GRADE 8 **Electrical Safety**

*Draw arrows to link items and explanations. Some may have more than one explanation.*

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| Insulation on wires |  | Protect against overloads and fires. Does NOT protect people against shocks. |
| Fuse | Switches off if too much current flows. Works by a little electromagnet inside pulling a switch. |
| Stops me from touching live conductors. |
| Melts if too much current flows. |
| Thermal circuit breaker | Switches off if too much current flows. Works using a little heater inside. |
| Magnetic circuit breaker | Normally this wire does nothing, but if there’s a fault the current goes this way instead of through me! |
| RCD (also called RCCBs or ELCBs) | Use these with lawn mowers and anything else outdoors. |
| Switches off if the Live current and Neutral current are not equal. |
| Plastic case, the machine has no exposed metal anywhere |
| Earthing | Does not need an earth wire |
| Protects people from shocks – switches off before a lethal current flows through you. |
| Double insulation | If a machine has a metal case, this wire connects the case to the ground. |
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