolder is working on a construction site, they must make sure that they are wearing proper personal protective equipment to help to protect themselves from potential harm. This equipment includes a high visibility jacket, a hard hat and steel-toed boots. If you are working in a noisy environment then you may also need to wear ear protection.





What's More

Using Working Tools and Equipment Safely

Every year, there are a number of accidents from using work equipment, including machinery. Many serious and some are fatal. Accidents not only cause human suffering, they also cost money, for example in lost working hours, training temporary staff, insurance premiums, fines and managers' time. By using safe, well-maintained equipment operated by adequately trained staff, you can help prevent accidents and reduce these personal and financial costs.

People using concrete and masonry tools and equipment face a wide range of hazards. Most at risks are operators of hand-held concrete and masonry saws. Information, instruction, training and supervision are essential in all concrete and masonry operations.



What I Have Learned

Enumerate the tools and equipment being mentioned in this module and be able to give a brief explanation on it. Write this in your activity notebook.



What I Can Do

After successfully performing the assigned task from what I have learned, observe and follow the appropriate tools and equipment in making the scaffolding.



Assessment

Multiple Choice:

Direction: Read the statements carefully. Write the correct answer on your answer sheet or activity notebook.

1. These are the bars and poles which are used to make up the general structure of the scaffold.
a. claw hammer b. braces c. frame d. planks
2. These are the diagonal bars which go across the frame in scaffold structure.
a. braces b. cross bars c. frame d. planks
3. It is one of the most important tools that any scaffolder could have.
a. claw hammer b. pull push rule c. base plates d. level
4. It makes the tightening and loosening nuts so much faster, and is a real time saver.
a. safety barriers or safety netting c. level
b. connecting pins and clamps d. spanners/socket set
5. This should be put under the lowest scaffold poles. These plates spread out the weight of the scaffold so that the legs put less pressure onto the ground.
a. base plates b. level c. planks d. braces



Answer Key

Assessment A.

1. Frame
2. Cross bars
3. Claw hammer
4. Spanners/socket set
5. Base plates

What I Know (Answers may vary)

1. Hard Hats & High-Visibility Clothing
2. Steel Toe Cap Boots
3. Long Pants/Sunscreen
4. Eyewear/Face Protection
5. Hand Protection
6. Hearing Protection
7. Safety Harness
8. Protective Boots

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