# Student worksheet – Electricity

## Key messages

* Work experience students must be aware that all workplaces use electricity
* Electric shock (electrocution) happens when a person becomes part of an electrical circuit and the current flows through their body
* Accidents and deaths can also happen when equipment becomes 'live' due to electrical faults, lack of maintenance, or short circuits

**Remember: You must not be asked to do any electrical work or repairs while on work experience.**

## Safe electrical practices

|  |  |  |
| --- | --- | --- |
| Rules for the workplace | Pictures must be formatted so they can be cut out and used as ‘cards’ | Rules for students undertaking work experience |
| Only licensed electrical workers can legally do electrical work. An unqualified person must not be asked to do electrical work. |  | You must not be asked to do any electrical work or repairs while on work experience. |
| Only use equipment that is properly maintained, tested and tagged. |  | Any electrical equipment you come in to contact with must have an up-to-date “Test and Tag” tag on it, showing the date the item was tested and the date of its next inspection. |
| Keep powered tools and equipment in safe working order through inspection and preventative maintenance programs. |  | You must not use powered tools, be asked to perform maintenance or inspect powered tools while on work experience. |
| Disconnect and report faulty tools and appliances - for example: frayed cords or broken power points. |  | If you notice any potential electrical faults, report this to your supervisor immediately. |
| Always switch off tools and appliances at the power point before pulling out the plug. |  | You must not use power tools while on work experience. If you need to unplug a computer, toaster, kettle etc. always switch off the power point before pulling out the plug. If you feel unsure, speak to your supervisor. |
| Keep electrical cords off the floor to reduce the risk of damage from dragging, contact with sharp objects or contact with water. A damaged electrical cord can cause electrocution. |  | If you notice a risk such as anything that could damage cords, or water near electrical equipment, do not touch anything, and tell your supervisor immediately. |
| Check the location of overhead wires and stand clear of any fallen power lines. |  | Be aware of overhead wires, and if you feel unsure about a task, speak to your supervisor. |
| Use your appliance properly. Read the instruction booklet and follow all instructions. |  | You must not use appliances such as powered tools while on work experience. You may use other appliances such as computers or photocopiers, but follow your supervisor’s instructions. |
| Electricity and water don't mix. Bare feet and wet skin lower the body's resistance to electricity. Keep electrical appliances and electrical leads away from water and wet areas. |  | If you notice a potential electrical hazard, do not touch anything, and immediately tell your supervisor. |
| Don't overload circuits and fuses by using too many appliances from the one power point. Don't use double adaptors to 'piggy back' plugs. Use a power board with individual switches. |  | You must not use appliances such as powered tools while on work experience. Always check with your supervisor before connecting an appliance to an outlet or power board e.g computer or electric kettle. Always make sure the power point is turned off while connecting or disconnecting a plug. |
| Employees who use portable electrical equipment at workplaces must be protected against earth leakage by a Residual Current Device (RCD), also known as a safety switch. |  | Always check with your supervisor that any portable equipment being used is connected to a safety switch. You must not use any powered tools while on work experience. If you are unsure, speak to your supervisor. |

## Activity 1: Safe electrical practices memory game.

The pictures in the “Safe Electrical Practices” table on the previous page can be cut out and used to test your knowledge of rules you must follow while on work experience.

Pair up with a classmate and test each other’s knowledge by playing this memory game.

1. Read and discuss with your class the rules regarding electricity in the workplace
2. Once you feel you have understood these, pair up with a classmate
3. Cut out the pictures from the Safe Electrical Practices table so that you have a deck of picture cards
4. Shuffle the cards and place them in a pile
5. Take turns with your partner, drawing a card from the pile and quizzing each other over what rules relate to that picture card