SAFETY TOOLBOX

MONTHLY SAFETY AWARENESS DISCUSSION GUIDE

ELECTRICAL SAFETY

Instructions:
Use this Safety Toolbox Talk to spark discussion within the employee group. Test knowledge retention with the associated quiz.

Introductory Comments

Electricity is the flow of electrons, a form of energy, which flows from one place to another. The flow of electrons (current) travels through a conductor as opposed to an insulator, through which electricity will not flow. Working with electricity can be dangerous. Engineers, electricians, and other professionals work with electricity directly, including working on overhead lines, cable harnesses, and circuit assemblies. Others, such as office workers , work with electricity indirectly and may also be exposed to electrical hazards.

Electricity has long been recognized as a serious workplace hazard. OSHA's electrical standards are designed to protect employees exposed to dangers such as electric shock, electrocution, fires, and explosions.

Many workers are unaware of the potential electrical hazards present in their work environment, which makes them more vulnerable to the danger of electrocution.

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Meeting Starter Questions

- What is Electricity?
- What precautions can you take to avoid electrcical injuries?
- Name two electrical hazards that could be found in the workplace.
- What is the term(s) for equiptment isolation from an energy source?

Critical Safety Points

Electrical Hazards

Electrical hazards are associated with inadequate or damaged wiring, exposed electrical parts, wires with bad insulation, ungrounded electrical systems and tools, overloaded circuits, damaged power tools and equipment, and power lines.

Electrical shocks, fires, or falls result from these hazards:

- Exposed electrical parts
- Overheard power lines
- Inadequate wiring
- Defective insulation
- Improper PPE
- Wet working conditions
- Damaged tools and equipment

Prevention of Electrical Hazards: Consider the following points for safe use of tools:

- Inspect tools before use.
- Use the correct tool for the job and use it correctly.
- Store Tools in a safe manner.
- Use double insulated tools.
- Use tools and equiptment according to the instructions provided by the manufacturer.
- Visually inspect all electrical equiptment before use. Remove from service any equiptment with frayed cords, missing grounded prongs, cracked tools casings, etc.
- Apply a warning tag to any defective tool and do not use it until the problem has been corrected.

Workplace Safety: The following are some essentials of workplace safety:

- Keeping working places and walkaways clear of electrical cords.
- Planning for every job is vital.
- Always use the right tools for the job.
- Follow procesdures, drawings, diagrams, and other documentation to complete the job.
- Equiptment isolation from energy sources is essential (Lockout/Tagout).
- You should be training to complete the job in the proper way.
- Use appropriate Personal Protective Equiptment (PPE) for the work being done.

Power Tools

Many power tools must have a three-wire cord plugged into a grounded receptacle or they must be double insulated. Some are powered by a low voltage transformer. Power tools safety tips are as follows:

- Use gloves and appropriate footwear.
- Do not use in wet/damp conditions unless designed specifically for this envirnment.
- Keep working areas well lit.
- Ensure stable footing to avoid tripping hazards.
- Keep cords away from heat, oil, and sharp objects.
- Disconnect when not in use and when changing accessories such as blades and bits.

Employee Name:	Signature:
Division:	Date:
Instructor:	Score:

Electrical Safety

Question 1: What is Electricity?

_____

_____

Question 2: You should always inspect tools before use?

☐ TRUE ☐FALSE

Question 3: Lockout/Tagout means isloating equiptment from the energy source?

☐ TRUE ☐FALSE

Question 4: Many workers are unaware of the potential electrical hazards present in their work environment, which makes them more vulnerable to the danger of electrocution.

☐ TRUE ☐FALSE

Question 5: Disconnect equiptment when not in use and when changing accessories such as blades and bits.

☐ TRUE ☐FALSE

Quiz Answer Key:

1. See page 1, first paragraph
2. TRUE
3. TRUE
4. TRUE
5. TRUE